## DIP Switch Adjustable

### DIP Switch S1

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### DIP Switch S2

#### Output Signal

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<td>0</td>
<td>20 mA</td>
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<td>Lower limit of output range - 5%</td>
<td>Upper limit of output range + 2.5%</td>
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<td>20 mA</td>
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<td>(0 mA / 1.9 mA / 3.8 mA / 0 V / 0.95 V / 1.9 V)</td>
<td>(10.25 mA / 20.5 mA / 5.125 V / 10.25 V)</td>
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<tr>
<td>0</td>
<td>10 mA</td>
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<td>Lower limit of output range</td>
<td>Upper limit of output range + 2.5%</td>
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<tr>
<td>0</td>
<td>10 mA</td>
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<td>(0 mA / 2 mA / 4 mA / 0 V / 1 V / 2 V)</td>
<td>(10.25 mA / 20.5 mA / 5.125 V / 10.25 V)</td>
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<tr>
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<td>5 V</td>
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<td>(10 mA / 20 mA / 5 V / 10 V)</td>
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Short description:
WAGO's RTD Threshold Value Switch for RTD sensors, potentiometers and resistors monitors and reports signals of up to two switching thresholds.

Features:
- Both digital signal output and relay with make contact react to configured measuring range limits (switching ON/OFF delay and threshold value switch function configurable with up to two threshold values).
- Configurable RTD factor
- Adjustable software filter
- Input/Output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage acc. to EN 61140

Technical Data

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<tr>
<th>Configuration</th>
<th>DIP switch, interface configuration software, interface configuration app, configuration display</th>
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<td>Input</td>
<td>RTD sensors, potentiometers and resistors: Pt100, Pt200, Pt500, Pt1000, Pt5000, Pt10000, Pt10, ...</td>
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<tr>
<td>Sensor supply current</td>
<td>&lt; 0.5 mA</td>
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<tr>
<td>Temperature range</td>
<td>-200 °C ... +850 °C</td>
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<tr>
<td>Resistor input</td>
<td>0 ... 100 kΩ</td>
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Output – Digital:
- Max. switching voltage: Supply voltage applied -0.3 V
- Max. continuous current: 100 mA (no internal restriction)
- Number of switching thresholds: 1 or 2
- Configurable rise and fall delay time: 0 ... 10 s (via DIP switch), 0 ... 60 s (expanded)

Output – Relay:
- Contact type: 1 make contact (1 a)
- Contact material: AgNi (gold-plated)
- Max. switching voltage: 250 VAC
- Max. continuous current: 6 A (up to 60 °C)
- (terminal blocks in a row) 3 A [60 °C ... 70 °C]
- Dielectric strength open contact [AC, 1 min]: 1 kV
- Pull-in/drop-out/bounce time typ.: 8 ms / 4 ms / 8 ms
- Number of switching thresholds: 1 or 2
- Configurable rise and fall delay time: 0 ... 10 s (via DIP switch), 0 ... 60 s (expanded)

Description

JUMPFLEX® Signal Conditioner, for DIN 35 rail 2857-533
RTD Threshold Value Switch

Technical Data

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<th>Item No.</th>
<th>Pack. Unit</th>
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<td>Nominal supply voltage Vₚ</td>
<td>24 VDC</td>
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<td>Supply voltage range</td>
<td>16.8 V ... 31.2 V</td>
<td>[30 % ... +30 %]</td>
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<td>Current consumption at 24 VDC</td>
<td>≤ 40 mA + I_DO</td>
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<td>Measurement error</td>
<td>± 1 K</td>
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<td>Temperature coefficient</td>
<td>≤ 0.01 %/K</td>
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<td>Environmental requirements:</td>
<td>Ambient operating temperature</td>
<td>-40 °C ... +70 °C</td>
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<td>Storage temperature</td>
<td>-40 °C ... +85 °C</td>
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<td>Safety and protection:</td>
<td>Test voltage</td>
<td>4 kV AC, 50 Hz, 1 min.</td>
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<td>(input/output/supply)</td>
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Connection and type of mounting:
- Wire connection: CAGE CLAMP® 5 (picoMAX® 5 0)
- Cross sections: solid, fine-stranded: 0.2 ... 2.5 mm² / AWG 24 ... 12
- Strip length: 9 ... 10 mm / 0.35 ... 0.39 in

Dimensions and weight:
- Dimensions (mm) W x H x L: 12.5 x 107 x 110
- Weight: 86 g

Standards and approvals:
- Conformity marking: CE
- Standards/Specifications: DIN EN 50178:1997 [Basic isolation]; DIN EN 61010-1:2010; DIN EN 60664-1:2008, EN 61000-6-2; EN 61000-6-4
- Accessories: see pages 226 ... 236

Sold & Serviced By:
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Toll Free Phone (877) SERVO98
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com
## DIP Switch Adjustability

### DIP Switch S1

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<th>Connection Technology</th>
<th>Hysteresis</th>
<th>Rise/Fall Delay Time Relay/Digital Output (DO)</th>
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### DIP Switch S2

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<td>Temperature / °C</td>
<td>Resistance / Ω</td>
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<tr>
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<tr>
<td></td>
<td>800</td>
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<tr>
<td></td>
<td>850</td>
</tr>
</tbody>
</table>

### Default Settings

- Sensor Type: Pt100
- Connection Technology: 2-wire
- Starting Value: 0 °C
- End Value: 100 °C
- Hysteresis: 3 K
- Rise/Fall Delay Time: 0 s
### Short description:
WAGO’s Thermocouple Threshold Value Switch for TC sensors monitors and reports signals of up to two switching thresholds.

### Features:
- Both digital signal output and relay with changeover contact react to configured measuring range limits (switching ON/OFF delay and threshold value switch function configurable with up to two threshold values).
- Adjustable software filter
- Input/Output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage acc. to EN 61140

### Technical Data

**Configuration:**
- DIP switch, interface configuration
- software, interface configuration app, configuration display

**Input:**
- Input signal: Thermocouples
- Temperature range:
  - Type J: -210 °C … +1200 °C
  - Type K: -200 °C … +1372 °C
- Cold junction compensation: On/Off (Default: On)
- Cold junction error: 3 K (type 2 K)

**Output:**
- **Output – Digital:**
  - Max. switching voltage: 5 V
  - Max. continuous current: 100 mA (no internal restriction)
  - Number of switching thresholds: 1 or 2
  - Configurable rise and fall delay time: 0 ... 60 s (via DIP switch), 0 ... 10 s (expanded)
- **Output – Relay:**
  - Contact type: 1 changeover contact (1 u)
  - Contact material: AgNi (gold-plated)
  - Max. switching voltage: 250 VAC
  - Max. continuous current: 6 A (up to 60 °C)
  - Dielectric strength open contact: 3 A [60 °C ... 70 °C]
  - Pull-in/drop-out/bounce time typ.: 8 ms / 4 ms / 8 ms
  - Number of switching thresholds: 1 or 2
  - Configurable rise and fall delay time: 0 ... 10 s (via DIP switch), 0 ... 60 s (expanded)

**Technical Specifications:**
- Nominal supply voltage: 24 VDC
- Supply voltage range: 16.8 V … 31.2 V [-30 % ... +30 %]
- Current consumption at 24 VDC: ≤ 40 mA + I DO
- Measurement error: ± 1 K
- Temperature coefficient: ≤ 0.01 %/K

**Environmental Requirements:**
- Ambient operating temperature: -40 °C … +70 °C
- Storage temperature: -40 °C … +85 °C

**Safety and Protection:**
- Test voltage (input/output/supply): 4 kV AC, 50 Hz, 1 min.
- Cross sections/stranded: 0.2 ... 2.5 mm² / AWG 24 ... 12
- Strip length: 9 ... 10 mm / 0.35 ... 0.39 in

**Dimensions and Weight:**
- Dimensions (mm): 12.5 x 107 x 110
- Height from upper-edge of DIN 35 rail: 87 g

**Standards and Approvals:**
- Conformity marking: CE
- Standards/Specifications:
  - DIN EN 50178:1997 [Basic isolation];
  - DIN EN 61010-1:2010;
  - DIN EN 60664-1:2008, EN 61000-6-2;
  - EN 61000-6-4

**Accessories:**
- see pages 226 ... 236
## DIP Switch Adjustability

### DIP Switch S1

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Cold Junction Compensation</th>
<th>Hysteresis</th>
<th>Rise/Fall Delay Time Relay/ Digital Output (DO)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type</td>
<td>0 / K</td>
<td>1 / s</td>
</tr>
<tr>
<td>1</td>
<td>J</td>
<td>ON</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>K</td>
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<td>5</td>
</tr>
<tr>
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### DIP Switch S2

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<th>Lower Value</th>
<th>Upper Value</th>
<th>Temperature / °C</th>
<th>0 / K</th>
<th>1 / s</th>
<th>Temperature / °C</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td>1400</td>
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</tbody>
</table>

### Default Settings

- **Cold Junction Compensation**: ON
- **Sensor Type**: Thermocouple of type J
- **Lower Value**: 0 °C
- **Upper Value**: 100 °C
- **Hysteresis**: 3 K
- **Rise/Fall Delay Time Relay/Digital Output (DO)**: 0 s

---

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Wago
**JUMPFLEX® Signal Conditioners**

**Threshold Value Switch with Analog Input and Changeover Relay Output**

**Short description:**
The threshold value switch for analog signals monitors analog standard signals and reports signals exceeding a preset threshold.

**Characteristics:**
- PC configuration interface
- Digital switching output
- Changeover contact relay output
- Calibrated scale switching
- Threshold value configuration via DIP switches and teach-in function via push/slide switch
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

**Technical Data**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35 rail</td>
<td>857-531</td>
<td>1</td>
</tr>
</tbody>
</table>

**Configuration:**
- DIP switch, push/slide switch, interface configuration software, interface configuration app

**Input:**
- Input signal: -10...+10V, -20...+20mA, 0...+30V *
- Input resistance: ≤ 200 Ω (I input), > 100 kΩ (U input)
- Max. input signal: (31.2 V (U) 100 mA (I))

**Output - Relay:**
- Contact type: 1 changeover contact
- Max. switching voltage: 250 V AC
- Max. continuous current: max. 6 A (to 60 °C), blocks in a row
- Max. Switching power (resistive): 1250 VA AC
- Anzahl der Schaltschwellen: 1 or 2 (adjustable) *

**Configurable rise and fall delay time:**
0 ... 10 s (via DIP switch), 0 ... 30 s *

**Output - Digital:**
- Max. switching voltage: Supply voltage applied
- Max. continuous current: 500 mA (to 60 °C)

**General specifications:**
- Response time: ≤ 16ms
- Nominal supply voltage Vₜ: 24V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: ≤ 25 mA
- Transmission error: ≤ 0.1 % of upper range value
- Temperature coefficient: ≤ 0.01 %/K

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® S
- Cross sections: solid:
- 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- fine-stranded:
- 0.34 mm² ... 2.5 mm² / AWG 22 ... 14

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 6 x 96 x 94
- Height from upper-edge of DIN 35 rail
- Weight: 49 g

**Standards and approvals:**
- Conformity marking: C E
- Shipbuilding: @

**Accessories:**
see pages 226 ... 236

(* Additional setting options via PC configuration software or smartphone app)
DIP Switch Adjustability

### Input signal limits

<table>
<thead>
<tr>
<th>Switch</th>
<th>Value</th>
<th>Hysteresis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>±0.25 V</td>
<td>±0.5 mA</td>
</tr>
<tr>
<td>2</td>
<td>±0.25 V</td>
<td>±0.5 mA</td>
</tr>
<tr>
<td>3</td>
<td>±0.25 V</td>
<td>±0.5 mA</td>
</tr>
<tr>
<td>4</td>
<td>±0.25 V</td>
<td>±0.5 mA</td>
</tr>
<tr>
<td>5</td>
<td>±0.25 V</td>
<td>±0.5 mA</td>
</tr>
</tbody>
</table>

### Configurable rise/fall delay time in sec.

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<tr>
<th>Switch</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
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<tr>
<td>7</td>
<td>1</td>
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<tr>
<td>8</td>
<td>2</td>
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<td>9</td>
<td>3</td>
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<tr>
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<td>4</td>
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</tbody>
</table>

### Digital output DO Signaling

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<th>Value</th>
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</thead>
<tbody>
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<tr>
<td>7</td>
<td>6</td>
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<tr>
<td>8</td>
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<tr>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

### Default Settings

All DIP switches are in „OFF“ position for delivery.

#### Input

- Input range: ±10 V
- Hysteresis: 5 mV

#### Output

- Configurable rise/fall delay time: 0 s
- Digital output DO: not active

---

**Push/Slide Switch Operation**

**Digital Output DO/Signaling**

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

**Configuration**

<table>
<thead>
<tr>
<th>Switching Behavior</th>
<th>Number of Switching Thresholds</th>
<th>Values for Switching Thresholds</th>
<th>Switching Threshold 1, Relay</th>
<th>Switching Threshold 2, Relay</th>
<th>Press for 1 sec.</th>
<th>Yellow LED flashes</th>
<th>Red LED flashes briefly</th>
<th>No flashing LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>S1</td>
<td>„On“</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>S1</td>
<td>„Off“</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>S1 &lt; S2</td>
<td>„On“</td>
<td>„Off“</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>S1 &lt; S2</td>
<td>„Off“</td>
<td>„On“</td>
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</tr>
<tr>
<td>5</td>
<td>2</td>
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<td>„On“</td>
<td>„Off“</td>
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<td>6</td>
<td>2</td>
<td>S1 &gt; S2</td>
<td>„Off“</td>
<td>„On“</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- Leave param. mode without storing a value

---

**Switching Behavior, Digital Output (DO)**

- Measuring input/ Measured value
- configured to 75 %
- Hysteresis

---

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**JUMPFLEX® Signal Conditioners**

Temperature Signal Conditioner for Pt 00, Pt200, Pt500 and Pt1000 as well as Resistors 0 ... 1 kΩ; 0 ... 4.5 kΩ

### Configuration via:

- **DIP switch**

### Technical Data

#### Configuration:

- **Configuration:** DIP switch

#### Input:

- **Input signal:** PT sensors and resistors
- **Sensor types:** Pt100, Pt200, Pt500, Pt1000
- **Sensor connection:** 2-wire, 3-wire, 4-wire
- **Temperature range:** -200 °C ... +850 °C
- **Sensor's wire break/short circuit**
- **Measuring range underflow/overflow**
- **Clipping capability allows analog standard signal limitation to upper range values**
- **Safe 3-way isolation with 2.5kV test voltage to EN 61140**

#### Output:

- **Output signal:**
  - 0 ... 20 mA, 4 ... 20 mA
  - 0 ... 10 V, 2 ... 10 V
  - 0 ... 5 V, 1 ... 5 V
  - 0 ... 10 mA, 2 ... 10 mA
- **Load impedance:**
  - ≤ 600 Ω (Out = mA)
  - ≥ 2 kΩ (Out = V)
- **Step response:** 180 ms (360 ms at 3-wire)

#### General specifications:

- **Nominal supply voltage V_s:** 24V DC
- **Supply voltage range:** 16.8 V ... 31.2 V
- **Current consumption at 24 V DC:** < 0.4 mA
- **Min. measuring span:** 50 K (50 Ω)
- **Transmission error:** ≤ 0.1 % at max. measuring span
- **Transmission error of set measuring span:** [(10 K / set measuring span [K]) + 0.1] %
- **Temperature coefficient:** ≤ 0.02 % /K

### Environmental requirements:

- **Ambient operating temperature:** -25 °C ... +70 °C
- **Storage temperature:** -40 °C ... +85 °C

### Safety and protection:

- **Test voltage (input/output/supply):** 2.5 kV AC, 50 Hz, 1 min

### Connection and type of mounting:

- **Wire connection:** CAGE CLAMP® S
- **Cross sections:**
  - solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
  - fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- **Strip lengths:** 9 ... 10 mm / 0.37 in

### Dimensions and weight:

- **Dimensions (mm) W x H x L:** 6 x 96 x 94
- **Height from upper-edge of DIN 35 rail:** 42 g

### Standards and approvals:

- **Conformity marking:** CE
- **UL 508**
- **ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4**
- **Shipbuilding**

### Accessories

- see pages 226 ... 236
DIP Switch S1

<table>
<thead>
<tr>
<th>Wire connection</th>
<th>Sensor type</th>
<th>Output signal</th>
<th>Measuring range underflow</th>
<th>Measuring range overflow</th>
<th>Wire break</th>
<th>Short circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2</td>
<td>3 4 5</td>
<td>6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-wire</td>
<td>Pt100</td>
<td>0 ... 20 mA</td>
<td>75 ... 167 °C °F</td>
<td>210 ... 410 °C °F</td>
<td>475 ... 887 °C °F</td>
<td></td>
</tr>
<tr>
<td>3-wire</td>
<td>Pt200</td>
<td>4 ... 20 mA</td>
<td>80 ... 176 °C °F</td>
<td>220 ... 428 °C °F</td>
<td>500 ... 932 °C °F</td>
<td></td>
</tr>
<tr>
<td>4-wire</td>
<td>Pt500</td>
<td>0 ... 10 mA</td>
<td>85 ... 185 °C °F</td>
<td>230 ... 446 °C °F</td>
<td>535 ... 997 °C °F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pt1000</td>
<td>2 ... 10 mA</td>
<td>90 ... 194 °C °F</td>
<td>240 ... 464 °C °F</td>
<td>550 ... 1022 °C °F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 kΩ</td>
<td>0 ... 10 V</td>
<td>95 ... 203 °C °F</td>
<td>250 ... 482 °C °F</td>
<td>575 ... 1067 °C °F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.5 kΩ</td>
<td>2 ... 10 V</td>
<td>100 ... 212 °C °F</td>
<td>260 ... 500 °C °F</td>
<td>600 ... 1112 °C °F</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 ... 5 V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 ... 5 V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

DIP Switch S2

<table>
<thead>
<tr>
<th>Start temperature</th>
<th>End temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8 9 10</td>
</tr>
<tr>
<td>°C °F</td>
<td>°C °F</td>
</tr>
<tr>
<td>1</td>
<td>200 328</td>
</tr>
<tr>
<td>°C °F</td>
<td>0 32</td>
</tr>
<tr>
<td>1</td>
<td>175 283</td>
</tr>
<tr>
<td>°C °F</td>
<td>5 41</td>
</tr>
<tr>
<td>1</td>
<td>150 238</td>
</tr>
<tr>
<td>°C °F</td>
<td>10 50</td>
</tr>
<tr>
<td>1</td>
<td>125 193</td>
</tr>
<tr>
<td>°C °F</td>
<td>15 59</td>
</tr>
<tr>
<td>1</td>
<td>100 148</td>
</tr>
<tr>
<td>°C °F</td>
<td>20 68</td>
</tr>
<tr>
<td>1</td>
<td>90 130</td>
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<tr>
<td>°C °F</td>
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<td>80 112</td>
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<td>°C °F</td>
<td>35 95</td>
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<tr>
<td>1</td>
<td>60 76</td>
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<td>°C °F</td>
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<td>°C °F</td>
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<tr>
<td>1</td>
<td>10 14</td>
</tr>
<tr>
<td>°C °F</td>
<td>65 149</td>
</tr>
<tr>
<td>1</td>
<td>0 32</td>
</tr>
<tr>
<td>°C °F</td>
<td>70 158</td>
</tr>
</tbody>
</table>

The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

Default Settings

* All DIP switches are in „OFF” position for delivery.
* Sensor connection: 2-wire
* Sensor type: Pt100
* Start temperature: 0 °C
* End temperature: 100 °C
* Output signal: 0 ... 20 mA
* Measuring range underflow: 0 mA
* Measuring range overflow: 20.5 mA
* Wire break: 2.1 mA
* Short circuit: 0 mA
**857-801**

**JUMPFLEX® Signal Conditioners**

Temperature Signal Conditioner for Pt100, Pt200, Pt500 and Pt1000 * as well as Resistors 0 ... 1 kΩ; 0 ... 4.5 kΩ

### Technical Data

**Configuration:**
- DIP switch, interface configuration software, interface configuration app

**Input:**
- Input signal: PT sensors and resistors *
- Sensor types: Pt100, Pt200, Pt500, Pt1000 *
- Sensor connection: 2-wire, 3-wire, 4-wire (switchable) *
- Temperature range: 200 °C ... +850 °C
- Sensornpeisestrom: < 0.5 mA
- Resistor input: 0 ... 1 kΩ, 0 ... 4.5 kΩ *

**Output:**
- Output signal: 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0 ... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA *
- Load impedance: ≤ 600 Ω (Out = mA), ≥ 2 kΩ (Out = V)
- Step response: 180 ms (360 ms at 3-wire)

**General specifications:**
- Nominal supply voltage $V_i$: 24V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: < 40 mA
- Min. measuring span: 50 K (50 Ω)
- Transmission error: ≤ 0.1 % at max. measuring span
- Transmission error of set measuring span: [(10 K / set measuring span [K]) + 0.1] %
- Temperature coefficient: ≤ 0.02 % /K

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

### Safety and protection:
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

### Connection and type of mounting:
- Wire connection: CAGE CLAMP® S
- Cross sections: solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14, fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

### Dimensions and weight:
- Dimensions (mm) $W \times H \times L$: 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 49.2 g

### Standards and approvals:
- Conformity marking: CE
- UL 508
- ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4
- Shipbuilding: Ø

### Accessories:
- see pages 226 … 236

---

**Short description:**
The 857-801 Temperature Signal Conditioner records Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kΩ, converting the temperature signal into a standard analog signal on the output side.

**Characteristics:**
- PC configuration interface
- For Pt100, Pt200, Pt500 and Pt1000 sensors, as well as resistors up to 4.5 kΩm
- 2-, 3-, and 4-wire connection technology
- Calibrated scale switching
- Sensor’s wire break/short circuit
- Measuring range underflow/overflow
- Clipping capability allows analog standard signal limitation to upper range values.
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

---

**Description Item No.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35</td>
<td>857-801</td>
<td>1</td>
</tr>
</tbody>
</table>

| Temperature Signal Conditioner for Pt 100, Pt 200, Pt 500 and Pt 1000 as well as Resistors * |

---

**Configuration via:**
- DIP switch

---

* Additional setting options as well as output signal inversion via PC configuration software or smartphone app

---

**Technical Data**

- **Configuration via:**
  - DIP switch

**Input:**
- Input signal: PT sensors and resistors *
- Sensor types: Pt100, Pt200, Pt500, Pt1000 *
- Sensor connection: 2-wire, 3-wire, 4-wire (switchable) *
- Temperature range: 200 °C ... +850 °C
- Sensornpeisestrom: < 0.5 mA
- Resistor input: 0 ... 1 kΩ, 0 ... 4.5 kΩ *

**Output:**
- Output signal: 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 0 ... 5 V, 1 ... 5 V, 0 ... 10 mA, 2 ... 10 mA *
- Load impedance: ≤ 600 Ω (Out = mA), ≥ 2 kΩ (Out = V)
- Step response: 180 ms (360 ms at 3-wire)

**General specifications:**
- Nominal supply voltage $V_i$: 24V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: < 40 mA
- Min. measuring span: 50 K (50 Ω)
- Transmission error: ≤ 0.1 % at max. measuring span
- Transmission error of set measuring span: [(10 K / set measuring span [K]) + 0.1] %
- Temperature coefficient: ≤ 0.02 % /K

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® S
- Cross sections: solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14, fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

**Dimensions and weight:**
- Dimensions (mm) $W \times H \times L$: 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 49.2 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508
- ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4
- Shipbuilding: Ø

**Accessories:**
- see pages 226 … 236
## DIP Switch Adjustability

### DIP Switch S1

<table>
<thead>
<tr>
<th>Wire connection</th>
<th>Sensor type</th>
<th>Output signal</th>
<th>Measuring range underflow</th>
<th>Measuring range overflow</th>
<th>Wire break</th>
<th>Short circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-wire</td>
<td>Pt100</td>
<td>0 ... 20 mA</td>
<td>Lower limit of output range</td>
<td>Upper limit of output range</td>
<td>4 ... 20 mA</td>
<td>12.5 %</td>
</tr>
<tr>
<td>3-wire</td>
<td>Pt200</td>
<td>0 ... 10 mA</td>
<td>Upper limit of output range</td>
<td>5 %</td>
<td>2 ... 10 mA</td>
<td>12.5 %</td>
</tr>
<tr>
<td>4-wire</td>
<td>Pt500</td>
<td>0 ... 10 mA</td>
<td>Upper limit of output range</td>
<td>5 %</td>
<td>2 ... 10 mA</td>
<td>12.5 %</td>
</tr>
<tr>
<td></td>
<td>Pt1000</td>
<td>0 ... 5 V</td>
<td>Upper limit of output range</td>
<td>5 %</td>
<td>2 ... 10 mA</td>
<td>12.5 %</td>
</tr>
</tbody>
</table>

### DIP Switch S2

<table>
<thead>
<tr>
<th>Start temperature</th>
<th>End temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>°F</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>°C</td>
<td>°F</td>
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<tr>
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<td>-328</td>
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<td>-20</td>
<td>-4</td>
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<tr>
<td>-10</td>
<td>14</td>
</tr>
<tr>
<td>0</td>
<td>32</td>
</tr>
</tbody>
</table>

* acc. to NAMUR NE 43

The minimum distance from the start temperature to the end temperature may not fall short of 50K degrees on the Celsius (C) scale or 122K degrees on the Fahrenheit (F) scale.

### Default Settings

All DIP switches are in “OFF” position for delivery. This is the position used to parameterize the device via PC configuration software.

<table>
<thead>
<tr>
<th>Sensor connection</th>
<th>2-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor type</td>
<td>Pt100</td>
</tr>
<tr>
<td>Start temperature</td>
<td>0 °C</td>
</tr>
<tr>
<td>End temperature</td>
<td>100 °C</td>
</tr>
<tr>
<td>Output signal</td>
<td>0 ... 20 mA</td>
</tr>
<tr>
<td>Measuring range underflow</td>
<td>0 mA</td>
</tr>
<tr>
<td>Measuring range overflow</td>
<td>20.5 mA</td>
</tr>
<tr>
<td>Wire break</td>
<td>21 mA</td>
</tr>
<tr>
<td>Short circuit</td>
<td>0 mA</td>
</tr>
</tbody>
</table>
**JUMPFLEX® Signal Conditioners**

Temperature Signal Conditioner for Thermocouples of Types J and K

**Short description:**
The 857-810 Thermocouple Temperature Signal Conditioner is suitable for the connection of type J and K thermocouples. On the output side, the thermocouple temperature signal conditioner converts the temperature signal into a standard analog signal.

**Characteristics:**
- For thermocouples of type J and K
- Cold junction compensation (on/off)
- Calibrated scale switching
- Sensor's wire break
- Measuring range underflow/overflow
- Clipping capability allows analog standard signal limitation to upper range values
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

**Technical Data**

<table>
<thead>
<tr>
<th>Configuration:</th>
<th>DIP switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input:</td>
<td>Thermodouples</td>
</tr>
<tr>
<td>Sensor types:</td>
<td>Thermocouples of types J and K</td>
</tr>
<tr>
<td>Temperature range:</td>
<td>Type J: -150 °C ... +1200 °C</td>
</tr>
<tr>
<td>Type K: -150 °C ... +1350 °C</td>
<td></td>
</tr>
<tr>
<td>Output:</td>
<td>Output signal</td>
</tr>
<tr>
<td></td>
<td>0 ... 20 mA, 4 ... 20 mA,</td>
</tr>
<tr>
<td></td>
<td>0 ... 10 V, 2 ... 10 V,</td>
</tr>
<tr>
<td></td>
<td>0 ... 5 V, 1 ... 5 V,</td>
</tr>
<tr>
<td></td>
<td>0 ... 10 mA, 2 ... 10 mA</td>
</tr>
<tr>
<td>Load impedance:</td>
<td>≤ 600 Ω (Out = mA)</td>
</tr>
<tr>
<td></td>
<td>≥ 2 kΩ (Out = V)</td>
</tr>
<tr>
<td>Cold junction compensation:</td>
<td>on / off (default: on)</td>
</tr>
<tr>
<td>Cold junction error:</td>
<td>3 K (typ. 2 K)</td>
</tr>
<tr>
<td>Step response:</td>
<td>60 ms without cold junction compensation/</td>
</tr>
<tr>
<td>120 ms with cold junction compensation</td>
<td></td>
</tr>
<tr>
<td>General specifications:</td>
<td>Nominal supply voltage $V_s$: 24V DC</td>
</tr>
<tr>
<td></td>
<td>Supply voltage range: 16.8 V ... 31.2 V</td>
</tr>
<tr>
<td></td>
<td>Current consumption at 24 V DC: ≤ 40 mA</td>
</tr>
<tr>
<td></td>
<td>Min. measuring span: 100 K (configurable)</td>
</tr>
<tr>
<td></td>
<td>Transmission error: ≤ 0.1 % at max. measuring span [Typ J, K]</td>
</tr>
<tr>
<td></td>
<td>Transmission error of set measuring span: 150 K / set measuring span [K]</td>
</tr>
<tr>
<td></td>
<td>Temperature coefficient: ≤ 0.04 % /K</td>
</tr>
</tbody>
</table>

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® S
- Cross sections:
  - solid: 0.08 mm² ... 2.5 mm² / AWG 24 ... 14
  - fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 6 x 96 x 94
- Height from upper edge of DIN 35 rail: 44.7 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508
- ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4
- Shipbuilding: Ω

**Accessories:**
- see pages 226 ... 236

---

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35</td>
<td>857-810</td>
</tr>
</tbody>
</table>

Temperature Signal Conditioner for Thermocouples of Types J and K
### DIP Switch Adjustability

#### 857-810

**DIP Switch S1**

<table>
<thead>
<tr>
<th>Cold junction compensation</th>
<th>Sensor type</th>
<th>Output signal</th>
<th>Measuring range underflow</th>
<th>Measuring range overflow</th>
<th>Wire break</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>J</td>
<td>0 – 20 mA</td>
<td>Lower limit of output range: -5 % *</td>
<td>Upper limit of output range: +2,5 % *</td>
<td>Upper limit of output range: +5 % *</td>
</tr>
<tr>
<td>off</td>
<td>K</td>
<td>4 – 20 mA</td>
<td>Lower limit of output range</td>
<td>Upper limit of output range: +2,5 %</td>
<td>Upper limit of output range: +5 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<tbody>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Default Settings

- **All DIP switches are in „OFF“ position for delivery.**
- **Cold junction compensation**
  - on
- **Start temperature**
  - 0 °C
- **End temperature**
  - 1000 °C
- **Output signal**
  - 0 – 20 mA
- **Measuring range underflow**
  - 0 mA
- **Measuring range overflow**
  - 20.5 mA
- **Wire break**
  - 21 mA

---

**DIP Switch S2**

<table>
<thead>
<tr>
<th>Start temperature</th>
<th>End temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>-200</td>
<td>-328</td>
</tr>
</tbody>
</table>

The minimum distance from the start temperature to the end temperature may not fall short of 100K degrees on the Celsius (C) scale or 212K degrees on the Fahrenheit (F) scale.

---

* acc. to NAMUR NE 43

---

**ELECTROMATE**

Toll Free Phone  (877) SERVO98

Toll Free Fax  (877) SERV099

www.electromate.com

sales@electromate.com
**857-811**

**JUMPFLEX® Signal Conditioners**

Temperature Signal Conditioner for Thermocouples of Types J and K *

---

**Short description:**
The 857-811 Thermocouple Temperature Signal Conditioner is suitable for the connection of type J and K thermocouples. On the output side, the thermocouple temperature signal conditioner converts the temperature signal into an analog standard signal.

**Characteristics:**
- PC configuration interface
- For thermocouples of type J and K (E, R, N, S, T, B, C)
- Cold junction compensation (on/off)
- Calibrated scale switching
- Sensor’s wire break
- Measuring range underflow/overflow
- Clipping capability allows analog standard signal limitation to upper range values
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

---

### Technical Data

**Description**
Item No. 857-811
Temperature Signal Conditioner for Thermocouples of Types J and K *

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35</td>
<td>857-811</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

### Safety and protection:
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

### Connection and type of mounting:
- Wire connection: CAGE CLAMP® S
- Cross sections solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- Fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

### Dimensions and weight:
- Dimensions (mm): W x H x L = 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 76 mm
- Weight: 49.2 g

### Standards and approvals:
- Conformity marking: CE
- UL 508
- ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4
- Shipbuilding: T

### Accessories:
- See pages 226 ... 236

---

### Configuration via:

- DIP switch
- Interface configuration software
- Interface configuration app

---

**Configuration via:**

<table>
<thead>
<tr>
<th>TC+</th>
<th>IN</th>
<th>OUT 1</th>
<th>OUT+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>OUT</td>
<td>5</td>
<td>6</td>
<td>GND 1</td>
</tr>
<tr>
<td>POWER</td>
<td>7</td>
<td>Us+</td>
<td>GND 2</td>
</tr>
</tbody>
</table>

---

### Technical Data

**General specifications:**
- Nominal supply voltage: 24 V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: ≤ 40 mA
- Min. measuring span: 100 K (configurable)
- Transmission error: ≤ 0.1 % at max. measuring span [Typ J, K]
- Transmission error of set measuring span: 150 K / set measuring span [K] %
- Temperature coefficient: ≤ 0.04 % /K

---

**Configuration:**

| Configuration | DIP switch, interface configuration software, interface configuration app |

---

**Input:**

| Input signal | Thermocouples |
| Sensor types | Thermocouples of types J and K *
| Temperature range | Type J: -150 °C ... +1200 °C
|                    | Type K: -150 °C ... +1350 °C |

---

**Output:**

| Output signal | 0 ... 10 mA, 2 ... 10 mA, 0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V *
| Load impedance | ≤ 600 Ω (Out = mA)
|                | ≥ 2 kΩ (Out = V)
| Cold junction compensation | on / off (default: on) *
| Cold junction error | 3 K (typ. 2 K) |
| Step response | 60 ms without cold junction compensation / 120 ms with cold junction compensation |

---

**Standards and approvals:**

| Conformity marking | CE |
| UL 508 | ANSI/ISA 12.12.01 Class I, Div. 2, Grp. ABCD, T4 |
| Shipbuilding | T |

---

* Additional setting options as well as output signal inversion via PC configuration software or smartphone app.
### DIP Switch Adjustability

#### DIP Switch S1

<table>
<thead>
<tr>
<th>Cold junction compensation</th>
<th>Sensor type</th>
<th>Output signal</th>
<th>Measuring range underflow</th>
<th>Measuring range overflow</th>
<th>Wire break</th>
</tr>
</thead>
<tbody>
<tr>
<td>on</td>
<td>J</td>
<td>0...20 mA</td>
<td>Lower limit of output range +5% *</td>
<td>Upper limit of output range +5% *</td>
<td></td>
</tr>
<tr>
<td>off</td>
<td>K</td>
<td>2...10 mA</td>
<td>Lower limit of output range +2.5% *</td>
<td>Upper limit of output range +5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0...10 mA</td>
<td>Lower limit of output range +2.5% *</td>
<td>Upper limit of output range +5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2...10 V</td>
<td>Lower limit of output range +2.5% *</td>
<td>Upper limit of output range +5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0...5 V</td>
<td>Lower limit of output range +5%</td>
<td>Upper limit of output range +5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1...5 V</td>
<td>Lower limit of output range +5%</td>
<td>Upper limit of output range +5%</td>
<td></td>
</tr>
</tbody>
</table>

#### DIP Switch S2

<table>
<thead>
<tr>
<th>Start temperature</th>
<th>End temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 °C</td>
<td>20 °C</td>
</tr>
<tr>
<td>0 °F</td>
<td>32 °F</td>
</tr>
<tr>
<td>10 °C</td>
<td>50 °C</td>
</tr>
<tr>
<td>10 °F</td>
<td>95 °F</td>
</tr>
</tbody>
</table>

The minimum distance from the start temperature to the end temperature may not fall short of 100K degrees on the Celsius (C) scale or 212K degrees on the Fahrenheit (F) scale.

* acc. to NAMUR NE 43

### Default Settings

All DIP switches are in “OFF” position for delivery.

- **Cold junction compensation**: on
- **Thermocouple**: Type J
- **Start temperature**: 0 °C
- **End temperature**: 1000 °C
- **Output signal**: 0...20 mA
- **Measuring range underflow**: 0 mA
- **Measuring range overflow**: 20.5 mA
- **Wire break**: 21 mA
857-818

**JUMPFLEX® Signal Conditioners**

Ni Signal Conditioner for Ni 100, Ni 120, Ni 200, Ni 500, Ni 1000

**Short description:**
The 857-818 Ni Signal Conditioner (Ni = nickel) records signals from Ni sensors featuring all standard characteristics. On the output side, the Ni temperature signal conditioner converts the temperature signal into a standard analog signal.

**Characteristics:**
- For Ni100, Ni120, Ni200, Ni500 and Ni1000 sensors
- Calibrated scale switching
- Clipping capability allows analog standard signal limitation to upper range values
- Safe 3-way isolation with 2.5 kV test voltage to EN 61140

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

**Configuration:**
- Configuration: DIP switch

**Input:**
- Input signal: Ni sensors
- Max. input signal: ± 31.2 V DC
- Sensor types: Ni 100, Ni 120, Ni 200, Ni 500, Ni 1000
- Sensor connection: 2-wire, 3-wire, 4-wire (switchable)

**Output:**
- Output signal: 0 ... 10 mA, 2 ... 10 mA,
- 0 ... 20 mA, 4 ... 20 mA,
- 0 ... 5 V, 1 ... 5 V,
- 0 ... 10 V, 2 ... 10 V
- Load impedance: ≤ 600 Ω (I output), ≤ 2 kΩ (U output)
- Step response: < 60 ms at 2- and 4-conductor measurement

**General specifications:**
- Nominal supply voltage Vᵣ: 24 V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: ≤ 40 mA
- Transmission error: ≤ 0.1 % of upper range value

**Configuration via:**
- DIP switch

**Technical Data**

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min.

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® S
- Cross sections: solid:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- Fine-stranded:
  - 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

**Dimensions and weight:**
- Dimensions (mm): W x H x L 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 76 mm
- Weight: 50 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508
- Shipbuilding: ☑

**Accessories:**
- see pages 226 ... 236

**Configuration via:**
- DIP switch

**Technical Data**

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min.

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® S
- Cross sections: solid:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- Fine-stranded:
  - 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

**Dimensions and weight:**
- Dimensions (mm): W x H x L 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 76 mm
- Weight: 50 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508
- Shipbuilding: ☑

**Accessories:**
- see pages 226 ... 236
### DIP Switch Adjustability

**DIP Switch S1**

<table>
<thead>
<tr>
<th>Connection Technology</th>
<th>Temperature Coefficient</th>
<th>Sensor Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-conductor</td>
<td>6178 ppm/K</td>
<td>Ni 100</td>
</tr>
<tr>
<td>3-conductor</td>
<td>5000 ppm/K</td>
<td>Ni 120</td>
</tr>
<tr>
<td>4-conductor</td>
<td>6720 ppm/K</td>
<td>Ni 200</td>
</tr>
<tr>
<td>Reserve</td>
<td></td>
<td>Ni 500</td>
</tr>
<tr>
<td>reserved</td>
<td></td>
<td>Ni 1000</td>
</tr>
</tbody>
</table>

**DIP Switch S1**

<table>
<thead>
<tr>
<th>Start Temperature</th>
<th>89 1 0 °C</th>
<th>12345T °C</th>
<th>End Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>-60</td>
<td>0</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>-50</td>
<td>10</td>
<td>110</td>
<td>210</td>
</tr>
<tr>
<td>-40</td>
<td>20</td>
<td>120</td>
<td>220</td>
</tr>
<tr>
<td>-30</td>
<td>30</td>
<td>130</td>
<td>230</td>
</tr>
<tr>
<td>-20</td>
<td>40</td>
<td>140</td>
<td>240</td>
</tr>
<tr>
<td>-10</td>
<td>50</td>
<td>150</td>
<td>250</td>
</tr>
<tr>
<td>0</td>
<td>60</td>
<td>160</td>
<td>260</td>
</tr>
<tr>
<td>10</td>
<td>70</td>
<td>170</td>
<td>270</td>
</tr>
<tr>
<td>20</td>
<td>80</td>
<td>180</td>
<td>280</td>
</tr>
<tr>
<td>30</td>
<td>90</td>
<td>190</td>
<td>290</td>
</tr>
<tr>
<td>40</td>
<td>100</td>
<td></td>
<td>300</td>
</tr>
</tbody>
</table>

**DIP Switch S2**

<table>
<thead>
<tr>
<th>Output Signal</th>
<th>Lower limit of output range</th>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
<th>Wire Break</th>
<th>Short Circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 20 mA</td>
<td>0 mA</td>
<td>5 %**2</td>
<td>20 mA</td>
<td>21 mA</td>
<td>0 mA</td>
</tr>
<tr>
<td>0 ... 10 mA</td>
<td>0 mA</td>
<td>5 %**2</td>
<td>10 mA</td>
<td>10 mA</td>
<td>0 mA</td>
</tr>
<tr>
<td>0 ... 10 V</td>
<td>0 mA</td>
<td>5 %**2</td>
<td>10 V</td>
<td>10 V</td>
<td>0 V</td>
</tr>
<tr>
<td>0 ... 5 V</td>
<td>0 mA</td>
<td>5 %**2</td>
<td>5 V</td>
<td>5 V</td>
<td>0 V</td>
</tr>
</tbody>
</table>

**Default Setting**

All DIP switches are in “OFF” position for delivery.

- Sensor connection: 2-conductor
- Sensor type: Ni 100
- Temperature coefficient: 6178 ppm/K
- Start temperature: 0 °C
- End temperature: 100 °C
- Output signal: 0 ... 20 mA
- Measuring range underflow: 0 mA
- Measuring range overflow: 20.5 mA
- Wire break: 21 mA
- Short circuit: 0 mA

---

* but not when lower limit of output range = 0V or 0mA
**2 acc. to NAMUR NE 43
**JUMPFLEX® Signal Conditioners**

**KTY Signal Conditioner**

---

**Short description:**
The 857-820 KTY Signal Conditioner records signals from KTY sensors featuring all standard characteristics. On the output side, the KTY temperature signal conditioner converts the temperature signal into a standard analog signal.

**Characteristics:**
- Supports all standard KTY sensors
- Calibrated scale switching
- Clipping capability allows analog standard signal limitation to upper range values
- Safe 3-way isolation with 2.5 kV test voltage to EN 61140

---

### Technical Data

<table>
<thead>
<tr>
<th>Configuration</th>
<th>DIP switch</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input:</strong></td>
<td></td>
</tr>
<tr>
<td>Input signal</td>
<td>KTY sensors</td>
</tr>
<tr>
<td>Max. input signal</td>
<td>± 30 V DC</td>
</tr>
<tr>
<td>Sensor types</td>
<td>KTY81-110, KTY81-120, KTY81-150, KTY82-110, KTY82-120, KTY82-150, KTY81-121, KTY82-121, KTY81-122, KTY82-122, KTY81-210, KTY81-220, KTY81-221, KTY81-222, KTY81-250, KTY82-250, KTY83-110, KTY83-120, KTY83-130, KTY83-121, KTY83-122, KTY83-131, KTY84-130, KTY84-130, KTY84-150, KTY84-151, KTY16, KTY19, ST13, ST20</td>
</tr>
<tr>
<td>Sensor connection</td>
<td>2-conductor</td>
</tr>
<tr>
<td><strong>Output:</strong></td>
<td></td>
</tr>
<tr>
<td>Output signal</td>
<td>0 ... 10 mA, 2 ... 10 mA, 0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V</td>
</tr>
<tr>
<td>Load impedance</td>
<td>≤ 600 Ω (I output), ≥ 2 kΩ (U output)</td>
</tr>
<tr>
<td>Step response</td>
<td>&lt; 50 ms</td>
</tr>
<tr>
<td><strong>Output - Digital</strong></td>
<td></td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>Supply voltage applied</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>500 mA (up to 60 °C), 100 mA (60 °C ... 70 °C)</td>
</tr>
</tbody>
</table>

---

### Technical Data - General specifications:
- Nominal supply voltage $V_s$: 24V DC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: ≤ 40 mA
- Transmission error: ≤ 0.1 % of upper range value

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

### Safety and protection:
- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min.

### Connection and type of mounting:
- Wire connection: CAGE CLAMP® S
  - Cross sections solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
  - Cross sections stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
  - Strip lengths: 9 ... 10 mm / 0.37 in

### Dimensions and weight:
- Dimensions (mm) $W \times H \times L$: 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 50 g

### Standards and approvals:
- Conformity marking: CE
- Shipbuilding: ☞

### Accessories:
- see pages 226 ... 236

---

**Description**

**Item No.** 857-820

**Pack. Unit** 1

**KTY Signal Conditioner**

---

**, **

Configuration via:

- DIP switch

---

### DIP Switch Adjustability

#### DIP Switch S1

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>KTY81-110, KTY81-120, KTY82-110, KTY82-120</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY81-121, KTY82-121</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY81-122, KTY82-122</td>
<td>☐</td>
<td>☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY81-150, KTY82-150</td>
<td>☐</td>
<td></td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>KTY81-210, KTY81-220, KTY82-210, KTY82-220</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>KTY81-221, KTY82-221</td>
<td>☐</td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>KTY81-250, KTY82-250</td>
<td>☐</td>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>KTY83-110, KTY83-120,</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY83-121</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY83-122</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY83-150</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY83-151</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY84-130, KTY84-150</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY84-151</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KTY16, KTY19, ST13, ST20</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### DIP Switch S2

<table>
<thead>
<tr>
<th>Start Temperature °C</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>-55</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-50</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>-40</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>-30</td>
<td>☐</td>
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<td></td>
<td>30</td>
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<td></td>
<td>130</td>
<td></td>
</tr>
<tr>
<td>-20</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td></td>
<td></td>
<td>140</td>
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</tr>
<tr>
<td>-10</td>
<td>☐</td>
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<td>70</td>
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<td></td>
<td>160</td>
<td></td>
<td>260</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Default Setting

- All DIP switches are in „OFF” position for delivery.
- Sensor type: KTY81-110, KTY81-120, KTY82-110, KTY82-120
- Start temperature: 0 °C
- End temperature: 100 °C
- Output signal: 0 ... 20 mA
- Measuring range underflow: 0 mA
- Measuring range overflow: 20.5 mA
- Wire break: 21 mA
- Short circuit: 0 mA
- Digital output: not active

#### DIP Switch S2

<table>
<thead>
<tr>
<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td>-</td>
<td>DO not active</td>
</tr>
<tr>
<td></td>
<td>DO Us+ switching</td>
</tr>
<tr>
<td></td>
<td>DO GND switching</td>
</tr>
</tbody>
</table>

---

* but not when lower limit of output range = 0V or 0mA

*1 acc. to NAMUR NE 43
JUMPFLEX® Signal Conditioners
Potentiometer Position Signal Conditioner

Short description:
The 857-809 Potentiometer Position Signal Conditioner records resistance signals (e.g., from potentiometers), converting them into an analog standard signal. The device is supplied with 24VDC (nominal voltage). It is set via DIP switches or push and slide switch.

Features:
• PC configuration interface
• Calibrated measurement range switching
• Automatic potentiometer identification
• Safe 3-way isolation with 2.5 kV test voltage to EN 61140

Technical Data

Configuration:
DIP switch, push/slide switch, interface configuration software, interface

Input:
Input signal: Potentiometers and resistors *
Input range:
Potentiometer: 100 Ω ... 100 kΩ *
Resistors: 10 Ω - 100 kΩ *
Max. potentiometer supply voltage: 2.5V
Min. measuring range: 100 Ω

Output:
Output signal:
Voltage: 0 – 10 V, 2 – 10 V, 0 – 5 V, 1 – 5 V *
Current: 0 – 20 mA, 4 – 20 mA, 0 – 10 mA, 2 – 10 mA *
Load impedance: ≤ 600 Ω (I output), ≥ 2 kΩ (U output)
Step response: < 32 ms

Output - Digital:
Max. switching voltage: Supply voltage applied
Max. continuous current: 100 mA

General specifications:
Nominal supply voltage Vᵦ: 24V DC
Supply voltage range: 16.8 V ... 31.2 V
Current consumption at 24 V DC: ≤ 40 mA
Transmission error: ≤ 0.1 % of upper range value
Temperature coefficient: ≤ 0.01 %/K

Technical Data

Environmental requirements:
Ambient operating temperature: -25 °C ... +70 °C
Storage temperature: -40 °C ... +85 °C

Safety and protection:
Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min.

Connection and type of mounting:
Wire connection: CAGE CLAMP® S
Cross sections:
Solid: 0.08 mm² – 2.5 mm² / AWG 28 – 14
Fine-stranded: 0.34 mm² – 2.5 mm² / AWG 22 – 14
Strip lengths: 9 – 10 mm / 0.37 in

Dimensions and weight:
Dimensions (mm) W x H x L: 6 x 96 x 94
Height from upper-edge of DIN 35 rail
Weight: 49.2 g

Standards and approvals:
• UL 508
Shipbuilding

Accessories:
See pages 226 ... 236
**DIP Switch Adjustability**

### DIP Switch S1 and S2

<table>
<thead>
<tr>
<th>Input</th>
<th>Start Value</th>
<th>Resistor Ω</th>
<th>End Value</th>
<th>Resistor Ω</th>
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<td>DIP S1</td>
<td></td>
<td>DIP S1</td>
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<tr>
<td>1</td>
<td>2 3 4 5 6</td>
<td>0 0 0 0 0</td>
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<td>80 2 3 4 5</td>
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<td>90 2 3 4 5</td>
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</table>

### DIP Switch S2

<table>
<thead>
<tr>
<th>Factor of Initial Value</th>
<th>Factor of End Value</th>
<th>Output</th>
<th>Output Signal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 3 4 5 6</td>
<td>x1</td>
<td>Current*</td>
<td>0 – 10 V/0 – 20 mA*</td>
</tr>
<tr>
<td>x10</td>
<td>x10</td>
<td>Voltage</td>
<td>2 – 10 V/4 – 20 mA</td>
</tr>
<tr>
<td>x100</td>
<td>x100</td>
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<td>0 – 5 V/0 – 10 mA</td>
</tr>
<tr>
<td>x1000</td>
<td>x1000</td>
<td></td>
<td>1 – 5 V/2 – 10 mA</td>
</tr>
</tbody>
</table>

### Measuring Range

<table>
<thead>
<tr>
<th>9 10</th>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
<th>Wire Break</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper limit of output range(^1) +2.5 %</td>
<td>Lower limit of output range(^1) -5 %</td>
<td>Upper limit of output range(^1) +5 %</td>
</tr>
<tr>
<td></td>
<td>Upper limit of output range +2.5 %</td>
<td>Lower limit of output range</td>
<td>Upper limit of output range +5 %</td>
</tr>
<tr>
<td></td>
<td>Upper limit of output range</td>
<td>Lower limit of output range</td>
<td>Upper limit of output range +5 %</td>
</tr>
</tbody>
</table>

\(^1\)acc. to NAMUR NE 45

### Digital Output DO/Signaling

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

In order to increase the switching current of the DO, the latter may be expanded by a relay. Thanks to the contour uniformity of Series 857, for example, a 857-304 Relay can be snapped in next to it. This output can be quickly and easily expanded to a switching current of 6A by simply using an adjacent jumper (859-402).
Push/Slide Switch Operation:

Operating push/slide switch:

The following switching thresholds (SP1 and SP2) are set via push/slide switch. The switch is located under the front-side transparent cover and can be operated manually.

- Press PSS down until the yellow LED is flashing
- Set potentiometer to the minimum value
- Briefly push PSS to the left
- Red LED flashes briefly
- Set potentiometer to the maximum value
- Briefly push PSS to the right
- Red LED flashes briefly
- Briefly press PSS downward
- The yellow LED stops flashing

PSS = Push/slide switch

---

Transmission function

<table>
<thead>
<tr>
<th>Out</th>
<th>In</th>
</tr>
</thead>
<tbody>
<tr>
<td>max</td>
<td>min</td>
</tr>
</tbody>
</table>

SP = Switching points

Configuration instructions

Press for 1 sec.
Yellow LED flashes

Parameterization mode

Press for 1 sec.
Red LED flashes briefly

Exit parameterization mode

SP1

Press for 3 sec.
Red LED flashes briefly

Exit parameterization mode

SP2

No flashing

Delete set switching points

Press for 1 sec.
Yellow LED flashes

Parameterization mode

Press for 3 sec.
Red LED flashes briefly

Exit parameterization mode

SP1

No flashing

Exit parameterization mode without saving value.

Press for 1 sec.
Yellow LED flashes

Parameterization mode

No flashing

SP = Switching points

---

Contact Information:

ELECTROMATE
Toll Free Phone (877) SERVO98
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

Sold & Serviced By:
Application example:

LED indication
24 V/500 mA

PLC/LED indication
4.2 mA

eg 787.1002
16.8...31.2 V

230 VAC
**JUMPFLEX® Signal Conditioners**

**Frequency Signal Conditioner 0.1 Hz ... 120 kHz**

**Configuration via:**

- DIP switch
- Interface configuration software
- Interface configuration app

---

**Short description:**
The 857-500 Frequency Signal Conditioner collects 0.1 – 120kHz signals from NAMUR, NPN or PNP sensors and converts them into analog standard signals.

**Characteristics:**
- PC configuration interface
- Signal acquisition from NAMUR, NPN or PNP sensors
- Calibrated scale switching
- Safe 3-way isolation with 2.5kV test voltage to EN 61140

---

**Technical Data**

**Input for frequency generators or NPN/PNP transistor outputs with pull-up or pull-down resistor**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35 rail</td>
<td>857-500</td>
<td>1</td>
<td>Unit</td>
</tr>
</tbody>
</table>

**Frequency Signal Conditioner**

**Technical Data**

**Input for frequency generators or NPN/PNP transistor outputs with pull-up or pull-down resistor**

- **Frequency range**: 0.1 Hz ... 120 kHz
- **Signal level**: 1.5 V, 10 V, 20 V (switchable)
- **Max. input signal**: ± DC 31.2 V
- **Pulse length**: ≥ 1 μs
- **Signal form**: Any
- **Coupling**: AC/DC (AC above 10 Hz)(adjustable)
- **Min. measuring span**: 10 Hz
- **Input resistance**: 10 kΩ

**Input for NPN/PNP transistor outputs without pull-up or pull-down resistor or mech. contact (dry contact)**

- **Frequency range**: 0.1 Hz ... 20 kHz
- **Pulse length**: ≥ 25 μs
- **Min. measuring span**: 10 Hz
- **Open-circuit voltage**: 5VDC
- **NPN_Residual voltage**: < 1.5 V
- **PNP Switching voltage**: > 7.5 V + residual voltage U<sub>CE sat</sub>
Technical Data

Output:

<table>
<thead>
<tr>
<th>Output signal</th>
<th>Voltage:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 10 mA, 2 ... 10 mA, 0 ... 20 mA, 4 ... 20 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load impedance</th>
<th>≤ 600 Ω (U output)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>≥ 2 kΩ (I output)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conversion time</th>
<th>Gate time measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(&gt; 400 Hz): &lt; 20 ms</td>
</tr>
<tr>
<td></td>
<td>Pulse time measurement method</td>
</tr>
<tr>
<td></td>
<td>(&lt; 400 Hz): &lt; 200 μs + T_Cycle duration</td>
</tr>
</tbody>
</table>

General Specifications:

Nominal supply voltage \( V_s \): 24 V DC
Supply voltage range: 16.8 V ... 31.2 V
Current consumption at 24 V DC: ≤ 40 mA
Transmission error: ≤ 0.1 % of upper range value
Temperature coefficient: ≤ 0.01 % /K

General Specifications

Environmental requirements:

Ambient operating temperature: -25 °C ... +70 °C
Storage temperature: -40 °C ... +85 °C

Safety and protection:

Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min.

Connection and type of mounting:

Wire connection: CAGE CLAMP® S
Cross sections:
- Solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- Fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
Strip lengths: 9 ... 10 mm / 0.37 in

Dimensions and weight:

Dimensions (mm) W x H x L: 6 x 96 x 94
Height from upper-edge of DIN 35 rail: 38.7 g

Standards and approvals:

Conformity marking: CE
UL 508
Shipbuilding

Accessories: see pages 226 ... 236

Refer to following pages for DIP Switch Table and Pin Assignments.
### DIP Switch Adjustability

**DIP Switch S1**

<table>
<thead>
<tr>
<th>Source Input</th>
<th>Coupling</th>
<th>Operation with disturbed frequency signals for acceptable signal level (applies only to ( f_{IN} ) input)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency generator or NPN/PNP transistor outputs with pull-up or pull-down resistor</td>
<td>AC/DC</td>
<td>( \geq 1.5 \text{ V} ) (&lt; 0.4 \text{ V} )</td>
</tr>
<tr>
<td>( \bullet ) NAMUR</td>
<td>( \bullet ) AC (without DC), see Figure 1</td>
<td>( \geq 10 \text{ V} ) (&lt; 8 \text{ V} )</td>
</tr>
<tr>
<td>( \bullet ) NPN/PNP transistor outputs without pull-up or pull-down resistor input</td>
<td>( \bullet ) Dry Contact</td>
<td>( \geq 20 \text{ V} ) (&lt; 16 \text{ V} )</td>
</tr>
</tbody>
</table>

**DIP Switch S2**

<table>
<thead>
<tr>
<th>Input Start Value</th>
<th>Frequency/Hz</th>
<th>Input End Value</th>
<th>Frequency/Hz</th>
</tr>
</thead>
<tbody>
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<td>6 7 8 9 10</td>
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<td>1 2 3 4 5</td>
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<td>( \bullet )</td>
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<td>( \bullet )</td>
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<tr>
<td>( \bullet )</td>
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<td>20000</td>
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<td>90000</td>
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<tr>
<td>( \bullet )</td>
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<td>( \bullet )</td>
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</tr>
<tr>
<td>( \bullet )</td>
<td>120000</td>
<td>( \bullet )</td>
<td>120000</td>
</tr>
</tbody>
</table>

**Default Setting**

- **Input:**
  - Frequency generator/transistor output with pull-up or pull-down resistor
  - Coupling: AC/DC
  - Signal level: \( \geq 1.5 \text{ V} \)
  - Start value: 100 Hz
  - End value: 1000 Hz
  - Measuring technique: Gate time measurement method

- **Output:**
  - Output signal: Current
  - Start value: 0 mA
  - End value: 20 mA
  - Measuring range underflow: 0 mA
  - Measuring range overflow: 20.5 mA

---

**Measuring Range**

<table>
<thead>
<tr>
<th>Output Signal</th>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \bullet )</td>
<td>Lower limit of output range ( \leq 5 % )</td>
<td>Upper limit of output range ( \leq 2.5 % )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 4 \text{ mA} )</td>
<td>( \leq 2 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 0 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 2 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 2 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>Lower limit of output range</td>
<td>Upper limit of output range</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 0 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 2 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
<tr>
<td>( \bullet )</td>
<td>( \leq 0 \text{ mA} )</td>
<td>( \leq 0 \text{ mA} )</td>
</tr>
</tbody>
</table>

**Only for NAMUR Sensors**

<table>
<thead>
<tr>
<th>Wire Break</th>
<th>Short Circuit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper limit of output range ( \leq 5 % )</td>
<td>Lower limit of output range ( \leq 12.5 % )</td>
</tr>
<tr>
<td>Upper limit of output range ( \leq 5 % )</td>
<td>Lower limit of output range</td>
</tr>
<tr>
<td>Upper limit of output range ( \leq 5 % )</td>
<td>Upper limit of output range ( \leq 5 % )</td>
</tr>
</tbody>
</table>

*acc. to NAMUR NE 43*
857-500, Wiring Material

2-Conductor DC (Mechanical Contact)

2-Conductor DC NAMUR Sensor

NPN Transistor Output

NPN Transistor Output with Pull-Up Resistor

PNP Transistor Output

PNP Transistor Output with Pull-Down Resistor

Frequency Generator

ELECTROMATE
Toll Free Phone (877) SERVO98
Toll Free Fax (877) SERV099
www.electromate.com
sales@electromate.com

Sold & Serviced By:
Interface Configuration Software – DIP Switch Alternative

Software features:
- Automatic module recognition
- Visualization of process values
- Parameterization of the digital switch output (threshold functionality)
- Communication via 750-923 WAGO USB Service Cable or WAGO 750-921 Bluetooth® Adapter

The following devices are already supported:

- **857-401**: Isolation Amplifier
- **857-500**: Frequency Signal Conditioner
- **857-531**: Threshold Value Switch
- **857-550**: Current Signal Conditioner
- **857-552**: Rogowski Signal Conditioner
- **857-801**: Temperature Signal Conditioner for Pt Sensors
- **857-809**: Potiposition Signal Conditioner
- **857-811**: Temperature Signal Conditioner for TC Sensors
- **857-819**: Millivolt Signal Conditioner
- **2857-401**: Universal Isolation Amplifier
- **2857-533**: RTD Threshold Value Switch
- **2857-534**: TC Threshold Value Switch
- **2857-550**: Current Signal Conditioner

Description

<table>
<thead>
<tr>
<th>Interface Configuration Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Download: <a href="http://www.wago.com">www.wago.com</a></td>
</tr>
</tbody>
</table>

- [Image of interface configuration software]
Interface Configuration App

WAGO's Interface Configuration App brings the power of a PC-based configuration software to mobile end-user devices. WAGO's 857 Series signal conditioner's input and output parameters can be configured via finger swipe on an Android-based smartphone or tablet. Furthermore, both configuration data and actual measured values can be easily displayed.

WAGO's 750-921 Bluetooth® Adapter communicates between a smartphone and signal conditioner.

The following devices are already supported:

- 857-401: Isolation Amplifier
- 857-500: Frequency Signal Conditioner
- 857-531: Threshold Value Switch
- 857-550: Current Signal Conditioner
- 857-552: Rogowski Signal Conditioner
- 857-801: Temperature Signal Conditioner for Pt Sensors
- 857-809: Potposition Signal Conditioner
- 857-811: Temperature Signal Conditioner for TC Sensors
- 857-819: Millivolt Signal Conditioner

- 2857-401: Universal Isolation Amplifier
- 2857-533: RTD Threshold Value Switch
- 2857-534: TC Threshold Value Switch
- 2857-550: Current Signal Conditioner
2857-900

Configuration Display

Features:
• Easy mounting on 2857 Series devices
• Automatic module detection
• Capacitive user interface with slider function
• Intuitive menu navigation
• Color backlight for status indication
• Device configuration and process value visualization
• Easy copying of device configuration

Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration Display</td>
<td>2857-900</td>
<td>1</td>
</tr>
</tbody>
</table>

Technical Data

Environmental requirements:
- Ambient operating temperature: -20 °C ... +70 °C
- Storage temperature: -30 °C ... +80 °C

Dimensions and weight:
- Dimensions (mm) W x H x L: 22 x 13 x 59

Standards and approvals:
- Conformity marking: €€
787-2852

Switched-Mode Power Supply in 2857 Series Housing

EPSITRON® Power for JUMPFLEX®

• Primary switch mode power supply in 22.5 mm wide 2857 Series Housing, same profile as 2857 and 857 Series JUMPFLEX® Signal Conditioners
• Both 24 VDC and 0 V output voltage can be easily supplied to adjacent JUMPFLEX® modules via 859-4xx Jumpers
• Plugable picoMAX® connection technology
• Natural convection cooling
• DC OK message as active signal output (24 VDC, 20 mA)
• Integrated redundancy diode enables easy fail-safe power supply via parallel connection of two power supplies
• Approvals for worldwide applications with JUMPFLEX® Modules (pending)

Description

Item No. Pack. Unit
Switched-mode power supply 787-2852 1
in 2857 Series housing, 24 VDC / 1 A

Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-mode power supply</td>
<td>787-2852</td>
<td>1</td>
</tr>
<tr>
<td>in 2857 Series housing, 24 VDC / 1 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Input:**
- Nominal input voltage $V_{in\text{nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 90 ... 370 VDC
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$: < 0.2 A (230 VAC, nominal load), < 0.9 A (90 VAC, nominal load)
- Power factor: > 0.6 (230 VAC, nominal load, acc. to EN 61000-3-2)
- Discharge current: < 1 mA (230 VAC)
- Inrush current: < 30 A (230 VAC, limited)
- Mains failure hold-up time: 120 ms (230 VAC)

**Output:**
- Nominal output voltage $V_{out\text{nom}}$: 24 VDC (SELV)
- Factory preset: 24 VDC
- Nominal load $P_{in\text{nom}}$: 24 W
- Output current $I_o$: 1 ADC
- Deviation, dynamic load change: 10 ... 90 %< 1 %
- Adjustment accuracy: < 2 %
- Residual ripple: < 100 mV (peak-peak) at 20 MHz
- Current limitation: 1.1 x Io typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o > 21.5 V$)

**Efficiency/Power losses:**
- Efficiency: 86 % typ. (230 VAC, nominal load);
  84 % typ. (110 VAC, nominal load)
- Power loss $P_v$: < 1 W (230 VAC, no load);
  4.3 W (230 VAC, nominal load)
- Max. power loss $P_v$: 4.6 W typ. (100 VAC / 24 VDC, 1 A)

**Fuse protection:**
- Internal fuse: 2 AT
- External fuse: Circuit breakers 6 A,
  B or C characteristic

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation)
- Derating: -2 %/K (> +60 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage: 4.2 kV DC (input – output)
- Protection class: II
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: Varistor (input side);
  internal protective circuit,< 29 ... 31 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 60 VDC
- Parallel operation: yes, for 2 devices of the same type
- Series connection: yes, for 2 devices of the same type
- MTBF: > 500,000 h (at 25 °C)
  Calculation acc. to IEC 61709

**Connection and type of mounting:**
- Wire connection: Input/Output/Signaling:
  CAGE CLAMP® 5 (picoMAX® 5.0)
- Cross sections: Input/Output/Signaling:
  solid/fine-stranded: 0.2 ... 2.5 mm² / AWG 24 ... 10
- Strip lengths: Input/Output/Signaling:
  9 ... 10 mm / 0.35 ... 0.39 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 22.5 x 110 x 118
- Length from upper-edge of DIN 35 rail: 118 mm
- Weight: 195 g

**Standards and approvals:**
- Standards/Specifications:
  EN 61000-6-2, EN 61000-6-3,
  EN 60950-1, UL 60950 *, cULus 508 *,
  ANSI/ISA 12.12.01 (Class I Div 2) *,
  ATEX/IEC Ex *, GL * (pending)
Bluetooth® Adapter in Connection with 750 Series
The Bluetooth® Adapter wirelessly connects a notebook computer with Bluetooth® functionality to the service interface of the buscoupler/controller. As a cable substitute, the Bluetooth® Adapter allows communication between two fieldbus controllers, as well as between fieldbus couplers/controllers via WAGO software tools (e.g., WAGO/I/O-CHECK, WAGO/I/O-PRO). Configurable coexistence properties ensure trouble-free operation in the presence of other radio systems.

If required, adapter configuration may be performed via AT commands. The adapter is supplied via both service interface and power supply of coupler/controller or JUMPFLEX® module.

Bluetooth® Adapter in Connection with 857 Series
The Bluetooth® Adapter wirelessly connects a notebook computer with Bluetooth® functionality to the service interface of a configurable 857 Series JUMPFLEX® Module. As a cable substitute, the Bluetooth® Adapter allows communication between JUMPFLEX® Modules and WAGO software tool (WAGOframe) or configuration APP for Android-based end devices.

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bluetooth® Adapter</strong></td>
<td>750-921</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Data transfer rate**: 9600 ... 115000 bps
- **Frequency range**: 2.4 ... 2.4835 GHz (ISM band)
- **Type of communication**: Point-to-point connection
- **Profiles supported**: Serial Port Profile (SPP)
- **Version**: 2.1
- **Radio class**: Class 2
- **RF output power**: max. +4 dBm (class 2)
- **RF input sensitivity**: typ. -82 dBm
- **Antenna**: integrated
- **Ports**: 4-pole service connectors
- **Configuration**: AT commands (e.g. via Hyper Terminal)
- **Function**: Master or Slave
- **LED**: Operating status
- **Operating temperature**: -20 °C ... +60 °C
- **Current consumption (internal)**: 60 mA
- **Security authentication**: PIN code or configurable access list
- **Security encryption**: 128-bit encryption
- **Dimensions (mm) W x H x L**: 15 x 50 x 19
- **Weight**: 7 g
- **Coexistence**: Frequency Hopping Spread Spectrum (FHSS), Adaptive Frequency Hopping (AFH), Adaptive transmission power with configurable upper limit, configurable channel blacklist, supports coexistence optimized inquiry (transmission time ≤ 0.1 s, transmission cycle ≥ 2.9 s)
The WAGO USB Communication Cable connects a PC (notebook) to either the service interface of the 857 Series Signal Conditioners and Relay Modules (JUMPFLEX), or to WAGO-I/O-SYSTEM buscouplers/controllers.

**Notice:**
Using the WAGO 759-923 USB Communication Cable in combination with select programmable fieldbus controllers requires the specific firmware versions listed below (or greater): 750-841 as from firmware version 12750-872/0020-0000 as from firmware version 2

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAGO USB Communication Cable, length 2.5 m</td>
<td>750-923</td>
<td>1</td>
</tr>
<tr>
<td>WAGO USB Communication Cable, length 5 m</td>
<td>750-923/000-001</td>
<td>1</td>
</tr>
</tbody>
</table>

**USB specification** 2.0 compatible/full-speed device

**Operating system**
- Microsoft® Windows® 2000,
- Microsoft® Windows® XP Professional,
- Microsoft® Windows® Vista®
- Microsoft® Windows® 7

**Operating temperature** -25 °C ... +70 °C

**Interface USB** Type A/m

**Length** 2.5 m (750-923) 5 m (750-923/000-001)

**Connector dimensions** (WxHxD) 15 x 50 x 19

**Test voltage** 2.5 kV, 50 Hz, 1 min.

**EMC:**
- immunity to interference acc. to EN 61000-4-3, EN 61000-4-6
- emission of interference acc. to EN 55022

**Approvals**
- Conformity marking CE
Supply and Through Module

Short description: The 857-979 Supply and Through Module transmits electrically isolated signals (e.g., in conjunction with the 857-980 Interface Adapter for analog signals). When used as a supply module, it transmits the power from the clamping points to the adjacent JUMPFLEX® modules via push-in type jumper bars.

Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply and Through Module</td>
<td>857-979</td>
<td>23</td>
</tr>
</tbody>
</table>

General specifications:
- Max. voltage 33 V AC/DC
- Current carrying capacity 8 A
- Contact resistance < 10 mΩ

Environmental Requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

Connection and type of mounting:
- Wire connection
- Cross sections: solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14, fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip length: 9 ... 10 mm / 0.37 in

Dimensions and weight:
- Dimensions (mm) W x H x L: 6 x 96 x 94
- Height from upper edge of DIN 35 rail
- Weight 27.5 g

Standards and approvals:
- Conformity marking: CE
- UL 308
- ANSI/ISA 12.12.01: pending
- Shipbuilding: pending
Application example:

Power supply for 8 JUMPFLEX® modules with plugged interface adapter
• WAGO interface adapter, 857-980
• WAGO Interface Cable, 706-100/1602-200, 16-pole socket/open-ended
• Push-in type jumper bar, 9-way, 859-409

857-979
## Interface Modules for System Wiring
### Interface Adapters, 857 Series

**8-channel adapter**
- with 16-pin ribbon cable connector
- Analog

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-channel adapter for system wiring</td>
<td>857-980</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data
- **Connection type, signal level**: 16-pin ribbon cable connector acc. to DIN 41651
- **Performance level**: 3
- **Contact resistance**: ≤ 20mΩ
- **Current carrying capacity**: 1A
- **Test voltage**: 500 V / 50 Hz / 1 min.
- **Overvoltage category**: III
- **Degree of pollution**: 2
WAGO Interface Cables
for Interface Adapters, 857 Series

The 16-pin WAGO Interface Cables transmit signals one-to-one from the 16-pole connector and are available in 1-, 2- and 3-meter lengths. Signal transmission from the 857-980 Interface Adapter is also possible.

Suitable for system wiring when combined with the Interface Adapter (Item No. 857-980)

![Image of WAGO Interface Cables]

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAGO Interface Cable 16/16, 1m long</td>
<td>706-753/301-100</td>
<td>1</td>
</tr>
<tr>
<td>WAGO Interface Cable 16/16, 2m long</td>
<td>706-753/301-200</td>
<td>1</td>
</tr>
<tr>
<td>WAGO Interface Cable 16/16, 3m long</td>
<td>706-753/301-300</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

<table>
<thead>
<tr>
<th>Ports</th>
<th>2 x 16-pole connector acc. to DIN 41651</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire cross-section</td>
<td>0.14 mm² LiYY</td>
</tr>
<tr>
<td>Color coding</td>
<td>acc. to DIN VDE 47100</td>
</tr>
<tr>
<td>Current per channel</td>
<td>max. 1 A</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>25 °C ... +70 °C</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Length</td>
<td>1 m (706-753/301-100)</td>
</tr>
<tr>
<td>Length</td>
<td>2 m (706-753/301-200)</td>
</tr>
<tr>
<td>Length</td>
<td>3 m (706-753/301-300)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAGO Interface Cable, 16-pole/one free cable end, length 2 m</td>
<td>706-100/1602-200</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

<table>
<thead>
<tr>
<th>Ports</th>
<th>16-pole HE 10 connector/one free cable end</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire cross-section</td>
<td>0.14 mm² LiYY</td>
</tr>
<tr>
<td>Color coding</td>
<td>acc. to DIN VDE 47100</td>
</tr>
<tr>
<td>Current per channel</td>
<td>max. 1 A</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>25 °C ... +70 °C</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Length</td>
<td>2 m</td>
</tr>
</tbody>
</table>

**Color Coding**

- White (1)
- Brown (2)
- Green (3)
- Yellow (4)
- Grey (5)
- Pink (6)
- Blue (7)
- Red (8)
- Black (9)
- Violet (10)
- Grey/Pink (11)
- Red/Blue (12)
- White/Green (13)
- Brown/Green (14)
- White/Yellow (15)
- Yellow/Brown (16)
## Accessories, 857 Series

### Push-in type jumper bar

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push-in type jumper bars, light gray, insulated, 18 A</td>
<td>859-402</td>
<td>200 (8x25)</td>
</tr>
<tr>
<td>2-way</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-way</td>
<td>859-403</td>
<td>200 (8x25)</td>
</tr>
<tr>
<td>4-way</td>
<td>859-404</td>
<td>200 (8x25)</td>
</tr>
<tr>
<td>5-way</td>
<td>859-405</td>
<td>200 (8x25)</td>
</tr>
<tr>
<td>6-way</td>
<td>859-406</td>
<td>100 (4x25)</td>
</tr>
<tr>
<td>7-way</td>
<td>859-407</td>
<td>100 (4x25)</td>
</tr>
<tr>
<td>8-way</td>
<td>859-408</td>
<td>100 (4x25)</td>
</tr>
<tr>
<td>9-way</td>
<td>859-409</td>
<td>100 (4x25)</td>
</tr>
<tr>
<td>10-way</td>
<td>859-410</td>
<td>100 (4x25)</td>
</tr>
</tbody>
</table>

Item no. suffix for colored push-in type jumper bars:
- yellow: ... /000-029
- red: ... /000-005
- blue: ... /000-006

### Comb-style jumper bar

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comb-style jumper bar, insulated</td>
<td>281-482</td>
<td>100</td>
</tr>
</tbody>
</table>

### WMB Multi marking system

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMB Multi marking system plain</td>
<td>793-501</td>
<td>5 cards</td>
</tr>
</tbody>
</table>

**Marking**

- 1 ... 10 (10x) 793-502 5 cards
- 11 ... 20 (10x) 793-503 5 cards
- 21 ... 30 (10x) 793-504 5 cards
- 31 ... 40 (10x) 793-505 5 cards
- 41 ... 50 (10x) 793-506 5 cards
- 1 ... 50 (2x) 793-566 5 cards

10 strips with 10 markers, white with black printing

### Operating tool

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating tool, with partially insulated shaft</td>
<td>210-720</td>
<td>1</td>
</tr>
<tr>
<td>Type 2, blade [3.5 x 0.5] mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAGO USB service cable</td>
<td>750-923</td>
<td>1</td>
</tr>
<tr>
<td>WAGO Bluetooth® Adapter</td>
<td>750-921</td>
<td>1</td>
</tr>
</tbody>
</table>

**Configuration**

- WAGO Bluetooth® Adapter
- WAGO USB service cable

---

Accessories, 857 Series

**Description**

- Push-in type jumper bar
- Commoning
- Comb-style jumper bar

**Pack. Unit**

- 200 (8x25)
- 100 (4x25)

**Marking**

- 5 cards

**Configuration**

- WAGO Bluetooth® Adapter
- WAGO USB service cable
Current and Energy Measurement Technology

**JUMPFLEX® Current and Voltage Signal Conditioners**
- 2857 Series
- 857 Series

**Current Transformers**
- Plug-In Current Transformers with CAGE CLAMP® Connector, 855 Series
- Plug-In Current Transformers with picoMAX® Pluggable Connector, 855 Series
- Split-Core Current Transformers, 855 Series

**Rogowski Coils and Current Signal Conditioners**
- Rogowski Coils, 855 Series
- Current Signal Conditioners, 789 Series

**Current Sensor Modules**
- Current Sensor Modules, 789 Series
- Accessories for 789 Series Current Sensor Modules
Short description:
The 2857-550 Current Signal Conditioner measures AC/DC currents up to 100 A, while converting the measured current into an analog standard signal at the output.

Features:
- Both digital signal output and relay with changeover contact react to configured measuring range limits (switching ON/OFF delay and threshold value switch function configurable with up to two threshold values).
- Clipping capability provides analog signal limitation to output end values.
- Adjustable software filter
- Input/Output response simulation via configuration display
- Safe 3-way isolation with 4 kV test voltage acc. to EN 61140

Description
Item No. Pack. Unit
JUMPFLEX® Signal Conditioner, for DIN 35 rail 2857-550 1
Current Signal Conditioner AC/DC 100 A

Technical Data

<table>
<thead>
<tr>
<th>Configuration</th>
<th>DIP switch, interface configuration software, interface configuration app, configuration display</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Input</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input signal</td>
<td>500 mA ... 100 A (AC) / -100 A ... 100 A (DC)</td>
</tr>
<tr>
<td>Response threshold</td>
<td>250 mA (AC) / 500 mA (DC)</td>
</tr>
<tr>
<td>Frequency range</td>
<td>15 Hz ... 1000 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Output signal</td>
<td>Current: ± 10 mA; 0 ... 10 mA; 2 ... 10 mA; ± 20 mA; 0 ... 20 mA; 4 ... 20 mA</td>
</tr>
<tr>
<td>Voltage</td>
<td>± 5 V; 0 ... 5 V; 1 ... 5 V; ± 10 V; 0 ... 10 V; 2 ... 10 V</td>
</tr>
<tr>
<td>Overcurrent</td>
<td>0% or +5% (e.g., 10.5 V / 24 mA)</td>
</tr>
<tr>
<td>Measuring range overflow/underflow</td>
<td>0% or +2.5%</td>
</tr>
<tr>
<td>Load impedance</td>
<td>Current: ≤ 600 Ω; Voltage: ≥ 1 kΩ</td>
</tr>
<tr>
<td>Measuring procedure</td>
<td>True RMS measurement (TRMS) or Arithmetic mean value</td>
</tr>
<tr>
<td>Output – Digital:</td>
<td>Supply voltage applied ±0.3 V</td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>100 mA (no internal restriction)</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>100 mA</td>
</tr>
<tr>
<td>Output – Relay:</td>
<td>Contact type: 1 changeover contact (1 v)</td>
</tr>
<tr>
<td>Contact material</td>
<td>AgNi (gold-plated)</td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>250 VAC</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>6 A (up to 60 °C), 3 A (60 °C ... 70 °C)</td>
</tr>
<tr>
<td>Dielectric strength span contact (AC, 1 min)</td>
<td>1 kV</td>
</tr>
<tr>
<td>Pull-in/pull-out/bounce time typ.</td>
<td>8 ms / 4 ms / 8 ms</td>
</tr>
</tbody>
</table>

General specifications:
- Nominal supply voltage $V_s$: 24 VDC
- Supply voltage range: 16.8 V ... 31.2 V (30% ... 30%)
- Current consumption at 24 VDC: ≤ 50 mA ($I_{LP}$)
- Conformity marking: CE
- Standards: DIN EN 61010-1:2010;
- Standards/Specifications: DIN EN 60664-1:2008; Safe isolation
- Standards/Specifications acc. to DIN EN 61140 2002;
- IEC 61000-6-2; IEC 61000-6-4
- Accessories: see pages 226 ... 236

Environmental requirements:
- Ambient operating temperature: -40 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

Safety and protection:
- Test voltage (input/output/supply): 25 kV AC, 50 Hz, 1 min.
- Test voltage (measuring circuit – output): 4 kV AC, 50 Hz, 1 min.

Connection and type of mounting:
- Wire connection: CAGE CLAMP® 5 (picoMAX® 5.0)
- Cross sections: solid/line-stranded: 0.2 ... 2.5 mm² / AWG 24 ... 12
- Strip length: 9 ... 10 mm / 0.35 ... 0.39 in
- Power cable feed-through: Ø 9.5 mm

Dimensions and weight:
- Dimensions (mm) W x H x L: 225 x 107 x 105
- Height from upper-edge of DIN 35 rail: 106 g

Standards and approvals:
- Conformity marking: CE
- Standards/Specifications: DIN EN 61010-1:2010;
- Standards/Specifications: DIN EN 60664-1:2008; Safe isolation
- Standards/Specifications acc. to DIN EN 61140 2002;
- IEC 61000-6-2; IEC 61000-6-4
- Accessories: see pages 226 ... 236
### DIP Switch Adjustability

**DIP Switch S1**

<table>
<thead>
<tr>
<th>Measuring Method</th>
<th>Filter</th>
<th>Analog Output</th>
<th>Output Signal (Bipolar for Arithmetic Mean Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>True RMS</td>
<td>inactive</td>
<td></td>
<td>$\pm 0 \ldots 20$ mA</td>
</tr>
<tr>
<td>Arithmetic mean value</td>
<td>active</td>
<td>inverted</td>
<td>$4 \ldots 20$ mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measuring Range</th>
<th>Measuring Range</th>
<th>Overcurrent (Input Signal - End Value +20%)</th>
<th>Digital Output (DO)/Relay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underflow</td>
<td>Overflow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower measuring range -5%</td>
<td>Upper measuring range +2.5%</td>
<td>Upper measuring range +5%</td>
<td>Off</td>
</tr>
<tr>
<td>● Lower measuring range</td>
<td>Upper measuring range +2.5%</td>
<td>Upper measuring range +5%</td>
<td>● DO US+ switching – relay pulls in</td>
</tr>
<tr>
<td>●● Lower measuring range -5%</td>
<td>Upper measuring range</td>
<td>Lower measuring range</td>
<td>●● DO GND switching – relay drops out</td>
</tr>
<tr>
<td>●●● Lower measuring range -5%</td>
<td>Upper measuring range +5%</td>
<td>Upper measuring range</td>
<td>●●● Off</td>
</tr>
</tbody>
</table>

**DIP Switch S2**

<table>
<thead>
<tr>
<th>Lower Value</th>
<th>Upper Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td>5 6 7 8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A / % (RMS)</th>
<th>A / % (arithmetic mean value)</th>
<th>Software configuration [0]</th>
<th>Software configuration [100]</th>
<th>Software configuration [100]</th>
</tr>
</thead>
<tbody>
<tr>
<td>● 0</td>
<td>● -100</td>
<td>● 100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● 5</td>
<td>● 75</td>
<td>● 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 8</td>
<td>● -50</td>
<td>●● 70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 10</td>
<td>● -25</td>
<td>●● 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 12</td>
<td>● -10</td>
<td>●● 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 14</td>
<td>● 0</td>
<td>●● 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 16</td>
<td>● 5</td>
<td>●●● 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 18</td>
<td>● 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 20</td>
<td>● 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 25</td>
<td>● 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 30</td>
<td>● 25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 35</td>
<td>● 30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●● 40</td>
<td>● 35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 45</td>
<td>●● 40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>●●● 50</td>
<td>●●● 50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**857-550**

**JUMPFLEX® Signal Conditioners**

Current Signal Conditioner AC/DC 0 ... 1 A, 0 ... 5 A

---

**Short description:**
The Current Signal Conditioner measures both 0–1 A and 0–5 A AC/DC currents, while converting the input signal to a standard analog signal at the output.

**Features:**
- PC configuration interface
- True RMS measurement or arithmetic mean value
- Digital switching output (configurable switching thresholds)
- Switchable filter function
- Switching between measuring ranges is calibrated
- Safe 3-way isolation with 2.5 kV test voltage acc. to EN 61140
- Extremely fast response times
- Measuring range overflow indication

---

### Technical Data

**Configuration:**
- DIP switch, interface configuration software, interface configuration app

**Input:**
- Input signal: 0 ... 1 A AC/DC, 0 ... 5 A AC/DC *
- Input resistance: 10 mΩ (5 A), 47 mΩ (1 A)
- Frequency range: 16 Hz ... 400 Hz
- Response threshold: < 0.5 % (of measuring range nominal)
- Current carrying capacity: 2 x I_n (continuous)

**Output:**
- Output signal:
  - Voltage: 0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V *
  - Current: 0 ... 10 mA, 2 ... 10 mA, 0 ... 20 mA, 4 ... 20 mA *
- Load impedance: ≤ 400 Ω (I output) **
- Filter (T10-90): 260 ms (DC), 600 ms (AC 50 Hz)

**General specifications:**
- Nominal supply voltage: 24 VDC
- Supply voltage range: 16.8 V ... 31.2 V
- Current consumption at 24 V DC: ≤ 40 mA
- Measuring procedure: Arithmetic mean value *
- Measuring procedure: True RMS measurement (TRMS)
- Response time: 1.5 ms * + signal cycle duration
- Max. response time: 60 ms
- Min. measuring span: 2 mA ... 1 A, 4 mA ... 5 A

---

**Technical Data**

- Transmission error: ≤ 0.1 % typ. (≤ 0.4 % max.)
- Temperature coefficient: ≤ 0.01 % /K
- Linearity error: < 0.5 % (of measuring range nominal)

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C (at nominal current)
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage: 2.5 kV AC, 50 Hz, 1 min.
- Wire connection: CAGE CLAMP® S
- 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
- 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

---

**Accessories:**
- see pages 226 ... 236

---

**Description**

**Item No.** | **Pack. Unit**
--- | ---
JUMPFLEX® Signal Conditioner, for DIN 35 rail | 857-550
Current Signal Conditioner | 1

---

**Configuration via:**

DIP switch, Interface configuration software, Interface configuration app
DIP Switch Adjustability

DIP Switch S1

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>Measuring Method</th>
<th>Filter</th>
<th>Output Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 A</td>
<td>Mean square value</td>
<td>off</td>
<td>0 ... 20 mA</td>
</tr>
<tr>
<td>● 1 A</td>
<td>Arithmetic mean value</td>
<td>● active</td>
<td>● 4 ... 20 mA</td>
</tr>
</tbody>
</table>

Filter

The filter function allows a low-pass filter to be switched on in order to mask or “smooth out” oscillating measured values (e.g., during trailing edge flows).

DIP Switch S1

<table>
<thead>
<tr>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
<th>Overcurrent (Input Signal - End Value + 20%)</th>
<th>Digit Output DO Signaling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower limit of measuring range ( \pm 5 % )</td>
<td>Upper limit of measuring range ( \pm 2.5 % )</td>
<td>Upper limit of measuring range ( \pm 5 % )</td>
<td>DO not active</td>
</tr>
<tr>
<td>● Lower limit of measuring range</td>
<td>Upper limit of measuring range ( \pm 2.5 % )</td>
<td>Upper limit of measuring range ( \pm 5 % )</td>
<td>● DO (+) switching</td>
</tr>
<tr>
<td>● Lower limit of measuring range</td>
<td>Upper limit of measuring range</td>
<td>Lower limit of measuring range</td>
<td>● ● DO GND switching</td>
</tr>
<tr>
<td>● ● Lower limit of measuring range</td>
<td>Upper limit of measuring range</td>
<td>Upper limit of measuring range</td>
<td>● ● ●</td>
</tr>
</tbody>
</table>

(acc. to NAMUR NE 43)

Digital Output DO/Signaling

The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

In order to increase the switching current of the DO, the latter may be expanded by a relay. Thanks to the contour uniformity of Series 857, for example, a 857-304 Relay can be snapped in next to it. This output can be quickly and easily expanded to a switching current of 6 A by simply using an adjacent jumper (859-402).

Default Setting

All DIP switches are in “OFF” position for delivery.

Input

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>Measuring Method</th>
<th>Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 5 A</td>
<td>Mean square value</td>
<td>not active</td>
</tr>
</tbody>
</table>

Output

<table>
<thead>
<tr>
<th>Output Signal</th>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
<th>Overcurrent</th>
<th>Digital Output DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 20 mA</td>
<td>0 mA</td>
<td>20.5 mA</td>
<td>21 mA</td>
<td>not active</td>
</tr>
</tbody>
</table>

Application example:

- Current Transformer 250 A/1 A
- DO/LED indication 24 V/500 mA
- PLC/LED indication 6.8 ... 31 V
- 230 VAC
- e.g. 787-1002
Short description:
The Rogowski Signal Conditioner records RMS values from alternating currents via a Rogowski coil, converting the input signal into a standard analog signal on the output side.

Features:
- PC configuration interface
- Supports different types of Rogowski coils
- Digital switching output (configurable switching thresholds)
- True RMS measurement (TRMS)
- Configurable output signal
- Configuration via DIP switch
- Safe 3-way isolation with 2.5 kV test voltage acc. to EN 61140
- No current bar interruption during installation
- Measuring range overflow indication

Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>JUMPFLEX® Signal Conditioner, for DIN 35 rail</td>
<td>857-552</td>
<td>1 Unit</td>
</tr>
</tbody>
</table>

Rogowski Signal Conditioner

Technical Data

General specifications:
- Linearity error ≤ 0.1 %
- Temperature coefficient ≤ 0.01 \%/K
- Measurement error < 1 %
- Line length < 3 m (to the Rogowski coil)

Environmental requirements:
- Ambient operating temperature -25 °C ... +70 °C (at rated current)
- Storage temperature -40 °C ... +85 °C

Safety and protection:
- Test voltage
  - (input/output/supply) 2.5 kV AC, 50 Hz, 1 min.
- Connection and type of mounting:
  - Wire connection CAGE CLAMP®
  - Cross sections solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
  - fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
  - Strip lengths 9 ... 10 mm / 0.37 in

Dimensions and weight:
- Dimensions (mm) W x H x L 6 x 96 x 94
- Height from upper-edge of DIN 35 rail
- Weight 36.2 g

Standards and approvals:
- Conformity marking CE
- Shipbuilding 

Accessories
- see pages 226 ... 236

Rogowski Coils see Section 4

( * Additional setting options via PC configuration software or smartphone app)
DIP Switch Adjustability

DIP Switch S1

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>RC Configuration Input</th>
<th>Filter</th>
<th>Output Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4  5  6</td>
</tr>
<tr>
<td>RC1 = RT500 from LEM</td>
<td>RC2 = RT2000 from LEM</td>
<td>off</td>
<td>0 ... 20 mA</td>
</tr>
<tr>
<td>RC2</td>
<td>RC2 = 100 mV eff. =&gt; 1 kA</td>
<td>active</td>
<td>4 ... 20 mA</td>
</tr>
</tbody>
</table>

Filter
The filter function allows a low-pass filter to be switched on in order to mask or “smooth out” oscillating measured values (e.g., during trailing edge flows).

DIP Switch S1

<table>
<thead>
<tr>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
<th>Overcurrent (Input Signal - End Value + 20%)</th>
<th>Digital Output DO Signaling</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>8</td>
<td>9  10</td>
<td></td>
</tr>
<tr>
<td>lower limit of measuring range +5 %</td>
<td>Upper limit of measuring range +2.5 %</td>
<td>Upper limit of measuring range +5 %</td>
<td>DO not active</td>
</tr>
</tbody>
</table>
| ● lower limit of measuring range | Upper limit of measuring range +2.5 % | Upper limit of measuring range +5 % | ● DO UL switching  
| ● lower limit of measuring range | Upper limit of measuring range | Lower limit of measuring range | ● ● DO GND switching |
| ● ● lower limit of measuring range | Upper limit of measuring range | Upper limit of measuring range | ● ● ● DO U switching |

Digital Output DO/Signaling
The digital output (DO) signals error messages and can be configured as follows: 24 V → 0 V/0 V → 24 V.

In order to increase the switching current of the DO, the latter may be expanded by a relay. Thanks to the contour uniformity of Series 857, for example, a 857-304 Relay can be snapped in next to it. This output can be quickly and easily expanded to a switching current of 6A by simply using an adjacent jumper (859-402).

Default Setting
All DIP switches are in “OFF” position for delivery.

Input
- Input Signal: RC1 500 A
- Measuring Method: Mean square value
- Filter: not active

Output
- Output Signal: 0 ... 20 mA
- Measuring Range Underflow: 0 mA
- Measuring Range Overflow: 20.5 mA
- Overcurrent: 21 mA
- Digital Output DO: not active

Application example:
**JUMPFLEX® Signal Conditioners**

Millivolt Signal Conditioner from -100 mV ... +100 mV and 0 mV ... 1000 mV

**Configuration via:**
- DIP switch
- Interface configuration software
- Interface configuration app

**Technical Data**

<table>
<thead>
<tr>
<th>Configuration</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>DIP switch, interface configuration software, interface configuration app</td>
<td></td>
</tr>
<tr>
<td>Input</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input signal</td>
<td>-100 mV ... +100 mV, 0 mV ... 200 mV, 0 mV ... 1000 mV * (in 100 mV increments)</td>
<td></td>
</tr>
<tr>
<td>Input resistance</td>
<td>&gt; 1MΩ</td>
<td></td>
</tr>
<tr>
<td>Max. input signal</td>
<td>31.2V</td>
<td></td>
</tr>
<tr>
<td>Output</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output signal</td>
<td>0 ... 10 mA, 2 ... 10 mA, 0 ... 20 mA, 4 ... 20 mA, 0 ... 5 V, 1 ... 5 V, 0 ... 10 V, 2 ... 10 V *</td>
<td></td>
</tr>
<tr>
<td>Load impedance</td>
<td>≤ 600 Ω (I output)</td>
<td></td>
</tr>
<tr>
<td>Step response</td>
<td>50ms</td>
<td></td>
</tr>
<tr>
<td>General specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal supply voltage</td>
<td>24V DC</td>
<td></td>
</tr>
<tr>
<td>Supply voltage range</td>
<td>16.8 V ... 31.2 V</td>
<td></td>
</tr>
<tr>
<td>Current consumption at</td>
<td>≤ 40 mA</td>
<td></td>
</tr>
<tr>
<td>Min. measuring span</td>
<td>10 mV (configurable)</td>
<td></td>
</tr>
<tr>
<td>Transmission error</td>
<td>≤ 0.1 % of upper range value</td>
<td></td>
</tr>
<tr>
<td>Temperature coefficient</td>
<td>≤ 0.01 %/K</td>
<td></td>
</tr>
</tbody>
</table>

**Description**

- JUMPFLEX® Signal Conditioner, for DIN 35 rail
- Item No.: 857-819
- Pack.: 1

**Pack.**

- Unit: Millivolt Signal Conditioner with Millivolt input as well as Current and Voltage Output

**Technical Data**

<table>
<thead>
<tr>
<th>Environmental requirements:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +70 °C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +85 °C</td>
<td></td>
</tr>
</tbody>
</table>

**Safety and protection:**

- Test voltage (input/output/supply): 2.5 kV AC, 50 Hz, 1 min

**Connection and type of mounting:**

- Wire connection: CAGE CLAMP® S
- Cross sections: solid: 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
  - fine-stranded: 0.34 mm² ... 2.5 mm² / AWG 22 ... 14
- Strip lengths: 9 ... 10 mm / 0.37 in

**Dimensions and weight:**

- Dimensions (mm) W x H x L: 6 x 96 x 94
- Height from upper-edge of DIN 35 rail: 94 mm / 3.68 in
- Weight: 50 g

**Standards and approvals:**

- Conformity marking: CE
- Shipbuilding: @

**Accessories:**

- see pages 226 ... 236

( * Additional setting options via PC configuration software or smartphone app)
### DIP Switch Adjustability

**857-819**

<table>
<thead>
<tr>
<th>Input Start value</th>
<th>Output signal</th>
<th>Measuring Range Underflow</th>
<th>Measuring Range Overflow</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6  7  8  9  10</td>
<td>Lower limit of output range - 5 % *</td>
<td>Upper limit of output range + 2.5 % *</td>
</tr>
<tr>
<td>0…100 mV</td>
<td>0…20 mA</td>
<td>(0 mA / 1.9 mA / 3.8 mA / 0 V / 0.95 V / 1.9 V)</td>
<td>(10.25 mA / 20.5 mA / 5.125 V / 10.25 V)</td>
</tr>
<tr>
<td>2.5 V</td>
<td>20 mA</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>0…10 mA</td>
<td>20 mA</td>
<td>(0 mA / 2 mA / 4 mA / 0 V / 1 V / 2 V)</td>
<td>(10.25 mA / 20.5 mA / 5.125 V / 10.25 V)</td>
</tr>
<tr>
<td>0…20 mA</td>
<td>10 mA</td>
<td>(0 mA / 2 mA / 4 mA / 0 V / 1 V / 2 V)</td>
<td>(10 mA / 20 mA / 5 V / 10 V)</td>
</tr>
<tr>
<td>0…5 V</td>
<td>5 V</td>
<td>(0 mA / 2 mA / 4 mA / 0 V / 1 V / 2 V)</td>
<td>(10 mA / 20 mA / 5 V / 10 V)</td>
</tr>
<tr>
<td>0…10 V</td>
<td>10 V</td>
<td>(0 mA / 2 mA / 4 mA / 0 V / 1 V / 2 V)</td>
<td>(10 mA / 20 mA / 5 V / 10 V)</td>
</tr>
</tbody>
</table>

**Default Settings**

All DIP switches are in "OFF" position for delivery.

This is the position used to parameterize the device via PC configuration software.

**Input Signal**: 0…100 mV

**Output Signal**: 0…20 mA

**Measuring Range Underflow**: 0 mA

**Measuring Range Overflow**: 20.5 mA
Plug-In Current Transformers with CAGE CLAMP® connector

<table>
<thead>
<tr>
<th>Description</th>
<th>$I_{pN}$</th>
<th>$I_{sN}$</th>
<th>$S_N$</th>
<th>G</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>$I_{pN}$</th>
<th>$I_{sN}$</th>
<th>$S_N$</th>
<th>G</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plugin current transformer</td>
<td>50 A</td>
<td>1 A</td>
<td>1.25</td>
<td>3</td>
<td>855-301/050-103</td>
<td>1</td>
<td>50 A</td>
<td>1 A</td>
<td>1.25</td>
<td>3</td>
<td>855-305/050-103</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>60 A</td>
<td>1 A</td>
<td>1.25</td>
<td>1</td>
<td>855-301/060-101</td>
<td>1</td>
<td>60 A</td>
<td>1 A</td>
<td>1.25</td>
<td>1</td>
<td>855-305/060-101</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>75 A</td>
<td>1 A</td>
<td>2.5VA</td>
<td>1</td>
<td>855-301/075-201</td>
<td>1</td>
<td>75 A</td>
<td>1 A</td>
<td>2.5VA</td>
<td>1</td>
<td>855-305/075-201</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100 A</td>
<td>1 A</td>
<td>2.5VA</td>
<td>1</td>
<td>855-301/100-201</td>
<td>1</td>
<td>100 A</td>
<td>1 A</td>
<td>2.5VA</td>
<td>1</td>
<td>855-305/100-201</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>150 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-301/150-501</td>
<td>1</td>
<td>150 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-305/150-501</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>200 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-301/200-501</td>
<td>1</td>
<td>200 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-305/200-501</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>250 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-301/250-501</td>
<td>1</td>
<td>250 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-305/250-501</td>
<td>1</td>
</tr>
<tr>
<td>$I_{pN}$ = Primary rated current</td>
<td>400 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-301/400-1001</td>
<td>1</td>
<td>400 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-305/400-1001</td>
<td>1</td>
</tr>
<tr>
<td>$I_{sN}$ = Secondary rated current</td>
<td>600 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-301/600-1001</td>
<td>1</td>
<td>600 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-305/600-1001</td>
<td>1</td>
</tr>
<tr>
<td>$S_N$ = Rated power</td>
<td>400 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-401/400-501</td>
<td>1</td>
<td>400 A</td>
<td>1 A</td>
<td>5VA</td>
<td>1</td>
<td>855-405/400-501</td>
<td>1</td>
</tr>
<tr>
<td>$G$ = Accuracy class</td>
<td>1000 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-501/1000-1001</td>
<td>1</td>
<td>1000 A</td>
<td>1 A</td>
<td>10VA</td>
<td>1</td>
<td>855-505/1000-1001</td>
<td>1</td>
</tr>
</tbody>
</table>

Technical Data

- Input:
  - Rated continuous thermal current $I_{cth}$: $1.2 \times I_{pN}$
  - Rated short-time thermal current $I_{sth}$: $60 \times I_{pN}$ (max 100 kA), 1 s
  - Max. operating voltage $V_{in}$: 1.2 kV
  - Rated frequency: 50 Hz ... 60 Hz
  - Overcurrent limiting factor: FS5 or FS10 (type-dependent, see type plate inscription)

- Environmental requirements:
  - Ambient operating temperature: $-5 \, ^\circ \text{C} \ldots +50 \, ^\circ \text{C}$
  - Storage temperature: $-25 \, ^\circ \text{C} \ldots +70 \, ^\circ \text{C}$
  - Max. operating altitude: 1000 m

- Safety and protection:
  - Test voltage: $6 \, \text{kVrms AC} / 50 \, \text{Hz} / 1 \, \text{min}$
  - Insulation class: E

- Connection and type of mounting:
  - Connection technology (1): CAGE CLAMP®
  - Cross sections: $0.08 \, \text{mm}^2 \ldots 4 \, \text{mm}^2 / \text{AWG 28} \ldots 12$
  - Strip lengths: 9 ... 10 mm / 0.37 in

- Standards and approvals:
  - Conformity marking: CE
  - Recognized Components: E356480

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier rail adapter for plug-in current transformers</td>
<td>855-9900</td>
<td>1</td>
</tr>
<tr>
<td>Quick-mount kit</td>
<td>855-9910</td>
<td>1</td>
</tr>
<tr>
<td>Operating tool, with partially insulated shaft, type 2, blade (3.5 x 0.5) mm</td>
<td>210-720</td>
<td>1</td>
</tr>
<tr>
<td>Connector assembly for current transformer</td>
<td>2007-8873</td>
<td>1</td>
</tr>
</tbody>
</table>
Connection / Connection Assignment

Implementation of the primary winding is designated with “K-P1” and “L-P2.” Connections for the secondary winding are designated with the corresponding lower case letters “k-S1” and “I-S2.”

Dimensions:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>855-3xx/xxxx-xxxx</th>
<th>855-4xx/xxxx-xxxx</th>
<th>855-5xx/xxxx-xxxx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current bar 1:</td>
<td>30 x 10 mm</td>
<td>Current bar 1:</td>
<td>40 x 10 mm</td>
</tr>
<tr>
<td>Current bar 2:</td>
<td>25 x 12 mm</td>
<td>Current bar 2:</td>
<td>30 x 15 mm</td>
</tr>
<tr>
<td>Current bar 3:</td>
<td>20 x 20 mm</td>
<td>Round cable:</td>
<td>32 mm</td>
</tr>
<tr>
<td>Width:</td>
<td>60 mm</td>
<td>Width:</td>
<td>70 mm</td>
</tr>
<tr>
<td>Overall height:</td>
<td>80.5 mm</td>
<td>Overall height:</td>
<td>91 mm</td>
</tr>
<tr>
<td>Overall depth:</td>
<td>52 mm</td>
<td>Overall depth:</td>
<td>52 mm</td>
</tr>
</tbody>
</table>

Application examples:

750 Series (3-Phase Power Measurement Module)

857 Series (JUMPFLEX® Current Transducer)

Mounting Options

- Mounting on round cable
- Mounting on copper current bar
- Mounting on carrier rail with carrier rail adapter
- Mounting on mounting plate
- Quick-mount installation for conductors

Note:
- The carrier rail adapter is only suitable for 855-3xx/xxxx-xxxx and 855-4xx/xxxx-xxxx transformers.
Plug-In Current Transformers, 855 Series
with picoMAX® pluggable connector

Short description:
The 855 Series Plug-In Current Transformers are inductive, single-conductor current transformers. Due to the measurement principle used, these current transformers are exclusively designed for AC network applications.

Features:
• First current transformer featuring picoMAX® connection technology
• Also suitable for space-restricted applications
• Simple assembly permits 17.5 mm phase spacing, allowing perfect adjustment to any circuit breaker.
• Easy mounting on DIN rails or panels via carrier rail adapter
• Converts currents from 64 A or 35 A to 1 A
• Accuracy class 1

<table>
<thead>
<tr>
<th>Description</th>
<th>IP</th>
<th>IN</th>
<th>SN</th>
<th>G</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plugin current transformer</td>
<td>35 A</td>
<td>1 A</td>
<td>0.2 VA</td>
<td>1</td>
<td>855-2701/035-001</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>64 A</td>
<td>1 A</td>
<td>0.2 VA</td>
<td>1</td>
<td>855-2701/064-001</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>IP</th>
<th>IN</th>
<th>SN</th>
<th>G</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP = Primary rated current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN = Secondary rated current</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SN = Rated power</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G = Accuracy class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Technical Data

Input:
- Rated continuous thermal current \(I_{th}\) 100 %
- Rated short-time thermal current \(I_{sh}\) 60 \(I_p\) / 1 s
- Rated surge current \(I_{dyn}\) 2.5 \(I_p\)
- Max. operating voltage \(V_m\) 0.72/3 kV
- Rated frequency \(f_R\) 50 Hz

Environmental requirements:
- Ambient operating temperature 20 °C...+60°C
- Storage temperature -10 °C...+70°C
- Rel. humidity 5 %...85 % (non-condensing)
- Max. operating altitude 2000 m

Safety and protection:
- Degree of protection IP20
- Insulation class E (120 °C)
- Housing material PA 6.6
- Flammability rating V2 (UL94)

Connection and type of mounting:
- Power cable feed-through Ø 7.5 mm
- Wire connection CAGE CLAMP® S [picoMAX® 3.5, 2091:1122]
- Cross sections 0.2 mm²...1.5 mm² / 24...14
- Strip lengths 8...9 mm / 0.31...0.35 in

Standards and approvals:
- Conformity marking CE
- Standards/Specifications EN 61869-2:2012

Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier rail adapter for plug-in current transformer</td>
<td>855-9927</td>
<td>1</td>
</tr>
<tr>
<td>Connector assembly for current transformer</td>
<td>2007-8873</td>
<td>1</td>
</tr>
<tr>
<td>Operating tool, with partially insulated shaft, type 2, blade (3.5 x 0.3) mm</td>
<td>210-720</td>
<td>1</td>
</tr>
</tbody>
</table>
**Short description:**
WAGO’s compact split-core current transformers are ideal for retrofit applications in existing systems. They are particularly suited for applications in which the current path may not be disrupted. The transformer’s accuracy permits extremely precise current measurements. The split-core current transformers are capable of supplying the specified rated power at the end of the secondary cable. All transformers are supplied with color-coded cables. Two UV-resistant cable ties for reliable and easy mounting are also included.

**Features:**
- Current ratios from 60 A up to 1000 A (primary side) and 1 A or 5 A (secondary side)
- No interruption of the measuring cable
- Ideal for use in very confined spaces
- Superfast mounting
- For use around insulated cables up to Ø 42 mm
- Compact and hinged
- Color-coded connecting cables up to 5 m

### Technical Data

#### Input:
- Rated continuous thermal current $I_{c,th}$: 100 %
- Rated short-time thermal current $I_{th}$: $60 \times I_{pr} / 1$ s
- Rated surge current $I_{dyn}$: $2.5 \times I_{th}$
- Rated frequency $f_{R}$: 50 Hz … 60 Hz
- Max. operating voltage $V_{ms}$: 0.72/3 kV

#### Connection:
- Conductor size
  - 0.5 mm², fine-stranded [855.xxx1/…]
  - 1.5 mm², fine-stranded [855.xxx5/…]
- Conductor identification
  - brown = S1, blue = S2 (855.xxx1/…)
  - black = S1, red = S2 (855.xxx5/…)

### Technical Data

#### Environmental Requirements:
- Ambient operating temperature: -10 °C ... +55 °C
- Storage temperature: -10 °C ... +40 °C (855.5xxx/1000.000)
- Relative humidity: 5 % ... 85 % (non-condensing)
- Max. operating altitude: 2000 m

#### Safety and protection:
- Degree of protection: IP20
- Insulation class: E (120 °C)
- Housing material: PA 6.6
- Flammability rating: V2 (UL94)

#### Standards and approvals:
- Conformity marking: ☑
<table>
<thead>
<tr>
<th>Power Cable Feed-Through</th>
<th>Primary Rated Current</th>
<th>Secondary Rated Current</th>
<th>Rated Power</th>
<th>Accuracy Class</th>
<th>Cable Length</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 18 mm</td>
<td>60 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>3</td>
<td>3 m</td>
<td>855-3001/060-003</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>100 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>3</td>
<td>3 m</td>
<td>855-3001/100-003</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>200 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-3001/200-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>250 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-3001/250-001</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Cable Feed-Through</th>
<th>Primary Rated Current</th>
<th>Secondary Rated Current</th>
<th>Rated Power</th>
<th>Accuracy Class</th>
<th>Cable Length</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 18 mm</td>
<td>100 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-4001/100-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>150 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-4001/150-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>150 A</td>
<td>5 A</td>
<td>1VA</td>
<td>1</td>
<td>0.5 m</td>
<td>855-4005/150-101</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>200 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>0.5</td>
<td>3 m</td>
<td>855-4001/200-001</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Cable Feed-Through</th>
<th>Primary Rated Current</th>
<th>Secondary Rated Current</th>
<th>Rated Power</th>
<th>Accuracy Class</th>
<th>Cable Length</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 28 mm</td>
<td>200 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-4101/200-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>250 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-4101/250-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>250 A</td>
<td>5 A</td>
<td>1VA</td>
<td>1</td>
<td>0.5 m</td>
<td>855-4105/250-101</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>400 A</td>
<td>1 A</td>
<td>0.2VA</td>
<td>1</td>
<td>3 m</td>
<td>855-4101/400-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>400 A</td>
<td>5 A</td>
<td>1VA</td>
<td>1</td>
<td>0.5 m</td>
<td>855-4105/400-101</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Cable Feed-Through</th>
<th>Primary Rated Current</th>
<th>Secondary Rated Current</th>
<th>Rated Power</th>
<th>Accuracy Class</th>
<th>Cable Length</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 42 mm</td>
<td>250 A</td>
<td>1 A</td>
<td>0.5VA</td>
<td>1</td>
<td>5 m</td>
<td>855-5001/250-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>400 A</td>
<td>1 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>5 m</td>
<td>855-5001/400-000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>400 A</td>
<td>5 A</td>
<td>0.5VA</td>
<td>1</td>
<td>3 m</td>
<td>855-5005/400-001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>600 A</td>
<td>1 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>5 m</td>
<td>855-5001/600-000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>600 A</td>
<td>5 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>3 m</td>
<td>855-5005/600-000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1000 A</td>
<td>1 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>5 m</td>
<td>855-5001/1000-000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1000 A</td>
<td>5 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>3 m</td>
<td>855-5005/1000-000</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Cable Feed-Through</th>
<th>Primary Rated Current</th>
<th>Secondary Rated Current</th>
<th>Rated Power</th>
<th>Accuracy Class</th>
<th>Cable Length</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø Ø 42 mm x 48</td>
<td>1000 A</td>
<td>1 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>5 m</td>
<td>855-5101/1000-000</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1000 A</td>
<td>5 A</td>
<td>0.5VA</td>
<td>0.5</td>
<td>3 m</td>
<td>855-5105/1000-000</td>
<td>1</td>
</tr>
</tbody>
</table>
## 855 Series

### Rogowski Coils RT 500

The Rogowski coil is a closed-air coil with non-magnetic split core, placed around a conductor or a current bar. The magnetic field produced by the AC current flowing through the conductor induces an output voltage in the coil. This measurement procedure provides galvanic isolation between the primary circuit (power) and secondary circuit (measurement). Easy placement of the Rogowski coils allows existing systems to be retrofitted without time-consuming installation or process interruption.

The Rogowski coil can be used together with the 789-652 Signal Conditioner or the 857-552 Rogowski Signal Conditioner.

#### Short description:
- **Features**:
  - Split-core style coil for easy installation
  - Ø 55 mm coil aperture for non-contact measurement
  - 1.5 m or 3 m output cable
  - Insulated plastic case to UL 94-V0

#### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rogowski coil RT 500, 1.5 m output cable</td>
<td>855-9100/500-000</td>
<td>3</td>
</tr>
<tr>
<td>Rogowski coil RT 500, 3 m output cable</td>
<td>855-9300/500-000</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Approvals

<table>
<thead>
<tr>
<th>Conformity marking</th>
<th>Standards/Specifications</th>
</tr>
</thead>
</table>

#### Technical Data

<table>
<thead>
<tr>
<th>Electrical data</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary rated current $I_{N}$</td>
<td>$500 \text{ A}_{\text{rms}}$</td>
</tr>
<tr>
<td>Coil inductance ($\pm 5%$)</td>
<td>$125 \mu\text{H}$</td>
</tr>
<tr>
<td>Coil resistance</td>
<td>$40 \Omega$ (at $20 \degree \text{C}$ ambient operating temperature, typ.)</td>
</tr>
<tr>
<td>Transfer ratio $M$</td>
<td>$0.064 \mu\text{H}$ (WAGO provides uncalibrated coils with $5%$ tolerance)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output signal</th>
<th>Example shown above</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating frequency</td>
<td>$700 \text{ kHz}$ (open output, no load)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety and protection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal isolation voltage</td>
</tr>
<tr>
<td>Voltage for isolation test</td>
</tr>
<tr>
<td>Impulse withstand voltage ($1.2/50 \mu\text{s}$)</td>
</tr>
<tr>
<td>Adjacent contacts</td>
</tr>
<tr>
<td>Comparative Tracking Index (CTI, group I)</td>
</tr>
<tr>
<td>Degree of protection</td>
</tr>
</tbody>
</table>

#### General specifications:

<table>
<thead>
<tr>
<th>Cable length</th>
<th>$855-9100/500-000$: $1.5 \text{ m}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$855-9300/500-000$: $3 \text{ m}$</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>$-10 \degree \text{C} ... +65 \degree \text{C}$</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>$-25 \degree \text{C} ... +70 \degree \text{C}$</td>
</tr>
<tr>
<td>Weight</td>
<td>$85 \text{ g}$</td>
</tr>
</tbody>
</table>
855 Series

Rogowski Coils RT 2000

Short Description:
The Rogowski coil is a closed-air coil with non-magnetic split core, placed around a conductor or a current bar. The magnetic field produced by the AC current flowing through the conductor induces an output voltage in the coil. This measurement procedure provides galvanic isolation between the primary circuit (power) and secondary circuit (measurement). Easy placement of the Rogowski coils allows existing systems to be retrofitted without time-consuming installation or process interruption.

The Rogowski coil can be used together with the 857-552 Rogowski Signal Conditioner.

Features:
- Split-core style coil for easy installation
- Ø 12.5 mm coil aperture for non-contact measurement
- 1.5 m or 3 m output cable
- Insulated plastic case to UL 94-V0

Technical Data

### Electrical Data
- **Primary rated current** \(I_{pN}\) 2000 Arms
- **Coil inductance** (± 5 %) 190 μH
- **Coil resistance** 60 Ω
  - (at 20 °C ambient operating temperature, typ.)
- **Transfer ratio** \(M\) 0.064 μH
  - (WAGO provides uncalibrated coils with 5 % tolerance)
- **Output signal** Example shown above
  - 40.2 mV at \(I_{pN} = 2000\) A, sinusoidal, 50 Hz (open output, no load)
- **Max. operating frequency** 500 kHz (open output, no load)

### Accuracy and Dynamic Performance
- **Linearity error** none
- **Temperature coefficient** 30 ppm/K, related to transfer ratio \(M\)
- **Positioning error**
  - 855-9100/2000-000: max. 0.65 %
  - 855-9300/2000-000: max. 0.80 %
  - (considering a primary conductor of at least Ø 15 mm perpendicular to the coil)
- **Temperature coefficient** 30 ppm/K, related to transfer ratio \(M\)
- **Positioning error**
  - 855-9100/2000-000: max. 0.65 %
  - 855-9300/2000-000: max. 0.80 %
  - (considering a primary conductor of at least Ø 15 mm perpendicular to the coil)

### Safety and Protection
- **Nominal isolation voltage** 300 \(V_{rms}\)
  - (between primary conductor and ground)
- **Voltage for isolation test** 3.5 \(kV_{rms}\) AC / 50 Hz / 1 min
- **Impulse withstand voltage** (1.2/50 μs) 6.5 kV
- **Adjacent contacts** 6 mm / 6 mm
- **Comparative Tracking Index** (CTI, group I) 600 V [plastic parts]
- **Degree of protection** IP2X

### General Specifications
- **Cable length** 855-9100/2000-000: 1.5 m
  - 855-9300/2000-000: 3 m
- **Ambient operating temperature** -10 °C ... +65 °C
- **Storage temperature** -25 °C ... +70 °C
- **Weight** 90 g

---

**Description**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rogowski coil RT 2000, 1.5 m output cable</td>
<td>855-9100/2000-000</td>
<td>3</td>
</tr>
<tr>
<td>Rogowski coil RT 2000, 3 m output cable</td>
<td>855-9300/2000-000</td>
<td>3</td>
</tr>
</tbody>
</table>

**Approvals**

- **Conformity marking** CE
- **Standards/Specifications**
  - IEC 61010-1:2001 (2nd edition)
  - IEC 61010-2-032:2002

**Technical Data**

- **Nominal isolation voltage** 300 \(V_{rms}\)
  - (between primary conductor and ground)
- **Voltage for isolation test** 3.5 \(kV_{rms}\) AC / 50 Hz / 1 min
- **Impulse withstand voltage** (1.2/50 μs) 6.5 kV
- **Adjacent contacts** 6 mm / 6 mm
- **Comparative Tracking Index** (CTI, group I) 600 V [plastic parts]
- **Degree of protection** IP2X

**Cable length** 855-9100/2000-000: 1.5 m

**Ambient operating temperature** -10 °C ... +65 °C

**Storage temperature** -25 °C ... +70 °C

**Weight** 90 g

---

**Output voltage (open output, no load)**

- **Dynamic**
  - \(V_{out} = M \times \frac{dI_p}{dt}\)
- **Sinusoidal signal**
  - \(V_{out} = 2 \times \pi \times M \times f \times I_p\) AC

**Example:**

\[V_{out} = 2 \times \pi \times 0.064 \mu H \times 50 \text{ Hz} \times 2000 \text{ A} = 40.2 \text{ mV}\]
Short description:
The Rogowski Current Signal Conditioner acquires 5–500A alternating currents in a three-phase system. The magnetic field produced around each conductor is sensed via three non-contact Rogowski coils and provided as a proportional voltage signal to the signal conditioner. The current signal conditioner adjusts the phase of each of the three voltage signals, converting them into 100mA alternating current signals. These are then transmitted to the 750-493/000-002 3-Phase Power Measurement Module.

The 750-493/000-002 3-Phase Power Measurement Module within the WAGO-I/O-SYSTEM measures electrical data (e.g., voltages, currents, effective power and energy consumption) in a three-phase supply network. Thus, the user is always able to determine the load condition (imbalance, capacitive components), to optimize consumption and protect machines or systems from damage and breakdowns. Easy installation of Rogowski coils also allows existing systems to be retrofitted without process interruption.

### Technical Data

**General specifications:**
- Supply voltage range: 16.8 ... 32 V
- Max. power consumption: 4000 mW
- Operational indication: LED, green
- Degree of protection: IP20
- Phase error: < 1°
- Max. operating frequency: 300 Hz (phase accuracy at 50 Hz only)
- Linearity: ≤ 0.1 %
- Temperature coefficient: ≤ 0.1 %/K
- Transmission error: < 1.1 %
- Response threshold: 2 A
- Test voltage: 2.5 kV AC, 50 Hz, 1 min.

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Wire connection: CAGE CLAMP®
- Cross sections: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: 5 ... 6 mm / 0.22 in

**Dimensions and weights:**
- Dimensions (mm) W x H x L: 70 x 55 x 90
- Weight: 128.4 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508 (pending)
### Recommended conductor sizes and lengths:

<table>
<thead>
<tr>
<th>Conductor size in mm²</th>
<th>Conductor length in m</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.14</td>
<td></td>
<td>0.26</td>
<td>0.51</td>
<td>0.77</td>
<td>1.28</td>
<td>2.55</td>
<td>3.83</td>
<td>5.10</td>
<td>6.38</td>
</tr>
<tr>
<td>0.34</td>
<td></td>
<td>0.11</td>
<td>0.21</td>
<td>0.32</td>
<td>0.53</td>
<td>1.05</td>
<td>1.58</td>
<td>2.10</td>
<td>2.63</td>
</tr>
<tr>
<td>0.5</td>
<td></td>
<td>0.07</td>
<td>0.14</td>
<td>0.21</td>
<td>0.36</td>
<td>0.71</td>
<td>1.07</td>
<td>1.43</td>
<td>1.79</td>
</tr>
<tr>
<td>0.75</td>
<td></td>
<td>0.05</td>
<td>0.10</td>
<td>0.14</td>
<td>0.24</td>
<td>0.48</td>
<td>0.71</td>
<td>0.95</td>
<td>1.19</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>0.04</td>
<td>0.07</td>
<td>0.11</td>
<td>0.18</td>
<td>0.36</td>
<td>0.54</td>
<td>0.71</td>
<td>0.89</td>
</tr>
<tr>
<td>1.25</td>
<td></td>
<td>0.03</td>
<td>0.06</td>
<td>0.09</td>
<td>0.14</td>
<td>0.29</td>
<td>0.43</td>
<td>0.57</td>
<td>0.71</td>
</tr>
<tr>
<td>1.5</td>
<td></td>
<td>0.02</td>
<td>0.05</td>
<td>0.07</td>
<td>0.12</td>
<td>0.24</td>
<td>0.36</td>
<td>0.48</td>
<td>0.60</td>
</tr>
<tr>
<td>2.5</td>
<td></td>
<td>0.01</td>
<td>0.03</td>
<td>0.04</td>
<td>0.07</td>
<td>0.14</td>
<td>0.21</td>
<td>0.29</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Conductor resistance in Ω (total value for both outgoing and return conductors)
Recommendation: Select the conductor size so that the conductor resistance is ≤ 0.3 Ω.

### Application example:

![Application example diagram]

[Conductor length < 30 m]
Short description:
The Rogowski Current Signal Conditioner acquires 5–2000A alternating currents in a three-phase system. The magnetic field produced around each conductor is sensed via three non-contact Rogowski coils and provided as a proportional voltage signal to the signal conditioner. The current signal conditioner adjusts the phase of each of the three voltage signals, converting them into 100mA alternating current signals. These are then transmitted to the 750-494 3-Phase Power Measurement Module.

The 750-494 3-Phase Power Measurement Module within the WAGO/I/O-SYSTEM measures electrical data (e.g., voltages, currents, effective power and energy consumption) in a three-phase supply network. Thus, the user is always able to determine the load condition (imbalance, capacitive components), to optimize consumption and protect machines or systems from damage and breakdowns. Easy installation of Rogowski coils also allows existing systems to be retrofitted without process interruption.

---

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>789-654</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Accessories

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>855-9100/2000-000</td>
<td>3</td>
</tr>
<tr>
<td>855-9300/2000-000</td>
<td>3</td>
</tr>
<tr>
<td>750-494</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Technical Data

**Input:**
- Input signal: 3 x RT 2000 (2000 A)
- Sensitivity: 42.2 mV
- Frequency: 50 Hz sinus

**Outputs:**
- Output signal: 3 x 100 mA AC
- Rated output current: 100 mA AC (for direct connection to 750-494 Phase Power Measurement Module)
- Overcurrent: 3000 A (max. 150 mA per output)

**Technical Data**

**General specifications:**
- Supply voltage range: 16.8 ... 32 V
- Max. power consumption: 4000 mW
- Operational indication: LED, green
- Degree of protection: IP20
- Phase error: < 1°
- Max. operating frequency: 300 Hz (phase accuracy at 50 Hz only)
- Linearity: ≤ 0.1 %
- Temperature coefficient: ≤ 0.1 %/K
- Transmission error: < 1.1 %
- Response threshold: 2 A

**Environmental requirements:**
- Amb. operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Safety and protection:**
- Test voltage: (input/output/supply) 2.5 kV AC, 50 Hz, 1 min.

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP®
- Cross sections: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: 5 ... 6 mm / 0.22 in

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 70 x 55 x 90
- Weight: 128.3 g

**Standards and approvals:**
- Conformity marking: CE
- UL 508 (pending)
### Recommended conductor sizes and lengths:

<table>
<thead>
<tr>
<th>Conductor size in mm²</th>
<th>Conductor length in m</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>0.14</td>
<td>0.26</td>
</tr>
<tr>
<td>0.34</td>
<td>0.11</td>
</tr>
<tr>
<td>0.5</td>
<td>0.07</td>
</tr>
<tr>
<td>0.75</td>
<td>0.05</td>
</tr>
<tr>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>1.25</td>
<td>0.03</td>
</tr>
<tr>
<td>1.5</td>
<td>0.02</td>
</tr>
<tr>
<td>2.5</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Conductor resistance in Ω (total value for both outgoing and return conductors)
Recommendation: Select the conductor size so that the conductor resistance is ≤ 0.3 Ω.

### Application example:

![Application example diagram](image-url)
Current Sensor with Bus Connection in DIN-Rail Mountable Enclosure

Measuring range 0 ... 80 A DC

Short description:
Intelligent current sensor for monitoring solar plants or inverters for DC measurements within a large current measuring range.

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sensor with bus connection</td>
<td>789-620</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessories for data and auxiliary power supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RJ-45 interface module</td>
<td>289-965</td>
<td>1</td>
</tr>
<tr>
<td>RJ-45 interface module with shield</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(screen) clamping saddle</td>
<td>289-966</td>
<td>1</td>
</tr>
<tr>
<td>ETHERNET RJ-45 connector, IP20</td>
<td>750-975</td>
<td>1</td>
</tr>
</tbody>
</table>

| Approvals                                |          |            |
| Conformity marking                        | CE       |            |
| Standards/Specifications                  | DIN EN 50178; EN 61000-6-2 ; EN 61000-6-4 |

| General Specifications                    |          |            |
| Dimensions (mm) W x H x L                 | 35 x 55 x 90 |
| Height from upper-edge of DIN 35 rail     |            |
| Ambient operating temperature            | -20 °C ... +70 °C |
| Storage temperature                      | -40 °C ... +85 °C |

| Technical Data                            |          |            |
| Electrical data:                          |          |            |
| Measuring range                           | 0 ... 80 A DC |
| Voltage supply                            | 12 ... 34V |
| Max. current consumption                  | ≤ 8 mA at 24 V |
| Transmission error                        | ≤ 0.5 % of upper range value (at room temperature) |
| Temperature coefficient                   | 0.01 % /K |
| Time frame for polling by master          | < 30 ms |
| Hard plugging                             | possible |
| Terminating resistor                      | 150 Ω (can be activated via DIP switch 1) |
| Status indication                         | Green: power Red: measured current < -3 A or > 83 A |

| Mechanical data:                          |          |            |
| Power cable feed-through                   | 15 mm    |
| Degree of protection                      | IP20     |

| Communication                              |          |            |
| Interface                                 | RS-485   |
| Transmission channels                     | Half duplex 8-bit data, 1 stop bit |
| Protocols                                 | MODBUS over serial line |
| Connector                                 | RJ-45    |
| Addressing                                | 1 ... 32 |
| Max. length of bus line                   | ≤ 1200m  |
| Baud rate                                 | 19,200 baud |
| Parity                                    | Even     |
RJ-45-Connector Pin Assignment:

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ub</td>
</tr>
<tr>
<td>2</td>
<td>n.c.</td>
</tr>
<tr>
<td>3</td>
<td>A (Data+)</td>
</tr>
<tr>
<td>4</td>
<td>B (Data-)</td>
</tr>
<tr>
<td>5</td>
<td>n.c.</td>
</tr>
<tr>
<td>6</td>
<td>GND</td>
</tr>
</tbody>
</table>

Communication Description:

<table>
<thead>
<tr>
<th>MODBUS Function</th>
<th>Read Holding Registers (0x03)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Measured Value</td>
<td>0x0004</td>
</tr>
<tr>
<td>Data Type Measurement</td>
<td>Integer</td>
</tr>
</tbody>
</table>

Error Numbers:

<table>
<thead>
<tr>
<th>id</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Illegal Function</td>
</tr>
<tr>
<td>03</td>
<td>Illegal Data</td>
</tr>
<tr>
<td>101</td>
<td>Overflow (Current &gt; +8A)</td>
</tr>
<tr>
<td>102</td>
<td>Underflow (Current &lt; -3A)</td>
</tr>
</tbody>
</table>

DIP Switch Adjustability:

<table>
<thead>
<tr>
<th>Address</th>
<th>DIP Switch 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>●</td>
</tr>
<tr>
<td>2</td>
<td>●</td>
</tr>
<tr>
<td>3</td>
<td>●</td>
</tr>
<tr>
<td>4</td>
<td>●</td>
</tr>
<tr>
<td>5</td>
<td>●</td>
</tr>
<tr>
<td>6</td>
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<td>7</td>
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</tr>
<tr>
<td>9</td>
<td>●</td>
</tr>
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<td>31</td>
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<tr>
<td>32</td>
<td>●</td>
</tr>
</tbody>
</table>

Terminating resistor 150 Ohm

NOTICE:
Only set the MODBUS address in the OFF state.
789-621

Current Sensor with Bus Connection in DIN-Rail Mountable Enclosure
Measuring range: 0 ... 140 A DC

Short description:
Intelligent current sensor for monitoring solar plants or inverters for DC measurements within a large current measuring range.

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sensor with bus connection</td>
<td>789-621</td>
<td>1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessories for data and auxiliary power supply</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RJ-45 interface module</td>
<td>289-965</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RJ-45 interface module with shield (screen) clamping saddle</td>
<td>289-966</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ETHERNET RJ-45 connector, IP20</td>
<td>750-975</td>
<td>1</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Approvals</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Conformity marking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standards/Specifications</td>
<td>DIN EN 50178; EN 61000-6-2 ; EN 61000-6-4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Specifications</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (mm) W x H x L</td>
<td>35 x 35 x 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>20 °C ... +70 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +85 °C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Data</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical data:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measuring range</td>
<td>0 ... 140 A DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage supply</td>
<td>12 ... 34 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. current consumption</td>
<td>≤ 8 mA at 24 V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmission error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ... 80 A: ≤ 0.5% of upper range value (at room temperature);</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 ... 140 A: ≤ 1% of upper range value (at room temperature)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature coefficient</td>
<td>≤ 0.05% /K (at ambient operating temperature: -20°C ... +60°C);</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>≤ 0.1% /K (at ambient operating temperature: +60°C ... +70°C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time frame for polling by master</td>
<td>&lt; 30 ms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot plugging</td>
<td>possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terminating resistor</td>
<td>150Ω (can be activated via DIP switch 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status indication</td>
<td>Green: power; Red: measured current &lt; -3A or &gt; 143 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Mechanical data: | | | |
| Power cable feed-through | 15 mm | | |
| Degree of protection | IP20 | | |

| Communication: | | | |
| Interface | RS-485 | | |
| Transmission channels | Half duplex, 8-bit data, 1 stop bit | | |
| Protocols | MODBUS RTU Slave over serial line | | |
| Connector | RJ-45 | | |
| Addressing | 1 ... 32 | | |
| Max. length of bus line | ≤ 1200m | | |
| Baud rate | 19200 baud | | |
| Parity | Even | | |
### RJ-45 Connector Pin Assignment:

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Uib</td>
</tr>
<tr>
<td>2</td>
<td>n.c.</td>
</tr>
<tr>
<td>3</td>
<td>A (Data+)</td>
</tr>
<tr>
<td>4</td>
<td>B (Data)</td>
</tr>
<tr>
<td>5</td>
<td>n.c.</td>
</tr>
<tr>
<td>6</td>
<td>GND</td>
</tr>
</tbody>
</table>

### Communication Description:

<table>
<thead>
<tr>
<th>MODBUS Function</th>
<th>Read Holding Registers (0x03)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Measured Value</td>
<td>Ox0004</td>
</tr>
<tr>
<td>Data Type Measurement</td>
<td>Integer</td>
</tr>
</tbody>
</table>

### Error Numbers:

<table>
<thead>
<tr>
<th>id</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Illegal Function</td>
</tr>
<tr>
<td>03</td>
<td>Illegal Data</td>
</tr>
<tr>
<td>101</td>
<td>Overflow (Current &gt; +83 A)</td>
</tr>
<tr>
<td>102</td>
<td>Underflow (Current &lt; -3 A)</td>
</tr>
</tbody>
</table>

### DIP Switch Adjustability

<table>
<thead>
<tr>
<th>Address</th>
<th>DIP Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td></td>
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<tr>
<td>2</td>
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<td>32</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Terminating Resistor</th>
<th>DIP Switch 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 Ohm</td>
<td>●</td>
</tr>
</tbody>
</table>

**NOTICE:**

Only set the MODBUS address in the OFF state.
**Current Sensor with Bus Connection in DIN-Rail Mountable Enclosure**

**Measuring range:** 0 ... 50 A\textsubscript{AC eff.}

**Short description:**
Intelligent DIN 35-rail mount current sensor for monitoring AC currents.

---

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current sensor with bus connection</strong></td>
<td>789-622</td>
<td>1</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Accessories for data and auxiliary power supply</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RJ-45 interface module</td>
<td>289-965</td>
<td>1</td>
</tr>
<tr>
<td>RJ-45 interface module with shield</td>
<td>289-966</td>
<td>1</td>
</tr>
<tr>
<td>ETHERNET RJ-45 connector, IP20</td>
<td>750-975</td>
<td>1</td>
</tr>
</tbody>
</table>

**Approvals**

- Conformity marking: CE
- Standards/Specifications: DIN EN 50178; EN 61000-6-2; EN 61000-6-4

**General Specifications**

- Dimensions (mm) W x H x L: 33 x 55 x 90
- Height from upper-edge of DIN 35 rail
- Ambient operating temperature: -20 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C

**Technical Data**

**Electrical data:**
- Measuring range: 0 ... 50 A\textsubscript{AC eff.}
- Voltage supply: 12 ... 34 V
- Max. current consumption: ≤ 8 mA at 24 V
- Transmission error: typ. 1%, max. 3% of upper range value (at room temperature)
- Temperature coefficient: ≤ 0.01% /°K
- Time frame for polling by master: < 30 ms
- Hot plugging: possible
- Terminating resistor: 150 Ω (can be activated via DIP switch 1)
- Status indication: Green: Power; Red: Measured current > 55 A\textsubscript{AC eff.}

**Mechanical data:**
- Power cable feed-through: 15 mm
- Degree of protection: IP20

**Communication:**
- Interface: RS-485
- Transmission channels: Half duplex, 8-bit data, 1 stop bit
- Protocols: MODBUS RTU slave over serial line
- Connector: RJ-45
- Addressing: 1 ... 32
- Max. length of bus line: ≤ 1200 m
- Baud rate: 19200 baud
- Parity: Even
**RJ-45 Connector Pin Assignment:**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(U_b)</td>
</tr>
<tr>
<td>2</td>
<td>n.c.</td>
</tr>
<tr>
<td>3</td>
<td>n.c.</td>
</tr>
<tr>
<td>4</td>
<td>A (Data+)</td>
</tr>
<tr>
<td>5</td>
<td>B (Data)</td>
</tr>
<tr>
<td>6</td>
<td>n.c.</td>
</tr>
<tr>
<td>7</td>
<td>GND</td>
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<td>8</td>
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</table>

**Communication Description:**

<table>
<thead>
<tr>
<th>MODBUS Function</th>
<th>Read Holding Registers (0x03)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Measured Value</td>
<td>0x0004</td>
</tr>
<tr>
<td>Data Type Measurement</td>
<td>Integer</td>
</tr>
</tbody>
</table>

**Error Numbers:**

- **id**
- **Description**
- 01: Illegal Function
- 03: Illegal Data
- 101: Overflow (Current > +83 A)
- 102: Underflow (Current < -3 A)

**DIP Switch Adjustability**

<table>
<thead>
<tr>
<th>Address</th>
<th>DIP Switch</th>
<th>Terminating resistor</th>
<th>DIP Switch 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
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<tr>
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</tbody>
</table>

**NOTICE:**
Only set the MODBUS address in the OFF state.

- **Terminating Resistor:** 150 Ohm
## Accessories for 789 Series Current Sensor Modules

### RJ-45 Interface Module

- **RJ-45 Interface Module** for current sensor modules
- **Mounting Carrier for DIN 35 Rail**

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ-45 interface module</td>
<td>289-965</td>
<td>1</td>
<td>289-966</td>
<td>1</td>
</tr>
</tbody>
</table>

### Connecting Cable

- **Assembled RJ-45 Cable** (Recommended: UTP)
- **Assembled, Shielded RJ-45 Cable** (Recommended: UTP, STP)

### Connector

<table>
<thead>
<tr>
<th>Min. Mating Cycles</th>
<th>Contact Resistance</th>
<th>Dielectric Strength</th>
<th>Insulation Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>≤ 20 mΩ</td>
<td>0.5 kVrms</td>
<td>≥ 500 MΩ</td>
</tr>
</tbody>
</table>

### Wire Connection

- **Cage Clamp** (WAGO 236 Series)
- **Cage Clamp** (WAGO 745 Series)

### Dimensions (mm) W x H x L

- **Height from upper-edge of DIN 35 rail**: 40 x 58 x 85
- **Height from upper-edge of DIN 35 rail**: 40 x 69 x 85

### Ambient Operating Temperature

- **-20°C to +85°C** (included)

### Technical Details

- **Clamping Units 4, 5**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)
- **Clamping Units 2, 7**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)
- **Strip Lengths**: 5 ... 6 mm / 0.22 in
- **Strip Lengths**: 11 ... 12 mm / 0.45 in

---

**Compatible on the field side with the 789-620, 789-621 and 789-622 Current Sensors.**

**Required terminal assignment:**

2: + Supply
7: - Supply
4: D+
5: D-

For 289-966, direct shield connection to the carrier rail via shield grounding foot.
Versatile RJ-45 connector for industrial, office and building wiring.

The compact RJ-45 uses IDC technology for easy field assembly — connection is made without tools.
The connector is compliant with all required standards. Large conductor cross sections can also be connected.
The connector satisfies Category 5e.

**Technical Data**

**Electrical data:**
- Contact resistance: (wire – IDC) < 1 mΩ; (strand – IDC) < 5 mΩ
- Connector shield: < 20 mΩ
- Insulation resistance: (100 V) > 500 MΩ
- Dielectric strength: (contact-contact) > 1000 V, 1 min.; (shield-contact) > 1500 V, 1 min.
- Nominal current: 1.75 A / 20 °C
- Standards/specifications:
  - Basic standard: IEC 60603-7 RJ-45 Category 5
  - CD ISO/IEC 11801: 2002
  - EN 50173: 2002
  - EIA/TIA 568A: 2002

**Approvals**

- Shipbuilding: siehe Übersicht Zulassungen Kapitel 1
- UL 508
## EPSITRON® Power Supply System

### EPSITRON® PRO Power
Switched-Mode Power Supplies, 1-Phase, 787 Series  
Switched-Mode Power Supplies, 3-Phase, 787 Series

### EPSITRON® CLASSIC Power
Switched-Mode Power Supplies, 1-Phase, 787 Series

### EPSITRON® ECO Power
Switched-Mode Power Supplies, 1-Phase, 787 Series  
Switched-Mode Power Supplies, 3-Phase, 787 Series

### EPSITRON® COMPACT Power
Switched-Mode Power Supplies, 1-Phase, 787 Series

### DC/DC Converters
Rail-Mounted Terminal Blocks with DC/DC Converters, 859 Series  
EPSITRON® COMPACT Power – DC/DC Converters, 787 Series  
Rail-Mounted Modules – DC/DC Converters, 288, 289 Series

### EPSITRON® – UPS, Battery Modules and Buffer Modules
EPSITRON® UPS Charger and Controller, 787 Series  
EPSITRON® Lead-Acid (AGM) Battery Modules, 787 Series  
EPSITRON® Capacitive Buffer Modules, 787 Series  
Back-Up Capacitor Module, 288 Series

### EPSITRON® Redundancy Modules
787 Series

### EPSITRON® Electronic Circuit Breakers
787 Series

### Constant Voltage Sources and Power Supplies
Rail-Mounted Modules – Constant Voltage Sources, 288, 289 Series  
Rail-Mounted Modules – Power Supplies, 288 Series

### Accessories, 787 Series
EPSITRON® Communication Cable, Wall Mount Adapter, Carrier Rail Adapter

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**EPSITRON®**

ELECTROMATE
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sales@electromate.com

Sold & Serviced By:

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**5**

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**5**
Switched-Mode Power Supply, 1-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage Vi nom: 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 350 VDC
- Input voltage derating: -5 % / V AC < 95 VAC
- Frequency: 50 Hz ... 60 Hz
- Input current li: 0.51 A at 230 VAC and 6 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A (peak)
- Mains failure hold-up time: 70 ms typ. at 230 VAC

#### Output:
- Nominal output voltage Vo nom: 12 VDC (SELV)
- Output voltage range: 11 ... 18 VDC adjustable
- Output current Io: 6 A at 12 V DC
- PowerBoost: 12 ADC (for 4 s); 9 ADC (for 8 s)
- TopBoost: 21 ADC (for 25 ms)
- Factory preset: 12 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x Io typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. [changeover contact]

#### Efficiency / power losses:
- Efficiency: 83 % typ.
- Power loss Pp: 0.5 W (stand-by) / 3.0 W (no load) / 9.4 W (rated load)

#### Fuse protection:
- Internal fuse: 2.2 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C
  - An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> +50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 25 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 231 Series
  - Cross sections Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Strip lengths: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
  - Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 40 x 163 x 163 (incl. female connector)
- Length from upper-edge of DIN 35 rail: 800 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 1-Phase

EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_{i \text{ nom}}$: 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 350 VDC
- Input voltage derating: -5 % / V AC < 95 VAC
- Frequency: 50 Hz ... 60 Hz
- Input current $I_i$: 0.97 A at 230 VAC and 10 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A (peak)
- Mains failure hold-up time: 35 ms typ. at 230 VAC

#### Output:
- Nominal output voltage $V_{o \text{ nom}}$: 12 VDC (SELV)
- Output voltage range: 11 ... 18 VDC adjustable
- Output current $I_o$: 10 A at 12 V DC
- PowerBoost: 20 ADC (for 4 s); 15 ADC (for 8 s)
- TopBoost: 60 ADC (for 25 ms); 40 ADC at $V_{i \text{ in}} < 110$ VAC (for 25 ms)
- Factory preset: 12 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x $I_o$ typ.
- Overload behavior: TopBoost / PowerBoost /Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. (changeover contact)

#### Efficiency / power losses:
- Efficiency: 87.8 % typ.
- Power loss $P_v$: 0.5 W (stand-by) / 5.0 W (no load) / 14.6 W (rated load)

#### Fuse protection:
- Internal fuse: T 4 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

#### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-Mode Power Supply, 12 V DC / 10 A</td>
<td>787-821</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Technical Data

<table>
<thead>
<tr>
<th>Environmental requirements:</th>
<th>Test voltage pri.-sec./ pri.-gr. / sec.-gr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +70 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-25 °C ... +85 °C</td>
</tr>
<tr>
<td>Rel. humidity</td>
<td>30 % ... 85 % (no condensation)</td>
</tr>
<tr>
<td>Derating</td>
<td>3 % / K (&gt; +50 °C)</td>
</tr>
<tr>
<td>Degree of pollution</td>
<td>2 (acc. to EN 50178)</td>
</tr>
<tr>
<td>Climatic category</td>
<td>3K3 (acc. to EN 60721)</td>
</tr>
</tbody>
</table>

| Protection class | Prepared for class I equipment |
| Degree of protection | IP20 (acc. to EN 60529) |
| Overvoltage protection | via varistor at primary circuit |
| Short circuit protection | yes |
| No-load proof | yes |
| Feedback voltage | max. 25 VDC |
| Parallel operation | yes |
| Series connection | yes |

#### Connection and type of mounting:
- Wire connection
- Input/Output: WAGO 231 Series
- Signalling: WAGO 733 Series
- Cross sections: Input/Output
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- AWG 28 ... 12
- Signalling
  - 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths: Input/Output: 8 ... 9 mm / 0.33 in
- Signalling: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

#### Dimensions and weight:
- Dimensions [mm]: W x H x L
  - 57 x 163 x 163 (incl. female connector)
- Length from upper-edge of DIN 35 rail
- Weight: 1295 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
787-831

Switched-Mode Power Supply, 1-Phase
EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

Technical Data

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<tr>
<td>Switched-Mode Power Supply</td>
<td>787-831</td>
<td>1</td>
</tr>
<tr>
<td>12 V DC / 15 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Input:
- Nominal input voltage $V_{in\text{nom}}$: 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 350 VDC
- Input voltage derating: -1.5 % / V AC < 110 VAC
- Frequency: 50 Hz ... 60 Hz
- Input current $i_i$: 0.9 A at 230 VAC and 15 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 8 A (active inrush current limitation)
- Mains failure hold-up time: 30 ms typ. at 230 VAC

Output:
- Nominal output voltage $V_{o\text{nom}}$: 12 VDC (SELV)
- Output voltage range: 11 ... 18 VDC adjustable
- Output current $i_o$: 15 A at 12 VDC
- PowerBoost: 30 ADC (for 4 s); 22.5 ADC (for 8 s)
- TopBoost: 55 ADC (for 25 ms)
- Factory preset: 12 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-peak)
- Current limitation: 1.1 x $i_o$ typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. [changeover contact]

Efficiency / power losses:
- Efficiency: 87 % typ.
- Power loss $P_L$: 0.8 W (stand-by) / 4.6 W (no load) / 23.4 W (rated load)

Fuse protection:
- Internal fuse: T 6.3 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C

Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> +50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 25 VDC
- Parallel operation: yes
- Series connection: yes

Connection and type of mounting:
- Wire connection: Input/Output: WAGO 231 Series
- Signalling: WAGO 733 Series
- Cross sections: Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

Dimensions and weight:
- Dimensions (mm): W x H x L: 57 x 163 x 179 (incl. female connector)
- Weight: 1480 g

Standards and approvals:
- Standards / Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
787-818

Switched-Mode Power Supply, 1-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:

- Nominal input voltage \( V_{\text{in nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 350 VDC
- Input voltage derating: -5 % / V AC < 95 VAC
- Frequency: 50 Hz ... 60 Hz
- Input current \( I_{\text{i}} \): 0.51 A at 230 VAC and 3 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A (peak)
- Mains failure hold-up time: 70 ms typ. at 230 VAC

#### Output:

- Nominal output voltage \( V_{\text{o nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 29.3 VDC adjustable
- Output current \( I_{\text{o}} \): 3 A at 24 VDC
- PowerBoost: 6 ADC (for 4 s), 4.5 A DC (for 8 s)
- TopBoost: 14 A DC (for 25 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-peak)
- Current limitation: 1.1 x to typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. (changeover contact)

#### Efficiency / Power losses:

- Efficiency: 87.8 % typ.
- Power loss \( P_{\text{v}} \): 0.5 W (standby) / 3.0 W (no load) / 8.8 W (rated load)

#### Fuse protection:

- Internal fuse: 1.2 A / 250 V
- External fuse:
  - Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C
  - An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:

- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> +50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:

- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:

- Wire connection:
  - Input/Output: WAGO 231 Series
  - Cross sections: Input/Output
    - 0.08 mm² / 2.5 mm² / AWG 28 ... 12
    - 0.08 mm² / 0.5 mm² / AWG 28 ... 20
- Signalising:
  - Signalising:
    - 0.08 mm² / 0.5 mm² / AWG 28 ... 20
    - Signalising:
      - 0.08 mm² / 0.5 mm² / AWG 28 ... 20
- Type of mounting:
  - DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:

- Dimensions [mm]: \( W \times H \times L \):
  - 40 x 163 x 163 (incl. female connector)
- Weight: 960 g

#### Standards and approvals:

- Standards/Specifications:
  - EN 60950, EN 61204-3, UL 60950, UL 508

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**Description**

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<tr>
<td>Switched-Mode Power Supply.</td>
<td>787-818</td>
<td>1</td>
</tr>
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</table>

**Technical Data**

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage ( V_{\text{in nom}} ): 100 ... 240 VAC</td>
<td>Nominal output voltage ( V_{\text{o nom}} ): 24 VDC (SELV)</td>
</tr>
<tr>
<td>Input voltage range: 85 ... 264 VAC, 120 ... 350 VDC</td>
<td>Output voltage range: 22 ... 29.3 VDC adjustable</td>
</tr>
<tr>
<td>Input voltage derating: -5 % / V AC &lt; 95 VAC</td>
<td>Output current ( I_{\text{o}} ): 3 A at 24 VDC</td>
</tr>
<tr>
<td>Frequency: 50 Hz ... 60 Hz</td>
<td>PowerBoost: 6 ADC (for 4 s), 4.5 A DC (for 8 s)</td>
</tr>
<tr>
<td>Input current ( I_{\text{i}} ): 0.51 A at 230 VAC and 3 ADC</td>
<td>TopBoost: 14 A DC (for 25 ms)</td>
</tr>
<tr>
<td>Discharge current: 1 mA typ.</td>
<td>Factory preset: 24 VDC</td>
</tr>
<tr>
<td>Inrush current: &lt; 30 A (peak)</td>
<td>Adjustment accuracy: 1%</td>
</tr>
<tr>
<td>Mains failure hold-up time: 70 ms typ. at 230 VAC</td>
<td>Residual ripple: &lt; 70 mV (peak-peak)</td>
</tr>
<tr>
<td>Current limitation: 1.1 x to typ.</td>
<td>Efficiency: 87.8 % typ.</td>
</tr>
<tr>
<td>Overload behavior: TopBoost / PowerBoost / Constant current</td>
<td>Power loss ( P_{\text{v}} ): 0.5 W (standby) / 3.0 W (no load) / 8.8 W (rated load)</td>
</tr>
<tr>
<td>Operational indication: LED green (DC O.K.), LED red (error)</td>
<td>Fuse protection:</td>
</tr>
<tr>
<td>Signaling: Relay contact DC O.K. (changeover contact)</td>
<td>Internal fuse: 1.2 A / 250 V</td>
</tr>
<tr>
<td>Efficiency: 87.8 % typ.</td>
<td>External fuse:</td>
</tr>
<tr>
<td>Power loss ( P_{\text{v}} ): 0.5 W (standby) / 3.0 W (no load) / 8.8 W (rated load)</td>
<td>Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C</td>
</tr>
</tbody>
</table>

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**Environmental requirements:**

- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> +50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**

- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

**Connection and type of mounting:**

- Wire connection:
  - Input/Output: WAGO 231 Series
  - Cross sections: Input/Output
    - 0.08 mm² / 2.5 mm² / AWG 28 ... 12
    - 0.08 mm² / 0.5 mm² / AWG 28 ... 20
- Signalising:
  - Signalising:
    - 0.08 mm² / 0.5 mm² / AWG 28 ... 20
- Type of mounting:
  - DIN-rail mounting (EN 60715) in 2 positions

**Dimensions and weight:**

- Dimensions [mm]: \( W \times H \times L \):
  - 40 x 163 x 163 (incl. female connector)
- Weight: 960 g

**Standards and approvals:**

- Standards/Specifications:
  - EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 1-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

**Input:**
- Nominal input voltage $V_{\text{nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 350 VDC
- Frequency: 44 Hz ... 66 Hz
- Input current $I_{\text{i}}$: 0.97 A at 230 VAC and 5 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 15 A
- Mains failure hold-up time: 35 ms typ. at 230 VAC

**Output:**
- Nominal output voltage $V_{\text{Nom}}$: 24 VDC (SELV)
- Output voltage range: 22 ... 29.5 VDC adjustable
- Output current $I_{\text{o}}$: 5 A at 24 VDC
- PowerBoost: 10 ADC (for 4 sec.);
  - 7.5 ADC (for another 2 sec.)
- TopBoost: 21 ADC (for 25 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x I typ.
- Overload behavior: Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. [changeover contact]

**Efficiency / power losses:**
- Efficiency $\eta$: 87.8 % typ.
- Power loss $P_{\text{P}}$: 0.5 W (stand-by) / 5.0 W (no load) / 14.6 W (rated load)

**Fuse protection:**
- Internal fuse: T 4 A / 250 V
- External fuse: C10 or B1 6 circuit breakers
- An external DC fuse is required for the DC input voltage
- Transient overvoltage protection: Varistor

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-822</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

**Environmental requirements:**
- Ambient operating temperature: -25°C ... +70°C
- Storage temperature: -25°C ... +85°C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: 2.5 % / K (> 55 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage: pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 231 Series
- Signalling: WAGO 733 Series
- Cross sections: Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Power: Signalling: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths: Input/Output: 8 ... 9 mm / 0.33 in
- Power: Signalling: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions (mm): W x H x L/ 57 x 163 x 163
- Height from upper-edge of DIN 35 rail: 1268 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 1-Phase
EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{in nom}} \): 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 350 VDC
- Frequency: 44 Hz ... 66 Hz
- Input current \( I_i \): 1.2 A at 230 VAC and 10 ADC
- Discharge current: 1mA typ.
- Inrush current: \( \leq I_e \) (active inrush current limitation)
- Mains failure hold-up time: 24 ms typ. at 230 VAC

#### Output:
- Nominal output voltage \( V_{\text{out nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 29.5 VDC adjustable
- Output current \( I_o \): 10 A at 24 V DC
- PowerBoost: 20 ADC (for 4 sec.);
  15 ADC (for another 2 sec.)
- TopBoost: 60 ADC (for 25 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: \(< 70 \text{ mV [peak-to-peak]} \)
- Current limitation: 1.1 x Io typ.
- Overload behavior: Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. (changeover contact)

#### Efficiency / power losses:
- Efficiency: 91.8 % typ.
- Power loss \( P_v \): 0.8 W (stand-by) / 3.5 W (no load) /
  19.7 W (rated load)

#### Fuse protection:
- Internal fuse: T 6.3 A / 250 V
- External fuse: C10 or B1.6 circuit breakers
- An external DC fuse is required for the DC input voltage
- Transient overvoltage protection: Varistor

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Degree of pollution: 1 % / K (no condensation)
- Climatic category: 3K (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Wire connection Input/Output: WAGO 231 Series
- Signalising: WAGO 733 Series
- Cross sections: Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Signalising: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths: Input/Output: 8 ... 9 mm / 0.33 in
- Signalising: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:
- Dimensions [mm]: W x H x L: 57 x 163 x 179
- Height from upper-edge of DIN 35 rail: 1485 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 1-Phase

EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{nom}} \): 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 350 VDC
- Input voltage derating: \(-1.5 \% / V\) AC < 110 VAC
- Frequency: 50 Hz ... 60 Hz
- Input current \( I_i \): 2.3 A at 230 VAC and 20 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 8 A (active inrush current limitation)
- Mains failure hold-up time: 25 ms typ. at 230 VAC

#### Output:
- Nominal output voltage \( V_{\text{nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 29.5 VDC adjustable
- Output current \( I_o \): 20 A at 24 V DC
- PowerBoost: 30 ADC (for 4 s); 25 ADC (for 8 s)
- TopBoost: 80 ADC (for 25 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-peak)
- Current limitation: \( 1.1 \times I_o\) typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC OK), LED red (error)
- Signaling: Relay contact DC OK, changeover contact

#### Efficiency / power losses:
- Efficiency: 91 % typ.
- Power loss \( P_v \): 0.8 W (stand-by) / 4.8 W (no load)
- Power loss \( P_v \) (rated load): 50.2 W

#### Fuse protection:
- Internal fuse: 10 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: \(-25^\circ\)C ... +70°C
- Storage temperature: \(-25^\circ\)C ... +85°C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: \(-3 \% / K (> +50^\circ\)C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.:
  - 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Wire connection: Input: WAGO 231 Series
  - Output: WAGO 831 Series
  - Signalising: WAGO 733 Series
- Cross sections: Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Signalising: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths: Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
  - Signalising: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:
- Dimensions (mm) \( W \times H \times L \): 97 x 171 x 187 (incl. female connector)
- Length from upper edge of DIN 35 rail: 2300 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
# Switched-Mode Power Supply, 1-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

## Technical Data

### Input:
- Nominal input voltage \( V_{\text{nom}} \) 110 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 ... 350 VDC
- Input voltage derating -1.5 % / V AC < 110 VAC
- Frequency 50 Hz ... 60 Hz
- Input current \( I_i \) 1.2 A at 230 VAC and 5 ADC
- Discharge current 1 mA typ.
- Inrush current < 8 A (active inrush current limitation)
- Mains failure hold-up time 20 ms typ. at 230 VAC

### Output:
- Nominal output voltage \( V_o \) nom 48 VDC (SELV)
- Output voltage range 33 ... 52 VDC adjustable
- Output current \( I_o \) 5 A at 48 V DC
- PowerBoost 10 ADC (for 4 s); 7.5 ADC (for 8 s)
- TopBoost 30 ADC (for 25 ms)
- Factory preset 48 VDC
- Adjustment accuracy 1%
- Residual ripple < 70 mV (peak-peak)
- Current limitation 1.1 x to typ.
- Overload behavior TopBoost / PowerBoost / Constant current
- Operational indication LED green (DC O.K.); LED red (error)
- Signaling Relay contact DC O.K. (changeover contact)

### Efficiency / power losses:
- Efficiency \( \eta \) 91 % typ.
- Power loss \( P_v \) 0.8 W (stand-by) / 7.4 W (no load) / 21.6 W (rated load)

### Fuse protection:
- Internal fuse T 6.3 A / 250 V
- External fuse Circuit breakers 6 A, 10 A, 16 A; characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:
- Ambient operating temperature -25 °C ... +70 °C
- Storage temperature -25 °C ... +85 °C
- Rel. humidity 30 % ... 85 % (no condensation)
- Derating -3 % / K (> +50 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class Prepared for class I equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection via varistor at primary circuit
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 63 VDC
- Parallel operation yes
- Series connection yes

#### Connection and type of mounting:
- Wire connection Input/Output: WAGO 231 Series
- Signalising: WAGO 733 Series
- Cross sections Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Signalising: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths Input/Output: 8 ... 9 mm / 0.33 in
- Signalising: 5 ... 6 mm / 0.22 in
- Type of mounting DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:
- Dimensions [mm] W x H x L 57 x 163 x 179
- Weight 1475 g (incl. female connector)

#### Standards and approvals:
- Standards/Specifications EN 60950, EN 61204-3, UL 60950, UL 508

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**Description**

**Item No.**

Switched-Mode Power Supply, 48 V DC / 5 A

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
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<tr>
<td>Switched-Mode Power Supply, 48 V DC / 5 A</td>
<td>787-833</td>
<td>1</td>
</tr>
</tbody>
</table>

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**Switched-Mode Power Supply, 1-Phase**

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

## Technical Data

### Input:
- Nominal input voltage \( V_{\text{nom}} \) 110 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 ... 350 VDC
- Input voltage derating -1.5 % / V AC < 110 VAC
- Frequency 50 Hz ... 60 Hz
- Input current \( I_i \) 1.2 A at 230 VAC and 5 ADC
- Discharge current 1 mA typ.
- Inrush current < 8 A (active inrush current limitation)
- Mains failure hold-up time 20 ms typ. at 230 VAC

### Output:
- Nominal output voltage \( V_o \) nom 48 VDC (SELV)
- Output voltage range 33 ... 52 VDC adjustable
- Output current \( I_o \) 5 A at 48 V DC
- PowerBoost 10 ADC (for 4 s); 7.5 ADC (for 8 s)
- TopBoost 30 ADC (for 25 ms)
- Factory preset 48 VDC
- Adjustment accuracy 1%
- Residual ripple < 70 mV (peak-peak)
- Current limitation 1.1 x to typ.
- Overload behavior TopBoost / PowerBoost / Constant current
- Operational indication LED green (DC O.K.); LED red (error)
- Signaling Relay contact DC O.K. (changeover contact)

### Efficiency / power losses:
- Efficiency \( \eta \) 91 % typ.
- Power loss \( P_v \) 0.8 W (stand-by) / 7.4 W (no load) / 21.6 W (rated load)

### Fuse protection:
- Internal fuse T 6.3 A / 250 V
- External fuse Circuit breakers 6 A, 10 A, 16 A; characteristic: B or C
- An external DC fuse is required for the DC input voltage

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**Environmental requirements:**

- Ambient operating temperature -25 °C ... +70 °C
- Storage temperature -25 °C ... +85 °C
- Rel. humidity 30 % ... 85 % (no condensation)
- Derating -3 % / K (> +50 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

**Safety and protection:**

- Test voltage pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class Prepared for class I equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection via varistor at primary circuit
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 63 VDC
- Parallel operation yes
- Series connection yes

**Connection and type of mounting:**

- Wire connection Input/Output: WAGO 231 Series
- Signalising: WAGO 733 Series
- Cross sections Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Signalising: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths Input/Output: 8 ... 9 mm / 0.33 in
- Signalising: 5 ... 6 mm / 0.22 in
- Type of mounting DIN-rail mounting (EN 60715) in 2 positions

**Dimensions and weight:**

- Dimensions [mm] W x H x L 57 x 163 x 179
- Weight 1475 g (incl. female connector)

**Standards and approvals:**

- Standards/Specifications EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 1-Phase

EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_i \text{ nom}$: 110 ... 240 V AC
- Input voltage range: 85 ... 264 V AC; 120 ... 350 V DC
- Input voltage derating: $-1.5 \% / V \text{ AC} < 110 \text{ VAC}$
- Frequency: 50 Hz ... 60 Hz
- Input current $i_i$: 2.3 A at 230 V AC and 10 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 8 A (active inrush current limitation)
- Mains failure hold-up time: 20 ms typ. at 230 V AC

#### Output:
- Nominal output voltage $V_o \text{ nom}$: 48 V DC (SELV)
- Output voltage range: 33 ... 52 V DC adjustable
- Output current $i_o$: 10 A at 48 V DC
- PowerBoost: 17.5 ADC (for 4 s); 15 ADC (for 8 s)
- TopBoost: 60 ADC (for 25 ms)
- Factory preset: 48 V DC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-peak)
- Current limitation: 1.1 x typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC O.K.), LED red (error)
- Signaling: Relay contact DC O.K. [changeover contact]

#### Efficiency / power losses:
- Efficiency: 91 % typ.
- Power loss $P_L$: 0.8 W (stand-by) / 4.8 W (no load) / 43.2 W (rated load)

#### Fuse protection:
- Internal fuse: T 10 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: $-3 \% / K (> +50 °C)$
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

### Safety and protection:
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes

### Connection and type of mounting:
- Wire connection: Input: WAGO 231 Series
  - Output: WAGO 831 Series
  - Signalising: WAGO 733 Series
- Cross sections:
  - Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Signalising: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths:
  - Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
  - Signalising: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

### Dimensions and weight:
- Dimensions (mm): W x H x L: 97 x 171 x 187 (incl. female connector)
- Length from upper-edge of DIN 35 rail: 2460 g

### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
### 787-840

**Switched-Mode Power Supply, 3-Phase**

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

#### Technical Data

**Input:**
- Nominal input voltage $V_i \text{ nom}$: $3 \times 400 \ldots 500 \text{ VAC}$
- Input voltage range: $340 \ldots 550 \text{ VAC}$; $480 \ldots 780 \text{ VDC}$
- Frequency: $50 \ldots 60 \text{ Hz}$
- Input current $I_i$: $3 \times 0.6 \text{ A}$ at $340 \text{ VAC}$ and $10 \text{ ADC}$
- Discharge current: $1\text{mA}$ typ.
- Inrush current: $< 30 \text{ A}$
- Mains failure hold-up time: $22 \text{ ms}$ typ. at $3 \times 400 \text{ VAC}$

**Output:**
- Nominal output voltage $V_o \text{ nom}$: $24 \text{ VDC}$ (SELV)
- Output voltage range: $22.8 \ldots 28.8 \text{ VDC}$ adjustable
- Output current $I_o$: $10 \text{ A}$ at $24 \text{ V DC}$
- PowerBoost: $20 \text{ ADC}$ (for $4 \text{ s}$); $15 \text{ ADC}$ (for $16 \text{ s}$)
- TopBoost: $70 \text{ ADC}$ (for $50 \text{ ms}$)
- Factory preset: $24 \text{ VDC}$
- Adjustment accuracy: $1\%$
- Residual ripple: $< 70 \text{ mV}$ (peak-to-peak)
- Current limitation: $1.1 \times I_o$ typ.
- Overload behavior: Constant current
- Operational indication: LED green (DC O.K.), LED red (error)

### Technical Data

**Efficiency / power losses:**
- Efficiency: $91.7 \%$ typ.
- Power loss $P_v$: $7.9 \text{ W}$ (stand-by) / $19.9 \text{ W}$ (rated load)

**Fuse protection:**
- Internal fuse: $3 \times 1.6 \text{ A} / 250 \text{ V}$
- External fuse: $3 \times$ circuit breakers $6 \text{ A}$, $10 \text{ A}$, $16 \text{ A}$, characteristics: $B$ or $C$; or motor circuit breakers, setpoint: $1.6 \ldots 2.5 \text{ A}$

#### Environmental requirements:
- Ambient operating temperature: $-25 \degree \text{C} \ldots +70 \degree \text{C}$
- Storage temperature: $-25 \degree \text{C} \ldots +85 \degree \text{C}$
- Rel. humidity: $30 \\% \ldots 85 \\%$ (no condensation)
- Degree of pollution: $3 \% / K (> 50 \degree \text{C})$
- Degree of protection: $IP20$ acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. $35 \text{ VDC}$
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 231 Series
- Cross sections: Input/Output: $0.08 \ldots 2.5 \text{ mm}^2 / \text{AWG 28} \ldots 12$
- Strip lengths: Input/Output: $8 \ldots 9 \text{ mm} / 0.33 \text{ in}
- Type of mounting: DINrail mounting (EN 60715) in $2$ positions

#### Dimensions and weight:
- Dimensions (mm) $W \times H \times L$: $57 \times 163 \times 179$
- Height from upper edge of DIN 35 rail
- Weight: $1000 \text{ g}$

#### Standards and approvals:
- Standards/Specifications: $EN 60950$, $EN 61204-3$, $UL 60950$, $UL 508$
Switched-Mode Power Supply, 3-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

<table>
<thead>
<tr>
<th>Input</th>
<th>Item No.</th>
<th>Pack. Unit</th>
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</thead>
<tbody>
<tr>
<td>Nominal input voltage Vi nom</td>
<td>3x (2x) 400 ... 500 VAC</td>
<td></td>
</tr>
<tr>
<td>Input voltage range</td>
<td>340 ... 530 VAC; 480 ... 780 VDC</td>
<td></td>
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<tr>
<td>Frequency</td>
<td>50 - 60 Hz</td>
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<tr>
<td>Input current iI</td>
<td>3 x 1 A at 340 VAC and 20 ADC</td>
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<tr>
<td>Discharge current</td>
<td>1 mA typ.</td>
<td></td>
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<tr>
<td>Mains failure hold-up time</td>
<td>13 ms typ. at 3 x 400 VAC</td>
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<table>
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<tr>
<th>Output</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Nominal output voltage Vo nom</td>
<td>24 VDC (SELV)</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>22.8 ... 28.8 VDC adjustable</td>
</tr>
<tr>
<td>Output current Io</td>
<td>20 A at 24 VDC</td>
</tr>
<tr>
<td>PowerBoost</td>
<td>40 ADC (for 4 s); 30 ADC (for 16 s)</td>
</tr>
<tr>
<td>TopBoost</td>
<td>80 ADC (for 50 ms)</td>
</tr>
<tr>
<td>Factory preset</td>
<td>24 VDC</td>
</tr>
</tbody>
</table>

- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x Io typ.
- Overload behavior: Constant current
- Operational indication: LED green (DC O.K.), LED red (error)

### Technical Data

- **Efficiency / power losses:**
  - Efficiency: 92.9 % typ.
  - Power loss $P_L$: 8.3 W (stand-by) / 34.1 W (rated load)

- **Fuse protection:**
  - Internal fuse: 3 x 2.5 A / 250 V
  - External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, characteristic: B or C; or motor circuit breakers, setpoint: 2.5 ... 40 A
  - An external DC fuse is required for the DC input voltage

### Environmental requirements:

- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

### Safety and protection:

- Test voltage pri.-sec./ pri.-gr. / sec.-gr. | 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

### Connection and type of mounting:

- Wire connection: Input: WAGO 231 Series
  - Output: WAGO 831 Series
- Cross sections: Input:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output:
    - 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths: Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

### Dimensions and weight:

- Dimensions (mm) | W x H x L: 77 x 171 x 179
- Height from upper-edge of DIN 35 rail: 1300 g
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 3-Phase
EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

**Technical Data**

**Input:**
- Nominal input voltage $V_i \text{nom}$: 3x (2x) 400 ... 500 VAC
- Input voltage range: 340 ... 550 VAC; 480 ... 780 VDC
- Frequency: 50 - 60 Hz
- Input current $I_i$: 3 x 2.0 A at 340 VAC and 40 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A
- Mains failure hold-up time: 15 ms typ. at 3 x 400 VAC

**Output:**
- Nominal output voltage $V_o \text{nom}$: 24 VDC (SELV)
- Output voltage range: 22.8 ... 28.8 VDC adjustable
- Output current $I_o$: 40 A at 24 VDC
- PowerBoost: 60 ADC (for 4 s), 50 ADC (for 16 s)
- TopBoost: 100 ADC (for 50 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x $I_o$ typ.
- Overload behavior: Constant current
- Operational indication: LED green (DC O.K.), LED red (error)

**Efficiency / power losses:**
- Efficiency: 93.6 % typ.
- Power loss $P_L$: 7.0 W (stand-by) / 61.5 W (rated load)

**Fuse protection:**
- Internal fuse: 3 x 3.2 A / 250 V
- External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, or motor circuit breakers, characteristic: B or C, setpoint: 3.2 A, setting range: 2.5 ... 4.0 A

An external DC fuse is required for the DC input voltage

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-844</td>
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<tr>
<td>787-844/000-002</td>
<td>1</td>
<td>Unit</td>
</tr>
</tbody>
</table>

**Technical Data**

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Degree of pollution: 3 / 1K / 1 / 45 °C
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage pri.-sec./ pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

**Connection and type of mounting:**
- Wire connection
- Input: WAGO 231 Series
- Output: WAGO 831 Series
- Cross sections:
- Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths:
- Input: 8 ... 9 mm / 0.33 in
- Output: 13 ... 15 mm / 0.55 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

**Dimensions and weight:**
- Dimensions [mm]: W x H x L: 128 x 171 x 205
- Height from upper-edge of DIN 35 rail: 117 mm
- Weight: 2500 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 3-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_{in\,nom}$: 3x (2x) 400 ... 500 VAC
- Input voltage range: 340 ... 530 VAC, 480 ... 780 VDC
- Frequency: 50 Hz ... 60 Hz
- Input current $I_i$: 3 x 1.1 A at 340 VAC and 10 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A (peak)
- Mains failure hold-up time: 12 ms typ. at 3 x 400 VAC

#### Output:
- Nominal output voltage $V_o\,nom$: 48 VDC (SELV)
- Output voltage range: 39 ... 53 VDC adjustable
- Output current $I_o$: 10 A at 48 VDC
- PowerBoost: 15 ADC (for 4 s), 12.5 ADC (for 16 s)
- TopBoost: 55 ADC (for 50 ms)
- Factory preset: 48 VDC
- Adjustment accuracy: 1 %
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x Io typ.
- Overload behavior: TopBoost / PowerBoost /Constant current
- Operational indication: LED green (DC O.K.), LED red (error)

#### Efficiency / power losses:
- Efficiency: 93 % typ.
- Power loss $P_v$: 0.8 W (stand-by) / 8.2 W (no load) / 38 W (rated load)
- Fuse protection:
  - Internal fuse: 3 x 3.2 A / 250 V
  - External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, or motor circuit breakers, setpoint: 2.5 A, setting range: 2.5 ... 4.0 A
  - An external DC fuse is required for the DC input voltage

#### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (+50 °C)
- Degree of pollution: 2 (acc. to EN 60518)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Cross sections:
  - Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Signalisation: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths:
  - Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
  - Signalisation: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 77 x 171 x 179 (incl. female connector), Length from upper-edge of DIN 35 rail
- Weight: 1900 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
Switched-Mode Power Supply, 3-Phase

EPSITRON® PRO Power

- Primary switch mode power supply unit with PowerBoost and TopBoost
- Stand-by input for switching off the output and minimizing power consumption
- DC OK contact for output monitoring
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_i$ nom: 3x (2x) 400 ... 500 VAC
- Input voltage range: 340 ... 550 VAC; 480 ... 780 VDC
- Frequency: 50 Hz ... 60 Hz
- Input current $I_i$: 3 x 2.0 A at 340 VAC and 20 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A (peak)
- Mains failure hold-up time: 15 ms typ. at 3 x 400 VAC

#### Output:
- Nominal output voltage $V_o$ nom: 48 VDC (SELV)
- Output voltage range: 39 ... 53 VDC adjustable
- Output current $I_o$: 20 A at 48 VDC
- PowerBoost: 30 ADC (for 4 s); 25 ADC (for 16 s)
- TopBoost: 80 ADC (for 25 ms)
- Factory preset: 48 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-peak)
- Current limitation: 1.1 x Io typ.
- Overload behavior: TopBoost / PowerBoost / Constant current
- Operational indication: LED green (DC O.K.), LED red (error)

#### Efficiency / power losses:
- Efficiency: 94.4 % typ.
- Power loss $P_v$: 0.8 W (stand-by) / 5.2 W (no load) / 59.2 W (rated load)

#### Fuse protection:
- Internal fuse: 3 x 3.2 A / 250 V
- External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, characteristic: B or C; or motor circuit breakers, setpoint: 3.2 A, setting range: 2.5 ... 4.0 A
- An external DC fuse is required for the DC input voltage

#### Technical Data

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -5 % / K (> +45 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

### Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes

### Connection and type of mounting:
- Wire connection: Input: WAGO 231 Series
  - Output: WAGO 831 Series
  - Signalling: WAGO 733 Series
- Cross sections:
  - Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Signalling: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths:
  - Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
  - Signalling: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

### Dimensions and weight:
- Dimensions (mm) W x H x L: 128 x 171 x 205 (incl. female connector)
- Weight: 3270 g

### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
### Technical Data

**Input:**
- Nominal input voltage $V_{\text{nom}}$: $3x (2x) 400 \ldots 500 \text{ VAC}$
- Input voltage range: $340 \ldots 530 \text{ VAC}, 480 \ldots 780 \text{ VDC}$
- Frequency: $50 \ldots 60 \text{ Hz}$
- Input current $I_i$: $3 \times 0.6 \text{ A at } 340 \text{ VAC and } 10 \text{ ADC}$
- Discharge current: $1 \text{ mA typ.}$
- Inrush current: $< 30 \text{ A}$
- Mains failure hold-up time: $22 \text{ ms typ. at } 3 \times 400 \text{ VAC}$

**Output:**
- Nominal output voltage $V_{\text{nom}}$: $24 \text{ VDC (SELV)}$
- Output voltage range: $22.8 \ldots 28.8 \text{ VDC adjustable}$
- Output current $I_o$: $10 \text{ A at } 24 \text{ VDC}$
- PowerBoost: $20 \text{ ADC (for } 4 \text{ s), } 15 \text{ ADC (for } 16 \text{ s)}$
- TopBoost: $70 \text{ ADC (for } 50 \text{ ms)}$
- Factory preset: $24 \text{ VDC}$
- Adjustment accuracy: $1\%$
- Residual ripple: $< 70 \text{ mV (peak-to-peak)}$
- Current limitation: $1.1 \times I_o \text{ typ.}$
- Overload behavior: adjustable (constant current / fuse mode)
- Operational indication: LED green (OK), LED yellow (warning), LED red (error)
- Signaling: LED, LCD, 4 x signal output $24 \text{ V DC, } 25 \text{ mA}$
- LineMonitor, parameter setting: via LCD and RS-232 serial interface

**Efficiency / power losses:**
- Efficiency: $91.7\% \text{ typ.}$
- Power loss $P_v$: $7.8 \text{ W (stand-by) / } 19.9 \text{ W (rated load)}$

**Fuse protection:**
- Internal fuse: $3 \times 1 \text{.6 A / } 250 \text{ V}$
- External fuse: $3 \times \text{ circuit breakers } 6 \text{ A, } 10 \text{ A, } 16 \text{ A, characteristic: } B \text{ or } C$,
  - or motor circuit breakers,
  - or setting: $1.6 \text{ A, setting range: } 1.6 \ldots 2.5 \text{ A}$
- An external DC fuse is required for the DC input voltage

### Description

**Item No.** 787-850

**Pack. Unit** 1

**24 V DC / 10 A**

### Technical Data

**Environmental requirements:**
- Ambient operating temperature: $-25 \degree \text{ C} \ldots +70 \degree \text{ C}$
- Storage temperature: $-25 \degree \text{ C} \ldots +85 \degree \text{ C}$
- Rel. humidity: $30 \% \ldots 85 \% \text{ (no condensation)}$
- Derating: $-3 \% / \text{ K} (> 50 \degree \text{ C})$
- Degree of pollution: $2 \text{ (acc. to EN 50178)}$
- Climatic category: $3 \text{K}3 \text{ (acc. to EN 60721)}$

**Safety and protection:**
- Test voltage pri.-sec./ pri.-gr. / sec.-gr.: $4.2 \text{ kV DC / 2.2 kV DC / 0.7 kV DC}$
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. $35 \text{ VDC}$
- Parallel operation: yes
- Series connection: yes

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 231 Series
- Signalling: WAGO 733 Series
- Cross sections: Input/Output: $0.08 \text{ mm}^2 \ldots 2.5 \text{ mm}^2 / \text{ AWG } 28 \ldots 12$
- Signalling: $0.08 \text{ mm}^2 \ldots 0.5 \text{ mm}^2 / \text{ AWG } 28 \ldots 20$
- Strip lengths: Input/Output: $8 \ldots 9 \text{ mm / } 0.33 \text{ in}$
- Signalling: $5 \ldots 6 \text{ mm / } 0.22 \text{ in}$
- Type of mounting: DINrail mounting [EN 60715] in $2 \text{ positions}$

**Dimensions and weight:**
- Dimensions (mm) $W \times H \times L$: $57 \times 163 \times 179$
- Height from upper-edge of DIN 35 rail: $1000 \text{ g}$
- Standards and approvals:
  - Standards/Specifications: EN 60950, EN 61204-3,
  - UL 60950, UL 508
### Technical Data

#### Input:
- Nominal input voltage \( V_{i\text{ nom}} \): \(3 x (2x) 400 \ldots 500 \text{ VAC}\)
- Input voltage range: \(340 \ldots 550 \text{ VAC}; 480 \ldots 780 \text{ VDC}\)
- Frequency: 50 - 60 Hz
- Input current \( I_i\): 3 x 1.0 A at 340 VAC and 20 ADC
- Discharge current: 1mA typ.
- Inrush current: < 30 A
- Mains failure hold-up time: 13 ms typ. at 3 x 400 VAC

#### Output:
- Nominal output voltage \( V_{o\text{ nom}} \): 24 VDC (SELV)
- Output voltage range: 22.8 ... 28.8 VDC adjustable
- Output current \( I_o\): 20 A at 24 VDC
- PowerBoost: 40 ADC (for 4 s), 30 ADC (for 16 s)
- TopBoost: 80 ADC (for 50 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV [peak-to-peak]
- Current limitation: 1.1 x \( I_o\) typ.
- Overload behavior: adjustable (constant current / fuse mode)
- Operational indication: LED green (DC O.K.), LED yellow (warning), LED red (error)
- Signaling: LED, ICD, 4 x signal output 24 V DC, 25 mA
- LineMonitor, parameter setting: via LCD and RS-232 serial interface

#### Efficiency / power losses:
- Efficiency: 92.9 % typ.
- Power loss \( P_o\): 8.3 W (stand-by) / 34.1 W (rated load)
- Fuse protection:
  - Internal fuse: 3 x 2.5 A / 250 V
  - External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, or motor circuit breakers, characteristic: B or C;
  - setpoint: 2.5 A, setting range: 2.5 ... 4.0 A
  - An external DC fuse is required for the DC input voltage

#### Technical Data

### Description

- Item No.: 787-852
- Pack. Unit: 1

#### Switched-Mode Power Supply, 24 V DC / 20 A

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -3 % / K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

#### Connection and type of mounting:
- Wire connection: Input: WAGO 231 Series
  - Output: WAGO 831 Series
  - Signalling: WAGO 733 Series
- Cross sections:
  - Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Signalling: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Strip lengths:
  - Input: 8 ... 9 mm / 0.33 in
  - Output: 13 ... 15 mm / 0.55 in
  - Signalling: 5 ... 6 mm / 0.22 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 77 x 171 x 179
- Height from upper-edge of DIN 35 rail: 1300 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 608
# Switched-Mode Power Supply, 3-Phase

**EPSITRON® PRO Power**

- Primary switch mode power supply unit with PowerBoost and TopBoost
- LineMonitor for parameter setting and monitoring
- RS-232 serial interface
- 4 signal outputs
- Parallel operation, series connection possible
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

## Technical Data

### Input:
- Nominal input voltage \( V_{\text{in.nom}} \): 3x (2x) 400 ... 500 VAC
- Input voltage range: 340 ... 550 VAC; 480 ... 780 VDC
- Frequency: 50 - 60 Hz
- Input current \( I_i \): 3 x 2.0 A at 340 VAC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A
- Mains failure hold-up time: 15 ms typ. at 3 x 400 VAC

### Output:
- Nominal output voltage \( V_{\text{out.nom}} \): 24 VDC (SELV)
- Output voltage range: 22.8 ... 28.8 VDC adjustable
- Output current \( I_o \): 40 A at 24 VDC
- PowerBoost: 60 ADC (for 4 s), 50 ADC (for 16 s)
- TopBoost: 100 ADC (for 50 ms)
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 70 mV (peak-to-peak)
- Current limitation: 1.1 x Io typ.
- Overload behavior: adjustable (constant current / fuse mode)
- Operational indication: LED green (DC O.K.), LED yellow (warning), LED red (error)
- Signaling: LED, LCD, 4 x signal output 24 V DC, 25 mA
- LineMonitor, parameter setting: via LCD and RS-232 serial interface

### Efficiency / power losses:
- Efficiency: 93.6 % typ.
- Power loss \( P_p \): 7.0 W (stand-by) / 61.5 W (rated load)

### Fuse protection:
- Internal fuse: 3 x 1 3.2 A / 250 V
- External fuse: 3 x circuit breakers 6 A, 10 A, 16 A, characteristic: B or C; or motor circuit breakers, setpoint: 3.2 A, setting range: 2.5 ... 4.0 A

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-Mode Power Supply, 24 V DC / 40 A</td>
<td>787-854</td>
<td>1</td>
</tr>
</tbody>
</table>

## Environmental requirements:
- Ambient operating temperature: -25 °C ... +55 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)
- Derating: -5 % / K (> 45 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Degree of protection: IP20 (acc. to EN 60529)

## Safety and protection:
- Test voltage pri.-sec./ pri.-gr. / sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 35 VDC
- Parallel operation: yes
- Series connection: yes

## Connection and type of mounting:
- Wire connection: Input: WAGO 231 Series
- Output: WAGO 831 Series
- Cross sections: Input: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths: Input: 8 ... 9 mm / 0.33 in
- Signal lengths: 0.08 mm² ... 0.5 mm² / AWG 28 ... 20
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

## Dimensions and weight:
- Dimensions (mm): W x H x L 128 x 171 x 205
- Height from upper-edge of DIN 35 rail
- Weight: 2300 g

## Standards and approvals:
- Standards / Specifications: EN 60950, EN 61204-3, UL 60950, UL 508
### Technical Data

#### Input:
- Nominal input voltage $V_{i,\text{nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 95 VAC)
- Frequency: 47 Hz ... 63 Hz, 0 Hz
- Input current $i_i$: 0.22 A (240 VAC); 0.45 A (100 VAC)
- Inrush current: < 30 A
- Mains failure hold-up time: 120 ms (230 VAC); 15 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{o,\text{nom}}$: 12 VDC (SELV)
- Output voltage range: 11.5 ... 14.5 VDC adjustable
- Output current $i_o$: 2 A at 12 VDC (2.1 A up to 40 °C)
- Factory preset: 12 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 25 mV (peak-to-peak) typ.
- Current limitation: 1.1 x $i_o$ typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Signaling: 1 x active signal output 12 VDC, 40 mA

#### Efficiency/Power losses:
- Efficiency: 82 % typ.
- Power loss $P_v$: < 0.7 W (230 VAC, no load); 5.3 W (230 VAC, nominal load)
- Max. power loss $P_v$: 5.7 W typ. (100 VAC / 12 VDC, 2 A)

#### Fuse protection:
- Internal fuse: 1.2 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, B or C characteristic;
  An external DC fuse is required for the DC input voltage
Switched-Mode Power Supply, 1-Phase

EPSITRON® CLASSIC Power

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

Description

Switched-mode power supply, 12 VDC / 4 A

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-mode power supply, 12 VDC / 4 A</td>
<td>787-1611</td>
<td>1</td>
</tr>
</tbody>
</table>

Technical Data

**Input:**
- Nominal input voltage \( V_{\text{nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating: -2.5% (< 95 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current \( I_i \): 0.41 A (240 VAC); 0.83 A (100 VAC)
- Inrush current: < 30 A
- Mains failure hold-up time: 120 ms (230 VAC); 15 ms (100 VAC)

**Output:**
- Nominal output voltage \( V_{\text{nom}} \): 12 VDC (SELV)
- Output voltage range: 11.5 ... 14.5 VDC adjustable
- Output current \( I_o \): 4 A at 12 VDC (4.2 A up to 40 °C) Factory preset 12 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 30 mV (peak-to-peak) typ.
- Current limitation: 1.1 x \( I_o \) typ.
- Overload behavior: Constant current
- Operational indication: Green LED (\( V_o \))
- Signaling: 1 x active signal output 12 VDC, 40 mA

**Efficiency/Power losses:**
- Efficiency: 86 % typ.
- Power loss \( P_V \): < 1 W (230 VAC, no load); 8 W (230 VAC, nominal load)
- Max. power loss \( P_V \): 9.1 W typ. (100 VAC / 12 VDC, 4 A)

**Internal fuse:**
- T 4 A / 250 V

**External fuse:**
- Circuit breakers 6 A, 10 A, 16 A,
- B or C characteristic,
- An external DC fuse is required for the DC input voltage

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C;
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -3 %/K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: II
- Degree of protection: IP20 (acc. to EN 50018)
- Overvoltage protection: Varistor (input side), internal protective circuit, < 35 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 25 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

**Connection and type of mounting:**
- Wire connection: Input/Output/Signaling
- Cross sections: WAGO 721 Series
- Strip lengths: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Type of mounting: DIN-rail mount (EN 60715)
- Weight: 210 g

**Standards and approvals:**
- Standards/Specifications: EN 60950-1, EN 61204-3, EN 60335-1, UL 60950-1, UL 508, GL (* pending)
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
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<tbody>
<tr>
<td>787-1621</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Technical Data

**Input:**
- Nominal input voltage $V_{\text{nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 95 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$: 0.7 A (240 VAC); 1.5 A (100 VAC)
- Inrush current: < 30 A
- Mains failure hold-up time: 100 ms (230 VAC), 15 ms (100 VAC)

**Output:**
- Nominal output voltage $V_{\text{nom}}$: 12 VDC (SELV)
- Output voltage range: 11.5 ... 14.5 VDC adjustable
- Output current $I_o$: 7 A at 12 VDC (7.5 A up to 40 °C)
- Factory preset: 12 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 50 mV (peak-to-peak) typ.
- Current limitation: 1.1 x $I_o$, typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Signaling: 1 x active signal output 12 VDC, 40 mA

**Efficiency/Power losses:**
- Efficiency: 85 % typ.
- Power loss $P_v$: < 0.6 W (230 VAC, no load); 15.2 W (230 VAC, nominal load)
- Max. power loss $P_v$: 16.4 W typ. (100 VAC / 12 VDC, 7 A)

**Fuse protection:**
- Internal fuse: 7.4 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A, B or C characteristic;
  An external DC fuse is required for the DC input voltage

### Technical Data

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -1 %/K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: II
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: Varistor (input side), internal protective circuit,
  < 32 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 25 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

**Connection and type of mounting:**
- Wire connection: Input/Output/Signaling:
- Cross sections: Input/Output/Signaling:
- Strip lengths: Input/Output/Signaling:
- Type of mounting: DIN-rail mount (EN 60715)
- Dimensions and weight:
  - Dimensions (mm): W x H x L: 52 x 90 x 119
  - Length from upper-edge of DIN rail: 384 g
- Standards and approvals:
  - Standards/Specifications: EN 60950-1, EN 61204-3, EN 60335-1,
    UL 60950-1, UL 508, GL (* pending)
**Switched-Mode Power Supply, 1-Phase**

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- **DC OK contact**
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage $V_{i\text{nom}}$: 100 ... 240 VAC
- Input voltage range $85 ... 264$ VAC; $120 \text{ V} ... 372$ VDC
- Input voltage derating -2.5 % (< 100 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$: 0.95 A (240 VAC); 2.07 A (100 VAC)
- Discharge current: < 1 mA
- Inrush current: < 30 A
- Mains failure hold-up time: 28 ms (230 VAC); 28 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{o\text{nom}}$: 12 VDC (SELV)
- Output voltage range: 11.5 ... 14.5 VDC adjustable
- Output current $I_o$: 15 A at 12 VDC
- Factory preset: 12 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 35 mV (peak-to-peak) typ.
- Current limitation: 1.1 x $I_o$, typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Signaling: DC O.K. contact;
  - (Make contact, max. 30 V AC/DC, 1 A)

#### Efficiency/Power losses:
- Efficiency: 90 % typ.
- Power loss $P_v$: 4.4 W [230 VAC, no load];
  - 21.8 W [230 VAC, nominal load]
- Max. power loss $P_{o\text{max}}$: 24.7 W typ. (100 VAC / 12 VDC, 15 A)

#### Fuse protection:
- Internal fuse: T 6.3 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A,
  - B or C characteristic;
  - An external DC fuse is required for the DC input voltage

### Environmental Requirements:
- Ambient operating temperature: -25 °C ... +70 °C;
- Device start at +40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -5 %/K (>60 °C, 196 ... 264 VAC);
  - -2.5 %/K (>50 °C, 85 ... 195 VAC)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

### Safety and protection:
- Test voltage PRI-SEC/PRI-GND/SEC-GND: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 50017)
- Overvoltage protection: Varistor (input side);
  - internal protective circuit,
  - < 20 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 25 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

### Connection and type of mounting:
- Wire connection: Input/Output/Signaling:
  - WAGO 721 Series
- Cross sections: Input/Output/Signaling:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: 8 ... 9 mm / 0.31 ... 0.35 in
- Type of mounting: DIN-rail mount [EN 60715]

### Dimensions and weight:
- Dimensions (mm): W x H x L: 55 x 127 x 172
- Length from upper-edge of DIN 35 rail
- Weight: 930 g

### Standards and approvals:
- Standards/Specifications: EN 60950-1, EN 61204-3,
  - UL 60950-1, UL 508, GL *
  - (* pending)
787-1602

Switched-Mode Power Supply, 1-Phase

EPSITRON® CLASSIC Power

Similar to picture

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
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<tbody>
<tr>
<td>Switched-mode power supply,</td>
<td>787-1602</td>
<td>1</td>
</tr>
<tr>
<td>24 VDC/ 1 A</td>
<td></td>
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</tr>
</tbody>
</table>

#### Input:
- Nominal input voltage $V_{\text{nom}}$ 100 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating -2.5 % (< 95 VAC)
- Frequency 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$ 0.2 A (240 VAC); 0.43 A (100 VAC)
- Inrush current < 30 A
- Mains failure hold-up time 120 ms (230 VAC); 20 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{\text{nom}}$ 24 VDC (SELV)
- Output voltage range 23 ... 28.5 VDC adjustable
- Output current $I_o$ 1 A at 24 VDC (1.2 A up to 40 °C)
- Factory preset 24 VDC
- Adjustment accuracy < 1 %
- Residual ripple 20 mV (peak-to-peak) typ.
- Current limitation 1.1 x $I_o$ typ.
- Overvoltage protection Constant current
- Overload behavior Constant current
- Operational indication Green LED ($V_o$)

#### Efficiency/Power losses:
- Efficiency 86 % typ.
- Power loss $P_v$ < 1 W (230 VAC, no load); 3.9 W (230 VAC, nominal load)
- Max. power loss $P_v$ 4.2 W typ. (100 VAC / 24 VDC, 1 A)

#### Fuse protection:
- Internal fuse 1 2 A / 250 V
- External fuse Circuit breakers 6 A, 10 A, 16 A, B or C characteristic;
  An external DC fuse is required for the DC input voltage

#### Environmental Requirements:
- Ambient operating temperature -25 °C ... +70 °C;
  Device start at -40 °C (type-tested)
- Storage temperature -25 °C ... +85 °C
- Relative humidity 30 % ... 85 % (no condensation permissible)
- Derating -3 °C/K (> 50 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri. - sec. 4.2 kV DC
- Protection class II
- Degree of protection IP20 (acc. to EN 50052)
- Overvoltage protection Varistor (input side);
  internal protective circuit,
  < 39 VDC (output side in case of an error)
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 33 VDC
- Parallel operation yes
- Series connection yes
- MTBF > 500,000 h (acc. to IEC 61709)

#### Connection and type of mounting:
- Wire connection Input/Output/Signaling:
  WAGO 721 Series
- Cross sections Input/Output/Signaling:
  0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input/Output/Signaling:
  8 ... 19 mm / 0.31 ... 0.35 in
- Type of mounting DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions [mm] W x H x L 22.5 x 90 x 107.5
- Length from upper-edge of DIN 35 rail 128 g

#### Standards and approvals:
- Standards/Specifications EN 60950-1, EN 61204-3, EN 60335-1,
  UL 60950-1, UL 508, GL
- (*) pending

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## Switched-Mode Power Supply, 1-Phase

### EPOSITRON® CLASSIC Power

- **Primary switch mode power supply unit**
- **Protection class II**
- **Natural convection cooling when horizontally mounted**
- **Enclosed for use in switchgear cabinets**
- **Bounce-free switching signal (DC OK)**
- **Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1**

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Switched-mode power supply, 24 VDC / 2 A</th>
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</thead>
<tbody>
<tr>
<td>787-1606</td>
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</table>

### Technical Data

#### Input:
- **Nominal input voltage** $V_{\text{nom}}$: 100 ... 240 VAC
- **Input voltage range**: 85 ... 264 VAC; 120 V ... 372 VDC
- **Input voltage derating**: -2.5 % (< 95 VAC)
- **Frequency**: 47 Hz ... 63 Hz; 0 Hz
- **Input current** $I_i$: 0.37 A (240 VAC); 0.73 A (100 VAC)
- **Inrush current**: < 30 A
- **Mains failure hold-up time**: 120 ms (230 VAC); 20 ms (100 VAC)

#### Output:
- **Nominal output voltage** $V_o \text{ nom}$: 24 VDC (SEIV)
- **Output voltage range**: 23 ... 28.5 VDC adjustable
- **Output current** $I_o$: 2 A at 24 VDC (2.2 A up to 40 °C)
- **Factory preset**: 24 VDC
- **Adjustment accuracy**: < 1 %
- **Residual ripple**: 20 mV (peak-to-peak) typ.
- **Current limitation**: 1.1 x $I_o$ typ.
- **Overload behavior**: Constant current
- **Operational indication**: Green LED ($V_o$)
- **Efficiency/Power losses**:
  - **Efficiency**: 89 % typ.
  - **Power loss** $P_v$: < 1 W [230 VAC, no load]; 6 W [230 VAC, nominal load]
  - **Max. power loss** $P_v$: 6.6 W typ. [100 VAC / 24 VDC, 2 A]

#### Fuse protection:
- **Internal fuse**: T 4 A / 250 V
- **External fuse**: Circuit breakers 6 A, 10 A, 16 A;
  - B or C characteristic;
  - An external DC fuse is required for the DC input voltage

#### Environmental Requirements:
- **Ambient operating temperature**: -25 °C ... +70 °C;
- **Device start at -40 °C** (type-tested)
- **Storage temperature**: -25 °C ... +85 °C
- **Relative humidity**: 30 % ... 85 % (no condensation permissible)
- **Derating**: -3 %/°C (> 50 °C)
- **Degree of pollution**: 2 (acc. to EN 50178)
- **Climatic category**: 3K3 (acc. to EN 60721)

#### Safety and protection:
- **Test voltage pri. - sec.**: 4.2 kV DC
- **Protection class**: II
- **Degree of protection**: IP20 (acc. to EN 60529)
- **Overvoltage protection**: Varistor (input side), internal protective circuit, < 37 VDC (output side in case of an error)
- **Short circuit protection**: yes
- **No-load proof**: yes
- **Feedback voltage**: max. 33 VDC
- **Parallel operation**: yes
- **Series connection**: yes
- **MTBF**: > 500,000 h (acc. to IEC 61709)

#### Connection and type of mounting:
- **Wire connection Input/Output/Signaling**: WAGO 721 Series
- **Cross sections Input/Output/Signaling**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip lengths Input/Output/Signaling**: 8 ... 9 mm / 0.31 ... 0.35 in
- **Type of mounting**: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- **Dimensions (mm) W x H x L**: 45 x 90 x 107.5
- **Length from upper-edge of DIN 35 rail**: 210 g

#### Standards and approvals:
- **Standards/Specifications**: EN 60950-1, EN 61204-3, EN 60335-1, UL 60950-1, UL 508, GL *(pending)*
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Similar to picture

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Description

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<th>Item No.</th>
<th>Pack. Unit</th>
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<tr>
<td>787-1616</td>
<td>1</td>
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</table>

**Technical Data**

#### Input:
- Nominal input voltage $V_{in, nom}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 95 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$: 0.66 A (240 VAC); 1.52 A (100 VAC)
- Inrush current: < 30 A
- Mains failure hold-up time: 80 ms (230 VAC); 15 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{out, nom}$: 24 VDC (SELV)
- Output voltage range: 23 ... 28.5 VDC adjustable
- Output current $I_o$: 4 A at 24 VDC (4.2 A up to 40 °C)
- Factory preset: 24 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 20 mV (peak-to-peak) typ.
- Current limitation: 1.1 x $I_o$, typ.
- Overvoltage behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Power loss $P_V$: 4 W (240 VAC, no load);<br>12.4 W (230 VAC, nominal load)
- Max. power loss $P_{max}$: 15 W typ. (100 VAC / 24 VDC, 4 A)

#### Safety and protection:
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: II
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: Varistor (input side);<br>internal protective circuit,
- Short circuit protection: yes<br>No-load proof: yes<br>Feedback voltage: max. 35 VDC<br-Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

### Technical Data

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C;
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -1 %/K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 52 x 90 x 119
- Weight: 384 g

**Standards and approvals:**
- Standards/Specifications: EN 60950-1, EN 61204-3, EN 60335-1, UL 60950-1, UL 508, GL (* pending)
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Limited Power Source (LPS) acc. to NEC Class 2
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{in, nom}}$ 100 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating -2.5 % (< 95 VAC)
- Frequency 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$ 0.7 A (240 VAC), 1.8 A (100 VAC)
- Inrush current < 30 A
- Mains failure hold-up time 80 ms (230 VAC); 15 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{\text{out, nom}}$ 24 VDC (SELV)
- Output voltage range 23 ... 28.5 VDC adjustable
- Output current $I_o$ 3.8 A at 24 VDC
- Factory preset 24 VDC
- Adjustment accuracy < 1 %
- Residual ripple 20 mV (peak-to-peak) typ.
- Current limitation 3.8 A [3.2 A at $V_o$ > 25 VDC], LPS acc. to NEC Class 2
- Overload behavior Constant current
- Operational indication Green LED ($V_o$)
- Signaling 1 x active signal output 24 VDC, 20 mA

#### Efficiency/Powers losses:
- Efficiency 87 % typ.
- Power loss $P_V$ 2.8 W [230 VAC, no load], 14 W [230 VAC, nominal load]
- Max. power loss $P_L$ < 20 W [100 V / 91 W]

#### Fuse protection:
- Internal fuse T 4 A / 250 V
- External fuse Circuit breakers 6 A, 10 A, 16 A, B or C characteristic;
  An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental Requirements:
- Ambient operating temperature -25 °C ... +70 °C;
- Storage temperature -25 °C ... +85 °C
- Relative humidity 30 % ... 85 % (no condensation permissible)
- Derating -3 %/K (> 50 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

#### Safety and Protection:
- Test voltage pri. - sec. 4.2 kV DC
- Protection class II
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection Varistor (input side), internal protective circuit, < 40 VDC (output side in case of an error)
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 33 VDC
- Parallel operation yes
- Series connection no

#### Connection and type of mounting:
- Wire connection Input/Output/Signaling: WAGO 721 Series
- Cross sections Input/Output/Signaling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input/Output/Signaling: 8 ... 9 mm / 0.31 ... 0.35 in
- Type of mounting DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) W x H x L 52 x 90 x 119
- Weight 384 g

#### Standards and approvals:
- Standards Specifications EN 60950-1, EN 61204-3, EN 60335-1, UL 60950-1, UL 508, UL 1310, GL *
  (* pending)
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

**Input:**
- Nominal input voltage $V_{i\text{ nom}}$ 100 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating -2.5 % (< 97 VAC)
- Frequency 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$ 1.2 A (240 VAC); 2.25 A (100 VAC)
- Discharge current < 1 mA
- Inrush current < 30 A
- Mains failure hold-up time 80 ms (230 VAC), 10 ms (100 VAC)

**Output:**
- Nominal output voltage $V_{o\text{ nom}}$ 24 VDC (SELV)
- Output voltage range 23 ... 28.5 VDC adjustable
- Output current $I_o$ 5 A at 24 VDC
- Factory preset 24 VDC
- Adjustment accuracy < 1 %
- Residual ripple 30 mV (peak-to-peak) typ.
- Current limitation 1.1 x $I_o$ typ.
- Overload behavior Constant current
- Operational indication Green LED ($V_o$)
- Signaling DC OK contact; (Make contact, max. 30 V AC/DC, 1 A)

**Efficiency/Power losses:**
- Efficiency 89 % typ.
- Power loss $P_v$ 1.2 W [230 VAC, no load]; 14.6 W [230 VAC, nominal load]
- Max. power loss $P_{v\text{ max}}$ 19.4 W typ. (100 VAC / 24 VDC, 5 A)

**Fuse protection:**
- Internal fuse T 4 A / 250 V
- External fuse Circuit breakers 6 A, 10 A, 16 A, 8 or C characteristic;
  An external DC fuse is required for the DC input voltage

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-mode power supply, 24 VDC / 5 A</td>
<td>787-1622</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

#### Environmental Requirements:
- Ambient operating temperature -25 °C ... +70 °C;
  Device start at -40 °C (type-tested)
- Storage temperature -25 °C ... +85 °C
- Relative humidity 30 % ... 85 % (no condensation permissible)
- Derating -5 %/K (>60 °C, 196 ... 264 VAC);
  -2.5 %/K (>30 °C, 85 ... 195 VAC)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage PRI-SEC/PRI-GND/SEC-GND 4.2 kV DC kV / 2.2 kV DC kV / 0.7 kV DC
- Protection class Prepared for class I equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection Varistor (input side);
  internal protective circuit,
  < 41 VDC (output side in case of an error)
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 35 VDC
- Parallel operation yes
- Series connection yes
- MTBF > 500,000 h (acc. to IEC 61709)

#### Connection and type of mounting:
- Wire connection Input/Output/Signaling:
  WAGO 721 Series
- Cross sections Input/Output/Signaling:
  0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input/Output/Signaling:
  6 ... 9 mm / 0.31 ... 0.35 in
- Type of mounting DIN-rail mount [EN 60715]

#### Dimensions and weight:
- Dimensions [mm] W x H x L 42 x 127 x 137.5
- Length from upper-edge of DIN 35 rail
- Weight 590 g

#### Standards and approvals:
- Standards/Specifications EN 60950-1, EN 61204-3, EN 60335-1,
  UL 60950-1, UL 508, GL (*)
  (* pending)
787-1675

Switched-Mode Power Supply with Integrated UPS Charger and Controller

**Technical Data**

**Input:**
- Nominal input voltage $V_i \text{nom}$: 100 ... 240 VAC; 110 ... 370 VDC
- Input voltage range: 85 ... 264 VAC
- Frequency: 45 ... 65 Hz; 0 Hz
- Input current $I_i$: 1.1 A at 230 VAC and 5 ADC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A

**Output:**
- Nominal output voltage $V_o \text{nom}$: 24 VDC (SELV)
- Output voltage range: 23.0 ... 28.5 VDC (mains operation)
  - 18.5 ... 27.5 VDC (battery operation)
- Output current $I_o$: 5 A
- Adjustment accuracy: 1 %
- Residual ripple: < 100 mV (peak-peak)
- Current limitation: 1.1 x $I_o$; TopBoost approx. 24 A
- Buffer time: 0.5 ... 20 min, IPC mode or constant (adjustable)
- Switch-on threshold (adjustable): 22 VDC (pre-configured), 20 ... 25.3 VDC (configurable via software)
- Final load voltage: 26 ... 29.5 VDC temperature-controlled (fixed or adjustable)
- Charging current: 0.3 A ... 0.6 A
- Recommended battery modules: 787-876, 787-871, 787-872, 787-873
- Operational indication: Green LED (DC OK), yellow LED (battery mode), red LED (warning/fault)
- Signaling: 3 x 24 VDC signal output, 25 mA and 1 x 30 VDC isolated relay contact, 1 A
- Remote input: to switch off buffer operation
- LineMonitor: parameter setting via RS-232 serial interface

**Efficiency / power losses:**
- Efficiency: 89 % typ.
- Power loss $P_L$: 5.2 W (battery operation, 24 VDC, 5 A) / 17 W (mains operation, 230 VAC/24 VDC, 5 A)

**Fuse protection:**
- Internal fuse: 4 A / 250 V (input side)
- External fuse: Circuit breakers 6 A, 10 A, 16 A, characteristic B or C

Environment:
- Ambient operating temperature: -25 °C ... +70 °C;
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Derating: -3 % / °C (up to +50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

Safety and protection:
- Test voltage: 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class: I
- Reverse voltage protection: yes
- Degree of protection: IP20 (acc. to EN 60529)
- Feedback voltage: max. 35 VDC
- Parallel operation: yes, max. 3 battery modules for buffer time extension

Connection and type of mounting:
- Wire connection: Input/Output/Signals:
  - WAGO 721 Series
- Interface: WAGO 733 Series
- Cross sections: Input/Output/Signals: 0.5 ... 10 mm² / AWG 20 ... 10
- Interface:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - 13 ... 15 mm / 0.55 in
- Line length:
  - ≤ 3 m (Output, Battery Control)
- Type of mounting: DIN-rail mount (EN 60715)

Dimensions and weight:
- Dimensions (mm) W x H x L: 60 x 127 x 135.5
- Length from upper-edge of DIN 35 rail
- Weight: 885 g

Standards and approvals:
- Standards/Specifications:
  - EN 60950, UL 60950, UL 508,
  - EN 61204-3, GL (* pending)
Switched-Mode Power Supply, 1-Phase

EPSITRON® CLASSIC Power

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- DC O.K. contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

Description

Item No. 787-1632
24 VDC / 10 A

Technical Data

<table>
<thead>
<tr>
<th>Input</th>
<th>Nominal input voltage $V_{nom}$</th>
<th>100 ... 240 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage range</td>
<td>85 ... 264 VAC</td>
<td>120 V ... 372 VDC</td>
</tr>
<tr>
<td>Input voltage derating</td>
<td>2.5 % (&lt; 100 VAC)</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>47 Hz ... 63 Hz, 0 Hz</td>
<td></td>
</tr>
<tr>
<td>Input current $I_i$</td>
<td>1.25 A (240 VAC); 2.74 A (100 VAC)</td>
<td></td>
</tr>
<tr>
<td>Discharge current</td>
<td>&lt; 1 mA</td>
<td></td>
</tr>
<tr>
<td>Inrush current</td>
<td>&lt; 30 A</td>
<td></td>
</tr>
<tr>
<td>Mains failure hold-up time</td>
<td>17 ms (230 VAC); 15 ms (100 VAC)</td>
<td></td>
</tr>
</tbody>
</table>

Output:

<table>
<thead>
<tr>
<th>Nominal output voltage $V_{nom}$</th>
<th>24 VDC (SELV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output voltage range</td>
<td>23 ... 28.5 VDC adjustable</td>
</tr>
<tr>
<td>Output current $I_o$</td>
<td>10 A at 24 VDC</td>
</tr>
<tr>
<td>Factory preset</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Adjustment accuracy</td>
<td>&lt; 1 %</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>50 mV (peak-to-peak) typ.</td>
</tr>
<tr>
<td>Current limitation</td>
<td>1.1 x $I_o$, typ.</td>
</tr>
<tr>
<td>Overload behavior</td>
<td>Constant current</td>
</tr>
<tr>
<td>Operational indication</td>
<td>Green LED (V o)</td>
</tr>
<tr>
<td>Signaling</td>
<td>DC O.K. contact; (Make contact, max. 30 V AC/DC, 1 A)</td>
</tr>
</tbody>
</table>

Efficiency/Power losses:

| Efficiency | 91 % typ. |
| Power loss $P_v$ | 6.6 W (230 VAC, no load); 24.4 W (230 VAC, nominal load) |
| Max. power loss $P_v$ | 31.3 W typ. (100 VAC / 24 VDC, 10 A) |

Fuse protection:

| Internal fuse | T 6.3 A / 250 V |
| External fuse | Circuit breakers 10 A, 16 A, 8 or 12 A characteristic; An external DC fuse is required for the DC input voltage |

Environmental Requirements:

| Ambient operating temperature | -25 °C ... +70 °C; Device start at 40 °C (type-tested) |
| Storage temperature | -25 °C ... +85 °C |
| Relative humidity | 30 % ... 85 % (no condensation permissible) |
| Derating | -5 %/K (>60 °C, 196 ... 264 VAC); -2.5 %/K (>50 °C, 196 ... 195 VAC) |
| Degree of pollution | 2 (acc. to EN 50178) |
| Climatic category | 3K3 (acc. to EN 60721) |

Safety and protection:

| Test voltage PRI-SEC/PRI-GND/SEC-GND | 4.2 kV DC kV / 2.2 kV DC kV / 0.7 kV DC |
| Protection class | Prepared for class I equipment |
| Degree of protection | IP20 (acc. to EN 60529) |
| Overvoltage protection | Varistor (input side); internal protective circuit, < 40 VDC (output side in case of an error) |
| Short circuit protection | yes |
| No-load proof | yes |
| Feedback voltage | max. 35 VDC |
| Parallel operation | yes |
| Series connection | yes |
| MTBF | > 500,000 h (acc. to IEC 61709) |

Connection and type of mounting:

| Wire connection | Input/Output/Signaling: WAGO 721 Series |
| Cross sections | Input/Output/Signaling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12 |
| Strip lengths | Input/Output/Signaling: 8 ... 9 mm / 0.31 ... 0.35 in |
| Type of mounting | DIN-rail mount (EN 60715) |

Dimensions and weight:

| Dimensions [mm] W x H x L | 55 x 127 x 172 |
| Length from upper-edge of DIN 35 rail | |
| Weight | 930 g |

Standards and approvals:

| Standards/Specifications | EN 60950-1, EN 61204-3, UL 60950-1, UL 508, GL * (* pending) |
Switched-Mode Power Supply, 1-Phase

**ELECTRONIC® CLASSIC Power**

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{in,nom}}$ 100 ... 240 VAC
- Input voltage range 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating -1.8 % (< 105 VAC)
- Frequency 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$ 2.23 A (240 VAC); 5.56 A (100 VAC)
- Discharge current < 1 mA
- Inrush current < 30 A
- Mains failure hold-up time 20 ms (230 VAC); 20 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{\text{out,nom}}$ 24 VDC (SELV)
- Output voltage range 23 ... 28.5 VDC adjustable
- Output current $I_o$ 20 A at 24 VDC
- Factory preset 24 VDC
- Adjustment accuracy < 1 %
- Residual ripple 70 mV (peak-to-peak) typ.
- Current limitation 1.1 x $I_o$, typ.
- Overload behavior Constant current
- Operational indication Green LED ($V_o$)
- Signaling DC O.K. contact: (Make contact, max. 30 V AC/DC, 1 A)

#### Efficiency/Power losses:
- Efficiency 92 % typ.
- Power loss $P_i$ 7.0 W (230 VAC, no load)
- Max. power loss $P_o$ 68.3 W typ. (100 VAC / 24 VDC, 20 A)

#### Fuse protection:
- Internal fuse 10 A / 250 V
- External fuse Circuit breakers 10 A, 16 A, B or C rating;
  An external DC fuse is required for the DC input voltage

### Environmental Requirements:
- Ambient operating temperature $-$25 °C ... +70 °C
- Device start at $-$40 °C (type-tested)
- Storage temperature $-$25 °C ... +85 °C
- Relative humidity 30 % ... 85 % (no condensation permissible)
- Derating $-$5 %/K (60 °C, 196 ... 264 VAC), $-$2.5 %/K (50 °C, 85 ... 195 VAC)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

### Safety and protection:
- Test voltage PRI-SEC/PRI-GND/SEC-GND 4.2 kV DC kV / 2.2 kV DC kV / 0.7 kV DC
- Protection class Prepared for class I equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection Varistor (input side), internal protective circuit,
  < 40 VDC (output side in case of an error)
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 35 VDC
- Parallel operation yes
- Series connection yes
- MTBF > 500,000 h (acc. to IEC 61709)

### Connection and type of mounting:
- Wire connection Input/Signaling: WAGO 721 Series
  Output: WAGO 831 Series
- Cross sections 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths Input/Signaling: 8 ... 9 mm / 0.31 ... 0.35 in
  Output: 13 ... 15 mm / 0.51 ... 0.59 in
- Type of mounting DIN-rail mount (EN 60715)

### Dimensions and weight:
- Dimensions (mm) W x H x L 95 x 127 x 170
- Length from upper-edge of DIN 35 rail
- Weight 1600 g

### Standards and approvals:
- Standards/Specifications EN 60950-1, EN 61204-3,
  UL 60950-1, UL 508, GL (* pending)
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Protection class II
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Bounce-free switching signal (DC OK)
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

**Input:**
- Nominal input voltage $V_{\text{nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 95 VAC)
- Frequency: 47 Hz ... 63 Hz, 0 Hz
- Input current $I_i$: 0.9 A (240 VAC), 1.78 A (100 VAC)
- Inrush current: < 30 A
- Mains failure hold-up time: 80 ms (230 VAC), 15 ms (100 VAC)

**Output:**
- Nominal output voltage $V_{\text{nom}}$: 48 VDC (SELV)
- Output voltage range: 40 ... 56 VDC adjustable
- Output current $I_o$: 2 A at 48 VDC (2.1 A up to 40 °C)
- Factory preset: 48 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 20 mV (peak-to-peak) typ.
- Current limitation: 1.1 x $I_o$, typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Efficiency/Power losses:
  - Efficiency: 86 % typ.
  - Power loss $P_v$: < 1 W (230 VAC, no load)
  - Max. power loss $P_v$: 19.8 W typ. (100 VAC / 48 VDC, 2 A)

**Fuse protection:**
- Internal fuse: T 4 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A,
  - B or C characteristic,
  - An external DC fuse is required for the DC input voltage

### Technical Data

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C;
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -1 %/K (> 50 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: II
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection:
  - Varistor (input side),
  - Internal protective circuit,
  - < 60 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

**Connection and type of mounting:**
- Wire connection: Input/Output/Signaling:
  - WAGO 721 Series
- Cross sections: Input/Output/Signaling:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output/Signaling:
  - 8 ... 9 mm / 0.31 ... 0.35 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 52 x 90 x 119
- Length from upper-edge of DIN 35 rail: 385 g

**Standards and approvals:**
- Standards/Specifications:
  - EN 60950-1, EN 61204-3, EN 60335-1, UL 60950-1, UL 508, GL (*)
  - (* pending)
Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- DC OK contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage $V_{n,m,1}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 100 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current $I_i$: 1.19 A (240 VAC); 2.68 A (100 VAC)
- Discharge current: < 1 mA
- Inrush current: < 30 A
- Mains failure hold-up time: 21 ms (230 VAC), 21 ms (100 VAC)

#### Output:
- Nominal output voltage $V_{o,n,1}$: 48 VDC (SELV)
- Output voltage range: 40 ... 56 VDC adjustable
- Output current $I_o$: 5 A at 48 VDC
- Factory preset: 48 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 30 mV (peak-to-peak) typ.
- Current limitation: 1.11 x I, typ.
- Overload behavior: Constant current
- Operational indication: Green LED ($V_o$)
- Signaling: DC O.K. contact; (Make contact, max. 30 V AC/DC, 1 A)

#### Efficiency/Power losses:
- Efficiency: 92 % typ.
- Power loss $P_v$: 7 W [230 VAC, no load]; 40.8 W [230 VAC, nominal load]
- Max. power loss $P_v$: 26.5 W typ. (100 VAC / 48 VDC, 5 A)

#### Fuse protection:
- Internal fuse: 1.6 A / 250 V
- External fuse: Circuit breaker 10 A, 16 A,
- B or C characteristic;
- An external DC fuse is required for the DC input voltage

### Description

**Switched-mode power supply, 787-1633**

- **48 VDC / 5 A**

### Technical Data

#### Environmental Requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -5 %/K (>60° C, 196 ... 264 VAC); -2.5 %/K (>50° C, 196 ... 264 VAC)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage PRI-SEC/PRI-GND/SEC-GND: 4.2 kV DC kV / 2.2 kV DC kV / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: Varistor (input side); internal protective circuit,
- < 60 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

#### Connection and type of mounting:
- Wire connection: Input/Output/Signaling:
- Cross sections: Input/Output/Signaling:
- Strip lengths: Input/Output/Signaling:
- Type of mounting: DIN-rail mount [EN 60715]

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 55 x 127 x 172
- Length from upper-edge of DIN 35 rail
- Weight: 930 g

#### Standards and approvals:
- Standards/Specifications: EN 60950-1, EN 61204-3,
  UL 60950-1, UL 508, GL *
- (* pending)
# Switched-Mode Power Supply, 1-Phase

**EPSITRON® CLASSIC Power**

- Primary switch mode power supply unit
- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Integrated TopBoost, enabling secondary-side protection via wire breakers
- DC O.K. contact
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

## Technical Data

### Input:
- Nominal input voltage \( V_{\text{in,nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 V ... 372 VDC
- Input voltage derating: -2.5 % (< 100 VAC)
- Frequency: 47 Hz ... 63 Hz; 0 Hz
- Input current \( I_i \): 2.22 A (240 VAC); 5.15 A (100 VAC)
- Discharge current: < 1 mA
- Inrush current: < 30 A
- Mains failure hold-up time: 20 ms (230 VAC), 20 ms (100 VAC)

### Output:
- Nominal output voltage \( V_{\text{out,nom}} \): 48 VDC (SELV)
- Output voltage range: 40 ... 56 VDC adjustable
- Output current \( I_o \): 10 A at 48 VDC
- Factory preset: 48 VDC
- Adjustment accuracy: < 1 %
- Residual ripple: 80 mV (peak-to-peak) typ.
- Current limitation: 1.1 x \( I_o \) typ.
- Overload behavior: Constant current
- Operational indication: Green LED (\( V_o \))
- Signaling: DC O.K. contact; (Make contact, max. 30 V AC/DC, 1 A)

### Efficiency/Power losses:
- Efficiency: 93 % typ.
- Power loss \( P_v \): 11.7 W (230 VAC, no load); 36.3 W (230 VAC, nominal load)
- Max. power loss \( P_{\text{max}} \): 64.9 W typ. (100 VAC / 48 VDC, 10 A)

### Fuse protection:
- Internal fuse: T 10 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A,
- An external DC fuse is required for the DC input voltage

## Environmental Requirements:
- Ambient operating temperature: -25 °C ... +70 °C;
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +85 °C
- Relative humidity: 30 % ... 85 % (no condensation permissible)
- Derating: -5 %/K (>60° C, 196 ... 264 VAC); -2.5 %/K (>50° C, 85 ... 195 VAC)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

## Safety and protection:
- Test voltage PRI-SEC/PRI-GND/SEC-GND: 4.2 kV DC kV / 2.2 kV DC kV / 0.7 kV DC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: Varistor (input side);
- internal protective circuit,
- < 60 VDC (output side in case of an error)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 63 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500,000 h (acc. to IEC 61709)

## Connection and type of mounting:
- Wire connection
  - Input/Signaling: WAGO 721 Series
  - Output: WAGO 831 Series
- Cross sections
  - Input/Signaling:
    - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
    - 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Output: 0.5 mm² ...
- Strip lengths
  - Input/Signaling:
    - 8 ... 9 mm / 0.31 ... 0.35 in
  - Output: 13 ... 15 mm / 0.51 ... 0.59 in
- Type of mounting: DIN-rail mount (EN 60715)

## Dimensions and weight:
- Dimensions (mm): 95 x 127 x 170
- Length from upper-edge of DIN 35 rail: 350 mm
- Weight: 1600 g

## Standards and approvals:
- Standards/Specifications:
  - EN 60950-1, EN 61204-3, UL 60950-1, UL 508, GL *
  - (* pending)
Switched-Mode Power Supply, 1-Phase

EPSITRON® ECO Power

- Primary switch mode power supply unit
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{in nom}} \): 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 130 ... 373 VDC
- Frequency: 47 - 63 Hz
- Input current \( I_i \): 0.7 A typ. at 230 VAC; 1.2 A at 115 VAC
- Discharge current: < 1 mA
- Inrush current: < 30 A
- Mains failure hold-up time: > 20 ms at 230 VAC

#### Output:
- Nominal output voltage \( V_{\text{out nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 28 VDC adjustable
- Output current \( I_o \): 2.5 A at 24 VDC
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 100 mV (peak-to-peak) to 20 MHz
- Overload behavior: Constant power [in overload range: \( 1.15 \times I_a \); shutdown and automatic restart in the event of a short circuit]

#### Operational indication:
- LED green [24 V DC o.k.]
- LED red (overload)

#### Efficiency / power losses:
- Efficiency: 82 % typ.
- Power loss \( P_v \): 8.3 W at 230 VAC and 2.5 ADC
- Max. power loss \( P_v \): 11.5 W at 110 VAC and 2.75 ADC

#### Fuse protection:
- Internal fuse: F 2.5 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A, characteristic: B or C
  - An external DC fuse is required for the DC input voltage

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-Mode Power Supply, 24 VDC / 2.5 A</td>
<td>787-712</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: \(-10 \, ^\circ C \ldots +70\, ^\circ C\)
- Storage temperature: \(-25 \, ^\circ C \ldots +85 \, ^\circ C\)
- Rel. humidity: 95 % (no condensation)
- Derating: \(-3.3 \, % / K \, (> 55 \, ^\circ C \text{ at } 230 \text{ VAC})\)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 3 kV AC / 1.5 kV AC / 0.5 kV AC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 28 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 480,000 h (acc. IEC 61709)

#### Connection and type of mounting:
- Wire connection: CAGE CLAMP® [WAGO 745 Series]
- Cross sections: 0.08 ... 4 mm² / AWG 28 ... 12 (THHN, THWN)
- Strip lengths: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount [EN 60715]

#### Dimensions and weight:
- Dimensions (mm): \( W \times H \times L = 50 \times 92 \times 136 \)
- Height from upper-edge of DIN 35 rail
- Weight: 596 g

#### Standards and approvals:
- Standards/Specifications: EN 40950, EN 61000-4-2, EN 61000-6-3, UL 60950, UL 508, ANSI/ISA 12.12.01 [Class I Div 2], ATEX, IEC Ex
787-722
Switched-Mode Power Supply, 1-Phase

**EPSITRON® ECO Power**

- Primary switch mode power supply unit
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
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<tbody>
<tr>
<td>787-722</td>
<td>1</td>
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</tbody>
</table>

#### Technical Data

<table>
<thead>
<tr>
<th>Input:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage V&lt;sub&gt;i nom&lt;/sub&gt;</td>
<td>110 ... 240 VAC</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>85 ... 264 VAC, 130 ... 373 VDC</td>
</tr>
<tr>
<td>Frequency</td>
<td>47 - 63 Hz</td>
</tr>
<tr>
<td>Input current I&lt;sub&gt;i&lt;/sub&gt;</td>
<td>1.0 A typ. at 230 VAC, 2.0 A at 115 VAC</td>
</tr>
<tr>
<td>Discharge current</td>
<td>&lt; 3.5mA</td>
</tr>
<tr>
<td>Inrush current</td>
<td>&lt; 30 A</td>
</tr>
<tr>
<td>Mains failure hold-up time</td>
<td>&gt; 20 ms at 230 VAC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal output voltage V&lt;sub&gt;o nom&lt;/sub&gt;</td>
<td>24 VDC (SELV)</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>22 ... 28 VDC adjustable</td>
</tr>
<tr>
<td>Output current I&lt;sub&gt;o&lt;/sub&gt;</td>
<td>5 A at 24 V DC</td>
</tr>
<tr>
<td>Factory preset</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Adjustment accuracy</td>
<td>1%</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>&lt; 100 mV (peak-to-peak) to 20 MHz</td>
</tr>
<tr>
<td>Overload behavior</td>
<td>Constant power (in overload range: 1.15 ... 1.4 x I&lt;sub&gt;a&lt;/sub&gt;), shutdown and automatic restart in the event of a short circuit</td>
</tr>
</tbody>
</table>

| Operational indication | LED green (24 VDC o.k.), LED red (overload) |

<table>
<thead>
<tr>
<th>Efficiency / power losses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>82 % typ.</td>
</tr>
<tr>
<td>Power loss P&lt;sub&gt;v&lt;/sub&gt;</td>
<td>19.5 W (at 230 VAC and 5 ADC)</td>
</tr>
<tr>
<td>Max. power loss P&lt;sub&gt;v&lt;/sub&gt;</td>
<td>23.5 W (at 110 VAC and 5.5 ADC)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fuse protection:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal fuse</td>
<td>F 3.15 A / 250 V</td>
</tr>
<tr>
<td>External fuse</td>
<td>Circuit breakers 10 A, 16 A, characteristic: B or C</td>
</tr>
</tbody>
</table>

An external DC fuse is required for the DC input voltage

### Environmental requirements:

- Ambient operating temperature: -10 °C ... +60 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 95 % (no condensation)
- Derating: 5.33 % / K (> 45 °C at 230 VAC)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

### Safety and protection:

- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 3 kV AC / 1.5 kV AC / 0.5 kV AC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 28 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 480000 h (acc. IEC 61709)

### Connection and type of mounting:

- Wire connection: CAGE CLAMP® (WAGO 745 Series)
- Cross sections: 0.08 mm² ... 4 mm² / AWG 28 ... 12 (THHN, THWN)
- Strip lengths: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

### Dimensions and weight:

- Dimensions (mm) W x H x L: 75 x 92 x 136
- Height from upper-edge of DIN 35 rail
- Weight: 850 g

### Standards and approvals:

- Standards/Specifications: EN 60950, EN 61000-6-2, EN 61000-6-3, UL 60950, UL 508, ANSI/ISA 12.2.12-01 (Class I Div 2), ATEX, IEC Ex

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Switched-Mode Power Supply, 1-Phase

**EPSITRON® ECO Power**

- Primary switch mode power supply unit
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_{in}$ nom: 110 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 130 ... 373 VDC
- Frequency: 47 Hz ... 63 Hz
- Input current $I_i$: 1.5 A typ. at 230 VAC; 3.0 A at 115 VAC
- Discharge current: < 3.5 mA
- Inrush current: < 30 A
- Mains failure hold-up time: > 20 ms at 230 VAC

#### Output:
- Nominal output voltage $V_o$ nom: 24 VDC (SELV)
- Output voltage range: 22 ... 28 VDC adjustable
- Output current $I_o$: 10 A at 24 V DC
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 100 mV (peak-to-peak) to 20 MHz
- Overload behavior: Constant power (in overload range: 1.15 ... 1.4 x $I_o$); shutdown and automatic restart in the event of a short circuit
- Operational indication: LED green (24 V DC o.k.), LED red (overload)

#### Efficiency / power losses:
- Efficiency: 82 % typ.
- Power loss $P_L$: 37.5 W (at 230 VAC and 10 ADC)
- Max. power loss $P_{max}$: 53 W (at 110 VAC and 11 ADC)

#### Fuse protection:
- Internal fuse: F 5 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

---

**Safety and protection:**
- Test voltage pri.-sec. / pri.-gr. / sec.-gr.: 3 kV AC / 1.5 kV AC / 0.5 kV AC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 28 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 480000 h (acc. IEC 61709)

---

**Connection and type of mounting:**
- Wire connection: CAGE CLAMP® (WAGO 745 Series)
- Cross sections: 0.08 mm² ... 4 mm² / AWG 28 ... 12 (THHN, THWN)
- Strip lengths: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 110 x 92 x 136
- Height from upper edge of DIN 35 rail: 110 x 92 x 136
- Weight: 1200 g

**Standards and approvals:**
- Standards/Specifications: EN 40950, EN 61000-4-2, EN 61000-6-3, UL 60950, UL 508, ANSI/ISA 12.2.01 (Class I Div 2), ATEX, IEC Ex
Switched-Mode Power Supply, 1-Phase
EPSITRON® ECO Power

- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Fast and tool-free termination via lever-actuated terminal blocks
- Bounce-free switching contact (DC OK)
- Parallel operation
- Electrically isolated output voltage (SELV) acc. to EN / UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 130 ... 373 VDC
- Frequency: 47 Hz ... 63 Hz
- Input current \( I_{i} \): 3 A typ. at 230 VAC; 6.0 A at 115 VAC
- Discharge current: 1.7 mA
- Inrush current: < 30 A
- Mains failure hold-up time: > 20 ms at 230 VAC

#### Output:
- Nominal output voltage \( V_{\text{nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 28 VDC adjustable
- Output current \( I_{o} \): 20 A at 24 VDC
- Factory preset: 24 VDC
- Adjustment accuracy: 1 %
- Residual ripple: < 100 mV (peak-peak)
- Overload behavior: Constant power
  (in overload range: 1.15 ... 1.4 x \( I_{o} \)); shutdown and automatic restart in the event of a short circuit
- Operational indication:
  - LED green (24 V DC o.k.),
  - LED red (overload)

#### Efficiency / Power losses:
- Efficiency: 90 % typ.
- Power loss \( P_{V} \): 65 W (230 VAC / nominal load)
- Max. power loss \( P_{L} \): 107 W typ. (110 VAC / 24 VDC, 23 A)

#### Fuse protection:
- Internal fuse: 16 A / 250 V
- External fuse:
  - Circuit breakers 10 A, 16 A,
  - Characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 95 % (no condensation)
- Derating:
  - see instruction manual
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage:
  - PRI-SEC/PRI-GND/SEC-GND: 3 kV AC / 1.5 kV AC / 0.5 kV AC
- Protection class: Prepared for class I equipment
- Degree of protection:
  - IP20 (acc. to EN 50529)
- Overvoltage protection via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 29 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 250000 h

#### Connection and type of mounting:
- Wire connection:
  - Input/Signalising: WAGO 2706 Series
  - Output: WAGO 2716 Series
- Cross sections:
- Input/Signalising: 0.5 mm² ... 6 mm² / AWG 20 ... 10
- Output: 1.5 mm² ... 16 mm² / AWG 16 ... 6
- Strip lengths:
  - Input/Signalising: 11 ... 12 mm / 0.45 in
  - Output: 12 ... 13 mm / 0.47 in
- Type of mounting:
  - DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm): W x H x L: 115 x 136 x 144
- Length from upper-edge of DIN 35 rail: 2120 g

#### Standards and approvals:
- Standards / Specifications:
  - EN 60950 [SELV], EN 61000-6-2,
  - EN 61000-6-3
  - UL 60950; UL 508* (* pending)
### Technical Data

**Input:**
- Nominal input voltage $V_{\text{in,nom}}$: 100 ... 240 VAC
- Input voltage range: 90 ... 264 VAC, 130 ... 373 VDC
- Frequency: 47 Hz ... 63 Hz
- Input current $I_{\text{i}}$: < 6 A at 230 VAC; < 12 A at 115 VAC
- Discharge current: < 3.5 mA
- Inrush current: < 30 A at 230 VAC; < 25 A at 115 VAC
- Mains failure hold-up time: > 17 ms at AC 230 V / nominal load
- Power factor: > 0.94 at 230 VAC; > 0.98 at 115 VAC

**Output:**
- Nominal output voltage $V_{\text{o,nom}}$: 24 VDC (SEIV)
- Output voltage range: 22 ... 28 VDC adjustable
- Output current $I_{\text{o}}$: 40 A at 24 VDC
- Factory preset: 24 VDC
- Adjustment accuracy: 1%
- Residual ripple: < 100 mV (peak-peak)
- Overload behavior: Constant power
- Operational indication: LED green (24 V DC o.k.), LED red (overload)
- Signaling: Contact DC o.k., make contact (max. 31.2 V / 20 mA)

**Efficiency/Power losses:**
- Efficiency: 90 % typ.
- Power loss $P_{\text{loss}}$: 107 W at AC 230 V / nominal load

**Fuse protection:**
- Internal fuse: T 20 A / 250 V
- External fuse: Circuit breakers 13 A, 16 A, 20 A, characteristic: B or C

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C
- Rel. humidity: 95 % (no condensation)
- Derating: 2.66 % / K (55 °C), 2 % / V (V < 100 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage PRI-SEC/PRI-GND/SEC-GND/SEC-DC OK: 3 kV AC / 1.5 kV AC / 0.5 kV AC / 0.5 kV AC
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via varistor at primary circuit
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 29 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 250000 h

**Connection and type of mounting:**
- Wire connection: Input/Signalling: WAGO 2706 Series
- Cross sections: Input/Signalling: 0.5 mm² ... 6 mm² / AWG 20 ... 10
- Strip lengths: Input/Signalling: 11 ... 12 mm / 0.43 ... 0.47 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 170 x 136 x 150
- Length from upper-edge of DIN 35 rail: 3500 g

**Standards and approvals:**
- Standards/Specifications: EN 60950 (SEIV)*, EN 61000-6-2*, EN 61000-6-3*, UL 60950*, UL 508*
  (* pending)
Switched-Mode Power Supply, 3-Phase

EPSITRON® ECO Power

- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Fast and tool-free termination via lever-actuated terminal blocks
- DC O.K. contact
- Parallel operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

**Input:**
- Nominal input voltage $V_{\text{in, nom}}$: $3 \times (2 \times) 400 \, \text{V} \ldots 500 \, \text{VAC}$
- Input voltage range: 325 $\ldots$ 575 VAC, 460 $\ldots$ 800 VDC
- Frequency: 47 Hz $\ldots$ 63 Hz
- Input current $I_i$: $3 \times 0.4 \, \text{A} \text{ at } 400 \, \text{VAC}$ and $6.25 \, \text{ADC}$
- Power factor: $\geq 0.6$
- Discharge current: $< 3.5 \, \text{mA}$
- Inrush current: $< 25 \, \text{A}$
- Mains failure hold-up time: $> 17 \, \text{ms at } 3 \times 400 \, \text{VAC}$

**Output:**
- Nominal output voltage $V_{\text{out, nom}}$: 24 VDC (SELV)
- Output voltage range: 22 $\ldots$ 28 VDC adjustable
- Output current $I_o$: 6.25 A at 24 VDC
- Factory preset: 24 VDC
- Adjustment accuracy: 1 %
- Residual ripple: $< 80 \, \text{mV (peak-to-peak)}$
- Overload behavior: Constant power (in overload range: 1.15 $\ldots$ 1.4 $\times I_o$); shutdown and automatic restart in the event of a short circuit
- Operational indication: Green LED ($V_o$)
- Red LED (overload)
- Signaling: DC O.K. contact;
- Make contact (max. 31.2 V / 20 mA)

**Efficiency/Power losses:**
- Efficiency: 87 % typ.
- Power loss $P_L$: 18.5 W
- Max. power loss $P_L$: 20 W

**Fuse protection:**
- Internal fuse: $3 \times 2 \times 2 \, \text{A} / 250 \, \text{V}$
- External fuse: $3 \times$ circuit breakers 10 A, 16 A, B or C characteristic, or motor circuit breakers
- External DC fuse required for DC input voltage

**Environmental requirements:**
- Ambient operating temperature: $-25 \, ^\circ\text{C} \ldots +70 \, ^\circ\text{C}$
- Storage temperature: $-40 \, ^\circ\text{C} \ldots +85 \, ^\circ\text{C}$
- Rel. humidity: 95% (no condensation permissible)

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-mode power supply, 24 VDC / 6.25 A</td>
<td>787-738</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

**Environmental requirements:**
- Derating: -2.5 % / K (> +50 °C, 400 VAC)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Test voltage PRI-SEC/PRI-GND/SEC-GND/SEC-DC OK: 3 kV AC / 1.5 kV AC /
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: yes
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 30 V
- Parallel operation: yes
- Series connection: yes
- MTBF: > 250000 h

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 2706 Series
- Signaling: WAGO 2091 Series
- Cross sections: $0.5 \, \text{mm}^2 \ldots 6 \, \text{mm}^2$ / AWG 20 $\ldots$ 10
- Strip lengths: $0.2 \, \text{mm}^2 \ldots 1.5 \, \text{mm}^2$ / AWG 24 $\ldots$ 14

**Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 50 x 130 x 92
- Length from upper-edge of DIN 35 rail: 3500 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950*, UL 508*
- (* pending)
787-740
Switched-Mode Power Supply, 3-Phase
EPSITRON® ECO Power

- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Fast and tool-free termination via lever-actuated terminal blocks
- DC O.K. contact
- Parallel operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{nom}} \): \( 3 \times (2 \times) 400 \text{ V} ... 500 \text{ VAC} \)
- Input voltage range: \( 325 \text{ V} ... 575 \text{ VAC}, 460 \text{ V} ... 800 \text{ VDC} \)
- Frequency: \( 47 \text{ Hz} ... 63 \text{ Hz} \)
- Input current \( i_i \): \( 3 \times 0.6 \text{ A at } 400 \text{ VAC} \) and \( 10 \text{ ADC} \)
- Power factor: \( \geq 0.6 \)
- Discharge current: \( < 3.5 \text{ mA} \)
- Inrush current: \( < 25 \text{ A} \)
- Mains failure hold-up time: \( > 17 \text{ ms at } 3 \times 400 \text{ VAC} \).

#### Output:
- Nominal output voltage \( V_{\text{nom}} \): 24 VDC (SELV)
- Output voltage range: 22 ... 28 VDC adjustable
- Factory preset: 24 VDC
- Adjustment accuracy: \( 1 \% \)
- Residual ripple: \( < 80 \text{ mV (peak-to-peak)} \)
- Overload behavior: Constant power
  - (in overload range: \( 1.15 ... 1.4 \times i_o \))
  - Shutdown and automatic restart in the event of a short circuit.
- Operational indication: Green LED (Vo)
- Signaling: Red LED (overload)
- DC O.K. contact; Make contact (max. 31.2 V / 20 mA)
- Efficiency/Power losses:
  - Efficiency: 89 % typ.
  - Power loss \( P_v \): 32.5 W
  - Max. power loss \( P_{\text{max}} \): 36 W
- Fuse protection:
  - Internal fuse: \( 3 \times T 2 \text{ A} / 250 \text{ V} \)
  - External fuse: \( 3 \times \) circuit breakers \( 10 \text{ A}, 16 \text{ A} \), 8 or C characteristic,
or motor circuit breakers
  - External DC fuse required for DC input voltage
- Environmental requirements:
  - Ambient operating temperature: \( -25 ^\circ \text{C} ... +70 ^\circ \text{C} \)
  - Storage temperature: \( -40 ^\circ \text{C} ... +85 ^\circ \text{C} \)
  - Rel. humidity: 95% (no condensation permissible)

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-mode power supply, 24 VDC / 10 A</td>
<td>787-740</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Data

#### Environmental requirements:
- Derating: \( -1.25 \% / \text{K} (> +50 ^\circ \text{C}, 400 \text{ VAC}) \)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: yes
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: 30 V
- Parallel operation: yes
- Series connection: yes
- MTBF: > 250000 h

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 2706 Series
- Signaling: WAGO 2091 Series
- Cross sections:
  - Input/Output: 0.5 mm² ... 6 mm² / AWG 20 ... 10
  - Signaling: 0.2 mm² ... 1.5 mm² / AWG 24 ... 14
- Strip lengths:
  - Input/Output: 11 ... 12 mm / 0.43 ... 0.47 in
  - Signaling: 8 ... 9 mm / 0.31 ... 0.35 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm): \( 6.5 \times 130 \times 130 \) Length from upper-edge of DIN 35 rail
- Weight: 2120 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3,
  - UL 60950*, UL 508*
  - (* pending)
Switched-Mode Power Supply, 3-Phase
EPSITRON® ECO Power

- Suitable for protection class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Fast and tool-free termination via lever-actuated terminal blocks
- DC O.K. contact
- Parallel operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

**Technical Data**

**Input:**
- Nominal input voltage $V_{\text{nom}}$: $3 \times (2 \times) 400 \text{ V} \ldots 500 \text{ VAC}$
- Input voltage range: $325 \text{ V} \ldots 575 \text{ VAC} ; 460 \text{ V} \ldots 800 \text{ VDC}$
- Frequency: $47 \text{ Hz} \ldots 63 \text{ Hz}$
- Input current $I_i$: $3 \times 2.05 \text{ A at 400 VAC}$ and $20 \text{ ADC}$
- Power factor: $\geq 0.6$
- Discharge current: $< 3.5 \text{ mA}$
- Inrush current: $< 30 \text{ A}$
- Mains failure hold-up time: $> 17 \text{ ms at 3x 400 VAC}$

**Output:**
- Nominal output voltage $V_{\text{nom}}$: $24 \text{ VDC (SELV)}$
- Output voltage range: $22 \ldots 28 \text{ VDC}$ adjustable
- Output current $I_o$: $20 \text{ A at 24 VDC}$
- Factory preset: $24 \text{ VDC}$
- Adjustment accuracy: $1 \%$
- Residual ripple: $< 80 \text{ mV (peak-to-peak)}$
- Overload behavior: Constant power (in overload range: $1.15 \ldots 1.4 \times I_o$), shutdown and automatic restart in the event of a short circuit
- Operational indication: Green LED ($V_o$), Red LED (overload)
- Signaling: DC O.K. contact; Make contact (max. $31.2 \text{ V} / 20 \text{ mA}$)

**Efficiency/Power losses:**
- Efficiency: $90 \%$ typ.
- Power loss $P_o$: $50 \text{ W}$
- Max. power loss $P_{\text{max}}$: $55 \text{ W}$

**Fuse protection:**
- Internal fuse: $3 \times 7.5 \text{ A} / 250 \text{ V}$
- External fuse: $3 \times$ circuit breakers $10 \text{ A}, 16 \text{ A}$
- B or C characteristic, or motor circuit breakers
- External DC fuse required for DC input voltage

**Environmental Requirements:**
- Ambient operating temperature: $-25 \text{ °C} \ldots +70 \text{ °C}$
- Storage temperature: $-40 \text{ °C} \ldots +85 \text{ °C}$
- Rel. humidity: $95\%$ (no condensation permissible)

**Technical Data**

**Environmental Requirements:**
- Derating: $-2 \% / \text{K} (> +50 \text{ °C}, 400 \text{ VAC})$
- Degree of pollution: $2$ (acc. to EN 50178)
- Climatic category: $3K3$ (acc. to EN 60721)

**Safety and protection:**
- Test voltage PRI-SEC/PRI-GND/SEC-GND/SEC-DC OK: $3 \text{ kV AC} / 1.5 \text{ kV AC} / 0.5 \text{ kV AC} / 0.5 \text{ kV AC}$
- Protection class: Prepared for class I equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: yes
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: $30 \text{ V}$
- Parallel operation: yes
- Series connection: yes
- MTBF: $> 250000 \text{ h}$

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 2706 Series
- Signaling: WAGO 2091 Series
- Cross sections: Input/Output: $0.5 \text{ mm}^2 \ldots 6 \text{ mm}^2 / \text{ AWG 20} \ldots 10$
- Strip lengths: $0.2 \text{ mm}^2 \ldots 1.5 \text{ mm}^2 / \text{ AWG 24} \ldots 14$
- Signaling: $8 \ldots 9 \text{ mm} / 0.31 \ldots 0.35 \text{ in}$
- Type of mounting: DINrail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: $110 \times 130 \times 151$
- Length from upper-edge of DIN 35 rail: $1930 \text{ g}$
- Standards and approvals: EN 60950, EN 61204-3, UL 60950*, UL 508*
  (* pending)
Switched-Mode Power Supply, 1-Phase

EPSITRON® COMPACT Power

- Primary switch mode power supply unit
- Prepared for protection class II equipment
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-1020</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

**Input:**
- Nominal input voltage \( V_{\text{in, nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 373 VDC
- Frequency: 44 Hz ... 66 Hz; 0 Hz
- Input current \( I_i \): 0.6 A at 110 VAC; 0.3 A at 230 VAC
- Discharge current: 1 mA typ.
- Inrush current: < 30 A, NTC
- Mains failure hold-up time: > 10 ms at 110 VAC; > 80 ms at 230 VAC

**Output:**
- Nominal output voltage \( V_{\text{o, nom}} \): 5 VDC, SELV
- Output voltage range: 4.5 ... 8.5 VDC adjustable
- Factory preset: 5 VDC
- Output current \( I_o \): 5.5 A at 5 VDC; max. 3.5 A in any mounting position
- Adjustment accuracy: < 2 %
- Residual ripple: < 100 mV (peak-to-peak) at 20 MHz
- Current limitation: 1.1 \( I_i \), typ.
- Overload behavior: Constant current
- Operational indication: LED green (\( V_o \))

**Efficiency/Power Losses:**
- Efficiency: 75 % typ.
- Power loss \( P_v \): 2.4 W (230 VAC, no load); 9.4 W (230 VAC, nominal load)
- Max. power loss \( P_{\text{loss}} \): 9.9 W typ. (264 VAC; 5 VDC, 5.5 A)

**Fuse Protection:**
- Internal fuse: 2 A / 250 V
- External fuse: Circuit breakers 6 A, 10 A, 16 A; characteristic: B or C
- An external DC fuse is required for the DC input voltage

**Technical Data**

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +60 °C (UL: -25 °C ... +55 °C)
- Device start at -40 °C (type-tested)
- Storage temperature: -25 °C ... +80 °C
- Relative humidity: 5 % ... 96 % (no condensation)
- Derating: -3 % / K (> 45 °C)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Enclosure: Plastic, light gray, Flammability class V0 acc. to UL94
- Test voltage PRI–SEC: 4.2 kV DC
- Protection class: Prepared for class II equipment
- Degree of protection: IP20 acc. to EN 60529
- Overvoltage protection: < 16 VDC (in the event of a fault)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 10 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500000 h

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) \( W \times H \times L \): 72 x 89 x 59
- Length: 55 mm, from upper-edge of DIN
- Weight: 240 g

**Standards and Specifications:**
- Standards/specifications: EN 60950-1, EN 61204-3, UL 60950-1, UL 508, GL (* pending)
## Switched-Mode Power Supply, 1-Phase

**EPSITRON® COMPACT Power**

- Primary switch mode power supply unit
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-1001</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

#### Input:
- Nominal input voltage \( V_{\text{in nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC; 120 ... 373 VDC
- Input voltage derating: \(< 100 \text{ VAC} \text{ max. 1.5 A}\)
- Frequency: 44 ... 66 Hz, 0 Hz
- Input current \( I_{\text{i}} \): 0.6 A at 110 VAC / 0.4 A at 230 VAC
- Discharge current: 1mA typ.
- Inrush current: \(< 30 \text{ A, NTC}\)
- Mains failure hold-up time: \(> 10 \text{ ms at 110 VAC} / > 80 \text{ ms at 230 VAC}\)

#### Output:
- Nominal output voltage \( V_{\text{o nom}} \): 12 VDC (SELV)
- Output voltage range: 10.8 ... 18 VDC adjustable
- Output current \( I_{\text{o}} \): 2 A at 12 VDC
- 0.75 A at 18 VDC
- max. 1.4 A (12 VDC) in any mounting position
- Factory preset: 12 VDC
- Adjustment accuracy: 2%
- Residual ripple: \(< 150 \text{ mV (peak-to-peak) at 20 MHz}\)
- Current limitation: 1.1 x \( I_{\text{o}} \), typ.
- Overload behavior: Constant current
- Operational indication: LED green (\( V_{\text{o}} \))

#### Efficiency / power losses:
- Efficiency: 80 % typ.
- Power loss \( P_{\text{v}} \): 2.6 W [230 VAC/no load],
- 6.0 W [230 VAC/rated load]
- Max. power loss \( P_{\text{v max}} \): 6 W typ. [100 VAC / 12 VDC, 2 A]

#### Fuse protection:
- Internal fuse: \( T \ 2 \text{ A / 250 V} \)
- External fuse: Circuit breakers 10 A, 16 A,
  - characteristic: B or C
  - An external DC fuse is required for the DC input voltage

#### Environmental requirements:
- Ambient operating temperature: \(-25 \text{ °C ... +60 \text{ °C}}\)
  - (UL: \(-25 \text{ °C ... +55 \text{ °C}}\))
- Device start at \(-40 \text{ °C (type-tested)}\)
- Storage temperature: \(-25 \text{ °C ... +80 \text{ °C}}\)
- Rel. humidity: 5% ... 96% (no condensation)
- Derating: \(-1 \text{ % / K (}\geq 45 \text{ °C)}\)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

#### Safety and protection:
- Enclosure: Plastic, light gray, Flammability class V0 acc. to UL94
- Test voltage pri. - sec. 4.2 kV DC
- Protection class: Prepared for class II equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: \(< 30 \text{ VDC (in the event of a fault)}\)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 20 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 500000 h

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 54 x 89 x 59
- Length: 55 mm, from upper edge of DIN 35 rail
- Weight: 180 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508, GL
# Switched-Mode Power Supply, 1-Phase

**EPSITRON® COMPACT Power**

- Primary switch mode power supply unit
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

## Technical Data

### Input:
- Nominal input voltage \( V_{i \text{ nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 373 VDC
- Input voltage derating < 100 VAC: \( I_a \) max. 3.5 A
- Frequency: 44 ... 66 Hz, 0 Hz
- Input current \( I_i \) 0.9 A at 110 VAC / 0.5 A at 230 VAC
- Discharge current 1mA typ.
- Inrush current 1mA typ.
- Mains failure hold-up time > 10 ms at 110 VAC / 80 ms at 230 VAC

### Output:
- Nominal output voltage \( V_{o \text{ nom}} \): 12 VDC (SELV)
- Output voltage range 10.5 ... 15.5 VDC adjustable
- Output current \( I_o \) 4 A at 12 VDC
- Factory preset 12 VDC
- Adjustment accuracy 2%
- Residual ripple < 100 mV (peak-to-peak) at 20 MHz
- Current limitation \( I_i \) 1.1 x \( I_o \) typ.
- Overload behavior Constant current
- Operational indication LED green (\( V_o \))

### Efficiency / power losses:
- Efficiency 85 % typ.
- Power loss \( P_v \): 2.2 W [230 VAC/no load], 8.5 W [230 VAC/rated load]
- Max. power loss \( P_{v\text{m}} \): 9 W typ. [100 VAC / 12 VDC, 4 A]

### Fuse protection:
- Internal fuse T 2 A / 250 V
- External fuse Circuit breakers 10 A, 16 A,
- An external DC fuse is required for the DC input voltage

### Environmental requirements:
- Ambient operating temperature: -25 °C ... +60 °C
- Storage temperature: -25 °C ... +80 °C
- Rel. humidity: 5 % ... 96 % (no condensation)
- Derating: \(-3 \% / K (>45 °C)\)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)
- Device start at -40 °C (type-tested)

### Safety and protection:
- Enclosure: Plastic, light gray, Flammability class V0 acc. to UL94
- Test voltage pri. - sec. 4.2 kV DC
- Protection class: Prepared for class II equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: < 30 VDC (in the event of a fault)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 20 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 500000 h

### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount (EN 60715)

### Dimensions and weight:
- Dimensions (mm): W x H x L 72 x 89 x 59
- Length: 55 mm, from upper-edge of DIN 35 rail
- Weight: 255 g

### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3,
- UL 60950, UL 508, GL
Switched-Mode Power Supply, 1-Phase  
**EPSITRON® COMPACT Power**  

- Primary switch mode power supply unit  
- Prepared for class II equipment  
- Natural convection cooling when horizontally mounted  
- Stage profile, ideal for distribution boards or distribution boxes  
- Parallel operation, series connection possible  
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950  

### Technical Data  

#### Input:  
- Nominal input voltage $V_{\text{in nom}}$: 100 ... 240 VAC  
- Input voltage range: 85 ... 264 VAC, 120 ... 373 VDC  
- Input voltage derating at 5.5 A (< 100 VAC) / 4.5 A (< 90 VAC)  
- Frequency: 44 ... 66 Hz, 0 Hz  
- Input current $I_i$: 1.6 A at 110 VAC / 0.9 A at 230 VAC  
- Discharge current: 1 mA typ.  
- Inrush current: < 30 A, NTC  
- Mains failure hold-up time: > 15 ms at 110 VAC / > 100 ms at 230 VAC  

#### Output:  
- Nominal output voltage $V_{\text{out nom}}$: 12 VDC (SELV)  
- Output voltage range: 10.5 ... 15.5 VDC adjustable  
- Output current $I_o$: 6.5 A at 12 VDC max. 3.9 A [12 VDC] in any mounting position  
- Factory preset: 12 VDC  
- Adjustment accuracy: 2%  
- Residual ripple: < 100 mV (peak-to-peak) at 20 MHz  
- Current limitation: 1.1 x $I_o$, typ.  
- Overload behavior: Constant current  
- Operational indication: LED green ($V_o$)  

#### Efficiency / power losses:  
- Efficiency: 87 % typ.  
- Power loss $P_v$: < 1 W [no load] / 15 W [rated load]  
- Max. power loss $P_o$: 15 W typ. [100 VAC / 12 VDC, 6.5 A]  

#### Fuse protection:  
- Internal fuse: T 4 A / 250 V  
- External fuse: Circuit breakers 10 A, 16 A, characteristic: B or C  
- An external DC fuse is required for the DC input voltage  

### Technical Data  

#### Environmental requirements:  
- Ambient operating temperature: -25 °C ... +60 °C (UL: -25 °C ... +55 °C)  
- Storage temperature: -25 °C ... +85 °C  
- Relative humidity: 5% ... 96% [no condensation]  
- Derating: -3% / K (> 45 °C)  
- Degree of pollution: 2 (acc. to EN 50178)  
- Climatic category: 3K3 (acc. to EN 60721)  

#### Safety and protection:  
- Enclosure: Plastic, light gray, Flammability class V0 acc. to UL94  
- Test voltage pri. - sec.: 4.2 kV DC  
- Protection class: Prepared for class II equipment  
- Degree of protection: IP20 (acc. to EN 60529)  
- Overvoltage protection: < 30 VDC [in the event of a fault]  
- Short circuit protection: yes  
- No-load proof: yes  
- Feedback voltage: max. 20 VDC  
- Parallel operation: yes  
- Series connection: yes  
- MTBF: 50000 h  

#### Connection and type of mounting:  
- Wire connection: Input/Output: WAGO 740 Series  
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12  
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in  
- Type of mounting: DIN-rail mount [EN 60715]  

#### Dimensions and weight:  
- Dimensions (mm) W x H x L: 90 x 89 x 59  
- Length: 55 mm, from upper edge of DIN 35 rail  
- Weight: 300 g  

#### Standards and approvals:  
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508, GL
Switched-Mode Power Supply, 1-Phase

**EPSITRON® COMPACT Power**

- Primary switch mode power supply unit
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-Mode Power Supply, 24 VDC / 1.3A</td>
<td>787-1002</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

#### Input:
- Nominal input voltage $V_{i\text{ nom}}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 373 VDC
- Input voltage derating: $< 100$ VAC, $I_a \text{ max. } 1$ A
- Frequency: 44 ... 66 Hz, 0 Hz
- Input current $I_i$ at 110 VAC / 0.5 A at 230 VAC
- Discharge current: 1 mA typ.
- Inrush current: $< 30$ A, NTC
- Mains failure hold-up time: $> 10$ ms at 110 VAC / $> 80$ ms at 230 VAC

#### Output:
- Nominal output voltage $V_{o\text{ nom}}$: 24 VDC (SELV)
- Output voltage range: 22.8 ... 26.4 VDC adjustable
- Output current $I_o$ at 24 VDC: 1.3 A
- Factory preset: 24 VDC
- Adjustment accuracy: 2 %
- Residual ripple: $< 100$ mV (peak-to-peak) at 20 MHz
- Current limitation: 1.1 x $I_o$, typ.
- Overload behavior: Constant current
- Operational indication: LED green ($V_o$)

### Efficiency / power losses:
- Efficiency: 82 % typ.
- Power loss $P_{i}$: 2.6 W [230 VAC/no load], 7.0 W [230 VAC/rated load]
- Max. power loss $P_{i}$: 7.3 W typ. [100 VAC / 24 VDC, 1.3 A]

### Fuse protection:
- Internal fuse: 12 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: $-25 \ ^\circ\text{C} ... +60 \ ^\circ\text{C}$
- Storage temperature: $-25 \ ^\circ\text{C} ... +80 \ ^\circ\text{C}$
- Rel. humidity: 5 % ... 96 % [no condensation]
- Derating: $-3 \ ^\circ\text{C} / K > 45 \ ^\circ\text{C}$
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: $< 40$ VDC [in the event of a fault]
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 30 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: 500000 h

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) $W \times H \times L$: 54 x 89 x 59
- Length: 55 mm, from upper edge of DIN 35 rail
- Weight: 180 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508, GL
Switched-Mode Power Supply, 1-Phase
EPSITRON® COMPACT Power

- Primary switch mode power supply unit
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

**Input:**
- Nominal input voltage \( V_{i \text{nom}} \): 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 373 VDC
- Input voltage derating: < 100 VAC, Ia max. 2.0 A
- < 90 VAC, Ia max. 1.8 A
- Frequency: 44 ... 66 Hz, 0 Hz
- Input current \( I_i \): 1.4 A at 110 VAC, 0.6 A at 230 VAC
- Inrush current: < 30 A, NTC
- Mains failure hold-up time: > 10 ms at 110 VAC, > 80 ms at 230 VAC

**Output:**
- Nominal output voltage \( V_{o \text{nom}} \): 24 VDC (SELV)
- Output voltage range: 22.8 ... 26.4 VDC adjustable
- Output current \( I_o \): 2.5 A at 24 VDC
- max. 1.6 A in any mounting position
- Factory preset: 24 VDC
- Adjustment accuracy: 2%
- Residual ripple: < 100 mV [peak-to-peak] at 20 MHz
- Current limitation: 1.1 x I, typ.
- Overload behavior: Constant current
- Operational indication: LED green (Vo)

### Efficiencies / power losses:
- Efficiency: 88 % typ.
- Power loss \( P_v \): 2.2 W [230 VAC/no load], 8.5 W [230 VAC/rated load]
- Max. power loss \( P_v \): 10.5 W typ. (100 VAC / 24 VDC, 2.5 A)

**Fuse protection:**
- Internal fuse: 2 A, 250 V
- External fuse:
  - Circuit breakers 10 A, 16 A, characteristic: B or C
  - An external DC fuse is required for the DC input voltage

### Technical Data

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +60 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 5 % ... 95 % (no condensation)
- Derating: -1 % / K (> 45 °C)
- Degree of pollution: 2 (acc. to EN 50178)
- Climatic category: 3K3 (acc. to EN 60721)

**Safety and protection:**
- Enclosure: Plastic, light gray
- Flammability class: V0 acc. to UL94
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: Prepared for class II equipment
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: < 40 VDC (in the event of a fault)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 30 VDC
- Parallel operation: yes
- Series connection: yes
- MTBF: > 500000 h

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 72 x 89 x 59
- Length: 55 mm, from upper edge of DIN 35 rail
- Weight: 255 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508, GL
### Switched-Mode Power Supply, 1-Phase

**EPSITRON® COMPACT Power**

- Primary switch mode power supply unit
- Prepared for class II equipment
- Natural convection cooling when horizontally mounted
- Stage profile, ideal for distribution boards or distribution boxes
- Parallel operation, series connection possible
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

---

### Technical Data

#### Input:
- Nominal input voltage $V_{in\,nom}$: 100 ... 240 VAC
- Input voltage range: 85 ... 264 VAC, 120 ... 373 VDC
- Input voltage derating: on request
- Frequency: 44 ... 66 Hz, 0 Hz
- Input current $I_{i}$: 1.6 A at 110 VAC / 0.9 A at 230 VAC
- Discharge current: 1mA typ.
- Inrush current: < 30 A, NTC
- Mains failure hold-up time: > 15 ms at 110 VAC / > 100 ms at 230 VAC

#### Output:
- Nominal output voltage $V_{o\,nom}$: 24 VDC (SELV)
- Output voltage range: 22.8 ... 26.4 VDC adjustable
- Output current $I_{o}$: 4 A at 24 VDC max. 2.4 A in any mounting position
- Factory preset: 24 VDC
- Adjustment accuracy: 2 %
- Residual ripple: < 100 mV (peak-to-peak) at 20 MHz
- Current limitation: 1.1 x $I_{o}$ typ.
- Overload behavior: Constant current
- Operational indication: LED green ($V_{o}$)

#### Efficiency / power losses:
- Efficiency: 88 % typ.
- Power loss $P_{v}$: 0.8 W [230 VAC/no load], 13.1 W [230 VAC/rated load]
- Max. power loss $P_{v}$: 14.8 W typ. (264 VAC / 24 VDC, 4 A)

#### Fuse protection:
- Internal fuse: T 4 A / 250 V
- External fuse: Circuit breakers 10 A, 16 A, characteristic: B or C
- An external DC fuse is required for the DC input voltage

---

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switched-Mode Power Supply, 24 VDC / 4A</td>
<td>787-1022</td>
<td>1</td>
</tr>
</tbody>
</table>

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### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +60 °C (UL: -25 °C ... +55 °C), Device start at -40 °C [type-tested]
- Storage temperature: -25 °C ... +80 °C
- Rel. humidity: 5 % ... 96 % [no condensation]
- Derating: -3 % / K (> 45 °C)
- Degree of pollution: 2 [acc. to EN 50178]
- Climatic category: 3K3 [acc. to EN 60721]

#### Safety and protection:
- Enclosure: Plastic, light gray, Flammability class V0 acc. to UL94
- Test voltage pri. - sec.: 4.2 kV DC
- Protection class: Prepared for class II equipment
- Degree of protection: IP20 [acc. to EN 60529]
- Overvoltage protection: < 40 VDC (in the event of a fault)
- Short circuit protection: yes
- No-load proof: yes
- Feedback voltage: max. 30 VDC
- Parallel operation: yes
- Type of mounting: DIN-rail mount [EN 60715]

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 740 Series
- Cross sections: Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting: DIN-rail mount [EN 60715]

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 90 x 89 x 59
- Length: 55 mm, from upper-edge of DIN 35 rail
- Weight: 310 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, EN 61204-3, UL 60950, UL 508, GL
787-1017

Switched-Mode Power Supply, 1-Phase

EPSITRON® COMPACT Power

• Primary switch mode power supply unit
• Prepared for class II equipment
• Natural convection cooling when horizontally mounted
• Stage profile, ideal for distribution boards or distribution boxes
• At reduced output current, any type of mounting positions are possible (e.g., horizontal, overhead mounting)
• Electrically isolated output voltage (SELV) acc. to EN / UL 60950-1

Description

Item No. | Pack. Unit
--- | ---
Switched-mode power supply, 15 ... 28 VDC / 2 A | 787-1017 | 1

Technical Data

### Input:
- Nominal input voltage $V_{\text{in, nom}}$ 100 ... 240 VAC
- Input voltage range 85 ... 264 VAC, 120 ... 373 VDC
- Input voltage derating max. 2 A (< 100 VAC)
- Frequency 44 Hz ... 66 Hz; 0 Hz
- Input current $I_{\text{i}}$ 0.9 A at 110 VAC / 0.3 A at 230 VAC
- Discharge current 1 mA typ.
- Inrush current < 30 A, NTC
- Mains failure hold-up time > 10 ms at 110 VAC / > 130 ms at 230 VAC

### Output:
- Nominal output voltage $V_{\text{o, nom}}$ 18 VDC
- Output voltage range 15 ... 28 VDC adjustable
- Output current $I_{\text{o}}$ 2.4 A at 18 VDC
- 2.0 A at 24 VDC in horizontal mounting position
- Factory preset 18 VDC
- Adjustment accuracy 2 \%
- Residual ripple < 100 mV [peak-to-peak] at 20 MHz
- Current limitation 1.1 x $I_{\text{o}}$, typ.
- Overload behavior Constant current
- Operational indication LED green ($V_{\text{o}}$)

### Efficiency/Power losses:
- Efficiency 84 \% typ.
- Power loss $P_{\text{L}}$ 2.6 W [230 VAC / no load]
- 8.1 W [230 VAC / nominal load]
- Max. power loss $P_{\text{L max}}$ 8.2 W [100 VAC / 18 VDC, 2.4 A]

### Fuse protection:
- Internal fuse T 2 A / 250 V
- External fuse Circuit breakers 10 A, 16 A,
- Characteristic: B or C
- An external DC fuse is required for the DC input voltage

### Environmental requirements:
- Ambient operating temperature -25 °C ... +60 °C
- Device start at -40 °C (type-tested)
- Storage temperature -25 °C ... +80 °C
- Rel. humidity 5 \% ... 96 \% [no condensation]
- Derating -1 \% / K (> 45 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

### Safety and protection:
- Enclosure Plastic, light gray,
- Flammability class V0 acc. to UL94
- Test voltage pri. - sec. 4.2 kV DC
- Protection class Prepared for class II equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection < 40 VDC [in the event of a fault]
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 25 VDC
- Parallel operation yes
- Series connection yes
- MTBF 500000 h

### Connection and type of mounting:
- Wire connection Input/Output: WAGO 740 Series
- Cross sections Input/Output: 0.08 ... 2.5 mm² / AWG 28 ... 12
- Strip lengths 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting DIN-rail mount [EN 60715]

### Dimensions and weight:
- Dimensions (mm) W x H x L 72 x 89 x 59
- Length from upper-edge of DIN 35 rail 264 g

### Standards and approvals:
- Standards/Specifications EN 60950, EN 61204-3, UL 60950-1, UL 508, GL (* pending)
## Rail-Mounted Terminal Blocks with DC/DC Converter

<table>
<thead>
<tr>
<th>DC/DC converter</th>
<th>24 V / 5 V, 0.5 ADC</th>
<th>DC/DC converter</th>
<th>24 V / 10 V, 0.5 ADC</th>
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<tbody>
<tr>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
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### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>(V_n) / (V_o)</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>(V_n) / (V_o)</th>
<th>Item No.</th>
<th>Pack. Unit</th>
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</thead>
<tbody>
<tr>
<td>DC/DC converter, for DIN 35 rail</td>
<td>24 VDC / 5 VDC ± 2 %</td>
<td>859-801</td>
<td>1</td>
<td>24 VDC / 10 VDC ± 2 %</td>
<td>859-802</td>
<td>1</td>
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</table>

### Technical Data

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<thead>
<tr>
<th>Parameter</th>
<th>DC/DC converter</th>
<th>DC/DC converter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage (V_n)</td>
<td>24 VDC</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>10 ... 30 VDC</td>
<td>15 ... 30 VDC</td>
</tr>
<tr>
<td>Output voltage</td>
<td>5 VDC ± 2 %</td>
<td>10 VDC ± 2 %</td>
</tr>
<tr>
<td>Output current (max.)</td>
<td>500 mA (individual terminal block, 10 mm distance); 400 mA (terminal strip)</td>
<td>500 mA</td>
</tr>
<tr>
<td>Line regulation, max. (full load, over input voltage range)</td>
<td>2 %</td>
<td>0.5 %</td>
</tr>
<tr>
<td>Max. load regulation (no load to full load, nominal input)</td>
<td>0.5 %</td>
<td>0.7 %</td>
</tr>
<tr>
<td>Efficiency at full load (24 VDC in)</td>
<td>70 %</td>
<td>85 %</td>
</tr>
<tr>
<td>Output noise peak-to-peak max. (20 MHz bandwidth)</td>
<td>150 mV</td>
<td>20 mV</td>
</tr>
<tr>
<td>Output short circuit protection</td>
<td>temporary (short-circuit of the output for 1 minute without damage to the device)</td>
<td>temporary (short-circuit of the output for 1 minute without damage to the device)</td>
</tr>
<tr>
<td>Temperature coefficient</td>
<td>70 ppm/°C</td>
<td>100 ppm/°C</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>0 °C ... +40 °C</td>
<td>-25 °C ... +55 °C</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>W x H x L</td>
<td>W x H x L</td>
</tr>
<tr>
<td>Height from upper-edge of DIN 35 rail</td>
<td>6 x 56 x 91</td>
<td>6 x 56 x 91</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP®</td>
<td>CAGE CLAMP®</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 14</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 14</td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>
### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>$V_{IN}$ / $V_{OUT}$</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>$V_{IN}$ / $V_{OUT}$</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC/DC converter, for DIN 35 rail</td>
<td>12 VDC / 24 VDC ± 1 %</td>
<td>859-804</td>
<td>1</td>
<td>DC/DC converter</td>
<td>24 VDC / 12 VDC ± 2 %</td>
<td>859-805</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>$V_{IN}$</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Technical Data</th>
<th>$V_{IN}$</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage ($V_{IN}$)</td>
<td>12 VDC</td>
<td>859-804</td>
<td>1</td>
<td>Nominal input voltage ($V_{IN}$)</td>
<td>24 VDC</td>
<td>859-805</td>
<td>1</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>8 ... 16 VDC</td>
<td>24 VDC ± 1 %</td>
<td>1</td>
<td>Input voltage range</td>
<td>15 ... 30 VDC</td>
<td>24 VDC ± 2 %</td>
<td>1</td>
</tr>
<tr>
<td>Output voltage</td>
<td>24 VDC ± 1 %</td>
<td>200 mA</td>
<td>1</td>
<td>Output voltage</td>
<td>12 VDC ± 2 %</td>
<td>500 mA</td>
<td>1</td>
</tr>
<tr>
<td>Output current (max.)</td>
<td>250 mA</td>
<td>0.5 %</td>
<td>1</td>
<td>Output current (max.)</td>
<td>500 mA</td>
<td>0.5 %</td>
<td>1</td>
</tr>
<tr>
<td>Line regulation, max. (full load, over input voltage range)</td>
<td>0.5 %</td>
<td>0.5 %</td>
<td>1</td>
<td>Line regulation, max. (full load, over input voltage range)</td>
<td>0.7 %</td>
<td>0.7 %</td>
<td>1</td>
</tr>
<tr>
<td>Max. load regulation (no load to full load, nominal input)</td>
<td>0.5 %</td>
<td>83 %</td>
<td>1</td>
<td>Max. load regulation (no load to full load, nominal input)</td>
<td>0.7 %</td>
<td>85 %</td>
<td>1</td>
</tr>
<tr>
<td>Efficiency at full load (24 VDC in)</td>
<td>83 %</td>
<td>20 mV</td>
<td>1</td>
<td>Efficiency at full load (24 VDC in)</td>
<td>85 %</td>
<td>20 mV</td>
<td>1</td>
</tr>
<tr>
<td>Output noise peak-to-peak max. (20 MHz bandwidth)</td>
<td>40 mV</td>
<td>1</td>
<td></td>
<td>Output noise peak-to-peak max. (20 MHz bandwidth)</td>
<td>20 mV</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Switching frequency</td>
<td>1.2 MHz (nominal)</td>
<td>1</td>
<td></td>
<td>Switching frequency</td>
<td>200 kHz (nominal)</td>
<td>1</td>
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</tr>
<tr>
<td>Isolation</td>
<td>non-isolated</td>
<td>1</td>
<td></td>
<td>Isolation</td>
<td>non-isolated</td>
<td>1</td>
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</tr>
<tr>
<td>Reverse voltage protection, input</td>
<td>yes</td>
<td>1</td>
<td></td>
<td>Reverse voltage protection, input</td>
<td>yes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Minimum load requirement</td>
<td>no</td>
<td>1</td>
<td></td>
<td>Minimum load requirement</td>
<td>no</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Max. transient recovery time (recovery time for load change from 25 % to 75% of full load)</td>
<td>50 μs</td>
<td>1</td>
<td></td>
<td>Max. transient recovery time (recovery time for load change from 25 % to 75% of full load)</td>
<td>500 μs</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Max. startup time (24 VDC in, full load)</td>
<td>8 ms</td>
<td>1</td>
<td></td>
<td>Max. startup time (24 VDC in, full load)</td>
<td>3 ms</td>
<td>1</td>
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</tr>
<tr>
<td>Max. hold time (nominal input voltage, full load)</td>
<td>500 μs</td>
<td>1</td>
<td></td>
<td>Max. hold time (nominal input voltage, full load)</td>
<td>500 μs</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Input fuse</td>
<td>TVS diode</td>
<td>1</td>
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<td>Input fuse</td>
<td>TVS diode</td>
<td>1</td>
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</tr>
<tr>
<td>Output short circuit protection</td>
<td>fuse</td>
<td>1</td>
<td></td>
<td>Output short circuit protection</td>
<td>fuse</td>
<td>1</td>
<td></td>
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<tr>
<td>Temperature coefficient</td>
<td>100 ppm/°C</td>
<td>2</td>
<td></td>
<td>Temperature coefficient</td>
<td>100 ppm/°C</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +55 °C</td>
<td>6 x 56 x 91</td>
<td>2</td>
<td>Ambient operating temperature</td>
<td>-25 °C ... +55 °C</td>
<td>6 x 56 x 91</td>
<td>2</td>
</tr>
<tr>
<td>Dimensions [mm] W x H x L</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>2</td>
<td></td>
<td>Dimensions [mm] W x H x L</td>
<td>Height from upper-edge of DIN 35 rail</td>
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<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP®</td>
<td>2</td>
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<td>Wire connection</td>
<td>CAGE CLAMP®</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 14</td>
<td>2</td>
<td></td>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 14</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>2</td>
<td></td>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

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**ELECTROMATE**

Toll Free Phone (877) SERVO98
Toll Free Fax (877) SERVO99
www.electromate.com
sales@electromate.com

**Sold & Serviced By:**
Rail-Mounted Modules - DC/DC Converter

**EPSITRON® COMPACT Power**

- Primary switch mode power supply unit
- Suitable for protection class II equipment
- Natural convection cooling when horizontally mounted
- Stepped profile, ideal for distribution boards or distribution boxes
- Suitable for both parallel and series operation
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{nom}}$ 110 VDC
- Input voltage range 77 V … 140 VDC
- Frequency 0 Hz
- Input current $I_i$ 0.77 A at 77 VDC / 0.42 A at 140 VDC
- Inrush current < 30 A, NTC
- Mains failure hold-up time > 8 ms at 77 VDC / > 25 ms at 140 VDC

#### Output:
- Nominal output voltage $V_{\text{nom}}$ 24 VDC (SELV)
- Output current $I_o$ 2.0 A at 24 VDC (max. 1.6 A in any mounting position)
- Factory preset 24 VDC
- Adjustment accuracy 2 %
- Residual ripple < 100 mV (peak-to-peak) at 20 MHz
- Current limitation 1.1 x $I_o$, typ.
- Overload behavior Constant current
- Operational indication LED green ($V_o$)

#### Efficiency/Power losses:
- Efficiency 85 % typ.
- Power loss $P_P$ 1.9 W ([110 VDC/no load]), 9.9 W ([110 VDC/nominal load])
- Max. power loss $P_T$ 9.9 W typ. (77 VDC / 24 VDC, 2 A)

#### Fuse protection:
- Internal fuse T 4 A / 125 VDC
- External fuse 6 A, 10 A power circuit breakers, B, C characteristics

### Environmental requirements:
- Ambient operating temperature -40 °C ... +70 °C
- Storage temperature -40 °C ... +85 °C
- Rel. humidity 5 % ... 96 % (varnished PCB)
- Derating 5 % / 96 % (varnished PCB)
- Degree of pollution 2 (acc. to EN 50178)
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection Varistor (input side); internal protective circuit, < 40 VDC (output side in case of an error)
- Shock and vibration Category 1, class B

### Safety and protection:
- Enclosure Plastic, light gray, Flammability class V0 acc. to UL94
- Test voltage pri. - sec. 4.2 kV DC
- Protection class Prepared for class II equipment
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection Varistor (input side);
- internal protective circuit,
- < 40 VDC (output side in case of an error)
- Short circuit protection yes
- No-load proof yes
- Feedback voltage max. 35 VDC
- Parallel operation yes
- Series connection yes
- MTBF > 500000 h

### Connection and type of mounting:
- Wire connection Input/Output: WAGO 740 Series
- Cross sections Input/Output:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths 6 ... 7 mm / 0.24 ... 0.28 in
- Type of mounting DIN rail mount (EN 60715)

### Dimensions and weight:
- Dimensions (mm) W x H x L 72 x 89 x 59
- Height: 55 mm, from upper-edge of DIN 35 rail
- Weight 250 g

### Standards and approvals:
- Standards/Specifications EN 60950, EN 61204-3, UL 60950 *, UL 508 *, GL *
- * (pending)
### Description

<table>
<thead>
<tr>
<th>DC/DC converter</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC/DC converter</td>
<td>289-913</td>
<td>1</td>
<td>288-895</td>
<td>1</td>
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</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>DC 24 V / 24 V: 0.21 ADC</th>
<th>DC 24 V / 18 V: 0.4 ADC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>24 V DC</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>± 10 %</td>
<td>18 ... 36 V DC</td>
</tr>
<tr>
<td>Output voltage</td>
<td>24 VDC (± 3 %)</td>
<td>18 VDC (± 1 %)</td>
</tr>
<tr>
<td>Nominal output current</td>
<td>210 mA</td>
<td>400 mA</td>
</tr>
<tr>
<td>Peak output current</td>
<td>315 mA</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>65 % ... 75 %</td>
<td>82 %</td>
</tr>
<tr>
<td>Test voltage input/output</td>
<td>500 VDC</td>
<td>1500 VDC</td>
</tr>
<tr>
<td>Short circuit protection</td>
<td>Thermal cut-out</td>
<td>permanent</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +40 °C</td>
<td>-25 °C ... +70 °C</td>
</tr>
<tr>
<td>Weight</td>
<td>77 g</td>
<td>73.9 g</td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L</td>
<td>83 x 25 x 77</td>
<td>50 x 25 x 85</td>
</tr>
<tr>
<td>Height from upper-edge of DIN 35 rail</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (236 Series)</td>
<td>CAGE CLAMP® (256 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>EMC 1 Immunity to interference</td>
<td>acc. to EN 50082-2 (1996)</td>
<td>acc. to EN 50082-2 (1996)</td>
</tr>
<tr>
<td>EMC 1 Emission of interference</td>
<td>* * Only in conjunction with DALI/DSSI Master Module 730-641</td>
<td>* * Only in conjunction with DALI/DSSI Master Module 730-641</td>
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</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>289-913</th>
<th>288-895</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMB Multi marking system for mounting carrier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marker strips for mounting carrier</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**EPSITRON® - UPS Charger and Controller**

- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for watchdog functions
- Remote input for switching off buffered output
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563) detects both battery life and battery type

### Technical Data

**Input:**
- Nominal input voltage $V_{i \text{ nom}}$ 24 V DC
- Input voltage range 22 V to 29 V DC
- Input current $I_i$ 0.1 A (no-load running), 0.8 A (charging), 10.8 A (max.)
- Inrush current < 4 A (no load)
- Switch-on threshold (adjustable) 20 V to 25.5 V DC

**Output:**
- Nominal output voltage $V_{o \text{ nom}}$ 24 V DC
- Output voltage range $V_i - 0.5$ V DC (below switch-on threshold); 20 V to 25.5 V DC (during buffer operation)
- Output current $I_o$ 10 A
- Current limitation typ. 11 - 14 A
- Buffer time 10 s to 600 s or constant (adjustable)
- Final load voltage 26 V to 29.5 V DC or temperature controlled (adjustable)
- Charging current max. 0.6 A
- Recommended battery modules 787-871, 787-872, 787-873, 787-876
- Operational indication LED green (Ok), LED amber (warning), LED red (error)
- Signaling LCD, 3 x signal output 24 V DC, 25 mA and 1 x floating relay contact
- Remote input 30 V DC, 1 A
- LineMonitor, parameter setting via LCD and RS-232 serial interface

**Efficiency / power losses:**
- Efficiency 95 % typ.
- Power loss $P_L$ 13 W (stand-by) / 20 W (rated load)

**Environmental requirements:**
- Ambient operating temperature -10 °C to +60 °C
- Storage temperature -25 °C to +85 °C
- Rel. humidity 30 % to 85 % (no condensation)

**Safety and protection:**
- Reverse voltage protection yes
- Degree of protection IP20 acc. to EN 60529
- Feedback voltage max. 35 VDC
- Parallel operation yes, for buffer time extension (temperature measurement evaluation is only possible via one battery module)

**Connection and type of mounting:**
- Wire connection Input/Output: WAGO 231 Series
- Cross sections Input/Output: 0.08 to 2.5 mm² / AWG 28 to 12
- Strip lengths Input/Output: 8 to 9 mm / 0.33 in
- Line length ≤ 3 m (Input, Output, Battery Control)
- Type of mounting DIN-rail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions (mm) W x H x L 40 x 163 x 163
- Height from upper-edge of DIN 35 rail 800 g

**Standards and approvals:**
- Standards/Specifications EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3
787-875

**EPSITRON®- UPS Charger and Controller**

- Charger and controller for uninterruptible power supply (UPS)
- Current and voltage monitoring, as well as parameter setting via LCD and RS-232 interface
- Active signal outputs for watchdog functions
- Remote input for switching off buffered output
- Input for temperature control of connected battery
- Battery control (from manufacturing no. 215563) detects both battery life and battery type

### Technical Data

#### Input:
- Nominal input voltage \( V_{i \text{ nom}} \): 24 V DC
- Input voltage range: 22 V ... 29 V DC
- Input current \( I_i \): 0.1 A (no-load running); 1.5 A (charging); 21.5 A (max.)
- Inrush current: \(< 4\) A (no load)
- Switch-on threshold (adjustable): 20 V ... 25.5 V DC

#### Output:
- Nominal output voltage \( V_{o \text{ nom}} \): 24 V DC
- Output voltage range: \( V_i \) - 1 V DC (below switch-on threshold); 20 V ... 25.5 V DC (buffer mode)
- Output current \( I_o \): 20 A
- Current limitation: typ. 22 ... 26 A
- Buffer time: 10 s ... 600 s or constant (adjustable)
- Final load voltage: 26 V ... 29.5 V DC or temperature controlled (adjustable)
- Charging current: max. 1.0 A
- Recommended battery modules: 787-871, 787-872, 787-873
- Operational indication: LED green (Vo), LED yellow (warning), LED red (error)
- Signaling: via LCD and RS-232 serial interface
- Remote input: to switch off buffer operation

#### Efficiency / power losses:
- Efficiency: 95 % typ.
- Power loss \( P_v \): 15 W (stand-by) / 30 W (rated load)
- Fuse protection: 25 AT

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: \(-10\) °C ... +60 °C
- Storage temperature: \(-25\) °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)

#### Safety and protection:
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: yes
- Degree of protection: IP20
- Feedback voltage: max. 35 VDC
- Parallel operation: yes, for buffer time extension (temperature measurement evaluation is only possible via one battery module)

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 831 Series, Signalising: WAGO 733 Series
- Cross sections: Input/Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths: 13 ... 15 mm / 0.5 mm², 6 ... 8 mm / 0.22 in
- Line length: 3 m (Input, Output, Battery Control)
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:
- Dimensions (mm): 57 x 163 x 171
- Height from upper-edge of DIN 35 rail: 1200 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, UL 60950*, UL 508*, EN 61000-6-2, EN 61000-6-3 (* pending)
Switched-Mode Power Supply with Integrated UPS Charger and Controller

EPSITRON

- Primary switch mode power supply with integrated charger and controller for uninterruptible power supply (UPS)
- Battery control technology for smooth charging and predictive maintenance applications
- Potential-free contacts provide function monitoring
- Buffer time can be set on-site via rotary switch
- Parameter setting and monitoring via RS-232 interface
- Prepared for class I equipment
- Natural convection cooling when horizontally mounted
- Enclosed for use in switchgear cabinets
- Electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950

### Technical Data

#### Input:
- Nominal input voltage $V_{i \text{ nom}}$ 100 ... 240 VAC, 110 ... 370 VDC
- Input voltage range 85 ... 264 VAC
- Frequency 45 ... 65 Hz, 0 Hz
- Input current $I_i$ 1,1 A at 230 VAC and 5 ADC
- Discharge current 1 mA typ.
- Inrush current < 30 A

#### Output:
- Nominal output voltage $V_{o \text{ nom}}$ 24 VDC (SELV)
- Output voltage range 23.0 ... 28.5 VDC (mains operation), 18.5 ... 27.5 VDC (battery operation)
- Output current $I_o$ 5 A
- Adjustment accuracy 1 %
- Residual ripple < 100 mV (peak-peak)
- Current limitation 1.1 x $I_o$, TopBoost approx. 24 A
- Buffer time 0.5 ... 20 min, IPC mode or constant (adjustable)
- Switch-on threshold (adjustable) 22 VDC (pre-configured), 20 ... 25.5 VDC (configurable via software)

#### Final load voltage 26 ... 29.5 VDC temperature-controlled (fixed or adjustable)

#### Charging current 0.3 A ... 0.6 A

#### Recommended battery modules 787-876, 787-871, 787-872, 787-873

#### Operational indication
- Green LED (DC OK), yellow LED (battery mode), red LED (warning/fault)

#### Signaling
- 3 x 24 VDC signal output, 25 mA and
- 1 x 30 VDC isolated relay contact, 1 A

#### Remote input to switch off buffer operation

#### LineMonitor parameter setting via RS-232 serial interface

#### Efficiency / power losses:
- Efficiency 89 % typ.
- Power loss $P_v$ 5.2 W (battery operation, 24 VDC, 5 A) / 17 W (mains operation, 230 VAC/24 VDC, 5 A)

#### Fuse protection:
- Internal fuse T 4 A / 250 V (input side)
- External fuse Circuit breakers 6 A, 10 A, 16 A, characteristic B or C
- An external DC fuse is required for the DC input voltage

#### Environmental requirements:
- Ambient operating temperature -25 °C ... +70 °C;
- Device start at -40 °C (type-tested)
- Storage temperature -25 °C ... +65 °C
- Derating -3 % / K (> +50 °C)
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 (acc. to EN 60721)

#### Safety and protection:
- Test voltage pri.-sec./pri.-gr./sec.-gr. 4.2 kV DC / 2.2 kV DC / 0.7 kV DC
- Protection class I
- Reverse voltage protection yes
- Degree of protection IP20 (acc. to EN 60529)
- Feedback voltage max. 35 VDC
- Parallel operation yes, max. 3 battery modules for buffer time extension

#### Connection and type of mounting:
- Wire connection Input/Output/Signals: WAGO 721 Series
- Interface: WAGO 733 Series
- Cross sections Input/Output/Signals: 0.5 mm² ... 10 mm² / AWG 20 ... 10
- Interface:
- Strip lengths 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Input/Output/Signals: 13 ... 15 mm / 0.55 in
- Interface: 8 ... 9 mm / 0.33 in
- Line length ≤ 3 m [Output, Battery Control]
- Type of mounting DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) W x H x L 60 x 127 x 135.5
- Length from upper-edge of DIN 35 rail
- Weight 885 g

#### Standards and approvals:
- Standards/Specifications EN 60950, UL 60950, UL 508, EN 61204-3, GL (*)
- (*) pending

---

**Technical Data**

**Item No.** | **Pack. Unit**
--- | ---
787-1675 | 1

---

**Description**

Switched-Mode Power Supply with Integrated UPS Charger and Controller, 24VDC / 5A
**EPSITRON® - Lead-Acid (AGM) Battery Modules**

![Similar to picture](image)

- Lead-acid Absorbed Glass Mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to both 787-870 UPS Charger and Controller and 787-1675 Power Supply with integrated UPS charger and controller
- Parallel operation provides higher buffer time *
- With built-in NTC K164 (4.7 kΩ) temperature sensor
- DIN 35 carrier rail mounting
- Battery control (from manufacturing no. 216570) detects both battery life and battery type

### Technical Data

<table>
<thead>
<tr>
<th>Input:</th>
<th>Output:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage $V_{i \text{ nom}}$</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Nominal output voltage $V_{o \text{ nom}}$</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Output current $I_o$</td>
<td>max. 7.5 A</td>
</tr>
<tr>
<td>Final load voltage $V_L$</td>
<td>max. 27 V DC (at 25 °C)</td>
</tr>
<tr>
<td>Charging current $I_C$</td>
<td>max. 0.3 A</td>
</tr>
<tr>
<td>Capacity</td>
<td>1.2 Ah</td>
</tr>
</tbody>
</table>

**Fuse protection:**
- Internal fuse: 15 AT (Type FK 2)

### Environmental requirements:
- Ambient operating temperature: $-10 °C ... +40 °C$
- Storage temperature: $-20 °C ... +40 °C$
- Service life: typ. 3/4/2 years
  - at $20 °C/30 °C/40 °C$

**Safety and protection:**
- Temperature sensor: NTC K164 (4.7 kΩ)
- Protection class: III
- Degree of protection: IP20 (acc. to EN 60529)

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 231 Series
  - Battery Control: WAGO 231 Series
- Cross sections:
  - Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Battery Control: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input/Output: 8 ... 9 mm / 0.33 in
  - Battery Control: 8 ... 9 mm / 0.33 in
- Line length: ≤ 3 m (Input, Output, Battery Control)
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions [mm]: W x H x L = 55 x 153 x 136.5
- Weight: 1800 g

**Standards and approvals:**
- Battery is tested to VdS, UL 508

---

* for parallel connection, please switch battery capacity setting to “OFF” in the UPS charger and controller.
**EPSITRON® - Lead-Acid (AGM) Battery Modules**

- Lead-acid Absorbed Glass Mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to 787-873 or 787-875 UPS Controller and power supply with integrated UPS charger and controller
- Parallel connection to increase the buffer time*
- Features built-in NTC K164 (4.7 kΩ) temperature sensor
- Battery control (from manufacturing no. 216654) detects both battery life and battery type

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{in}}$ nom 24 V DC

#### Output:
- Nominal output voltage $V_{\text{o}}$ nom 24 V DC
- Output current $I_o$ 20 A
- Final load voltage max. 27 V DC (at 25 °C)
- Charging current max. 0.8 A
- Capacity 3.2 Ah

#### Fuse protection:
- Internal fuse 25 AT

### Technical Data

#### Environmental requirements:
- Ambient operating temperature -10 °C ... +40 °C
- Storage temperature -20 °C ... +40 °C
- Service life typ. 5/4/2 years
  - at 20 °C/30 °C/40 °C

#### Safety and protection:
- Temperature sensor NTC K164 (4.7 kΩ)
- Protection class III
- Degree of protection IP20 acc. to EN 60529

#### Connection and type of mounting:
- Wire connection Input/Output: WAGO 231 Series
- Battery Control: WAGO 231 Series
- Cross sections Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Battery Control: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input/Output: 8 ... 9 mm / 0.33 in
- Battery Control: 8 ... 9 mm / 0.33 in
- Line length ≤ 3 m (Input, Output, Battery Control)
- Type of mounting Screw mount

#### Dimensions and weight:
- Dimensions (mm) W x H x L 76.2 x 168 x 175.5
- Weight 3975 g

#### Standards and approvals:
- Standards/Specifications battery is tested to VdS, UL 508

* for parallel connection, please switch battery capacity setting to “OFF” in the UPS charger and controller.
• Lead-acid Absorbed Glass Mat (AGM) battery module for uninterruptible power supply (UPS)
• Can be connected to 787-870 or 787-875 UPS Controller and power supply with integrated UPS charger and controller
• Parallel connection to increase the buffer time*
• Features built-in NTC K164 (4.7 kΩ) temperature sensor
• Battery control (from manufacturing no. 213987) detects both battery life and battery type

### Technical Data

#### Input:
- Nominal input voltage $V_{i\text{ nom}}$: 24 V DC

#### Output:
- Nominal output voltage $V_{o\text{ nom}}$: 24 V DC
- Output current $I_{o}$: 40 A
- Final load voltage: max. 27 V DC (at 25 °C)
- Charging current: max. 1.8 A
- Capacity: 7 Ah
- Fuse protection: Internal fuse 2 x 25 AT

#### Environmental requirements:
- Ambient operating temperature: $-10^\circ\text{C} \ldots +40^\circ\text{C}$
- Storage temperature: $-20^\circ\text{C} \ldots +40^\circ\text{C}$
- Service life: typ. 3/ 4/ 2 years at 20 °C/ 30 °C/ 40 °C

#### Safety and protection:
- Temperature sensor: NTC K164 (4.7 kΩ)
- Protection class: III
- Degree of protection: IP20 acc. to EN 60529

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 231 Series
- Battery Control: WAGO 231 Series
- Cross sections: Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  Battery Control: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input/Output: 8 ... 9 mm / 0.33 in
  Battery Control: 8 ... 9 mm / 0.33 in
- Line length: ≤ 3 m (Input, Output, Battery Control)
- Type of mounting: Screw mount

#### Dimensions and weight:
- Dimensions [mm]: $86 \times 239 \times 217.5$
- Weight: 6500 g

#### Standards and approvals:
- Standards/Specifications: battery is tested to VdS, UL 508

* for parallel connection, please switch battery capacity setting to “OFF” in the UPS charger and controller.
**EPSITRON® - Lead-Acid (AGM) Battery Modules**

- Lead-acid Absorbed Glass Mat (AGM) battery module for uninterruptible power supply (UPS)
- Can be connected to 787-873 or 787-875 UPS Controller and power supply with integrated UPS charger and controller
- Parallel connection to increase the buffer time*
- Features built-in NTC K164 (4.7 kΩ) temperature sensor
- Battery control (from manufacturing no. 213412) detects both battery life and battery type
- With UL 508 approval (from manufacturing no. 416334)

### Technical Data

**Description** | **Item No.** | **Pack. Unit**
--- | --- | ---
Lead-acid Absorbed Glass Mat (AGM) battery module | 787-873 | 1

**Input:**

| Nominal input voltage V\textsubscript{nom} | 24 V DC |

**Output:**

| Nominal output voltage V\textsubscript{nom} | 24 V DC |
| Output current I\textsubscript{o} | 40 A |
| Final load voltage | max. 27 V DC (at 25 °C) |
| Charging current | max. 3A |
| Capacity | 12 Ah |
| Fuse protection: | Internal fuse 2 x 25 AT |

**Environmental requirements:**

| Ambient operating temperature | -10 °C ... +40 °C |
| Storage temperature | -20 °C ... +40 °C |
| Service life | typ. 5/4/2 years at 20 °C/30 °C/40 °C |

**Safety and protection:**

| Temperature sensor | NTC K164 (4.7 kΩ) |
| Protection class | III |
| Degree of protection | IP20 (acc. to EN 60529) |

**Connection and type of mounting:**

- Wire connection: Input/Output: WAGO 831 Series
- Battery Control: WAGO 231 Series
- Cross sections: Input/Output: 0.5 mm\textsuperscript{2} ... 10 mm\textsuperscript{2} / AWG 20 ... 8
- Battery Control: 0.08 mm\textsuperscript{2} ... 2.5 mm\textsuperscript{2} / AWG 28 ... 12
- Strip lengths: Input/Output: 13 ... 15 mm / 0.55 in
- Battery Control: 8 ... 9 mm / 0.33 in
- Line length: ≤ 3 m (Input, Output, Battery Control)
- Type of mounting: Screw mount

**Dimensions and weight:**

- Dimensions (mm) W x H x L: 120.5 x 239 x 217.5
- Weight: 10830 g

**Standards and approvals:**

- Standards/Specifications: Battery is tested to VdS, UL 508

---

* For parallel connection, please switch battery capacity setting to “OFF” in the UPS charger and controller.
**EPSITRON® - Capacitive Buffer Modules**

- Capacitive buffer module bridges short duration voltage drops
- For uninterruptible power supply
- Potential-free contact for charge condition monitoring

### Technical Data

**Input:**
- Nominal input voltage \( V_{i\text{nom}} \): 24 V DC
- Input voltage range: 20 V ... 30 V DC
- Input current \( I_i \): 60 mA (no-load running); 1 A (charging); 11 A (max.)
- Switch-on threshold (adjustable): 20 V ... 24 V DC

**Output:**
- Nominal output voltage \( V_{o\text{nom}} \): 24 V DC
- Output voltage range: \( V_i - 0.5 \text{ V DC} \) (below switch-on threshold); 20.4 V ... 24 V DC (during buffer operation)
- Output current \( I_o \): 10 A
- Current limitation: electronic, typ. 11 A
- Buffer time: 0.06 s ... 7.2 s (depends on load current and switch-on threshold)
- Charging time: typ. 5 minutes
- Operational indication:
  - LED green (\( V_a > 20 \text{ V} \))
  - LED yellow (charging)
  - LED red (\( V_a < 20 \text{ V} \))
- Signaling:
  - 1 x floating relay contact 30 V DC, 1 A
- Efficiency / power losses:
  - Power loss \( P_v \): 1.5 W open circuit
  - Power loss \( P_{no} \): 6.5 W nominal load

### Environmental requirements:
- Ambient operating temperature: \(-10^\circ C \ldots +50^\circ C\)
- Storage temperature: \(-10^\circ C \ldots +60^\circ C\)
- Service life: typ. 87,000 h (at 25 °C ambient operating temperature); typ. 30,500 h (at 40 °C ambient operating temperature)
- Rel. humidity: 30% ... 85% (no condensation)

### Safety and protection:
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: yes
- Degree of protection: IP20 acc. to EN 60529
- Feedback voltage: max. 35 VDC
- Parallel operation: yes

### Connection and type of mounting:
- Wire connection:
  - Input/Output: WAGO 231 Series
  - Relay: WAGO 231 Series
- Cross sections:
  - Input/Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Relay: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input/Output: 8 ... 9 mm / 0.33 in
  - Relay: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

### Dimensions and weight:
- Dimensions (mm): 57 x 179 x 163
- Height from upper-edge of DIN 35 rail: 75 mm
- Weight: 1000 g

### Standards and approvals:
- Standards/Specifications:
  - EN 60950, UL 508, EN 61000-6-2
  - EN 61000-6-3

---

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-880</td>
<td>1</td>
</tr>
</tbody>
</table>
**EPSITRON® - Capacitive Buffer Modules**

- Capacitive buffer module bridges short duration voltage drops
- For uninterruptible power supply
- Potential-free contact for charge condition monitoring

---

### Technical Data

**Input:**
- Nominal input voltage \( V_{i\text{ nom}} \): 24 V DC
- Input voltage range: 20 V ... 30 V DC
- Input current \( I_i \): 60 mA (no-load running); 1 A (charging); 22 A (max.)
- Switch-on threshold (adjustable): 20 V ... 24 V DC

**Output:**
- Nominal output voltage \( V_{o\text{ nom}} \): 24 V DC
- Output voltage range:
  - \( V_o \): 1 V DC (below switch-on threshold);
  - 20.4 V ... 24 V DC (during buffer operation)
- Output current \( I_o \): 20 A
- Current limitation: electronic, typ. 22 A
- Buffer time:
  - 0.17 s ... 16.5 s (depends on load current and switch-on threshold)

**Operational indication LED:**
- Green (\( V_a > 20 \text{ V} \))
- Yellow (charging)
- Red (\( V_a < 20 \text{ V} \))

**Signaling:**
- 1 x floating relay contact 30 V DC, 1 A

**Efficiency / power losses:**
- Power loss \( P_v \):
  - 1.5 W open circuit
  - 15 W nominal load

### Technical Data

**Environmental requirements:**
- Ambient operating temperature: -10 °C ... +50 °C
- Storage temperature: -10 °C ... +60 °C
- Service life:
  - typ. 67,600 h (at 25 °C ambient operating temperature)
  - typ. 30,500 h (at 40 °C ambient operating temperature)
- Rel. humidity: 30 % ... 85 % (no condensation)

**Safety and protection:**
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: yes
- Degree of protection: IP20 acc. to EN 60529
- Feedback voltage: max. 35 V DC
- Parallel operation: yes

**Connection and type of mounting:**
- Wire connection: Input/Output: WAGO 831 Series
- Relay: WAGO 231 Series
- Cross sections:
  - Input/Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Relay: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input/Output: 13 ... 15 mm / 0.55 in
  - Relay: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions (mm): 57 x 179 x 181
- Height from upper edge of DIN rail: 1000 g

**Standards and approvals:**
- Standards/Specifications:
  - EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3
Back-Up Capacitor Module

This module is equipped with a capacitor which smoothes unstable 24 VDC power supplies in case the voltage tolerances mentioned in our data sheets cannot be ensured. Reasons for voltage transients could be:

- Voltage disconnections (switching transients) on primary side
- Overloads on secondary side
- Switching of inductive or capacitive loads

The back-up capacitor module is connected between the 24 V power supply and the electronic device which has to be protected.

Notice:
If using a non-filtered single-phase power supply, the capacitor causes a voltage increase.

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-up capacitor module</td>
<td>288-824</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>24 VDC (+25 %)</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1 A</td>
</tr>
<tr>
<td>Nominal capacity</td>
<td>10000 μF</td>
</tr>
<tr>
<td>Weight</td>
<td>104.4 g</td>
</tr>
<tr>
<td>Dimensions [mm] W x H x L</td>
<td>38 x 81 x 85</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

### Accessories

- WMB Multi marking system for mounting carrier see from page 506
- Marker strips for mounting carrier white 709.198 / transparent 709.196
**EPSITRON® - Redundancy Module**

- Redundancy module with 2 inputs for decoupling 2 power supplies
- For redundant or uninterruptible power supply
- With potential-free contact for input voltage monitoring

### Technical Data

#### Input:
- Nominal input voltage $V_{i\text{ nom}}$: 2 x 24 V DC
- Input voltage range: 18 V ... 30 V DC
- Input current $I_{i}$: 2 x 20 A, max. 1 x 40 A

#### Output:
- Nominal output voltage $V_{o\text{ nom}}$: 24 V DC
- Output voltage range: $V_e$: 1 V DC
- Output current $I_o$: 20 A, max. 40 A
- Operational indication: LED green ($V_o$), 2 x LED yellow ($V_i$)
- Signaling: 1 x floating relay contact 30 V DC, 1 A

#### Efficiency / power losses:
- Efficiency: 97 % typ.
- Power loss $P_v$: 1.5 W open circuit
  - 14 W nominal load (20 A) / 26 W nominal load (40 A)

#### Fuse protection:
- Internal fuse: no

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redundancy Module</td>
<td>787-885</td>
<td>1</td>
</tr>
<tr>
<td>24 VDC, 2 x 20 A / 1 x 40 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -10 °C ... +60 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)

#### Safety and protection:
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: yes
- Degree of protection: IP20 (acc. to EN 60529)
- Feedback voltage: max. 33 V DC
- Parallel operation: yes

#### Connection and type of mounting:
- Wire connection: Input/Output: WAGO 831 Series
  - Relay: WAGO 231 Series
- Cross sections: Input/Output:
  - 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input/Output: 13 ... 15 mm / 0.55 in
  - Relay: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mounting (EN 60715) in 2 positions

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 40 x 163 x 181
- Height from upper edge of DIN 35 rail, $T=127$ mm without pluggable female
- Weight: 870 g

#### Standards and approvals:
- Standards/Specifications: EN 60950, UL 60950, UL 508, EN 61000-6-2, EN 61000-6-3
EPSITRON® - Redundancy Module

- Redundancy module with 2 inputs for decoupling 2 power supplies
- For redundant or uninterruptible power supply
- With potential-free contact for input voltage monitoring

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-886</td>
<td>1</td>
</tr>
</tbody>
</table>

- **Redundancy Module**
- **48 VDC, 2 x 20 A / 1 x 40 A**

### Technical Data

**Input:**
- Nominal input voltage $V_{i\text{ nom}}$ 2 x 48 V DC
- Input voltage range 36 V ... 54 V DC
- Input current $I_{i}$ 2 x 20 A, max. 1 x 40 A

**Output:**
- Nominal output voltage $V_{o\text{ nom}}$ 48 V DC
- Output voltage range $V_{e}$ : 1 V DC
- Output current $I_{o}$ 20 A, max. 40 A
- Operational indication LED green ($V_{o}$), 2 x LED yellow ($V_{i}$)
- Signaling 1 x floating relay contact 30 V DC, 1 A

**Efficiency / power losses:**
- Efficiency 96 % typ.
- Power loss $P_{v}$ 1.7 W [48 VDC/no load] / 20 W [48 VDC/rated load] (20 A) / 40 W [48 VDC/rated load] (40 A)

**Fuse protection:**
- Internal fuse no

**Environmental requirements:**
- Ambient operating temperature -10 °C ... +60°C
- Storage temperature -25 °C ... +85 °C
- Rel. humidity 30 % ... 85 % [no condensation]

**Safety and protection:**
- Test voltage 500 V DC (terminals to enclosure)
- Protection class III
- Reverse voltage protection yes
- Degree of protection IP20 [acc. to EN 60529]
- Feedback voltage max. 60 VDC
- Parallel operation yes

**Connection and type of mounting:**
- Wire connection Input/Output: WAGO 831 Series
- Relay: WAGO 231 Series
- Cross sections Input/Output: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Relay: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input/Output: 13 ... 15 mm / 0.55 in
- Relay: 8 ... 9 mm / 0.33 in
- Type of mounting DIN-rail mounting [EN 60715] in
- 2 positions

**Dimensions and weight:**
- Dimensions [mm] W x H x L 40 x 181 x 163
- Length from upper-edge of DIN 35 rail
- Weight 860 g

**Standards and approvals:**
- Standards/Specifications EN 60950, UL 60950*, UL 508*, EN 61000-6-2, EN 61000-6-3
- (* pending)
Diode redundancy module with 2 inputs for decoupling 2 power supplies
- For redundant and fail-safe power supply
- Same profile as EPSITRON® ECO Power Supplies
- Connects to power supplies with electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diode Redundancy Module</td>
<td>787-783</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>24 VDC, 12.5 A</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Technical Data

<table>
<thead>
<tr>
<th>Input:</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage V_i nom</td>
<td>2 x 24 VDC</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>2 x 9 ... 54 VDC</td>
</tr>
<tr>
<td>Input current I_i max</td>
<td>max. 2 x 12.5 ADC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output:</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal output voltage V_o nom</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>9 ... 54 VDC</td>
</tr>
<tr>
<td>Voltage drop</td>
<td>0.6 V (input/output)</td>
</tr>
<tr>
<td>Output current I_o max</td>
<td>max. 25 ADC</td>
</tr>
<tr>
<td>Operational indication</td>
<td>2 x LED green [V_i &gt; 7.5 VDC], 1 x LED green [V_o &gt; 7.5 VDC]</td>
</tr>
<tr>
<td>Output power</td>
<td>≤ 1350 W</td>
</tr>
</tbody>
</table>

Efficiency/Power losses:
- Efficiency ≥ 96 %
- Power loss P_L 12.5 W [nominal load]

Environmental Requirements:
- Ambient operating temperature -25 °C ... +70 °C
- Storage temperature 40 °C ... +85 °C
- Relative humidity ≤ 95 % [no condensation]
- Derating -2.66 %/K [3 °C < T_amb ≤ 70 °C]
- Temperature coefficient ± 0.03 %/K [0 °C < T_amb ≤ 50 °C]
- Degree of pollution 2 (acc. to EN 50178)
- Climatic category 3K3 [acc. to EN 60721, except for low air pressure]
- Vibration resistance 0.7 g [acc. to EN 60068-2-6]
- Shock resistance 15 g [acc. to EN 60068-2-27]

Safety and protection:
- Test voltage 0.5 kV [input – housing], 0.5 kV [output – housing]
- Protection class Prepared for class I equipment
- Degree of protection IP20 acc. to EN 60529
- Overvoltage protection no
- Short circuit protection no
- No-load proof yes
- Feedback voltage 60 V
- Parallel operation yes
- MTBF > 10 Mio. h (acc. to IEC 61709)

Connection and type of mounting:
- Wire connection CAGE CLAMP® [WAGO 2706 Series]
- Cross sections solid/fine-stranded: 0.5 ... 6 mm² / AWG 20 ... 10
- Strip lengths 11 ... 12 mm / 0.43 ... 0.47 in
- Type of mounting DIN-rail mounting [EN 60715]

Dimensions and weight:
- Dimensions (mm) W x H x L 50 x 130 x 92
- Length from upper-edge of DIN rail
- Weight 340 g

Standards and approvals:
- Standards/Specifications UL 508 [pending]
Diode redundancy module with 2 inputs for decoupling 2 power supplies
For redundant and fail-safe power supply
Same profile as EPSITRON® ECO Power Supplies
Connects to power supplies with electrically isolated output voltage (SELV) acc. to EN 60950-1/UL 60950-1

**Technical Data**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diode Redundancy Module</td>
<td>787-785</td>
<td>1</td>
</tr>
<tr>
<td>24 VDC, 40 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Input:**
- Nominal input voltage $V_{in}$: 2 x 24 VDC
- Input voltage range: 2 x 9 ... 54 VDC
- Input current $I_{in}$: max. 2 x 40 ADC (in total max. 76 ADC)

**Output:**
- Nominal output voltage $V_{out}$: 24 VDC
- Output voltage range: 9 ... 54 VDC
- Voltage drop: 0.6 V (input/output)
- Output current $I_{out}$: max. 76 ADC
- Operational indication: 2 x LED green ($V_i > 7.5$ VDC), 1 x LED green ($V_o > 7.5$ VDC)
- Output power: ≤ 4104 W

**Efficiency/Power losses:**
- Efficiency: ≥ 97 %
- Power loss $P_p$: 29.7 W (nominal load)

**Environmental Requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -40 °C ... +85 °C
- Relative humidity: ≤ 95 % (no condensation)
- Derating: 2.66 %/K (55 °C < $T_{amb}$ ≤ 70 °C)
- Temperature coefficient: ± 0.03 %/K (0 °C < $T_{amb}$ ≤ 50 °C)
- Degree of pollution: 2 (acc. to EN 6050178)
- Climatic category: 3K3 (acc. to EN 60721, except for low air pressure)
- Vibration resistance: 0.7 g (acc. to EN 60068-2-6)
- Shock resistance: 15 g (acc. to EN 60068-2-27)
**Electronic Circuit Breaker**

**EPSITRON®**

- Electronic circuit breaker with 4 channels, parametrizable
- Time-delayed switching of channels
- Floating switch contact
- Current and voltage monitoring via RS-232 interface and LCD
- Watchdog functions with active signal ports

---

### Technical Data

#### Input:
- Nominal input voltage $V_{i\text{ nom}}$: 24 V DC
- Input voltage range: 18 ... 30 V DC

#### Output:
- Nominal output voltage $V_{o\text{ nom}}$: 4 x 24 V DC
- Nominal current: 4 x 1 ... 10 A DC (adjustable for each channel in 1 A steps)
- Voltage drop: 140 mV at 6 A, 240 mV at 10 A
- Trip time: 100 s (100 ms ... 600 s; adjustable)
- Switch-on capacity: max. 20,000 μF
- Active current limitation: no
- Operational indication:
  - LED green (all channels o.k.),
  - LED yellow (warning),
  - LED red (at least one channel has tripped)

#### Signaling:
- LCD, 4 x signal output 24 V DC,
- 25 mA and 1 x floating relay contact
- 30 V DC, 1 A

#### Remote input:
- Reactivation of all tripped channels via
  - 18 V ... 30 V DC impulse for min. 50 ms

#### Efficiency / power losses:
- Efficiency: 96 % typ.
- Power loss $P_v$: 2 W (stand-by) / 12 W (rated load)
- Fuse protection:
  - Internal fuse: 15 AT

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -10 °C ... +60°C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)

#### Safety and protection:
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 acc. to EN 60529
- Overload protection:
  - via suppressor diode at input
  - max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

#### Connection and type of mounting:
- Wire connection:
  - Input: WAGO 831 Series
  - Output: WAGO 231 Series
  - Cross sections:
    - Input: 0.5 mm² ... 10 mm² / AWG 20 ... 8
    - Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
  - Strip lengths:
    - Input: 13 ... 15 mm / 0.55 in
    - Output: 8 ... 9 mm / 0.33 in
- Type of mounting:
  - DIN-rail mounting [EN 60715] in 2 positions

#### Dimensions and weight:
- Dimensions (mm) $W \times H \times L$: 40 x 171 x 163
- Height from upper-edge of DIN 35 rail: 272 mm
- Weight: 800 g

#### Standards and approvals:
- Standards/Specifications:
  - EN 60950, UL 508, EN 61000-6-2,
  - EN 61000-6-3
Electronic Circuit Breaker

EPSITRON®

- Electronic circuit breaker with 4 channels, parametrizable
- Time-delayed switching of channels
- Floating switch contact
- Current and voltage monitoring via RS-232 interface and LCD
- Watchdog functions with active signal ports

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-860</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

**Input:**
- Nominal input voltage $V_{\text{in\,nom}}$ 24 V DC
- Input voltage range 18 ... 30 V DC

**Output:**
- Nominal output voltage $V_{\text{out\,nom}}$ 4 x 24 V DC
- Nominal current 4 x 1...6 A DC (adjustable for each channel in 1 A steps)
- Voltage drop 140 mV at 6 A
- Trip time 100 s (100 ms ... 600 s; adjustable)
- Switch-on capacity max. 20,000 μF
- Switch-on behavior time-delayed channel switching (250 ms each)
- Active current limitation no
- Operational indication LED green (all channels o.k.), LED yellow (warning), LED red (at least one channel has tripped)

**Signaling**
- LCD, 4 x signal output 24 V DC,
- 25 mA and 1 x floating relay contact
- 30 V DC, 1 A

**Remote input**
- Reactivation of all tripped channels via 18 V ... 30 V DC impulse for min. 30 ms

**LineMonitor, parameter setting**
- via LCD and RS-232 serial interface

**Efficiency / power losses:**
- Efficiency 96 % typ.
- Power loss $P_V$ 2 W (standby) / 5.5 W (rated load)
- Internal fuse 6.3 AT

**Environmental requirements:**
- Ambient operating temperature -10 °C ... +60°C
- Storage temperature -25 °C ... +85 °C
- Rel. humidity 30 % ... 85 % (no condensation)

**Safety and protection:**
- Test voltage 500 V DC (terminals to enclosure)
- Protection class III
- Reverse voltage protection no
- Degree of protection IP20 acc. to EN 60529
- Overload protection via suppressor diode at input
- Feedback voltage max. 33 VDC
- Series connection of several devices not permitted
- Parallel operation of single channels not permitted

**Connection and type of mounting:**
- Wire connection: Input: WAGO 831 Series
- Output: WAGO 231 Series
- Cross sections:
  - Input: 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input: 13 ... 15 mm / 0.55 in
  - Output: 8 ... 9 mm / 0.33 in
- Type of mounting DINrail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions [mm] W x H x L 40 x 171 x 163
  - Height from upper-edge of DIN 35 rail
  - Weight 800 g

**Standards and approvals:**
- Standards/Specifications EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker with Active Current Limitation

**EPSITRON®**

- Electronic circuit breaker with 4 channels, parametrizable
- Features active current limitation, reliably prevents voltage drops
- Time-delayed switching of channels
- Current and voltage monitoring via RS-232 interface and LCD
- Watchdog functions with active signal ports

**Technical Data**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Circuit Breaker, 24 VDC / 4 x 8 A</td>
<td>787-861</td>
<td>1</td>
</tr>
</tbody>
</table>

**Input:**
- Nominal input voltage V_i nom: 24 V DC
- Input voltage range: 18 ... 30 V DC

**Output:**
- Nominal output voltage V_o nom: 4 x 24 V DC
- Nominal current: 4 x 1 ... 8 A DC (adjustable for each channel in 1 A steps)
- Voltage drop: 140 mV at 8 A
- Trip time: 100 ms (100 ms ... 1.5 s; adjustable, depending on nominal current)
- Switch-on capacity: max. 20,000 μF
- Switch-on behavior: time-delayed channel switching (250 ms each)
- Trip current: 1.1 x nominal current typ.
- Active current limitation: yes
- Current limitation: 1.5 x nominal current typ.
- Operational indication: LED green (all channels o.k.), LED yellow (warnings), LED red (at least one channel has tripped)
- Signaling: LCD, 4 x signal output 24 V DC, 25 mA
- Line Monitor, parameter setting: via LCD and RS-232 serial interface

**Efficiency / power losses:**
- Efficiency: 96 % typ.
- Power loss P_p: 2 W [stand-by] / 8.2 W [rated load]
- Fuse protection: Internal fuse 15 AT

**Environmental requirements:**
- Ambient operating temperature: -10 °C ... +60°C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)

**Safety and protection:**
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 acc. to EN 60529
- Overload protection: via suppressor diode at input
- Feedback voltage: max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

**Connection and type of mounting:**
- Wire connection: Input: WAGO 831 Series
- Cross sections: Input: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input: 13 ... 15 mm / 0.55 in
- Output: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 40 x 171 x 163
- Weight: 800 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3

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**Electronic Circuit Breaker with Active Current Limitation**

**EPSITRON®**

- Electronic circuit breaker with 4 channels, parametrizable
- Features active current limitation, reliably prevents voltage drops
- Time-delayed switching of channels
- Current and voltage monitoring via RS-232 interface and LCD
- Watchdog functions with active signal ports

**Technical Data**

<table>
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<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Circuit Breaker, 24 VDC / 4 x 8 A</td>
<td>787-861</td>
<td>1</td>
</tr>
</tbody>
</table>

**Input:**
- Nominal input voltage V_i nom: 24 V DC
- Input voltage range: 18 ... 30 V DC

**Output:**
- Nominal output voltage V_o nom: 4 x 24 V DC
- Nominal current: 4 x 1 ... 8 A DC (adjustable for each channel in 1 A steps)
- Voltage drop: 140 mV at 8 A
- Trip time: 100 ms (100 ms ... 1.5 s; adjustable, depending on nominal current)
- Switch-on capacity: max. 20,000 μF
- Switch-on behavior: time-delayed channel switching (250 ms each)
- Trip current: 1.1 x nominal current typ.
- Active current limitation: yes
- Current limitation: 1.5 x nominal current typ.
- Operational indication: LED green (all channels o.k.), LED yellow (warnings), LED red (at least one channel has tripped)
- Signaling: LCD, 4 x signal output 24 V DC, 25 mA
- Line Monitor, parameter setting: via LCD and RS-232 serial interface

**Efficiency / power losses:**
- Efficiency: 96 % typ.
- Power loss P_p: 2 W [stand-by] / 8.2 W [rated load]
- Fuse protection: Internal fuse 15 AT

**Environmental requirements:**
- Ambient operating temperature: -10 °C ... +60°C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % (no condensation)

**Safety and protection:**
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 acc. to EN 60529
- Overload protection: via suppressor diode at input
- Feedback voltage: max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

**Connection and type of mounting:**
- Wire connection: Input: WAGO 831 Series
- Cross sections: Input: 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Output: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input: 13 ... 15 mm / 0.55 in
- Output: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mounting [EN 60715] in 2 positions

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 40 x 171 x 163
- Weight: 800 g

**Standards and approvals:**
- Standards/Specifications: EN 60950, UL 508, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker
EPSITRON®

- Space-saving electronic circuit breaker with 2 channels
- 2–10 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50,000 µF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resettings, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic circuit breaker,</td>
<td>787-1662</td>
<td>1</td>
</tr>
<tr>
<td>24 VDC / 2 x 10 A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Input:
- Nominal input voltage $V_{\text{nom}}$ 24 VDC
- Input voltage range 18 ... 30 VDC

#### Output:
- Nominal output voltage $V_{\text{nom}}$ 2 x 24 VDC
- Nominal current max. 2 x 10 ADC
- Voltage drop 200 mV at 10 A
- Trip time Load-dependent (16 ms ... 100 s)
- Switch-on capacity > 50,000 µF per channel
- Switch-on behavior Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
- Active current limitation no
- Operational indication Green LED (O.K. channel), Red LED (tripped channel)

#### Signalizing:
- 2 x LED (green/red/orange)

#### Connection and type of mounting:
- Wire connection Input (+): WAGO 831 Series
- Cross sections Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Strip lengths Input (+): 13 ... 15 mm / 0.55 in
- Type of mounting DINrail mount (EN 60715)

#### Dimensions and weight:
- Dimensions [mm] W x H x L 45 x 90 x 115.5
- Weight 200 g

#### Technical Data

<table>
<thead>
<tr>
<th>Environmental requirements:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient operating temperature -25 °C ... +70 °C</td>
<td></td>
</tr>
<tr>
<td>Storage temperature -25 °C ... +85 °C</td>
<td></td>
</tr>
<tr>
<td>Rel. humidity 30% ... 85% (no condensation permissible)</td>
<td></td>
</tr>
<tr>
<td>Degree of protection IP20 (acc. to EN 60529)</td>
<td></td>
</tr>
<tr>
<td>Overvoltage protection via 33 V suppressor diode at input</td>
<td></td>
</tr>
<tr>
<td>Feedback voltage max. 33 VDC</td>
<td></td>
</tr>
<tr>
<td>Series connection of several devices not permitted</td>
<td></td>
</tr>
<tr>
<td>Parallel operation of single channels not permitted</td>
<td></td>
</tr>
</tbody>
</table>

#### Safety and protection:
- Test voltage 500 VDC (connectors to housing)
- Protection class III
- Reverse voltage protection no
- Overvoltage protection via 33 V suppressor diode at input

#### Operational indication:
- Green LED (O.K. channel), Red LED (tripped channel)
- Switching on/off any number of channels via pulse sequence.

#### Feedback voltage max. 33 VDC

#### Strip lengths Input (+): 13 ... 15 mm / 0.55 in
- Input (+), output, signaling: 8 ... 9 mm / 0.33 in

#### Type of mounting:
- DINrail mount (EN 60715)
- Dimensions [mm] W x H x L 45 x 90 x 115.5
- Weight 200 g

#### Standards and approvals:
- Standards/Specifications UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker
EPSITRON®

- Space-saving electronic circuit breaker with 4 channels
- 1–6 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50,000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic circuit breaker, 24 VDC / 2 x 6 A</td>
<td>787-1662/106-000</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Data</th>
<th>Environmental requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input:</td>
<td>Ambient operating temperature</td>
</tr>
<tr>
<td>Nominal input voltage $V_{\text{in}}$</td>
<td>Storage temperature</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>Rel. humidity</td>
</tr>
<tr>
<td>Output:</td>
<td>Derating</td>
</tr>
<tr>
<td>Nominal output voltage $V_{\text{out}}$</td>
<td>Safety and protection:</td>
</tr>
<tr>
<td>Nominal current</td>
<td>Test voltage</td>
</tr>
<tr>
<td>max. 2 x 6 A</td>
<td>Protection class</td>
</tr>
<tr>
<td>Voltage drop</td>
<td>Reverse voltage protection</td>
</tr>
<tr>
<td>120 mV at 6 A</td>
<td>Degree of protection</td>
</tr>
<tr>
<td>Trip time</td>
<td>Overvoltage protection</td>
</tr>
<tr>
<td>Load-dependent (16 ms ... 100 s)</td>
<td>Feedback voltage</td>
</tr>
<tr>
<td>Switch-on capacity</td>
<td>Series connection of several devices</td>
</tr>
<tr>
<td>&gt; 50,000 μF per channel</td>
<td>Parallel operation of single channels</td>
</tr>
<tr>
<td>Switch-on behavior</td>
<td>Connection and type of mounting:</td>
</tr>
<tr>
<td>Time-delayed channel switching</td>
<td>Wire connection</td>
</tr>
<tr>
<td>(load-dependent, min. 50 ms / max. 5 s)</td>
<td>Input [–], output, signaling:</td>
</tr>
<tr>
<td>Active current limitation</td>
<td>Cross sections</td>
</tr>
<tr>
<td>no</td>
<td>Input [–], output, signaling:</td>
</tr>
<tr>
<td>Operational indication</td>
<td>Strip lengths</td>
</tr>
<tr>
<td>Green LED (O.K. channel),</td>
<td>Input [–], output, signaling:</td>
</tr>
<tr>
<td>Red LED (tripped channel)</td>
<td>Type of mounting</td>
</tr>
<tr>
<td>Signaling</td>
<td>Dimensions and weight:</td>
</tr>
<tr>
<td>2 x LED (green/red/orange)</td>
<td></td>
</tr>
<tr>
<td>Remote input</td>
<td></td>
</tr>
<tr>
<td>Reactivation of all tripped channels via</td>
<td></td>
</tr>
<tr>
<td>15–30 VDC pulse for min. 500 ms.</td>
<td>Standards and approvals:</td>
</tr>
<tr>
<td>Switching on/off any number of channels</td>
<td></td>
</tr>
<tr>
<td>via pulse sequence.</td>
<td></td>
</tr>
</tbody>
</table>

Efficiency/Power losses:
- Efficiency 99 % typ.
- Power loss $P_L$ 2.5 W (nominal load)

Fuse protection:
- Internal fuse 15 AT per channel
Electronic Circuit Breaker with Active Current Limitation

**EPSITRON®**

- Space-saving electronic circuit breaker with 2 channels
- 0.5 - 6 A nominal current, adjustable for each channel via sealable selector switch
- Active current limitation
- Switch-on capacity > 65000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{in,nom}}$: 24 VDC
- Input voltage range: 18 ... 30 VDC

#### Output:
- Nominal output voltage $V_{\text{out,nom}}$: 2 x 24 VDC
- Nominal current: max. 2 x 6 ADC
  - (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
- Voltage drop: 145 mV at 6 A
- Trip time: Load-dependent (16 ms ... 5 s)
- Switch-on capacity: > 65,000 μF per channel
- Switch-on behavior: Time-delayed channel switching
  - (load-dependent, min. 50 ms / max. 5 s)
- Active current limitation: yes
- Operational indication: Green LED (O.K. channel), Red LED (tripped channel)
- Signaling: 2 x LED (green/red/orange)
- Remote input: Reactivation of all tripped channels via 15...30 VDC pulse for min. 500 ms.
  - Switching on/off any number of channels via pulse sequence.

#### Efficiency/Power losses:
- Efficiency: 99 % typ.
- Power loss $P_v$: 2.5 W (nominal load)
- Fuse protection: Internal fuse 15 AT per channel

#### Technical Data

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<thead>
<tr>
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<th>Pack. Unit</th>
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</thead>
<tbody>
<tr>
<td>Electronic circuit breaker, 24 VDC / 2 x 6 A</td>
<td>787-1662/006-1000</td>
<td>1</td>
</tr>
</tbody>
</table>

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30% ... 85% (no condensation permissible)

**Safety and protection:**
- Test voltage: 500 VDC (connectors to housing)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via 33 V suppressor diode at input
- Feedback voltage: max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

**Connection and type of mounting:**
- Wire connection: Input (+): WAGO 831 Series
  - Input (-), output, signaling: WAGO 721 Series
- Cross sections: Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Input (-), output, signaling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input (+): 13 ... 15 mm / 0.55 in
  - Input (-), output, signaling: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm): W x H x L: 45 x 90 x 115.5
- Length from upper-edge of DIN 35 rail: 170 g

**Standards and approvals:**
- Standards/Specifications: UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker

**EPSITRON®**

- Compact 4-channel electronic circuit breaker
- 2–10 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting and on-site diagnosing
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switching on/off any number of channels via pulse sequence

### Technical Data

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<tbody>
<tr>
<td>Electronic Circuit Breaker, 24 VDC / 4 x 10 A</td>
<td>787-1664</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Input:
- Nominal input voltage \( V_{\text{nom}} \) 24 V DC
- Input voltage range 18 ... 30 V DC

#### Output:
- Nominal output voltage \( V_{\text{nom}} \) 4 x 24 V DC
- Nominal current max. 4 x 10 ADC (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
- Voltage drop 200 mV at 10 A
- Trip time Load-dependent (20 ms – 100 s)
- Switch-on capacity > 50000 μF per channel
- Switch-on behavior Time-delayed channel switching (50 – 100 ms each)
- Active current limitation no
- Operational indication Green LED (channel OK), Red LED (channel triggered)

#### Signalizing:
- 4 x LED (green/red/orange)
- Reactivation of all tripped channels via 15 – 30 VDC pulse for min. 500 ms.
- Switching on/off any number of channels via pulse sequence.

#### Efficiency / power losses:
- Efficiency 99 % typ.
- Power loss \( P_{\text{v}} \) 1.3 W (stand-by) / 20 W (nominal load)
- Fuse protection:
  - Internal fuse 15 AT per channel

#### Technical Data

### Environmental requirements:
- Ambient operating temperature -25 °C ... +70 °C
- Storage temperature -25 °C ... +85 °C
- Rel. humidity 30 % ... 85 % (no condensation)
- Derating ≥ +50 °C: see instruction manual

### Safety and protection:
- Test voltage 500 V DC (terminals to enclosure)
- Protection class III
- Reverse voltage protection no
- Degree of protection IP20 (acc. to EN 60529)
- Overload protection via 33 V suppressor diode at input
- Feedback voltage max. 33 VDC
- Series connection of several devices not permitted
- Parallel operation of single channels not permitted

### Connection and type of mounting:
- Wire connection Input (+): WAGO 831 Series
- Input (–), Output, Signalising: WAGO 721 Series
- Cross sections Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
- Input (–), Output, Signalising: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input (+): 13 ... 15 mm / 0.55 in
- Input (–), Output, Signalising: 8 ... 9 mm / 0.33 in
- Type of mounting DIN-rail mount (EN 60715)

### Dimensions and weight:
- Dimensions (mm) \( W \times H \times L \): 45 x 90 x 115.5
- Weight 170 g

### Standards and approvals:
- Standards/Specifications UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker
EPSITRON®

- Space-saving electronic circuit breaker with 4 channels
- 2–6 A nominal current, adjustable for each channel via sealable selector switch; factory preset: 2 A, switched off
- Switch-on capacity > 50000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnosis
- Time-delayed switching of channels
- Tripped and switched off message (common group signal S3)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

**Description**

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-1664/000-004</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

**Input:**
- Nominal input voltage $V_{\text{in}}$ nom 24 VDC
- Input voltage range 18 … 30 VDC

**Output:**
- Nominal output voltage $V_{\text{out}}$ nom 4 x 24 VDC
- Nominal current max. 4 x 10 ADC
  - (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
- Factory preset 2 ADC, switched off
- Voltage drop 200 mV at 10 A
- Trip time Load-dependent (20 ms – 100 s)
- Switch-on capacity > 50000 μF per channel
- Switch-on behavior Time-delayed channel switching (50 – 100 ms each)
- Active current limitation no
- Operational indication Green LED (channel OK), Red LED (channel triggered)
- Signaling 4 x LED (green/red/orange)
- Remote input Reactivation of all tripped channels via 13–30 VDC pulse for min. 500 ms.
  - Switching on/off any number of channels via pulse sequence.

**Efficiency/Power Losses:**
- Efficiency 99 % typ.
- Power loss $P_v$ 1.3 W (stand-by) / 20 W (nominal load)

**Fuse Protection:**
- Internal fuse 15 AT per channel

**Technical Data**

**Environmental Requirements:**
- Ambient operating temperature -25 °C ... +70 °C
- Storage temperature -25 °C ... +85 °C
- Relative humidity 30% ... 85% (no condensation permissible)
- Derating ≥ +50 °C: see instruction manual

**Safety and protection:**
- Test voltage 500 VDC (connectors to housing)
- Protection class III
- Reverse voltage protection no
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection via 33 V suppressor diode at input
- Feedback voltage max. 35 VDC
- Series connection of several devices not permitted
- Parallel operation of single channels not permitted

**Connection and type of mounting:**
- Wire connection Input (+): WAGO 831 Series
  - Input (–), output, signaling: WAGO 721 Series
- Cross sections Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Input (–), output, signaling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths Input (+): 13 ... 15 mm / 0.55 in
  - Input (–), output, signaling: 8 ... 9 mm / 0.33 in
- Type of mounting DINrail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) $W \times H \times L$: 45 x 90 x 115.5
- Weight 161 g

**Standards and Specifications:**
- Standards/specifications UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker

**EPSITRON®**

- Space-saving electronic circuit breaker with 4 channels
- 1–6 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50,000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-1664/106-000</td>
<td>1</td>
<td>Electronic circuit breaker, 24 VDC / 4 x 6 A</td>
</tr>
</tbody>
</table>

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30% ... 85% (no condensation permissible)

#### Safety and protection:
- Test voltage: 500 VDC (connectors to housing)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via 33 V suppressor diode at input

#### Connection and type of mounting:
- Wire connection:
  - Input (+): WAGO 831 Series
  - Input (–), output, signaling: WAGO 721 Series
- Cross sections:
  - Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Input (–), output, signaling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:
  - Input (+): 13 … 15 mm / 0.55 in
  - Input (–), output, signaling: 8 … 9 mm / 0.33 in
- Type of mounting:
  - DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm): W x H x L: 45 x 90 x 115.5
- Length from upper-edge of DIN 35 rail: 35 mm
- Weight: 170 g

#### Standards and approvals:
- Standards/Specifications: UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker with Active Current Limitation
EPSITRON®

- Space-saving electronic circuit breaker with 4 channels
- 0.5 - 6 A nominal current, adjustable for each channel via sealable selector switch
- Active current limitation
- Switch-on capacity > 65000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message [group signal]
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{nom}}$: 24 VDC
- Input voltage range: 18 ... 30 VDC

#### Output:
- Nominal output voltage $V_{\text{nom}}$: 4 x 24 VDC
- Nominal current: max. 4 x 6 ADC
  - (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
- Voltage drop: 145 mV at 6 A
- Trip time: Load-dependent (16 ms ... 5 s)
- Switch-on capacity: > 65,000 μF per channel
- Switch-on behavior: Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
- Active current limitation: yes
- Operational indication: Green LED (O.K. channel), Red LED (tripped channel)
- Signaling: 4 x LED (green/red/orange)
- Remote input: Reactivation of all tripped channels via 15 - 30 VDC pulse for min. 500 ms.
- Switching on/off any number of channels via pulse sequence.

#### Efficiency/Power losses:
- Efficiency: 99 % typ.
- Power loss $P_v$: 4.3 W (nominal load)
- Fuse protection: Internal fuse 15 AT per channel

### Technical Data

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30% ... 85% (no condensation permissible)
- Derating: no derating

#### Safety and protection:
- Test voltage: 500 VDC (connectors to housing)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via 33 V suppressor diode at input
- Feedback voltage: max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

#### Connection and type of mounting:
- Wire connection: Input (+): WAGO 831 Series
  - Input (-), output, signaling: WAGO 721 Series
- Cross sections: Input (+):
  - 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Input (-), output, signaling:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input (+): 13 ... 15 mm / 0.55 in
  - Input (-), output, signaling:
  - 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 45 x 90 x 115.5
- Length from upper-edge of DIN 35 rail: 170 g

#### Standards and approvals:
- Standards/Specifications: UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

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**Description**

**Item No.** 787-1664/006-1000

**Pack. Unit** 1

**Description**

Electronic circuit breaker, 24 VDC / 4 x 6 A
**Electronic Circuit Breaker**  
**EPSITRON®**

- **Compact 8-channel electronic circuit breaker**
- **2–10 A nominal current, adjustable for each channel via sealable selector switch**
- **Switch-on capacity > 50000 μF per channel**
- **One illuminated three-colored button per channel simplifies switching (on/off), resetting and on-site diagnosing**
- **Time-delayed switching of channels**
- **Tripped message (group signal)**
- **Status message for each channel via pulse sequence**
- **Remote input resets tripped channels or switching on/off any number of channels via pulse sequence**

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electronic Circuit Breaker,</strong> 24 VDC / 8 x 10 A</td>
<td>787-1668</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Technical Data

**Input:**
- Nominal input voltage $V_{nom}$: 24 V DC
- Input voltage range: 18 ... 30 V DC

**Output:**
- Nominal output voltage $V_{nom}$: 8 x 24 V DC
- Nominal current: max. 8 x 10 ADC  
  (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
- Voltage drop: 200 mV at 10 A
- Trip time: Load-dependent (20 ms – 100 s)
- Switch-on capacity: > 50000 μF per channel
- Switch-on behavior: Time-delayed channel switching  
  (50 – 100 ms each)
- Active current limitation: no
- Operational indication: Green LED (channel OK), Red LED (channel triggered)
- Signaling: 8 x LED (green/red/orange)
- Remote input: Reactivation of all tripped channels via  
  15 – 30 VDC pulse for min. 500 ms.
- Switching on/off any number of channels via pulse sequence.

**Efficiency / power losses:**
- Efficiency: 99 % typ.
- Power loss $P_v$: 1.3 W (stand-by) / 20 W (nominal load)
- Fuse protection: Internal fuse, 15 AT per channel

**Environmental requirements:**
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30 % ... 85 % [no condensation]
- Derating: ≥ +50 °C: see instruction manual

**Safety and protection:**
- Test voltage: 500 V DC (terminals to enclosure)
- Protection class: III
- Reverse voltage protection: no
- Degree of protection: IP20 (acc. to EN 60529)
- Overload protection: via 33 V suppressor diode at input
- Feedback voltage: max. 33 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

**Connection and type of mounting:**
- Wire connection: Input (+) - WAGO 831 Series
- Input (–), Output, Signalling: WAGO 721 Series
- Cross sections:  
  - Input (+): 0.5 mm² ... 10 mm² / AWG 20 ... 8
  - Input (–), Output, Signalling: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths:  
  - Input (+): 13 ... 15 mm / 0.55 in
  - Input (–), Output, Signalling: 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) W x H x L: 42 x 127 x 142.5
- Length from upper-edge of DIN 35 rail
- Weight: 800 g

**Standards and approvals:**
- Standards/Specifications: UL 508, UL 2367, GL, EN 60950,  
  EN 61000-6-2, EN 61000-6-3
Electronic Circuit Breaker
EPSITRON®

- Space-saving electronic circuit breaker with 8 channels
- 2–6 A nominal current, adjustable for each channel via sealable selector switch; factory preset: 2 A, switched off
- Switch-on capacity > 50000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnosis
- Time-delayed switching of channels
- Tripped and switched off message (common group signal S3)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence

**System Data**

**Input:**
- Nominal input voltage $V_{in}$ 24 VDC
- Input voltage range 18 … 30 VDC

**Output:**
- Nominal output voltage $V_{out}$ 8 x 24 VDC
- Nominal current max. 8 x 10 A
  (2, 3, 4, 6, 8, 10 A adjustable for each channel via selector switch)
- Factory preset 2 A, switched off
- Voltage drop 200 mV at 10 A
- Trip time Load-dependent (20 ms – 100 s)
- Switch-on capacity > 50000 μF per channel
- Switch-on behavior Time-delayed channel switching
  (50 – 100 μs each)
- Active current limitation no
- Operational indication Green LED (channel OK),
  Red LED (channel triggered)
- Signaling 8 x LED (green/red/orange)
- Remote input Reactivation of all tripped channels via
  13–30 VDC pulse for min. 500 ms.
- Switching on/off any number of channels via pulse sequence.

**Efficiency/Power Losses:**
- Efficiency 99 % typ.
- Power loss $P_e$ 1.3 W (stand-by) / 20 W (nominal load)
- Fuse Protection: Internal fuse 15 AT per channel

**Technical Data**

**Environmental Requirements:**
- Ambient operating temperature -25 °C … +70 °C
- Storage temperature -25 °C … +85 °C
- Relative humidity 30% … 85% (no condensation permissible)
- Derating ≥ +50 °C: see instruction manual

**Safety and protection:**
- Test voltage 500 VDC (connectors to housing)
- Protection class III
- Reverse voltage protection no
- Degree of protection IP20 (acc. to EN 60529)
- Overvoltage protection via 33 V suppressor diode at input
- Feedback voltage max. 33 VDC
- Series connection of several devices not permitted
- Parallel operation of single channels not permitted

**Connection and type of mounting:**
- Wire connection Input (+): WAGO 831 Series
- Input (−), output, signaling: WAGO 721 Series
- Cross sections Input (+): 0.5 mm² … 10 mm² / AWG 20 … 8
  Input (−), output, signaling: 0.08 mm² … 2.5 mm² / AWG 28 … 12
- Strip lengths Input (+): 13 … 15 mm / 0.55 in
  Input (−), output, signaling: 8 … 9 mm / 0.33 in
- Type of mounting DIN rail mount (EN 60715)

**Dimensions and weight:**
- Dimensions (mm) $W \times H \times L$ 42 x 127 x 142.5
- Length from upper-edge of DIN 35 rail
- Weight 420 g

**Standards and Specifications:**
- Standards/specifications UL 508, UL 2367, GL, EN 60950,
  EN 61000-6-2, EN 61000-6-3

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Similar to picture
### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic circuit breaker, 24 VDC / 8 x 6 A</td>
<td>787-1668/106-000</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Input:
- Nominal input voltage $V_{in,nom}$: 24 VDC
- Input voltage range: 18 ... 30 VDC

#### Output:
- Nominal output voltage $V_{out,nom}$: 8 x 24 VDC
- Nominal current max.: 8 x 6 ADC (1, 2, 3, 4, 5, 6 A adjustable for each channel via selector switch)
- Voltage drop: 120 mV at 6 A
- Trip time: Load-dependent (16 ms ... 100 s)
- Switch-on capacity: > 50,000 μF per channel
- Switch-on behavior: Time-delayed channel switching (load-dependent, min. 50 ms / max. 5 s)
- Active current limitation: no
- Operational indication: Green LED (O.K. channel), Red LED (tripped channel)
- Signaling: 8 x LED (green/red/orange)
- Remote input: Reactivation of all tripped channels via 15–30 VDC pulse for min. 500 ms.
- Switching on/off any number of channels via pulse sequence.

#### Efficiency/Power losses:
- Efficiency: 99 % typ.
- Power loss $P_v$: 8 W (nominal load)
- Fuse protection: Internal fuse 15 AT per channel

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30% ... 85% (no condensation permissible)

#### Safety and protection:
- Reverse voltage protection: no
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection: via 33 V suppressor diode at input
- Feedback voltage: max. 35 VDC
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

#### Connection and type of mounting:
- Wire connection: Input (+): WAGO 831 Series
- Cross sections: Input (+), output, signaling:
  - 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip lengths: Input (+): 13 ... 15 mm / 0.55 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm) W x H x L: 42 x 127 x 142.5
- Length from upper-edge of DIN 35 rail: 80 mm / 3.15 in
- Weight: 440 g

#### Standards and approvals:
- Standards/Specifications: UL 508, UL 2367, GL, EN 60950, EN 61000-6-2, EN 61000-6-3

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- Space-saving electronic circuit breaker with 8 channels
- 1–6 A nominal current, adjustable for each channel via sealable selector switch
- Switch-on capacity > 50,000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message (group signal)
- Status message for each channel via pulse sequence
- Remote input resets tripped channels or switches on/off any number of channels via pulse sequence
**Electronic Circuit Breaker with Active Current Limitation**

**EPSITRON®**

- Space-saving electronic circuit breaker with 8 channels
- 0.5 - 6 A nominal current, adjustable for each channel via sealable selector switch
- Active current limitation
- Switch-on capacity > 65000 μF per channel
- One illuminated three-colored button per channel simplifies switching (on/off), resetting, and on-site diagnostics
- Time-delayed switching of channels
- Tripped message [group signal]
- Status message for each channel via pulse sequence
- Remote input resets tripped switches or switches on/off any number of channels via pulse sequence

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic circuit breaker, 24 VDC / 8 x 6 A</td>
<td>787-1668/006-1000</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

#### Input:
- Nominal input voltage $V_{\text{nom}}$: 24 VDC
- Input voltage range: 18 … 30 VDC

#### Output:
- Nominal output voltage $V_{\text{nom}}$: 8 x 24 VDC
- Nominal current: max. 8 x 6 ADC
  - (0.5, 1, 2, 3, 4, 6 A adjustable for each channel via selector switch)
- Voltage drop: 150 mV at 6 A
- Trip time: Load-dependent (16 ms ... 5 s)
- Switch-on capacity: > 65,000 μF per channel
- Switch-on behavior: Time-delayed channel switching
  - (load-dependent, min. 50 ms / max. 5 s)
- Active current limitation: yes
- Operational indication:
  - Green LED (O.K. channel)
  - Red LED (tripped channel)
- Signaling:
  - 8 x LED (green/red/orange)
- Remote input:
  - Reactivation of all tripped channels via 15-30 VDC pulse for min. 500 ms.
  - Switching on/off any number of channels via pulse sequence.

#### Efficiency/Power losses:
- Efficiency: 99 % typ.
- Power loss $P_{\text{v}}$: 8.6 W (nominal load)
- Fuse protection:
  - Internal fuse: 15 AT per channel

#### Environmental requirements:
- Ambient operating temperature: -25 °C ... +70 °C
- Storage temperature: -25 °C ... +85 °C
- Rel. humidity: 30% ... 85% (no condensation permissible)
- Degree of protection: IP20 (acc. to EN 60529)
- Overvoltage protection:
  - via 33 V suppressor diode at input
  - max. 33 VDC

#### Safety and protection:
- Test voltage: 500 VDC (connectors to housing)
- Protection class: III
- Reverse voltage protection: no
- Series connection of several devices: not permitted
- Parallel operation of single channels: not permitted

#### Connection and type of mounting:
- Wire connection: Input (+): WAGO 831 Series
- Input (-), output, signaling: WAGO 721 Series
- Cross sections:
  - Input (+), output, signaling:
    - 0.08 mm² ... 2.5 mm² / AWG 28 ... 14
  - Strip lengths:
    - Input (+): 13 ... 15 mm / 0.55 in
    - Input (-), output, signaling:
      - 8 ... 9 mm / 0.33 in
- Type of mounting: DIN-rail mount (EN 60715)

#### Dimensions and weight:
- Dimensions (mm): W x H x L:
  - 42 x 127 x 142.5
- Length from upper-edge of DIN 35 rail: 840 g

#### Standards and approvals:
- Standards/Specifications:
  - UL 508*, UL 2367*, GL, EN 60950, EN 61000-6-2, EN 61000-6-3
  - (* pending)
Rail-Mounted Modules - Constant Voltage Sources

24 VDC; 3 A
Input 27 ... 35 VDC
Mounting feet for DIN 35 rail

24 VDC; 3 A
Input 24 VAC +10 %, 50 ... 60 Hz
Mounting carrier for DIN 35 rail

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>Constant voltage source 24 VDC</td>
<td>289-907</td>
<td>1</td>
<td>Unit</td>
<td>288-800</td>
<td>1</td>
<td>Unit</td>
</tr>
</tbody>
</table>

Technical Data

- **Input voltage**: 27 ... 35 VDC
- **Output voltage**: 24 VDC (± 10 %)
- **Nominal output current**: 3 A
- **Ambient operating temperature**: -25 °C ... +40 °C
- **Weight**: 88 g
- **Dimensions (mm)**: W x H x L 78.5 x 39 x 66
- **Wire connection**: CAGE CLAMP® (236 Series)
- **Cross sections**: 0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)
- **Stripped lengths**: 5 ... 6 mm / 0.22 in

Accessories

- WMB Multi marking system for mounting carrier
- Marker strips for mounting carrier

see from page 506

white 709-198 / translucent 709-196
**Description**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
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<tbody>
<tr>
<td>Constant voltage source 24 VDC</td>
<td>288-801</td>
<td>1</td>
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**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>24 VAC +10%</td>
</tr>
<tr>
<td>Output voltage</td>
<td>24 VDC (± 10 %)</td>
</tr>
<tr>
<td>Nominal output current</td>
<td>5 A</td>
</tr>
<tr>
<td>Overload protection</td>
<td>electronic</td>
</tr>
<tr>
<td>Voltage returns after removal of overload</td>
<td>after 4 s</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>0 °C ... +30 °C</td>
</tr>
<tr>
<td>Weight</td>
<td>600.5 g</td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L</td>
<td>170 x 85 x 108</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

**Accessories**

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / translucent 709.196
# Rail-Mounted Modules - Power Supplies

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply, with universal mounting carrier</td>
<td>288-809</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>288-810</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

## Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>115 VAC</th>
<th>230 VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage Vi nom</td>
<td>± 10 %</td>
<td>± 10 %</td>
</tr>
<tr>
<td>Input voltage range</td>
<td>± 10 %</td>
<td>± 10 %</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz ... 60 Hz</td>
<td>50 Hz ... 60 Hz</td>
</tr>
<tr>
<td>Power consumption at nominal load</td>
<td>30 VA</td>
<td>30 VA</td>
</tr>
<tr>
<td>Nominal output voltage Vo nom</td>
<td>24 VDC</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Output voltage range</td>
<td>± 4 %</td>
<td>± 4 %</td>
</tr>
<tr>
<td>Output current Io</td>
<td>0.5 A</td>
<td>0.5 A</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>≤ 10 mVss</td>
<td>≤ 10 mVss</td>
</tr>
<tr>
<td>Output fuse</td>
<td>0.8 A slow</td>
<td>0.8 A slow</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>0 °C ... +50 °C</td>
<td>0 °C ... +50 °C</td>
</tr>
<tr>
<td>Weight</td>
<td>579 g</td>
<td>552 g</td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L</td>
<td>77 x 52 x 106</td>
<td>77 x 52 x 106</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (236 Series)</td>
<td>CAGE CLAMP® (236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>Approvals</td>
<td>Transformer acc. to VDE 0551</td>
<td>Transformer acc. to VDE 0551</td>
</tr>
</tbody>
</table>

## Accessories

| WMB Multi marking system for mounting carrier       | see from page 506 | see from page 506 |
| Marker strips for mounting carrier                  | white 709-198 / translucent 709-196 | white 709-198 / translucent 709-196 |
### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>288-808</td>
<td>1</td>
</tr>
<tr>
<td>288-813</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply, with universal mounting carrier</td>
<td>288-808</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Nominal input voltage $V_{i \text{ nom}}$

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>± 10 %</td>
</tr>
<tr>
<td>115 VAC</td>
<td>± 10 %</td>
</tr>
</tbody>
</table>

#### Input voltage range

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>50 Hz ... 60 Hz</td>
</tr>
<tr>
<td>115 VAC</td>
<td>50 Hz ... 60 Hz</td>
</tr>
</tbody>
</table>

#### Power consumption at nominal load

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Power Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>23 VA</td>
</tr>
<tr>
<td>115 VAC</td>
<td>80 VA</td>
</tr>
</tbody>
</table>

#### Nominal output voltage $V_{o \text{ nom}}$

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 VDC</td>
<td>± 4 %</td>
</tr>
<tr>
<td>24 VDC</td>
<td>± 10 %</td>
</tr>
</tbody>
</table>

#### Output voltage range

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 A</td>
<td>≤ 10 mVss</td>
</tr>
<tr>
<td>2 A</td>
<td>≤ 80 mVss</td>
</tr>
</tbody>
</table>

#### Residual ripple

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 A</td>
<td>≤ 10 mVss</td>
</tr>
<tr>
<td>2 A</td>
<td>≤ 80 mVss</td>
</tr>
</tbody>
</table>

#### Input fuse

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Fuse Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>0.8 A medium-slow</td>
</tr>
<tr>
<td>115 VAC</td>
<td>electronic, short-circuit protected</td>
</tr>
</tbody>
</table>

#### Short circuit current

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>2.5 A</td>
</tr>
<tr>
<td>115 VAC</td>
<td>2 A</td>
</tr>
</tbody>
</table>

#### Ambient operating temperature

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>0 °C ... +50 °C</td>
</tr>
<tr>
<td>115 VAC</td>
<td>0 °C ... +40 °C</td>
</tr>
</tbody>
</table>

#### Weight

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>574 g</td>
</tr>
<tr>
<td>115 VAC</td>
<td>1969 g</td>
</tr>
</tbody>
</table>

#### Dimensions [mm] $W \times H \times L$

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>77 x 52 x 106</td>
</tr>
<tr>
<td>115 VAC</td>
<td>182 x 98 x 106</td>
</tr>
</tbody>
</table>

#### Wire connection

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Wire Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>CAGE CLAMP® (236 Series)</td>
</tr>
<tr>
<td>115 VAC</td>
<td>CAGE CLAMP® (256 Series)</td>
</tr>
</tbody>
</table>

#### Cross sections

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Cross Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
</tr>
<tr>
<td>115 VAC</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
</tr>
</tbody>
</table>

#### Stripped lengths

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Stripped Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>115 VAC</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

#### Approvals

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>230 VAC</td>
<td>Transformer acc. to VDE 0551</td>
</tr>
<tr>
<td>115 VAC</td>
<td>Transformer acc. to VDE 0551</td>
</tr>
</tbody>
</table>

### Accessories

- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / translucent 709.196
### Rail-Mounted Modules - Power Supplies

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply, with universal mounting carrier</td>
<td>288-812</td>
<td>1</td>
<td>288-814</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>288-815</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

- **Nominal input voltage \( V_{i \text{ nom}} \)**: 230 VAC
- **Input voltage range**: ± 10 %
- **Frequency**: 50 Hz ... 60 Hz
- **Power consumption at nominal load**: 80 VA
- **Nominal output voltage \( V_{o \text{ nom}} \)**: 24 VDC
- **Output voltage range**: ± 10 %
- **Output current Io**: 2 A
- **Residual ripple**: ≤ 80 mVss
- **Input fuse**: 0.5 A medium-slow
- **Output fuse**: electronic, short-circuit protected
- **Short-circuit current**: 2.5 A
- **Ambient operating temperature**: 0 °C ... +40 °C
- **Weight**: 1900 g
- **Dimensions (mm) W x H x L**: 182 x 98 x 106
- **Wire connection**: CAGE CLAMP® (256 Series)
- **Cross sections**: 0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)
- **Stripped lengths**: 5 ... 6 mm / 0.22 in
- **Approvals**: Transformer acc. to VDE 0551

### Accessories
- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / translucent 709.196
## Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal input voltage $V_{i \text{ nom}}$</td>
<td>230 VAC</td>
<td></td>
</tr>
<tr>
<td>Input voltage range</td>
<td>± 10 %</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz ... 60 Hz</td>
<td></td>
</tr>
<tr>
<td>Power consumption at nominal load</td>
<td>53 VA</td>
<td></td>
</tr>
<tr>
<td>Nominal output voltage $V_{o \text{ nom}}$</td>
<td>± 15 VDC</td>
<td></td>
</tr>
<tr>
<td>Output voltage range</td>
<td>± 4 %</td>
<td></td>
</tr>
<tr>
<td>Output current $I_{o}$</td>
<td>2 x 1 A</td>
<td></td>
</tr>
<tr>
<td>Residual ripple</td>
<td>≤ 10 mVSS</td>
<td></td>
</tr>
<tr>
<td>Short-circuit current</td>
<td>approx. 1.3 A</td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>0 °C ... 40 °C</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1011 g</td>
<td></td>
</tr>
<tr>
<td>Dimensions [mm] W x H x L</td>
<td>138 x 87 x 106</td>
<td>Height from upper edge of DIN 35 rail</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (256 Series)</td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 ... 2.5 mm² / AWG 28 ... 12 (THHN, THWN)</td>
<td></td>
</tr>
<tr>
<td>Stripped lengths</td>
<td>5 ... 6 mm / 0.22 in</td>
<td></td>
</tr>
<tr>
<td>Approvals</td>
<td>Transformer acc. to VDE 0551</td>
<td></td>
</tr>
</tbody>
</table>

## Accessories

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / translucent 709.196
The 787-890 Communication Cable is used for configuration and visualization via PC or controller. It is suitable for all 787-8xx Series devices equipped with an RS-232 serial interface. PC software for 787 Series devices can be downloaded at: www.wago.com/epsitron. Function blocks for communication with WAGO-I/O-SYSTEM 750 are also available.

**NOTE:**
The 787-890 Communication Cable is not electrically isolated.

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS-232 communication cable</td>
<td>787-890</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Type of signal</th>
<th>RS-232</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports</td>
<td>1 x 8-pole 733-108 Female Connector with strain relief (787-8xx Module side), 1 x 9-pole SUB-D female connector (PC/controller side)</td>
</tr>
<tr>
<td>Isolation</td>
<td>No</td>
</tr>
<tr>
<td>Cross sections</td>
<td>3 x 0.34 mm² (AWG 22), shielded</td>
</tr>
<tr>
<td>Ambient operating temp.</td>
<td>-10°C ... +70°C</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP20</td>
</tr>
<tr>
<td>Length</td>
<td>1.8 m</td>
</tr>
</tbody>
</table>
### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall Mount Adapter</td>
<td>787-895</td>
<td>5</td>
</tr>
</tbody>
</table>

### Technical Data

- **Material**: Galvanized sheet steel
- **Dimensions [mm]**: W x H x L 35 x 15 x 158.5
- **Fixing**: Fixing holes: 4 slots, 5.3 mm x 9 mm  
  Fixing hole spacing: 143 mm x 19.5 mm
- **Included**: Wall mounting adapter  
  1x screw M4 x 16  
  1x screw M4 x 20  
  1x screw M4 x 30
Carrier rail adapter for mounting 787-8xx devices to a DIN 35 rail.

The 787-896 Carrier Rail Adapter allows both vertical and horizontal mounting of 787-8xx devices.

Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing, allowing the position to be changed easily.

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>787-896</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

- **Material**: Galvanized sheet metal
- **Dimensions (mm) W x H x L**: 35 x 136.5 x 15.5
- **Fixing**: by sliding both single parts into the guide slot and then screwing
- **Included**: Carrier rail adapter, Assembly instructions
**EPSITRON® Carrier Rail Adapter**

 Carrier rail adapter made of zinc die-cast for mounting 787-8xx devices to a DIN 35 rail.

The 787-897 Carrier Rail Adapter allows horizontal mounting of 787-8xx devices. Mounting the adapter to the device is performed by sliding both single parts into the guide slots of the cooling element and then screwing, allowing the position to be changed easily.

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier Rail Adapter</td>
<td>787-897</td>
<td>1</td>
</tr>
</tbody>
</table>

**Technical Data**

- **Material**: Zinc die-cast
- **Dimensions (mm) W x H x L**: 37 x 102.5 x 10.5
- **Fixing**: by pressing the adapter into the guide slot
- **Included**: Carrier rail adapter, Assembly instructions
Interface Modules

- Interface Modules for D-Sub/HD D-Sub Connectors
  289 Series
  364 - 373

- Interface Modules for Connectors acc. to DIN 41651
  289 Series
  374 - 375

- Interface Modules for Connectors acc. to DIN 41612
  289 Series
  376 - 379

- Interface Modules for RJ-45 Connectors
  289 Series
  380 - 383

- Connection Modules for Sensors and Actuators
  289 Series
  384 - 385
Interface Modules for D-Sub/HD D-Sub Connectors

Interface module with D-subminiature male connector, for mating connectors with solder connection, mating direction vertical
Mounting carrier for DIN 35 rail

Description

<table>
<thead>
<tr>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module</td>
<td></td>
<td>9</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td>53.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>157</td>
</tr>
</tbody>
</table>

Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>125 V AC / DC</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1 A</td>
</tr>
<tr>
<td>Connector contact</td>
<td>Au over Ni</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>≤ 30 mΩ</td>
</tr>
<tr>
<td>Performance level</td>
<td>2 / 200 mating cycles</td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>50 V / 0.8 kW / 2</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-20 °C ... +50 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L, incl. mounting carrier or feet</td>
<td>W x 19 x 63.5</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>
### Interface module
with D-subminiature male connector,
for mating connectors with solder connection,
mating direction vertical

- **Mounting carrier for DIN 35 rail**

### Interface module
with D-subminiature male connector,
for mating connectors with IDC,
mating direction vertical

- **Mounting carrier for DIN 35 rail**

---

**Description**

<table>
<thead>
<tr>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>38</td>
<td>289-545</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>46</td>
<td>289-546</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>72</td>
<td>289-547</td>
<td>1</td>
</tr>
<tr>
<td>37</td>
<td>102</td>
<td>289-548</td>
<td>1</td>
</tr>
<tr>
<td>50</td>
<td>94</td>
<td>289-549</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 2 A
- **Connector contact**: Au over Ni
- **Contact resistance**: ≤ 30 mΩ
- **Performance level**: 2 / 200 mating cycles
- **Nominal voltage**: 125 V / 0.8 kV / 2
- **Ambient operating temperature**: -20 °C ... +50 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Dimensions (mm)**:
  - Height from upper-edge of DIN 35 rail
  - Width: W x 34 x 85
- **Wire connection**: CAGE CLAMP® (WAGO 236 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in

### Accessories

- **WMB Multi marking system for mounting carrier**
  - see from page 506
- **Marker strips for mounting carrier**
  - white 709.198 / transparent 709.197
Interface Modules for D-Sub/HD D-Sub Connectors

Interface module with D-subminiature female connector, for mating connectors with solder connection, mating direction vertical
Mounting carrier for DIN 35 rail

Interface module with D-subminiature female connector, for mating connectors with IDC, mating direction vertical
Mounting carrier for DIN 35 rail

---

**Description**

<table>
<thead>
<tr>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>38</td>
<td>289-455</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>53.5</td>
<td>289-456</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>79</td>
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<tr>
<td>50</td>
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</tr>
</tbody>
</table>

---

**Technical Data**

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 1 A
- **Connector contact**: Au over Ni
- **Contact resistance**: ≤ 30 mΩ
- **Performance level**: 2 / 200 mating cycles
- **Nominal voltage to EN 60664-1**: 50 V / 0.8 kV / 2 / 50 V / 0.8 kV / 2
- **Ambient operating temperature**: -20 °C ... +50 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Dimensions (mm)**: W x 19 x 63.5
- **Wire connection**: CAGE CLAMP® (WAGO 236 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in
Interface module
with D-subminiature female connector,
for mating connectors with solder connection,
mating direction vertical
Mounting carrier for DIN 35 rail

Interface module
with D-Subminiature female connector,
for mating connectors with IDC,
mating direction vertical
Mounting carrier for DIN 35 rail

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
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<tr>
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Technical Data

Operating voltage 125 V AC / DC 125 V AC / DC
Nominal current 2 A 2 A
Connector contact Au over Ni Au over Ni
Contact resistance ≤ 30 mΩ ≤ 30 mΩ
Performance level 2 / 200 mating cycles 2 / 200 mating cycles
Nominal voltage to EN 60664-1 125 V / 0.8 kV / 2 125 V / 0.8 kV / 2
Ambient operating temperature -20 °C ... +50 °C -20 °C ... +50 °C
Storage temperature -40 °C ... +70 °C -40 °C ... +70 °C
Dimensions (mm) W x H x L, incl. mounting carrier or feet
<table>
<thead>
<tr>
<th>Height from upper-edge of DIN 35 rail</th>
<th>Height from upper-edge of DIN 35 rail</th>
</tr>
</thead>
<tbody>
<tr>
<td>W x 34 x 85</td>
<td>W x 34 x 85</td>
</tr>
</tbody>
</table>

Wire connection
CAGE CLAMP® (WAGO 236 Series) CAGE CLAMP® (WAGO 236 Series)
Cross sections 0.08 mm² ... 2.5 mm² / AWG 28 ... 12 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
Strip length 5 ... 6 mm / 0.22 in 5 ... 6 mm / 0.22 in

Accessories
WMB Multi marking system for mounting carrier see from page 506
Marker strips for mounting carrier white 709.198 / transparent 709.197
Interface Modules
for D-Sub/HD D-Sub Connectors

Interface module
with D-subminiature female connector, for mating connectors with solder connection, mating direction vertical, shield (screen) connection
Mounting carrier for DIN 35 rail

Interface module
with D-subminiature male connector, for mating connectors with solder connection, mating direction vertical, shield (screen) connection
Mounting carrier for DIN 35 rail

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
<th>Width</th>
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<td>289-578</td>
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<td>102</td>
<td>289-588</td>
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Technical Data

- Operating voltage: 125 V AC / DC
- Nominal current: 2 A
- Connector contact: Au over Ni
- Contact resistance: ≤ 30 mΩ
- Performance level: 2 / 200 mating cycles
- Nominal voltage to EN 60664-1: 125 V / 0.8 kV / 2
- Ambient operating temperature: -20 °C ... +50 °C
- Storage temperature: -40 °C ... +70 °C
- Dimensions (mm) W x H x L incl. mounting carrier or feet: W x 34 x 85
- Wire connection: CAGE CLAMP® (WAGO 236 Series)
- Cross sections: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip length: 5 ... 6 mm / 0.22 in

Accessories

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197
### Interface Module

- **Interface module** with D-subminiature female connector, for mating connectors with solder connection, mating direction vertical, shield (screen) connection.
- **Mounting carrier** for DIN 35 rail.

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
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<th>Item No.</th>
<th>Pack. Unit</th>
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<tbody>
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<td>56</td>
<td>289-623</td>
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<td>25</td>
<td>56</td>
<td>289-620</td>
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<td>289-624</td>
<td>1</td>
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<td>74</td>
<td>289-621</td>
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</table>

### Technical Data

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 2 A
- **Connector contact**: Au over Ni
- **Contact resistance**: ≤ 30 mΩ
- **Performance level**: 2 / 200 mating cycles
- **Nominal-voltage to EN 60664-1**: 125 V / 0.8 kV / 2
- **Mounting direction**: vertical
- **Pull relief stud bolt**: UNC 4-40
- **Ambient operating temperature**: -20 °C ... +55 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Dimensions [mm] W x H x L, incl. mounting carrier or feet**: W x 62 x 85
- **Wire connection**: CAGE CLAMP® (WAGO 737 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in

### Accessories

- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / transparent 709.197
# Interface Modules for D-Sub/HD D-Sub Connectors

<table>
<thead>
<tr>
<th>Description</th>
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<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
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<tr>
<td></td>
<td>25</td>
<td>68.5</td>
<td>289-652</td>
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## Technical Data

<table>
<thead>
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</thead>
<tbody>
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<td>Nominal current</td>
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<tr>
<td>Connector contact</td>
<td>Au over Ni</td>
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<tr>
<td>Contact resistance</td>
<td>≤ 30 mΩ</td>
</tr>
<tr>
<td>Performance level</td>
<td>2 / 200 mating cycles</td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>125 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Mounting direction</td>
<td>vertical</td>
</tr>
<tr>
<td>Pull relief stud bolt</td>
<td>UNC 4-40</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-20 °C ... +50 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>W x 48 x 85</td>
</tr>
<tr>
<td>incl. mounting carrier or feet</td>
<td>Height from upper edge of DIN 35 rail</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 736 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

## Accessories

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197
### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
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<tbody>
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<td>289-720</td>
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<tr>
<td></td>
<td>15</td>
<td>43.5</td>
<td>289-721</td>
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<td></td>
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<td>289-722</td>
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</tr>
<tr>
<td></td>
<td>37</td>
<td>99.5</td>
<td>289-723</td>
<td>1</td>
</tr>
<tr>
<td>Interface module with D-subminiature female connector</td>
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<td>289-725</td>
<td>1</td>
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<tr>
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<td>43.5</td>
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<td>99.5</td>
<td>289-728</td>
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</tbody>
</table>

1 solder pin per pole is available for testing and patching (except for shield (screen) contact)

### Technical Data

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 2 A
- **Connector contact**: Au over Ni
- **Contact resistance**: ≤ 30 mΩ
- **Performance level**: 2 / 200 mating cycles
- **Nominal voltage to EN 60664-1**: 50 V / 0.8 kV / 2
- **Mounting direction**: vertical
- **Pull relief stud bolt**: UNC 4-40
- **Ambient operating temperature**: -20 °C ... +50 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Dimensions [mm] W x H x L, incl. mounting carrier or feet**: W x 48 x 85
- **Wire connection**: CAGE CLAMP® (WAGO 736 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in

### Accessories
- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / transparent 709.197

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**ELECTROMATE**

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Toll Free Fax  (877) SERV099
www.electromate.com
sales@electromate.com

Sold & Serviced By:
# Interface Modules for D-Sub/HD D-Sub Connectors

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
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<td>35</td>
<td>289-713</td>
<td>1</td>
<td>Interface module with HD D-sub male connector, mounting carrier for DIN 35 rail</td>
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<td>35</td>
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<tr>
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## Technical Data

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<th>Value</th>
<th>Description</th>
<th>Value</th>
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<tbody>
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<td>125 V AC/DC</td>
<td>Nominal current</td>
<td>1 A</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1 A</td>
<td>Connector contact</td>
<td>Au over Ni</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>≤ 15 mΩ</td>
<td>Performance level</td>
<td>3 / 50 mating cycles</td>
</tr>
<tr>
<td>Performance level</td>
<td>≤ 15 mΩ</td>
<td>Nominal voltage to EN 60664-1</td>
<td>125 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Mounting direction</td>
<td>vertical</td>
<td>Pull relief stud bolt</td>
<td>UNC-440</td>
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<td>Pull relief stud bolt</td>
<td>UNC-440</td>
<td>Ambient operating temperature</td>
<td>-20 °C ... +55 °C</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-20 °C ... +55 °C</td>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>Dimensions (mm) W x H x L, incl. mounting carrier or feet</td>
<td>W × 62 x 85</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 737 Series)</td>
<td>Height from upper edge of DIN 35 rail</td>
<td>Height from upper edge of DIN 35 rail</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12 [THHN, THWN]</td>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12 [THHN, THWN]</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>Standards/specifications</td>
<td>VDE 0660, EN 60947</td>
<td>Standards/specifications</td>
<td>VDE 0660, EN 60947</td>
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## Accessories

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<th>Description</th>
<th>Value</th>
<th>Description</th>
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<tbody>
<tr>
<td>WMB Multi marking system for mounting carrier</td>
<td>see from page 506</td>
<td>Marker strips for mounting carrier</td>
<td>White 709.198 / Transparent 709.197</td>
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**Description**

<table>
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</table>

**Technical Data**

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 1 A
- **Connector contact**: 0.8 μm Au over Ni
- **Contact resistance**: ≤ 10 mΩ
- **Performance level**: 2 / 400 mating cycles
- **Nominal voltage to EN 60664-1**: 125 V / 0.8 kW / 2
- **Touch-proof terminal strip**: IP20
- **Touch-proof HD D-sub header**: IP00
- **Dimensions [mm] W x H x L, incl. mounting carrier or feet**: W x 27 x 132
- **Wire connection**: CAGE CLAMP® (WAGO 739 Series)
- **Cross sections**: 0.08 mm² ... 1.5 mm² / AWG 28 ... 14 *
  - *(AWG14: THHN, THWN)*
- **Strip length**: 5 ... 6 mm / 0.22 in
- **Mounting direction**: vertical
- **Pull relief stud bolt**: UNC 4.40
- **Ambient operating temperature**: -20 °C ... +55 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Standards/specifications**: EN 60664
Interface Modules for Connectors acc. to DIN 41651

<table>
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<th>Width</th>
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<tbody>
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Technical Data

- Operating voltage: 125 V AC / DC
- Nominal current: 1 A
- Connector contact: Au over Ni
- Performance level: 3 / 50 mating cycles
- Nominal voltage to EN 60664-1: 125 V / 0.8 kV / 2
- Mounting direction: vertical
- Ambient operating temperature: -20 °C ... +55 °C
- Storage temperature: -40 °C ... +70 °C
- Dimensions (mm) W x H x L, incl. mounting carrier or feet:
  - W x 48 x 85
  - W x 62 x 85
- Wire connection: CAGE CLAMP® (WAGO 736 Series)
- Cross sections: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- Strip length: 5 ... 6 mm / 0.22 in
- Standards/specifications: IEC 60603-1 / DIN 41651 Part 1 and 2

Accesories

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197
### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
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<th>Pack. Unit</th>
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<tbody>
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<tr>
<td>Mounting carrier for DIN 35 rail</td>
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<td>43</td>
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<td>289-504</td>
<td>1</td>
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<tr>
<td></td>
<td>26</td>
<td>81</td>
<td>289-405</td>
<td>1</td>
<td>26</td>
<td>71</td>
<td>289-505</td>
<td>1</td>
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<td></td>
<td>34</td>
<td>102</td>
<td>289-406</td>
<td>1</td>
<td>34</td>
<td>94</td>
<td>289-506</td>
<td>1</td>
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<tr>
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<td>40</td>
<td>126</td>
<td>289-407</td>
<td>1</td>
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<td>114</td>
<td>289-507</td>
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<tr>
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<td>50</td>
<td>151</td>
<td>289-408</td>
<td>1</td>
<td>50</td>
<td>122</td>
<td>289-508</td>
<td>1</td>
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<tr>
<td></td>
<td>64</td>
<td>187</td>
<td>289-409</td>
<td>1</td>
<td>64</td>
<td>170</td>
<td>289-509</td>
<td>1</td>
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<td></td>
<td>80</td>
<td>222</td>
<td>289-510</td>
<td>1</td>
<td>80</td>
<td>120</td>
<td>289-510</td>
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### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>125 V AC / DC</td>
<td>Connector contact</td>
<td>Au over Ni</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1 A</td>
<td>Performance level</td>
<td>3 / 50 mating cycles</td>
</tr>
<tr>
<td>Connector contact</td>
<td>Au over Ni</td>
<td>Nominal voltage to EN 60664-1</td>
<td>50 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>W x 28 x 63.5</td>
<td>Dimensions from upper-edge of DIN 35 rail</td>
<td>W x 36 x 85</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>125 V AC / DC</td>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>Accessories</td>
<td>see from page 506</td>
</tr>
</tbody>
</table>

**Accessories**

- WMB Multi marking system for mounting carrier
- Marker strips for mounting carrier
  - white 709-198 / transparent 709-197
### Interface Modules
for Connectors acc. to DIN 41612

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module</td>
<td>48</td>
<td>128</td>
<td>289-434</td>
<td>1</td>
<td>48</td>
<td>128</td>
<td>289-436</td>
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#### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>250 V AC / DC</th>
<th>250 V AC / DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>4 A</td>
<td>4 A</td>
</tr>
<tr>
<td>Nominal current</td>
<td>Copper alloy, gold plated</td>
<td>Copper alloy, gold plated</td>
</tr>
<tr>
<td>Connector contact</td>
<td>≤ 16 mΩ</td>
<td>≤ 16 mΩ</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>2 / 400 mating cycles</td>
<td>1 / 500 mating cycles</td>
</tr>
<tr>
<td>Performance level</td>
<td>50 V / 1.5 kV / 2</td>
<td>50 V / 1.5 kV / 2</td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>W x 55 x 85</td>
<td>W x 39 x 85</td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L, incl. mounting carrier or feet</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>Height from upper-edge of DIN 35 rail</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

#### Accessories

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197

---

**Accessories**
- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197

---

**Sold & Serviced By:**
- ELECTROMATE
  - Toll Free Phone: (877) SERVO98
  - Toll Free Fax: (877) SERV099
  - www.electromate.com
  - sales@electromate.com
**Description**

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module, for connector with IDC</td>
<td>64</td>
<td>187</td>
<td>289-422</td>
<td>1</td>
<td>64</td>
<td>187</td>
<td>289-423</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Interface module, for connector with solder contacts</td>
<td>32</td>
<td>97</td>
<td>289-424</td>
<td>1</td>
<td>32</td>
<td>97</td>
<td>289-425</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Interface module, for connector with solder contacts</td>
<td>64</td>
<td>187</td>
<td>289-426</td>
<td>1</td>
<td>64</td>
<td>187</td>
<td>289-427</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Technical Data**

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 1 A
- **Connector contact**: Copper alloy, gold plated
- **Contact resistance**: ≤ 20 mΩ
- **Performance level**: 2 / 400 mating cycles
- **Nominal voltage to EN 60664-1**: 50 V / 0.8 kV / 2
- **Dimensions (mm) W x H x L, incl. mounting carrier or feet**: W x 21 x 63.5
- **Height from upper-edge of DIN 35 rail**: Height from upper-edge of DIN 35 rail
- **Wire connection**: CAGE CLAMP® (WAGO 236 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in
# Interface Modules
for Connectors acc. to DIN 41612

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module</td>
<td>32</td>
<td>97</td>
<td>289-430</td>
<td>1</td>
<td>64</td>
<td>187</td>
<td>289-431</td>
<td>1</td>
</tr>
<tr>
<td>for connectors acc. to DIN 41 612, with female connector, type C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mating direction vertical, for male connector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with solder contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting carrier for DIN 35 rail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface module</td>
<td>64</td>
<td>187</td>
<td>289-431</td>
<td>1</td>
<td>64</td>
<td>171</td>
<td>289-522</td>
<td>1</td>
</tr>
<tr>
<td>for connectors acc. to DIN 41 612, with female connector, type C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mating direction vertical, for female connector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with IDC connection or with solder contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting carrier for DIN 35 rail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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**Technical Data**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>125 V AC / DC</td>
<td>Nominal voltage to EN 60664-1</td>
<td>50 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Nominal current</td>
<td>1 A</td>
<td>Connector contact</td>
<td>Copper alloy, gold plated</td>
</tr>
<tr>
<td>Copper alloy, gold plated</td>
<td></td>
<td>Contact resistance</td>
<td>≤ 20 mΩ</td>
</tr>
<tr>
<td>≤ 20 mΩ</td>
<td></td>
<td>Performance level</td>
<td>2 / 400 mating cycles</td>
</tr>
<tr>
<td>2 / 400 mating cycles</td>
<td></td>
<td>Nominal voltage to EN 60664-1</td>
<td>125 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>W x 21 x 63.5</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>W x 34 x 85</td>
</tr>
<tr>
<td>height from upper-edge of DIN 35 rail</td>
<td></td>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

**Accessories**

- WMB Multi marking system for mounting carrier: see from page 506
- Marker strips for mounting carrier: white 709.198 / transparent 709.197
### Interface Module

<table>
<thead>
<tr>
<th>Description</th>
<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module</td>
<td>64</td>
<td>171</td>
<td>289-523</td>
<td>1</td>
</tr>
<tr>
<td>for connectors acc. to DIN 41 612, with female connector, type C, mating direction horizontal, for female connector with IDC connection or with solder contact</td>
<td>64</td>
<td>171</td>
<td>289-527</td>
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</table>

### Interface Module

<table>
<thead>
<tr>
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<th>No. of Poles</th>
<th>Width</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module</td>
<td>64</td>
<td>171</td>
<td>289-531</td>
<td>1</td>
</tr>
<tr>
<td>for connectors acc. to DIN 41 612, with female connector, type C, mating direction vertical, for male connector with solder contact</td>
<td>64</td>
<td>171</td>
<td>289-527</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

- **Operating voltage**: 125 V AC / DC
- **Nominal current**: 1 A
- **Connector contact**: Copper alloy, gold plated
- **Contact resistance**: ≤ 20 mΩ
- **Performance level**: 2 / 400 mating cycles
- **Nominal voltage to EN 60664-1**: 125 V / 0.8 kW / 2
- **Dimensions (mm)**: W x 34 x 85
  - incl. mounting carrier or feet
- **Height from upper-edge of DIN 35 rail**: see from page 506
- **Wire connection**: CAGE CLAMP® (WAGO 236 Series)
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in

### Accessories

- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709-198 / transparent 709-197
# Interface Modules for RJ-45 Connectors

**RJ-45 interface module with shield clamping unit for WAGO shield (screen) clamping saddle**
**Mounting carrier for DIN 35 rail**

### Description

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>289-174</td>
<td>1</td>
<td>289-175</td>
<td>1</td>
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### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connecting cable</strong></td>
<td>min. CAT5</td>
<td>min. CAT5</td>
</tr>
<tr>
<td>Max. transmission length</td>
<td>100 m</td>
<td>100 m</td>
</tr>
<tr>
<td>Connector</td>
<td>RJ-45 shielded</td>
<td>RJ-45 shielded</td>
</tr>
<tr>
<td>Min. mating cycles</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Current load</td>
<td>≤ 1.5 A</td>
<td>≤ 1.5 A</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>&gt; 500 MQ</td>
<td>&gt; 500 MQ</td>
</tr>
<tr>
<td>Dielectric strength contact-contact</td>
<td>1 kVrms</td>
<td>1 kVrms</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>typ. &lt; 20 mΩ</td>
<td>typ. &lt; 20 mΩ</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-40 °C ... +85 °C</td>
<td>-40 °C ... +85 °C</td>
</tr>
<tr>
<td>(actuation: -35 °C ... +85 °C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (mm) W x H x L, incl. mounting carrier or feet</td>
<td>24 x 40 x 85</td>
<td>24 x 40 x 85</td>
</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 739 Series)</td>
<td>CAGE CLAMP® (WAGO 739 Series)</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 1.5 mm² / AWG 28 ... 14</td>
<td>0.08 mm² ... 1.5 mm² / AWG 28 ... 14</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMB Multi marking system for mounting carrier</td>
<td>see from page 506</td>
<td>see from page 506</td>
</tr>
<tr>
<td>Marker strips for mounting carrier</td>
<td>white 709-198 / transparent 709-197</td>
<td>white 709-198 / transparent 709-197</td>
</tr>
<tr>
<td>WAGO shield (screen) clamping saddle</td>
<td>790.108 (11 mm wide, cable diameter up to 8 mm)</td>
<td>790.108 (11 mm wide, cable diameter up to 8 mm)</td>
</tr>
</tbody>
</table>
# RJ-45 Interface Module

**Mounting carrier for DIN 35 rail**

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ-45 Interface module</td>
<td>289-172</td>
<td>1</td>
</tr>
</tbody>
</table>

## Technical Data

- **Connecting cable**: min. CAT5
- **Max. transmission length**: 100 m
- **Connector**: RJ-45 shielded
- **Min. mating cycles**: 500
- **Current load**: ≤ 1.5 A
- **Voltage load**: 30V AC / 42 V DC
- **Insulation resistance**: > 500 MΩ
- **Dielectric strength**: contact-contact 1 kVrms
- **Contact resistance typ.**: < 20mΩ
- **Ambient operating temperature**: -40 °C ... +85 °C
- **Dimensions [mm]**: Width x Height x Length, incl. mounting carrier or feet 20.5 x 51 x 85

## Standards/Specifications

- ISO/IEC 11801: 2002-09
- EN 55022

## Accessories

- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / transparent 709.197
## Interface Modules for RJ-45 Connectors

**RJ-45 Interface module with power contacts and shield clamping unit for WAGO shield (screen) clamping saddle**

**Mounting carrier for DIN 35 rail**

**RJ-45 Interface module with power contacts and shield carrier for WAGO shield clamping saddle**

**Mounting carrier for DIN 35 rail**

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ-45 Interface module with power contacts</td>
<td>289-178</td>
<td>1</td>
<td>RJ-45 Interface module with power contacts</td>
<td>289-179</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>min. CAT5</th>
<th>min. CAT5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecting cable</td>
<td>max. 100 m</td>
<td>max. 100 m</td>
</tr>
<tr>
<td>Max. transmission length</td>
<td>RJ-45 shielded, with 2 additional power contacts</td>
<td>RJ-45 shielded, with 2 additional power contacts</td>
</tr>
<tr>
<td>Connector</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>Min. mating cycles</td>
<td>≤ 2.1 A</td>
<td>≤ 2.1 A</td>
</tr>
<tr>
<td>Current load</td>
<td>35 V AC / 50 V DC</td>
<td>35 V AC / 50 VDC</td>
</tr>
<tr>
<td>Voltage load</td>
<td>&gt; 500 MΩ</td>
<td>&gt; 500 MΩ</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>1 kVrms</td>
<td>1 kVrms</td>
</tr>
<tr>
<td>Dielectric strength contact-contact</td>
<td>typ. 40 mΩ</td>
<td>typ. 40 mΩ</td>
</tr>
<tr>
<td>Contact resistance</td>
<td>11 mm wide, cable diameter up to 8 mm</td>
<td>790.108 (11 mm wide, up to 8 mm cable diameter)</td>
</tr>
<tr>
<td>WAGO shield (screen) clamping saddle</td>
<td>-40 °C ... +85 °C (actuation: -35 °C ... +85 °C)</td>
<td>-40 °C ... +85 °C (actuation: -35 °C ... +85 °C)</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>30 x 67 x 85</td>
<td>30 x 67 x 85</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>incl. mounting carrier or feet</td>
<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>Height from upper-edge of DIN 35 rail</td>
</tr>
<tr>
<td>CAGE CLAMP® (WAGO 739 Series)</td>
<td>CAGE CLAMP® (WAGO 739 Series)</td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 1.5 mm² / AWG 28 ... 14</td>
<td>0.08 mm² ... 1.5 mm² / AWG 28 ... 14</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

### Accessories

- **WMB Multi marking system for mounting carrier**: see from page 506
- **Marker strips for mounting carrier**: white 709.198 / transparent 709.197
## Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ-45 Interface module with power contacts</td>
<td>289-176</td>
<td>1</td>
<td>RJ-45 Interface module with power contacts</td>
<td>289-177</td>
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## Technical Data

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<th>Connecting cable</th>
<th>min. CAT5</th>
<th>min. CAT5</th>
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<tr>
<td>Max. transmission length</td>
<td>100 m</td>
<td>100 m</td>
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<tr>
<td>Connector</td>
<td>RJ45 shielded, with 2 additional power contacts</td>
<td>RJ45 shielded, with 2 additional power contacts</td>
</tr>
<tr>
<td>Min. mating cycles</td>
<td>≤ 2.1 A</td>
<td>≤ 2.1 A</td>
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<tr>
<td>Current load</td>
<td>35 V AC / 50 V DC</td>
<td>35 V AC / 50 V DC</td>
</tr>
<tr>
<td>Voltage load</td>
<td>&gt; 500 MΩ</td>
<td>&gt; 500 MΩ</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>1 kVrms</td>
<td>1 kVrms</td>
</tr>
<tr>
<td>Dielectric strength contact-contact</td>
<td>&lt; 40mΩ</td>
<td>typ. &lt; 40 mΩ</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-40 °C ... +85 °C</td>
<td>-40 °C ... +85 °C</td>
</tr>
<tr>
<td>Dimensions [mm] W x H x L, incl. mounting carrier or feet</td>
<td>30 x 51 x 85</td>
<td>30 x 51 x 85</td>
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</table>

## Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>see from page 506</th>
<th>see from page 506</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMB Multi marking system for mounting carrier</td>
<td>white 709.198 / transparent 709.197</td>
<td>white 709.198 / transparent 709.197</td>
</tr>
<tr>
<td>Marker strips for mounting carrier</td>
<td></td>
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</table>
# Interface Modules

## Connection Modules for Sensors and Actuators

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<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
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<tr>
<td>Connection module</td>
<td>289-664</td>
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<td>Connection module</td>
<td>289-665</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>8 x 3-conductor sensors</td>
<td>289-666</td>
<td>1</td>
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</table>

| Operating voltage | 125 V AC/DC | 24 V DC (± 10 %) |
| Max. current per connection | 1 A         | 1 A            |
| Max. total current | 8 A         | 8 A            |
| Power consumption LED | 5.2 mA      |                |
| Nominal voltage to EN 60664-1 | 125 V / 1.5 kW / 2 |
| Dimensions (mm) | 56 x 34 x 85 | 56 x 34 x 105 |

**Technical Data**

**Operating voltage**

- 125 V AC/DC: 24 V DC (± 10 %)

**Max. current per connection**

- 1 A

**Max. total current**

- 8 A

**Power consumption LED**

- 5.2 mA

**Nominal voltage to EN 60664-1**

- 125 V / 1.5 kW / 2

**Dimensions (mm)**

- 56 x 34 x 85

**Height from upper-edge of DIN 35 rail**

**Wire connection**

- CAGE CLAMP® (WAGO 236 Series)

**Cross sections**

- 0.08 mm² ... 2.5 mm² / AWG 28 ... 12

**Strip length**

- 5 ... 6 mm / 0.22 in

**Accessories**

- WMB Multi marking system for mounting carrier
  - see from page 506

- Marker strips for mounting carrier
  - white 709.198 / transparent 709.197

- WMB Multi marking system for mounting carrier
  - see from page 506

- Marker strips for mounting carrier
  - white 709.198 / transparent 709.197
### Connection module for 8 actuators

<table>
<thead>
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<td>Connection module</td>
<td>289-667</td>
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<td>Unit</td>
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<tr>
<td>Connection module for 8 actuators with shield (screen) connection</td>
<td>289-671</td>
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### Technical Data

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<td>Operating voltage</td>
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<td></td>
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<tr>
<td>Max. current per connection</td>
<td>1 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. total current</td>
<td>8 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>125 V / 1.5 kW / 2</td>
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<td></td>
</tr>
<tr>
<td>Dimensions [mm] W x H x L, incl. mounting carrier or feet</td>
<td>56 x 34 x 85</td>
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</tr>
<tr>
<td>Wire connection</td>
<td>CAGE CLAMP® (WAGO 236 Series)</td>
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<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
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<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height from upper-edge of DIN 35 rail</td>
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### Accessories

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<th>Unit</th>
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<tbody>
<tr>
<td>WMB Multi marking system for mounting carrier</td>
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<td>see from page 506</td>
<td></td>
</tr>
<tr>
<td>Marker strips for mounting carrier</td>
<td>white 709.198 / transparent 709.197</td>
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</tbody>
</table>
WAGO System Wiring
Overview and Application Examples
388 – 391

Interface Modules for System Wiring
704 Series
Interface Adapters, 857 Series
392 – 400
402 – 403

WAGO Interface Cables, 706 Series
for 289, 704 Series
for Interface Adapters, 857 Series
404 – 411
412 – 414
16-Channel I/O Module with Interface Module

The new 750-14xx and 750-15xx Series I/O Modules with cable connection acc to DIN 41651 offer 16 digital channels in a module less than 1/2 inch (12mm) wide. Offering quick connections and a space-efficient design, the DIN-rail mount interface modules simplify installation in confined areas and relocate the termination point. When combined with WAGO interface modules (e.g., item no. 289-614, 289-611), a switch cabinet can be pre-wired before install to minimize wiring time and errors. This is beneficial as wiring can be performed independently of a plant’s construction. Pre-wired electronics can be installed right before start-up, saving valuable time during final stages of project completion. The modules are also ideal for connecting series machines or relay modules tasked with the higher loads common to buildings and industrial applications. The interface module also combines the advantages of relays (e.g., manual operation or rapid replacement with socked-mounted versions) with the benefits of a modern I/O system. Another ideal application would be the integration of pneumatic controllers into a fieldbus network.

Most pneumatic modules have an appropriate connector and can be controlled by the WAGO-I/O-SYSTEM. Five variants are available: two 16-channel input or output modules (one high-side and one low-side switching variant), as well as a version combining 8 inputs and 8 outputs.
### Application Examples

#### WAGO-I/O-SYSTEM 753

<table>
<thead>
<tr>
<th>I/O Modules</th>
<th>Item No.</th>
<th>pcs</th>
<th>Type</th>
<th>pcs</th>
</tr>
</thead>
<tbody>
<tr>
<td>753-430 (x2), 16 DI</td>
<td>706-7753/300-XXX</td>
<td>1</td>
<td>T8ES</td>
<td>1</td>
</tr>
<tr>
<td>753-430 (x1) 8 DI</td>
<td>706-7753/301-XXX</td>
<td>1</td>
<td>T16ES</td>
<td>1</td>
</tr>
<tr>
<td>753-431 (x1) 8 DI</td>
<td>706-7753/300-XXX</td>
<td>1</td>
<td>T8ES</td>
<td>1</td>
</tr>
<tr>
<td>753-431 (x2) 16 DI</td>
<td>706-7753/301-XXX</td>
<td>1</td>
<td>T16ES</td>
<td>1</td>
</tr>
<tr>
<td>753-530 (x1) 8 DO</td>
<td>706-7753/300-XXX</td>
<td>1</td>
<td>T8ES/T8S</td>
<td>1</td>
</tr>
<tr>
<td>753-530 (x2) 16 DO</td>
<td>706-7753/301-XXX</td>
<td>1</td>
<td>T16ES/T16S</td>
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</tbody>
</table>

#### WAGO Interface Cables

- WAGO 753 T8ES, 2 m long
- 706-7753/301-200

#### WAGO Interface Modules

- 704-2004
- T16ES

---

### WAGO-I/O-SYSTEM 750

<table>
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<td>750-1400 16 DI</td>
<td>706-3057/300-XXX</td>
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<td>750-1500 16 DO</td>
<td>706-3057/300-XXX</td>
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<td>750-1502 8 DI/8 DO</td>
<td>706-7753/302-XXX</td>
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<td>750-1502 8 DI/8 DO</td>
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Overview over cables and interface modules see page 389
### SIEMENS S7-300

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<td>6ES7 313-5BF03-0AB0</td>
<td>T16ES/T16S</td>
<td>1/1</td>
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<td>6ES7 313-6BE01-0AB0</td>
<td>T16ES/T16S</td>
<td>1/1</td>
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<tr>
<td>6ES7 313-6BF03-0AB0</td>
<td>T16ES/T16S</td>
<td>1/1</td>
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<td>T16ES/T16S</td>
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<td>6ES7 313-6CF03-0AB0</td>
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<td>6ES7 314-6BF01-0AB0</td>
<td>T16ES/T16S</td>
<td>1/1</td>
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<tr>
<td>6ES7 314-6BG03-0AB0</td>
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<td>6ES7 314-6CG03-0AB0</td>
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<td>6ES7 321-1BH02-0AA0</td>
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<td>6ES7 321-1BH10-0AA0</td>
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<td>6ES7 321-1BH80-0AA0</td>
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<td>6ES7 321-1BL80-0AA0</td>
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<td>6ES7 321-7BH01-0AA0</td>
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<td>6ES7 321-7BH80-0AA0</td>
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<td>6ES7 322-1BH01-0AA0</td>
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### WAGO Interface Cables

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<td>706-2300/300-XXX</td>
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<tr>
<td>706-2300/200-XXX</td>
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<tr>
<td>706-2300/101-XXX</td>
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<td>706-2300/301-XXX</td>
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<tr>
<td>706-2300/300-XXX</td>
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### WAGO Interface Modules

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</tbody>
</table>

System Wiring for:

- GEFANUC 90-30 / ALSPA 80-35
- SCHNEIDER M340
- SCHNEIDER QUANTUM
- SCHNEIDER TSX 37 (Micro)
- SCHNEIDER TSX 57 (Premium)
- ROCKWELL COMPACT LOGIX (1769)
- ROCKWELL CONTROL LOGIX (1756)
  - contact factory
# WAGO Interface Modules

<table>
<thead>
<tr>
<th>Type</th>
<th>Item No.</th>
<th>See Page</th>
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# WAGO Interface Cables

<table>
<thead>
<tr>
<th>Type</th>
<th>Item No.</th>
<th>See Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAGO-753 T8ES</td>
<td>706-7753/300-XXX</td>
<td><a href="http://www.wago.com">www.wago.com</a></td>
</tr>
<tr>
<td>WAGO-753 T16ES</td>
<td>706-7753/301-XXX</td>
<td><a href="http://www.wago.com">www.wago.com</a></td>
</tr>
<tr>
<td>WAGO-750 HE T8ES</td>
<td>706-7753/302-XXX</td>
<td>402</td>
</tr>
<tr>
<td>TSX T16ES</td>
<td>706-3057/300-XXX</td>
<td>404</td>
</tr>
<tr>
<td>S7-300 T16E</td>
<td>706-2300/101-XXX</td>
<td>406</td>
</tr>
<tr>
<td>S7-300 2 x T16E</td>
<td>706-2300/100-XXX</td>
<td>406</td>
</tr>
<tr>
<td>S7-300 T8S</td>
<td>706-2300/201-XXX</td>
<td>407</td>
</tr>
<tr>
<td>S7-300 2 x T16S</td>
<td>706-2300/200-XXX</td>
<td>407</td>
</tr>
<tr>
<td>S7-300 T16ES</td>
<td>706-2300/300-XXX</td>
<td>408</td>
</tr>
<tr>
<td>S7-300 2 x T16ES</td>
<td>706-2300/301-XXX</td>
<td>408</td>
</tr>
<tr>
<td>S7-300 A8E</td>
<td>706-2300/400-XXX</td>
<td>409</td>
</tr>
<tr>
<td>S7-300 A8EI1</td>
<td>706-2300/404-XXX</td>
<td>410</td>
</tr>
<tr>
<td>S7-300 A8EI2</td>
<td>706-2300/406-XXX</td>
<td>410</td>
</tr>
<tr>
<td>S7-300 A4SI</td>
<td>706-2300/500-XXX</td>
<td>411</td>
</tr>
<tr>
<td>S7-300 A8SI</td>
<td>706-2300/502-XXX</td>
<td>411</td>
</tr>
</tbody>
</table>

### Cable Length Overview

<table>
<thead>
<tr>
<th>Item No.</th>
<th>-XXX</th>
<th>Length</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>706-2300/201-XXX</td>
<td>-100</td>
<td>1 m</td>
<td>706-2300/201-100</td>
</tr>
<tr>
<td></td>
<td>-200</td>
<td>2 m</td>
<td>706-2300/201-200</td>
</tr>
<tr>
<td></td>
<td>-300</td>
<td>3 m</td>
<td>706-2300/201-300</td>
</tr>
</tbody>
</table>
# Interface Modules for System Wiring
## 704 Series

**Interface module for direct wiring (3 conductors)**
8 channels with integrated status indication,
10-pole connector acc. to DIN 41651

### Description

<table>
<thead>
<tr>
<th>Interface module, for DIN 35 rail</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>704-2003</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Technical Data

- **Operating voltage**: 24 V DC (± 10 %)
- **Max. continuous current**: 1 A per channel
- **Max. total current**: 2 A
- **Fuse**: 2 A
- **Status indication**: LED green: Channel;
  LED yellow: Power supply
- **Power consumption LED**: 5 mA
- **Nominal voltage to EN 60664-1**: 50 V / 0.8 kV / 2
- **Ambient operating temperature**: -20 °C ... +50 °C
- **Storage temperature**: -40 °C ... +70 °C
- **Dimensions incl. mounting carrier (mm)**: 56 x 85 x 63
- **Height from upper edge of DIN 35 rail**:
- **Wire connection**:
  - Input: 10-pole connector acc. to DIN 41651
  - Output: CAGE CLAMP®
- **Cross sections**: 0.08 mm² ... 2.5 mm² / AWG 28 ... 12
- **Strip length**: 5 ... 6 mm / 0.22 in

---

**Sold & Serviced By:**
ELECTROMATE
Toll Free Phone  (877) SERVO98
Toll Free Fax  (877) SERV099
www.electromate.com
sales@electromate.com
Relay output module with miniature switching relay for 8 channels, 1 changeover contact each (1 u) with integrated status indication, 10-pole connector acc. to DIN 41651

**Technical Data**

<table>
<thead>
<tr>
<th>Contact material</th>
<th>AgNi 90/10</th>
<th>AgNi 90/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact type</td>
<td>1 changeover contact</td>
<td>1 changeover contact</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td>24 V DC (± 10 %)</td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>250 V AC / 48 V DC</td>
<td>250 V AC / 48 V DC</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>5 A</td>
<td>5 A</td>
</tr>
<tr>
<td>Max. switching power (resistive)</td>
<td>1250 VA / 50 W</td>
<td>1250 VA / 50 W</td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green : Channel</td>
<td>LED green : Channel</td>
</tr>
<tr>
<td></td>
<td>LED yellow : Power supply</td>
<td>LED yellow : Power supply</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>10 x 10^6 switching operations</td>
<td>10 x 10^6 switching operations</td>
</tr>
<tr>
<td>Dielectric strength contact-coil (AC, 1 min)</td>
<td>4 kV</td>
<td>4 kV</td>
</tr>
<tr>
<td>Dielectric strength contact-contact</td>
<td>1 kV</td>
<td>1 kV</td>
</tr>
<tr>
<td>Fuse</td>
<td>Supply: 1 A</td>
<td>Supply: 1 A</td>
</tr>
<tr>
<td>Relay output: -</td>
<td>Relay output: -</td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +40 °C</td>
<td>-25 °C ... +40 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions [mm]</td>
<td>L x W x H</td>
<td>L x W x H</td>
</tr>
<tr>
<td></td>
<td>70 x 65 x 105</td>
<td>70 x 65 x 105</td>
</tr>
<tr>
<td>incl. mounting carrier and relay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>Height from upper-edge of DIN 35 rail</td>
</tr>
<tr>
<td>Inpu: 10-pole connector acc. to DIN 41651</td>
<td>Output: CAGE CLAMP®</td>
<td>Inpu: 10-pole connector acc. to DIN 41651</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

**Accessories**

| Spare relay 857-152 | Spare relay 857-152 |
# Interface Modules for System Wiring

## 704 Series

### Interface module for direct wiring (1 conductor)
- 16 channels with integrated status indication, 20-pole connector acc. to DIN 41651

### Interface module for direct wiring (2 conductors)
- 16 channels with integrated status indication, 20-pole connector acc. to DIN 41651

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module, for DIN 35 rail</td>
<td>704-2004</td>
<td>1</td>
<td></td>
<td>704-2024</td>
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</table>

### Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td>24 V DC (± 10 %)</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>1 A per channel</td>
<td>1 A per channel</td>
</tr>
<tr>
<td>Max. total current</td>
<td>2 A</td>
<td>2 A</td>
</tr>
<tr>
<td>Fuse</td>
<td>2 A</td>
<td>2 A</td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green : Channel;</td>
<td>LED green : Channel;</td>
</tr>
<tr>
<td></td>
<td>LED yellow : Power supply</td>
<td>LED yellow : Power supply</td>
</tr>
<tr>
<td>Power consumption LED</td>
<td>5 mA</td>
<td>5 mA</td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>50 V / 0.8 kV / 2</td>
<td>50 V / 0.8 kV / 2</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-20 °C ... +50 °C</td>
<td>-20 °C ... +50 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions incl. mounting carrier</td>
<td>55 x 85 x 50</td>
<td>85 x 85 x 50</td>
</tr>
<tr>
<td>Wire connection</td>
<td>Inpu: 20-pole connector acc. to DIN 41651</td>
<td>Output: CAGE CLAMP®</td>
</tr>
<tr>
<td></td>
<td>Output: CAGE CLAMP®</td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>
### Interface Module for Direct Wiring

#### Interface Module for Direct Wiring (2 Conductors)
- 16 channels with integrated status indication and disconnection,
- 20-pole connector acc. to DIN 41651

#### Interface Module for Direct Wiring (3 Conductors)
- 16 channels with integrated status indication,
- 20-pole connector acc. to DIN 41651

### Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface module, for DIN 35 rail</td>
<td>704-2044</td>
<td>1</td>
<td>Interface module, for DIN 35 rail</td>
<td>704-2054</td>
<td>1</td>
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</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Description</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td>24 V DC (± 10 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>1 A per channel</td>
<td>1 A per channel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. total current</td>
<td>2 A</td>
<td>2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuse</td>
<td>2 A</td>
<td>2 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green: Channel; LED yellow: Power supply</td>
<td>LED green: Channel; LED yellow: Power supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption LED</td>
<td>5 mA</td>
<td>5 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal voltage to EN 60664-1</td>
<td>50 V / 0.8 kV / 2</td>
<td>50 V / 0.8 kV / 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-20 °C ... +50 °C</td>
<td>-20 °C ... +50 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>-40 °C ... +70 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions incl. mounting carrier</td>
<td>99 x 85 x 50</td>
<td>85 x 85 x 63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>In: 20-pole connector acc. to DIN 41651 Output: CAGE CLAMP®</td>
<td>In: 20-pole connector acc. to DIN 41651 Output: CAGE CLAMP®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Interface Modules for System Wiring
### 704 Series

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching relay module, for DIN 35 rail</td>
<td>704-5024</td>
<td>1</td>
<td>704-5044</td>
<td>1</td>
</tr>
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</table>

### Technical Data

<table>
<thead>
<tr>
<th>Contact material</th>
<th>1 changeover contact</th>
<th>1 changeover contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact type</td>
<td>AgNi 90/10</td>
<td>AgNi 90/10</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td>24 V DC (± 10 %)</td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>250 V AC / 48 V DC</td>
<td>250 V AC / 48 V DC</td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>5 A</td>
<td>5 A</td>
</tr>
<tr>
<td>Max. switching power (resistive)</td>
<td>1250 VA / 50 W</td>
<td>1250 VA / 50 W</td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green : Channel</td>
<td>LED green : Channel</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>10 x 10⁶ switching operations</td>
<td>10 x 10⁶ switching operations</td>
</tr>
<tr>
<td>Dielectric strength contact-coil (AC, 1 min)</td>
<td>4 kV</td>
<td>4 kV</td>
</tr>
<tr>
<td>Dielectric strength contact-contact</td>
<td>1 kV</td>
<td>1 kV</td>
</tr>
<tr>
<td>Fuse</td>
<td>Supply: 1 A</td>
<td>Supply: 1 A</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +40 °C</td>
<td>-25 °C ... +40 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions (mm) L x W x H</td>
<td>111 x 65 x 105</td>
<td>111 x 65 x 105</td>
</tr>
<tr>
<td>Incl. mounting carrier and relay</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>Height from upper-edge of DIN 35 rail</td>
</tr>
<tr>
<td>Wire connection</td>
<td>Inpu: 20-pole connector acc. to DIN 41651</td>
<td>Inpu: 20-pole connector acc. to DIN 41651</td>
</tr>
<tr>
<td></td>
<td>Output: CAGE CLAMP®</td>
<td>Output: CAGE CLAMP®</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
</tbody>
</table>

### Accessories

Spare relay 857-152

Spare relay 857-152
## Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching relay module, for DIN 35 rail</td>
<td>704-3004</td>
<td>1</td>
<td>Switching relay module without miniature switching relay, for DIN 35 rail</td>
<td>704-5034</td>
<td>1</td>
</tr>
<tr>
<td>Switching relay module, for DIN 35 rail</td>
<td>704-5014</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Technical Data

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact material</td>
<td>AgNi 90/10</td>
<td></td>
<td>AgNi 90/10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact type</td>
<td>1 changeover contact</td>
<td></td>
<td>1 changeover contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td></td>
<td>24 V DC (± 10 %)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>250 V AC / 48 V DC</td>
<td></td>
<td>250 V AC / 48 V DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. continuous current</td>
<td>5 A</td>
<td></td>
<td>5 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inrush current</td>
<td>2s, 16A</td>
<td></td>
<td>2s, 16A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. switching power (resistive)</td>
<td>1250VA / 50W</td>
<td></td>
<td>1250VA / 50W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green : Channel</td>
<td></td>
<td>LED green : Channel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical life</td>
<td>30 x 10⁶ switching operations</td>
<td></td>
<td>30 x 10⁶ switching operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dielectric strength contact-coil (AC, 1 min)</td>
<td>3 kV</td>
<td></td>
<td>4 kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diellectric strength contact-contact</td>
<td>1 kV</td>
<td></td>
<td>1 kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuse</td>
<td>Supply: 1 A</td>
<td></td>
<td>Supply: 1 A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +50 °C</td>
<td></td>
<td>-25 °C ... +50 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td></td>
<td>-40 °C ... +70 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions [mm] L x W x H incl. mounting carrier and relay</td>
<td>180 x 30 x 105</td>
<td></td>
<td>247 x 55 x 105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wire connection</td>
<td>Inpu: 20-pole connector acc. to DIN 41651</td>
<td></td>
<td>Output: CAGE CLAMP®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td></td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td></td>
<td>5 ... 6 mm / 0.22 in</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Accessories

- Spare relay 788-154

---

### Relay output module with miniature switching relay for 16 channels, 1 changeover contact each (1 u) with integrated status indication, 20-pole connector acc. to DIN 41651

### Relay output module with miniature switching relay for 16 channels, 1 changeover contact each (1 u) with integrated status indication and output fuse, 20-pole connector acc. to DIN 41651

---

**ELECTROMATE**

Toll Free Phone  (877) SERVO98

Toll Free Fax  (877) SERV099

www.electromate.com

sales@electromate.com

Sold & Serviced By:
Interface Modules for System Wiring
704 Series

Relay output module with miniature switching relay for 16 channels, 1 make contact each (1 a) with integrated status indication, disconnect terminal block and output fuse, 20-pole connector acc. to DIN 41651

Relay output module with miniature switching relay for 16 channels, 1 make contact each (1 a) with integrated status indication, double disconnect terminal block and output fuse, 20-pole connector acc. to DIN 41651

<table>
<thead>
<tr>
<th>Description</th>
<th>Item No.</th>
<th>Pack. Unit</th>
<th>Item No.</th>
<th>Pack. Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switching relay module, for DIN 35 rail</td>
<td>704-5054</td>
<td>1</td>
<td>704-5074</td>
<td>1</td>
</tr>
</tbody>
</table>

### Technical Data

<table>
<thead>
<tr>
<th>Contact material</th>
<th>AgNi 90/10</th>
<th>AgNi 90/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact type</td>
<td>1 make contact</td>
<td>1 make contact</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V DC (± 10 %)</td>
<td>24 V DC (± 10 %)</td>
</tr>
<tr>
<td>Max. switching voltage</td>
<td>250 V AC / 48 V DC</td>
<td>250 V AC / 48 V DC</td>
</tr>
<tr>
<td>Status indication</td>
<td>LED green : Channel</td>
<td>LED green : Channel</td>
</tr>
<tr>
<td></td>
<td>LED yellow : Power supply</td>
<td>LED yellow : Power supply</td>
</tr>
<tr>
<td>Mechanical life</td>
<td>30 x 10⁶ switching operations</td>
<td>30 x 10⁶ switching operations</td>
</tr>
<tr>
<td>Dielectric strength contact-coil (AC, 1 min)</td>
<td>4 kV</td>
<td>4 kV</td>
</tr>
<tr>
<td>Dielectric strength contact/contact</td>
<td>1 kV</td>
<td>1 kV</td>
</tr>
<tr>
<td>Fuse</td>
<td>Supply: 1 A</td>
<td>Supply: 1 A</td>
</tr>
<tr>
<td></td>
<td>Relay output: 2 A</td>
<td>Relay output: 5 A</td>
</tr>
<tr>
<td>Ambient operating temperature</td>
<td>-25 °C ... +50 °C</td>
<td>-25 °C ... +50 °C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-40 °C ... +70 °C</td>
<td>-40 °C ... +70 °C</td>
</tr>
<tr>
<td>Dimensions (mm) L x W x H</td>
<td>240 x 55 x 105</td>
<td>240 x 55 x 105</td>
</tr>
<tr>
<td>incl. mounting carrier and relay</td>
<td>Height from upper-edge of DIN 35 rail</td>
<td>Height from upper-edge of DIN 35 rail</td>
</tr>
<tr>
<td>Wire connection</td>
<td>Input: 20-pole connector acc. to DIN 41651</td>
<td>Output: 20-pole connector acc. to DIN 41651</td>
</tr>
<tr>
<td>Cross sections</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
<td>0.08 mm² ... 2.5 mm² / AWG 28 ... 12</td>
</tr>
<tr>
<td>Strip length</td>
<td>5 ... 6 mm / 0.22 in</td>
<td>5 ... 6 mm / 0.22 in</td>
</tr>
<tr>
<td>Accessories</td>
<td>Spare relay 788-154</td>
<td>Spare relay 788-154</td>
</tr>
</tbody>
</table>