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Inductive

The metal detectors

Cubic housings from
from Page 702

- *Variety of housing sizes for numerous applications*
- *Plastic or metal housing options*
- *Switching distances from 1.5 mm to 35 mm*
- *Numerous connection possibilities*
- *Flush, quasi-flush and non-flush mounting possibilities*

Because of their functional principle, inductive sensors are only suitable for detecting metal objects. But they do this extremely reliably and are also very robust and resistant (e.g. regarding environmental factors), which makes them interesting for numerous industrial applications. They are mainly used wherever the detection of uniform movements is involved – for example as proximity switches for determining the position of transported machine parts such as saddles or hydraulic cylinders, for measuring rotary speeds on vehicle crankshafts, or as pulse generators for motor ignition.

Inductive sensors are extremely precise due to their high repeatability levels. Their simple design and uncomplicated commissioning ensure minimal downtimes. Whether in robotics, in assembly and handling, in factory automation or mechanical engineering: inductive sensors from SensoPart are reliable, require no maintenance, and offer versatile use thanks to the numerous housings and sizes available.

TYPICAL SENSOPART

- Reliable detection of metallic objects
- Product variants for standard or three-fold switching distances
- Robust cylindrical or cuboid metal housing options
- Simple installation thanks to integrated metric threads
- Different designs for flush, quasi-flush and non-flush mounting
- Switching or analogue output options available
- NAMUR-compliant design on request

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Cylindrical housings

from Page 708

- *Variety of housing sizes for numerous applications*
- *High switching frequency of up to 5 kHz*
- *Robust stainless steel designs*
- *With switching or analogue output options*
- *Highly pressure-resistant sensors for up to 800 bar*
- *Flush, quasi-flush and non-flush mounting possibilities*
- *Full-metal "see-through" sensors (metal face)*
- *Three-fold switching distance*
- *K-factor 1, switching distance independent of type of metal*

Inductive sensors with standard switching distance

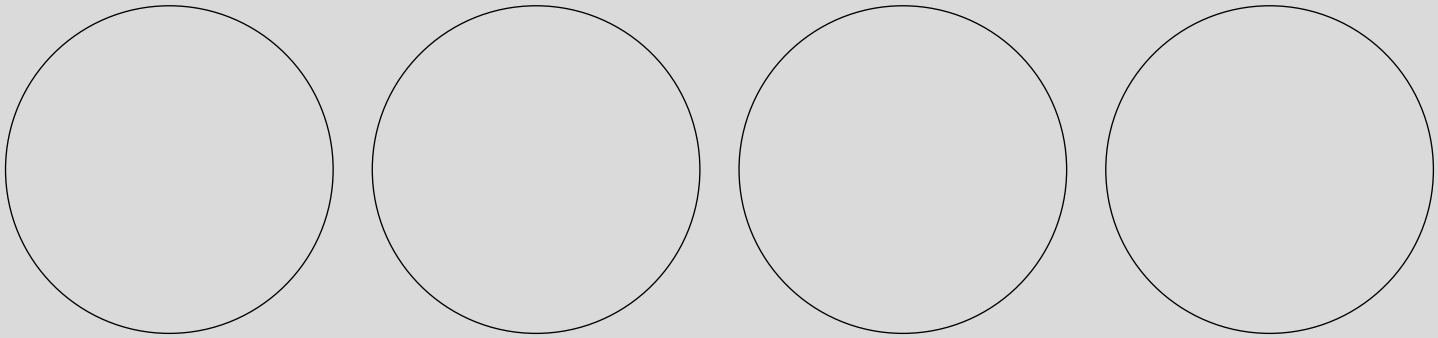
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
ø 3 mm	996-09390	IS 33-52	Flush	0.6 mm	PNP / NO	Cable, 3-wire	708
	996-09444	ISN 44-20	Flush	0.8 mm	NAMUR	Cable, 2 m, 2-wire	709
ø 6.5 mm	996-09488	ISZ 46-02	Flush	1.5 mm	PNP / NO	Cable 2 m, 3-wire	713
	996-50590	IS 46-12	Flush	1.5 mm	PNP / NO	Plug, M8x1, 3-wire	714
	996-09401	IS 46-02	Flush	1.5 mm	PNP / NO	Cable, 2 m, 3-wire	714
	996-50586	IS 56-12	Quasi-flush	3 mm	PNP / NO	Plug, M8x1, 3-pin	716
	996-09963	IS 56-42	Quasi-flush	3 mm	PNP / NO	Plug, M12x1, 4-pin	716
	996-09409	IS 56-02	Quasi-flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	716
M4	996-09397	IS 34-52	Flush	0.6 mm	PNP / NO	Cable, 2 m, 3-wire	710
	996-51486	IT 4 BD-PSK3	Flush	1 mm	PNP / NO	Cable, 3-wire	711
M5	697-01005	IMT 5-0B8-PS-K3	Flush	0.8 mm	PNP / NO	Cablel 2 m	712
	697-01007	IMT 5-0B8-PS-M3	Flush	0.8 mm	PNP / NO	M8 3-pin	712
M8	697-01009	IMT 8-1B5-PS-K3	Flush	1.5 mm	PNP / NO	Cable 2 m	718
	697-01011	IMT 8-1B5-PS-L4	Flush	1.5 mm	PNP / NO	M12 3-pin	718
	697-01013	IMT 8-2N-PS-K3	Non-flush	2 mm	PNP / NO	Cable 2 m	720
M8	996-50624	IS 48-12T	Flush	1.5 mm	PNP / NO	Plug, M8x1, 3-pin	717
	996-09405	IS 48-02	Flush	1.5 mm	PNP / NO	Cable, 2 m, 3-wire	717
	996-50587	IS 58-12T	Flush	3 mm	PNP / NO	Plug, M8x1, 3-pin	722
	996-09965	IS 58-42	Flush	3 mm	PNP / NO	Plug, M8x1, 4-pin	722
	996-09413	IS 58-02	Flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	722
	697-01015	IMT 8-2N-PS-L4	Non-flush	2 mm	PNP / NO	M12 3-pin	720
M12	697-01016	IMT 12-2B-NS-K3	Flush	2 mm	NPN / NO	Cable 2 m	724
	697-01017	IMT 12-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	724
	697-01019	IMT 12-2B-PS-L4	Flush	2 mm	PNP / NO	M12 3-pin	724
	697-01023	IMT 12-4N-PS-L4	Non-flush	4 mm	PNP / NO	M12 3-pin	726
	996-51479	IS 512-02 AI	Quasi-flush	6 mm	Analogue output 0 … 10V / 4 … 20 mA	Cable, 4-wire	742

Selection Table Inductive Sensors

Inductive sensors with standard switching distance							
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
M18	697-01027	IMT 18-5B-PS-L4	Flush	5 mm	PNP / NO	M12 3-pin	731
	697-01031	IMT 18-8N-PS-L4	Non-flush	8 mm	PNP / NO	M12 3-pin	732
	996-09435	IS 518-02 A	Quasi-flush	10 mm	Analogue output 0 … 10V / 4 … 20 mA	Cable, 4-wire	743
M30	697-01033	IMT 30-10B-PS-K3	Flush	10 mm	PNP / NO	Cable 2 m	737
	697-01035	IMT 30-10B-PS-L4	Flush	10 mm	PNP / NO	M12 3-pin	737

Inductive sensors with increased switching distance							
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
ø 6.5 mm	697-01040	IDT 6-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	715
	697-01042	IDT 6-2B-PS-M3	Flush	2 mm	PNP / NO	M8 3-pin	715
M8	697-01044	IMT 8-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	720
	996-51456	IS 58-14-S	Non-flush	6 mm	PNP / NO	Plug, M8x1, 3-pin	723
	996-51460	IS 58-44-S	Non-flush	6 mm	PNP / NO	Plug, M8x1, 4-pin	723
	996-51461	IS 58-04-S	Non-flush	6 mm	PNP / NO	Cable, 3-wire	723
	697-01046	IMT 8-2B-PS-M3	Flush	2 mm	PNP / NO	M8 3-pin	720
M12	996-51487	IT 12 BM-PSK3	Flush	6 mm	PNP / NO	Cable, 3-wire	728
	996-51480	IT 12 BM-PSL4	Flush	6 mm	PNP / NO	Plug, M12x1, 4-pin	728
	996-51481	IT 12 NBM-PSL4	Non-flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	728
	996-09969	IS 512-42	Quasi-flush	6 mm	PNP / NO	Plug, M12x1, 4-pin	729
	996-09421	IS 512-02	Quasi-flush	6 mm	PNP / NO	Cable, 2 m, 3-wire	729
M12	996-09420	IS 512-01	Quasi-flush	6 mm	NPN / NO	Cable, 2 m, 3-wire	729
	996-51449	IS 512-44-S	Non-flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	730
	996-51458	IS 512-04-S	Non-flush	10 mm	PNP / NO	Cable, 2 m, 3-wire	730
	697-01048	IMT 12-4B-PS-K3	Flush	4 mm	PNP / NO	Cable 2 m	726
	697-01050	IMT 12-4B-PS-L4	Flush	4 mm	PNP / NO	M12 3-pin	726
	697-01051	IMT 12-4B-NS-L4	Flush	4 mm	NPN / NO	M12 3-pin	726
M18	697-01052	IMT 18-8B-PS-K3	Flush	8 mm	PNP / NO	Cable 2 m	732
	697-01054	IMT 18-8B-PS-L4	Flush	8 mm	PNP / NO	M12 3-pin	732
	996-09973	IS 518-42	Quasi-flush	12 mm	PNP / NO	Plug, M12x1, 4-pin	734
	996-09429	IS 518-02	Quasi-flush	12 mm	PNP / NO	Cable, 2 m, 3-wire	734
	996-51453	IS 518-44-S	Non-flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	735
	996-51450	IS 518-04-S	Non-flush	20 mm	PNP / NO	Cable, 3-wire	735
	996-51482	IT 18 BM-PSL4	Flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	736
	996-51483	IT 18 NBM-PSL4	Non-flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	736
M30	697-01058	IMT 30-15B-PS-L4	Flush	15 mm	PNP / NO	M12 3-pin	738
	996-09905	IS 530-42	Quasi-flush	22 mm	PNP / NO	Plug, M12x1, 4-pin	739
	996-09437	IS 530-02	Quasi-flush	22 mm	PNP / NO	Cable, 2 m, 3-wire	739
	996-51454	IS 530-44-S	Quasi-flush	22 mm	PNP / NO	Plug, M12x1, 4-pin	740
	996-51452	IS 530-04-S	Quasi-flush	22 mm	PNP / NO	Cable, 2 m, 3-wire	740
	996-51484	IT 30 BM-PSL4	Flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	741
	996-51485	IT 30 NBM-PSL4	Non-flush	40 mm	PNP / NO	Plug, M12x1, 4-pin	741

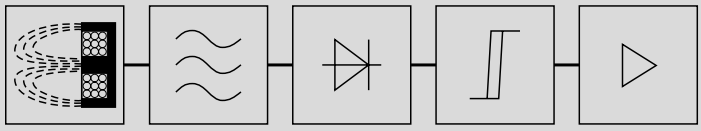
Cubic inductive sensors							
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
40 x 26 x 12 mm	697-01061	IT 12-4B-PS-K3	Flush	4 mm	PNP / NO	Cable 2 m	706
	697-01063	IT 12-4B-PS-M3	Flush	4 mm	PNP / NO	M8 3-pin	706
	697-01065	IT 12-8N-PS-K3	Non-flush	8 mm	PNP / NO	Cable 2 m	706
	697-01067	IT 12-8N-PS-M3	Non-flush	8 mm	PNP / NO	M8 3-pin	706
16 x 8 x 5 mm	697-01068	IT 8-1B5K-PS-K3	Flush	1.5 mm	PNP / NO	Strand, 0.5 m, 3-wire	702
27 x 10 x 7 mm	697-01070	IT10-4N-PS-K3	Non-flush	4 mm	PNP / NO	Cable 2 m	703
25 x 5 x 5 mm	996-50585	IS 455-02	Flush	0.8 mm	PNP / NO	Cable, 2 m, 3-wire	704
40 x 8 x 8 mm	996-50589	IS 588-02	Quasi-flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	705



Inductive Sensors

System description

Method of function

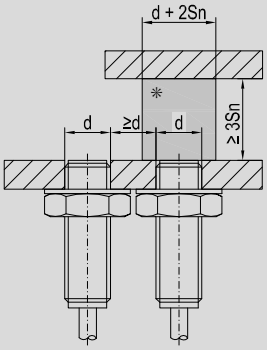


Inductive sensors exploit the interaction of metallic conductors with their alternating electromagnetic fields. Eddy currents are induced in the conductor. They draw energy from the field, reducing the oscillation amplitude. Inductive sensors evaluate this change. The area through which the high-frequency sensor field enters space is described as the active area. It roughly corresponds to the area of the pot core cap.

Applications

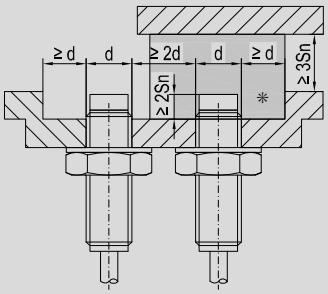
Inductive sensors are suitable for controlling and monitoring machine processes, and for providing signals in counting tasks where metals are involved. In particular, they are characterised by their immunity to vibrations, impacts, dust and dampness, and operate with extreme precision.

Flush-mountable proximity switches



Flush-mountable proximity switches can be embedded in metal up to the active area. The distance to any metal surfaces opposite must be ≥ 3 Sn and the distance between two proximity switches (mounted in series) must be ≥ d.

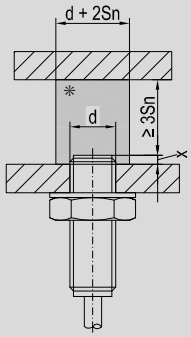
Non-flush mountable proximity switches



Non-flush mountable proximity switches have no metal housing near the active area. They have a free zone. For this reason they experience no pre-damping of the sensor field and can – unlike flush-mountable sensors – be used at longer switching distances. A metal-free zone, however, must always be maintained around the active area. The distance to any metal surfaces opposite must be ≥ 3 Sn and the distance between two proximity switches (mounted in series) must be ≥ 2 d.

* Metal-free zone

Quasi-flush-mountable proximity switches

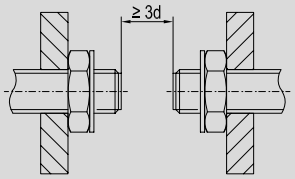


Quasi-flush-mountable proximity switches require a space behind the active area that is kept free of conductive materials. As a result, the nominal switching distance is available without restriction. Whereby the value "x" is the shortest distance between the active area and the conductive material located behind it.

Mounting in steel or non-ferrous metals	
Housing	x in mm
ø 6.5	1
M 8	1
8 x 8	1
M 12	2
M 18	4
M 30	6

Mounting in stainless steel	
Housing	x in mm
ø 6.5	0
M 8	0
8 x 8	0
M 12	1
M 18	1,5
M 30	2

Opposite mounting



All inductive proximity sensors mounted facing one another require a minimum distance of ≥ 3 d between their active areas.

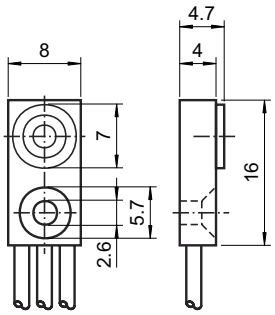
11

* Metal-free zone

IT 8

Inductive sensor in cubic housing

Strand



Sensor data

Switching distance	1.5 mm
Ensured switching distance	0 … 1.215 mm
Hysteresis	~ 5 %
Reduction factor, Al	0.3
Reduction factor, Cu	0.2
Reduction factor, V2A	0.7

Electrical data

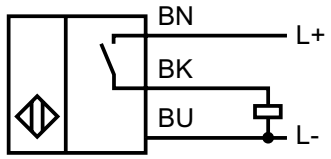
Operating voltage, $+U_B$	5 … 30 V DC
No-load current, I_0	≤ 15 mA
Output current, Ie	≤ 100 mA
Voltage drop, U_D	≤ 1.5 V
Residual current, Ir	≤ 10 µA
Protective circuits	Short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1200 Hz

Mechanical data

Dimensions	16 x 4.7 x 8 mm
Enclosure rating	IP 67[1]
Material, housing	PA
Material, front surface	PA
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	EN 60947-5-2

[1] With connected IP 67 plug

Connection, 3-wire



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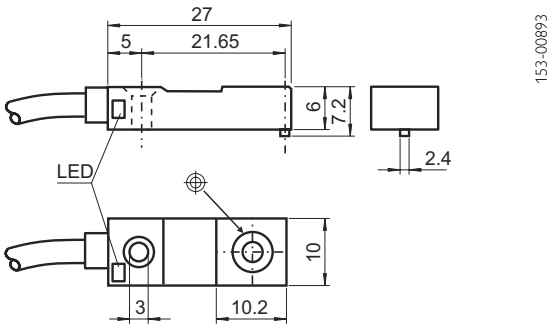
Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
1.5 mm	Flush	PNP	Strand, 0.5 m, 3-wire	IT 8-1B5K-PS-K3	697-01068

IT 10

Inductive sensor in cubic housing

Cable connection

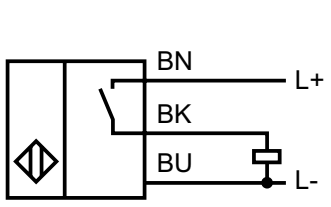


Sensor data		Functions	
Switching distance	4 mm	Indicator LED, yellow	Switching output indicator
Ensured switching distance	0 … 3.24 mm		
Hysteresis	~ 5 %		
Reduction factor, Al	0,4		
Reduction factor, Cu	0,3		
Reduction factor, V2A	0,7		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC	Dimensions	27 x 7.2 x 10 mm
No-load current, I_0	≤ 10 mA	Enclosure rating	IP 67[1]
Output current, Ie	≤ 100 mA	Material, housing	PPS
Voltage drop, U_D	≤ 3 V	Material, front surface	PPS
Residual current, Ir	≤ 0.5 mA	Type of connection	See selection table
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)	Ambient temperature: operation	-25 … +70 °C
Switching output, Q	PNP	Vibration and impact resistance	EN 60947-5-2
Output function	N.O.		
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz		

[1] With connected IP 67 plug

Connection, 3-wire



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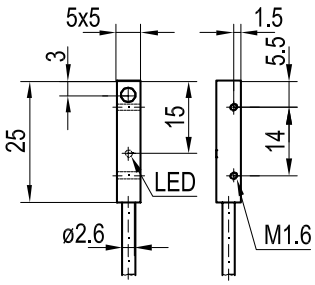
Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
4 mm	Non-flush	PNP	Cable, 2 m, 3-wire	IT 10-4N-PS-K3	697-01070

IS 455

Inductive sensor in cubic housing

CE

Cable connection



Sensor data	
Switching distance	0.8 mm
Repeatability	0.01 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.60
Reduction factor, Cu	0.60
Reduction factor, V2A	0.85
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.70

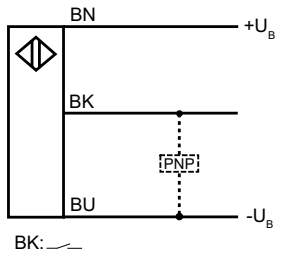
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz

Mechanical data	
Dimensions	5 x 5 x 25 mm
Mounting	Flush
Enclosure rating	IP 67[4]
Material, housing	Brass, chrome-plated
Material, front surface	Polyester
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection, 3-wire



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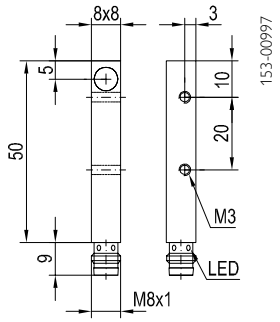
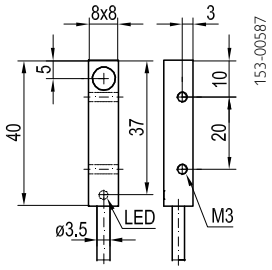
Switching distance	Switching output	Type of connection	Part number	Article number
0.8 mm	PNP	Cable, 2m, 3-wire	IS 455-02	996-50585

IS 588

Inductive sensor in cubic housing

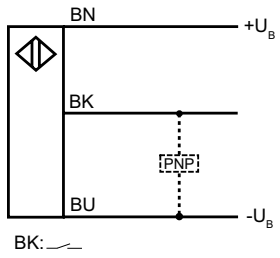
Plug connection	Cable connection
	

Sensor data		Functions	
Switching distance	3 mm	Indicator LED, yellow	Switching output indicator
Repeatability	0.15 mm[1]		
Hysteresis	≤ 10 %[2]		
Reduction factor, Al	0.36		
Reduction factor, Cu	0.27		
Reduction factor, V2A	0.77		
Reduction factor, steel FE 360	1.00		
Reduction factor, brass	0.45		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]	Dimensions (plug device)	8 x 8 x 59 mm
No-load current, I_0	≤ 10 mA	Dimensions (cable device)	8 x 8 x 40 mm
Output current, Ie	≤ 200 mA	Mounting	Quasi-flush
Voltage drop, U_D	≤ 2 V at 200 mA	Enclosure rating	IP 67[4]
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection	Material, housing	Zamac, chrome-plated
		Material, front surface	PBTP
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … 70 °C
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection, 3-pin



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Switching distance	Switching output	Type of connection	Part number	Article number
3 mm	PNP	Cable, 2 m, 3-wire	IS 588-02	996-50589

IT 12

Inductive sensor in cubic housing

Sensor data	
Switching distance (Flush)	4 mm
Ensured switching distance (Flush)	0 … 3.24 mm
Switching distance (Non-flush)	8 mm
Ensured switching distance (Non-flush)	0 … 6.48 mm
Hysteresis	~ 5 %
Reduction factor, Al	0.3
Reduction factor, Cu	0.2
Reduction factor, V2A	0.7

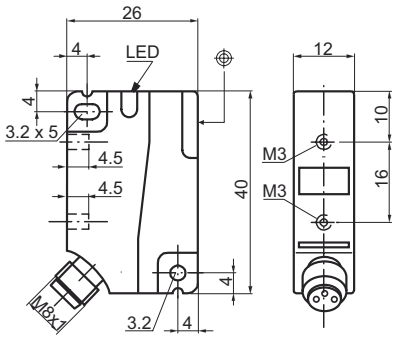
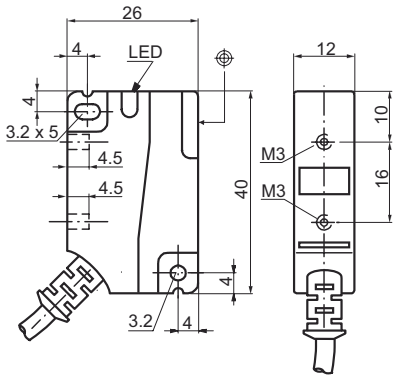
Functions	
Indicator LED, yellow	Switching output indicator

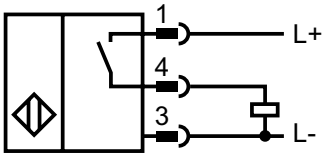
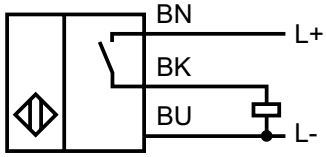
Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 15 mA
Output current, Ie	≤ 250 mA
Voltage drop, U_D	≤ 2.5 V
Residual current, Ir	≤ 0.01 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1400 Hz

Mechanical data	
Dimensions	40 x 26 x 12 mm
Enclosure rating	IP 67[1]
Material, housing	PA
Material, front surface	PA
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	EN 60947-5-2

[1] With connected IP 67 plug

Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
4 mm	Flush	PNP	Plug, M8x1, 3-pin	IT 12-4B-PS-M3	697-01063
4 mm	Flush	PNP	Cable, 2 m, 3-wire	IT 12-4B-PS-K3	697-01061
8 mm	Non-flush	PNP	Plug, M8x1, 3-pin	IT 12-8N-PS-M3	697-01067
8 mm	Non-flush	PNP	Cable, 2 m, 3-wire	IT 12-8N-PS-K3	697-01065

Plug connection	Cable connection
 153-00889	 153-00888

Connection plug, 3-pin	Connection cable, 3-wire
 154-00294	 154-00294

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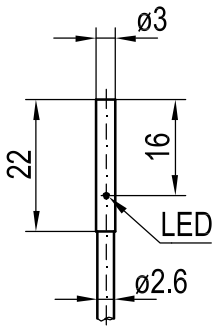
IS 33

Inductive sensor with stainless steel housing

CE

Cable connection



153-00512

Sensor data	
Switching distance	0.6 mm
Reduction factor, Al	0.55
Reduction factor, Cu	0.50
Reduction factor, V2A	0.80

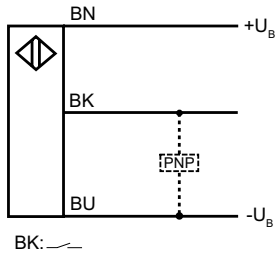
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[1]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 100 mA
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz
Switching output, Q	PNP N.O.
Output function	

Mechanical data	
Dimensions	Ø 3 x 22 mm
Mounting	Flush
Enclosure rating	IP 67[2]
Material, housing	Stainless steel
Type of connection	See selection table
Ambient temperature: operation	-25 … 70 °C

[1] Max. 20 % ripple, within U_B [2] With connected IP 67 plug

Connection, 3-wire



154-00160

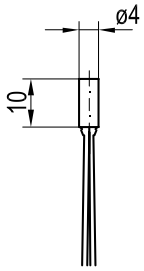
Switching distance	Switching output	Type of connection	Part number	Article number
0.6 mm	PNP	Cable, 3-wire	IS 33-52	996-09390

ISN 44-20

Inductive sensor, NAMUR design

CE

Cable connection



153-00315

Sensor data

Switching distance	0.8 mm
Repeatability	0.01 mm[1]
Reduction factor, Al	0.50
Reduction factor, Cu	0.45
Reduction factor, V2A	0.80
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.55

Electrical data

Operating voltage, $+U_B$ (NAMUR* conditions)	7.7 … 9 V DC[2]
Operating voltage, $+U_B$ (not NAMUR*)	5 … 30 V DC[2]
Operating resistance, NAMUR	1 kΩ
Recommended operating resistance	1 kΩ (5 … 10 V) / 2.2 kΩ (10 … 20 V) / 4.7 kΩ (20 … 30 V)
Output current, Ie (dampened / undampened)	≤ 1 mA / ≥ 2.2 mA
Protective circuits	Short-circuit protection (Q)
Switching frequency, f (ti/tp 1:1)	≤ 10000 Hz

Mechanical data

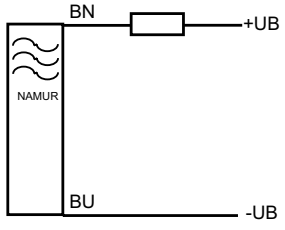
Dimensions	Ø 4 x 10 mm
Mounting	Flush
Enclosure rating	IP 67[3]
Material, housing	Stainless steel, V2A
Material, front surface	PA 66
Type of connection	See selection table
Ambient temperature: operation	-25 … 70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

11

[1] U_B = 7.7 … 9 V DC, T_A = 23 °C ± 5 °C [2] Max. 20 % ripple, within U_B [3] With connected IP 67 plug

* Standardization Association for Measurement and Control in the Chemical and Pharmaceutical Industries

Cable connection



154-00223

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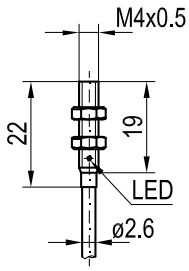
Switching distance	Switching output	Type of connection	Part number	Article number
0.8 mm	NAMUR*	Cable, 2 m, 2-wire	ISN 44-20	996-09444

IS 34

Inductive sensor with stainless steel housing

CE

Cable connection



153-00513

Sensor data	
Switching distance	0.6 mm
Repeatability	0.01 mm[1]
Hysteresis	~ 10 %[2]
Reduction factor, Al	0.55
Reduction factor, Cu	0.50
Reduction factor, V2A	0.80
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.65

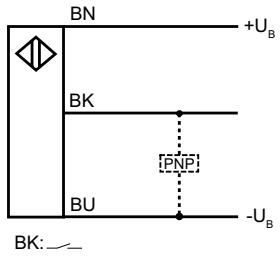
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 100 mA
Voltage drop, U_D	≤ 2.0 V at 100 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz

Mechanical data	
Dimensions	M4 x 22 mm
Mounting	Flush
Enclosure rating	IP 67[4]
Material, housing	Stainless steel, V2A
Material, front surface	Polyester
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection, 3-wire



154-00160

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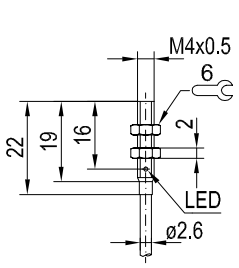
Switching distance	Switching output	Type of connection	Part number	Article number
0.6 mm	PNP	Cable, 2 m, 3-wire	IS 34-52	996-09397

IT 4

Inductive sensor with stainless steel housing

CE

Cable connection

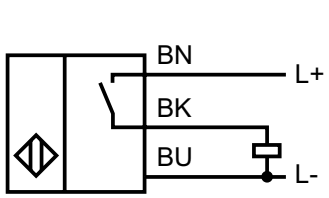


Sensor data		Functions	
Switching distance	1 mm	Indicator LED, yellow	Switching output indicator
Hysteresis	1 … 15 %		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC	Dimensions	M4 x 22 mm
Output current, Ie	≤ 100 mA	Mounting	Flush
Protective circuits	Reverse-polarity protection, U_B	Enclosure rating	IP 67[1]
Switching frequency, f (ti/tp 1:1)	≤ 3000 Hz	Material, housing	Stainless steel, V2A
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … 70 °C

[1] With connected IP 67 plug

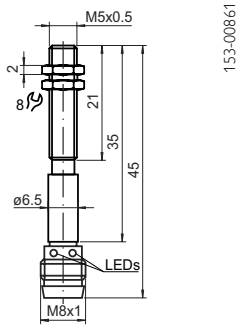
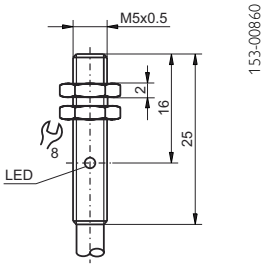
Connection, 3-wire



Switching distance	Switching output	Type of connection	Part number	Article number
1 mm	PNP	Cable, 3-wire	IT 4 BD-PSK3	996-51486

IMT 5

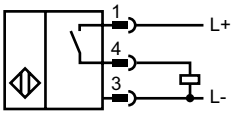
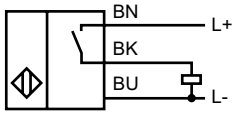
Inductive sensor with stainless steel housing

Plug connection	Cable connection
	

Sensor data		Functions	
Switching distance	0.8 mm	Indicator LED, yellow	Switching output indicator
Ensured switching distance	0 … 0.648 mm		
Reduction factor, Al	0.45		
Reduction factor, Cu	0.40		
Reduction factor, V2A	0.85 / 0.77[1]		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC	Dimensions (plug device)	M5 x 45 mm
No-load current, I_0	See selection table	Dimensions (cable device)	M5 x 25 mm
Output current, Ie	See selection table	Mounting	Flush
Voltage drop, U_D	≤ 3 V	Enclosure rating	IP 67[2]
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)	Material, housing	Stainless steel
		Material, front surface	PBT / PC[1]
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	≤ 3000 Hz		

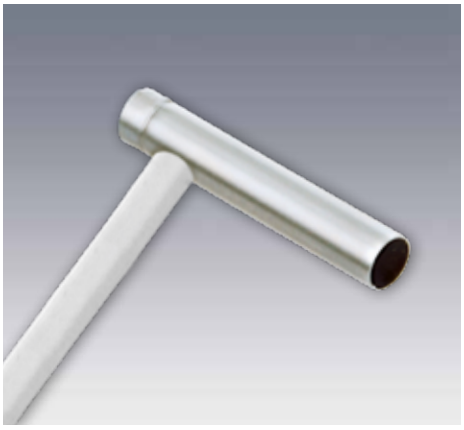
[1] IMT 5-0B8-PS-K3 [2] With connected IP 67 plug

Connection plug, 3-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Type of connection	No-load current, I_0	Output current, Ie	Part number	Article number
0.8 mm	PNP	Plug, M8x1, 3-pin	≤ 15 mA	0,1…100 mA	IMT 5-0B8-PS-M3	697-01007
0.8 mm	PNP	Cable, 2 m, 3-wire	≤ 10 mA	0 … 200 mA	IMT 5-0B8-PS-K3	697-01005

ISZ 46

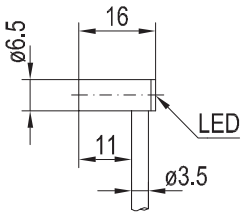
Inductive sensor with stainless steel housing



CE

Cable connection

153-00316



Sensor data	
Switching distance	1.5 mm
Repeatability	0.02 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.45
Reduction factor, Cu	0.40
Reduction factor, V2A	0.80
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.50

Functions	
Indicator LED, yellow	Switching output indicator

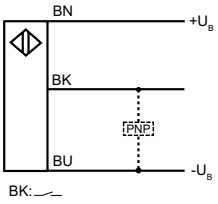
Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz

Mechanical data	
Dimensions	Ø 6,5 x 16 mm
Mounting	Flush
Enclosure rating	IP 67[4]
Material, housing	Stainless steel, V2A
Material, front surface	PA 66
Type of connection	See selection table
Ambient temperature: operation	-25 … 70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection, 3-wire

154-00160



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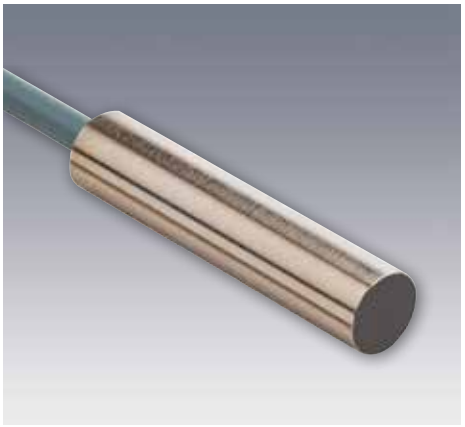
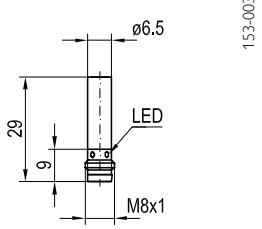
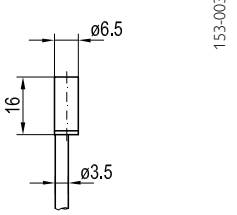
Switching distance	Switching output	Type of connection	Part number	Article number
1.5 mm	PNP	Cable, 2m, 3-wire	ISZ 46-02	996-09488

IS 46

Inductive sensor with stainless steel housing



CE

Plug connection	Cable connection
	

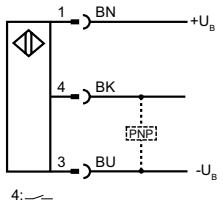
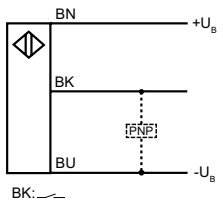
Sensor data	
Switching distance	1.5 mm
Repeatability	0.02 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.45
Reduction factor, Cu	0.40
Reduction factor, V2A	0.80
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.50

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz

Mechanical data	
Dimensions (plug device)	Ø 6.5 x 29 mm
Dimensions (cable device)	Ø 6.5 x 16 mm
Mounting	Flush
Enclosure rating	IP 67[4]
Material, housing	Stainless steel, V2A
Material, front surface	PA 66
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

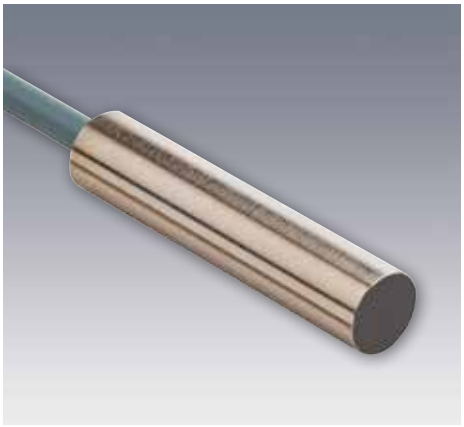
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

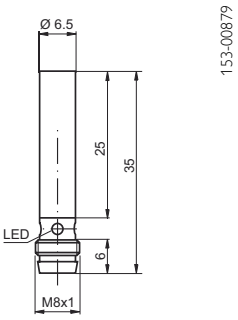
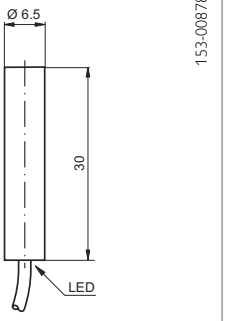
Connection plug, 3-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Type of connection	Part number	Article number
1.5 mm	PNP	Plug, M8x1, 3-pin	IS 46-12	996-50590
1.5 mm	PNP	Cable, 2 m, 3-wire	IS 46-02	996-09401

IDT 6

Inductive sensor

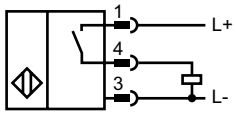
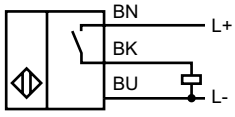


Plug connection	Cable connection
	

Sensor data		Functions	
Switching distance	2 mm	Indicator LED, yellow	Switching output indicator
Ensured switching distance	0 … 1.62 mm		
Reduction factor, Al	0.45		
Reduction factor, Cu	0.40 / 0.35[1]		
Reduction factor, V2A	0.75 / 0.70[1]		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC / 5 … 30 V DC[1]	Dimensions (plug device)	Ø 6.5 x 35 mm
No-load current, I_0	≤ 15 mA	Dimensions (cable device)	Ø 6.5 x 30 mm
Operating current, I_L	≤ 100 mA	Mounting	Flush
Voltage drop, U_D	≤ 3 V / ≤ 2.5 V[1]	Enclosure rating	IP 67[2]
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)	Material, housing	Brass, nickel-plated
		Material, front surface	LCP
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	≤ 3000 Hz		

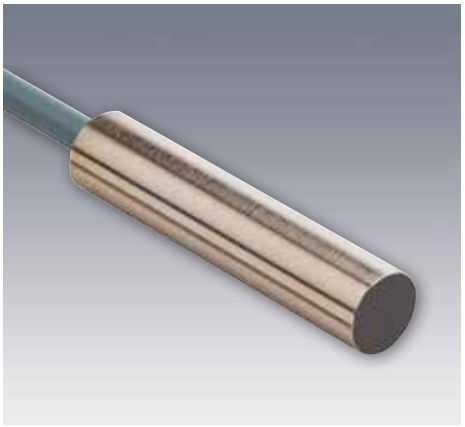
[1] IDT 6 2B-NS-M3 [2] With connected IP 67 plug

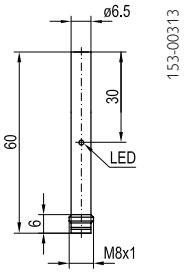
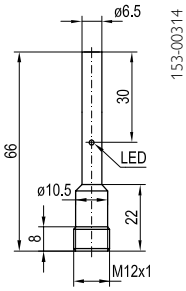
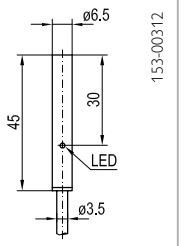
Connection plug, 3-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Type of connection	Part number	Article number
2 mm	PNP	Plug, M8x1, 3-pin	IDT 6-2B-PS-M3	697-01042
2 mm	PNP	Cable, 2 m, 3-wire	IDT 6-2B-PS-K3	697-01040

IS 56

Inductive sensor

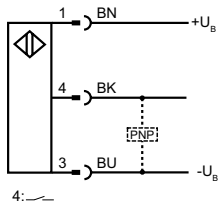
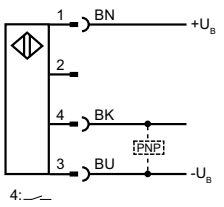
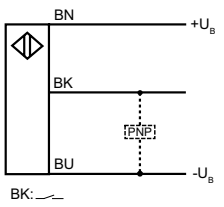


Plug connection (M8x1)	Plug connection (M12x1)	Cable connection
		

Sensor data		Functions	
Switching distance	3 mm	Indicator LED, yellow	Switching output indicator
Repeatability	0.15 mm[1]		
Hysteresis	≤ 10 %[2]		
Reduction factor, Al	0.26		
Reduction factor, Cu	0.18		
Reduction factor, V2A	0.67		
Reduction factor, steel FE 360	1.00		
Reduction factor, brass	0.35		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]	Dimensions	See selection table
No-load current, I_0	≤ 10 mA	Mounting	Quasi-flush
Output current, Ie	≤ 200 mA	Enclosure rating	IP 67[4]
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Brass, chrome-plated
Protective circuits	Reverse-polarity protection, U_B / Short-circuit protection (Q) / induction protection	Material, front surface	PBTP
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Vibration and impact resistance	IEC 60947-5-2 / 7.4

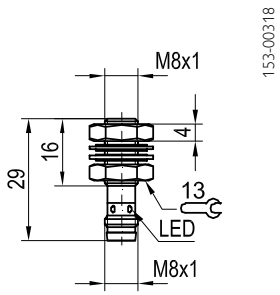
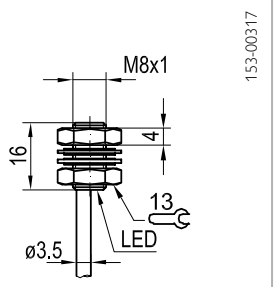
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 3-pin	Connection plug, 4-pin	Connection cable, 3-wire
		

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
3 mm	PNP	Ø 6.5 x 60 mm	Plug, M8x1, 3-pin	IS 56-12	996-50586
3 mm	PNP	Ø 6.5 x 66 mm	Plug, M12x1, 4-pin	IS 56-42	996-09963
3 mm	PNP	Ø 6.5 x 45 mm	Cable, 2 m, 3-wire	IS 56-02	996-09409

IS 48

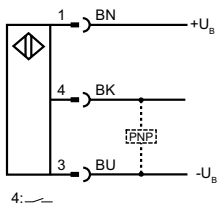
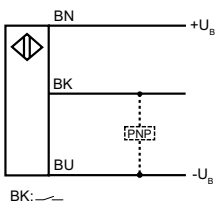
Inductive sensor with stainless steel housing

Plug connection	Cable connection
	

Sensor data		Functions	
Switching distance	1.5 mm	Indicator LED, yellow	Switching output indicator
Repeatability	0.02 mm[1]		
Hysteresis	≤ 10 %[2]		
Reduction factor, Al	0.45		
Reduction factor, Cu	0.40		
Reduction factor, V2A	0.80		
Reduction factor, steel FE 360	1.00		
Reduction factor, brass	0.50		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]	Dimensions (plug device)	M8 x 29 mm
No-load current, I_0	≤ 10 mA	Dimensions (cable device)	M8 x 16 mm
Output current, Ie	≤ 200 mA	Mounting	Flush
Voltage drop, U_D	≤ 2 V at 200 mA	Enclosure rating	IP 67[4]
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection	Material, housing	Stainless steel, V2A
		Material, front surface	PA 66
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	≤ 5000 Hz	Vibration and impact resistance	IEC 60947-5-2 / 7.4

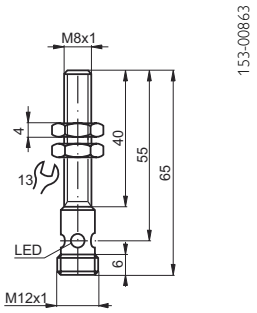
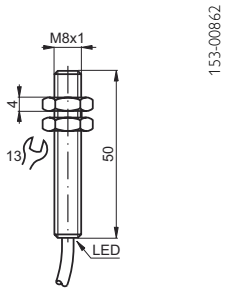
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 3-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Type of connection	Part number	Article number
1.5 mm	PNP	Plug, M8x1, 3-pin	IS 48-12T	996-50624
1.5 mm	PNP	Cable, 2 m, 3-wire	IS 48-02	996-09405

IMT 8-1

Inductive sensor

Plug connection	Cable connection
	

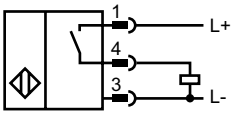
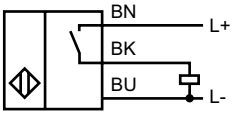
Sensor data	
Switching distance	1.5 mm
Ensured switching distance	0 … 1.215 mm
Reduction factor, Al	0.45
Reduction factor, Cu	0.35
Reduction factor, V2A	0.75

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 15 mA
Operating current, I_L	≤ 100 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1500 Hz

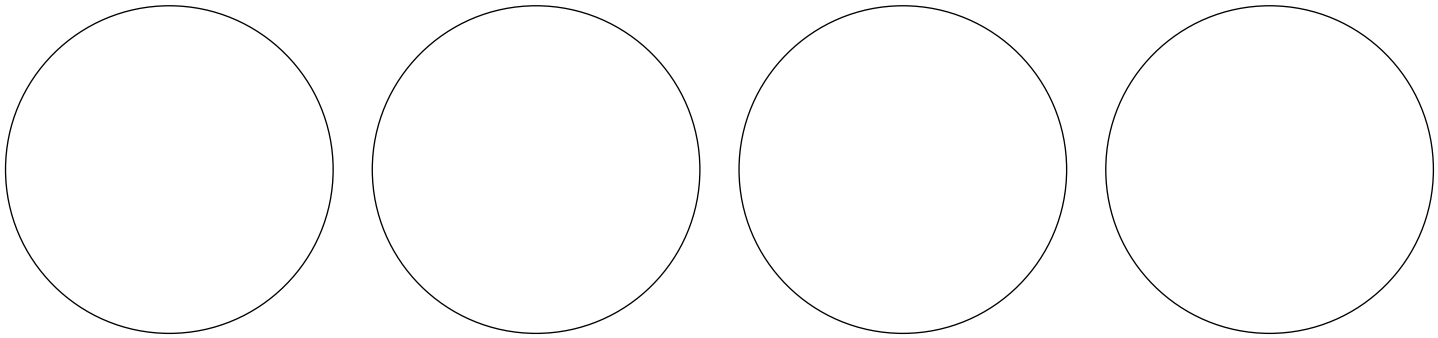
Mechanical data	
Dimensions (plug device)	M8 x 65 mm
Dimensions (cable device)	M8 x 50 mm
Mounting	Flush
Enclosure rating	IP 67[1]
Material, housing (plug device)	Brass, nickel-plated
Material, housing (cable device)	Brass
Material, front surface	LCP
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] With connected IP 67 plug

Connection plug, 3-pin[2]	Connection cable, 3-wire
	

[2] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

Switching distance	Switching output	Type of connection	Part number	Article number
1.5 mm	PNP	Plug, M12x1, 3-pin[2]	IMT 8-1B5-PS-L4	697-01011
1.5 mm	PNP	Cable, 2 m, 3-wire	IMT 8-1B5-PS-K3	697-01009



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IMT 8-2

Inductive sensor

Sensor data	
Switching distance	2 mm
Ensured switching distance	0 … 1.62 mm
Reduction factor, Al	0.45
Reduction factor, Cu	0.35[1] / 0.40[2]
Reduction factor, V2A	0.75 / 0.7[3]

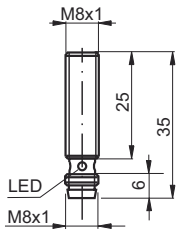
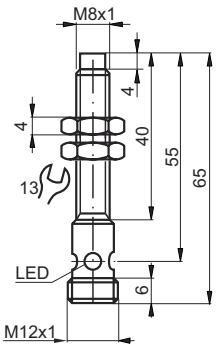
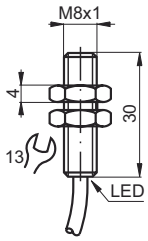
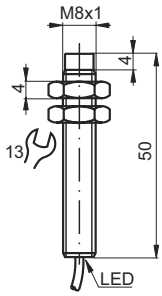
Functions	
Indicator LED, yellow	Switching output indicator

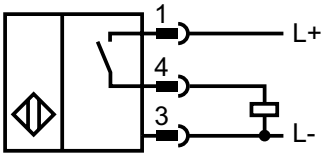
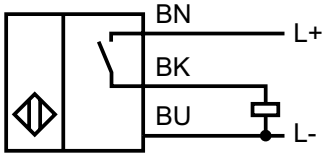
Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC / 5 … 30 V DC[3]
No-load current, I_0	≤ 15 mA
Operating current, I_L	≤ 100 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	See selection table

Mechanical data	
Dimensions (plug device, flush)	M8 x 35 mm
Dimensions (plug device, non-flush)	M8 x 65 mm
Dimensions (cable device, flush)	M8 x 30 mm
Dimensions (cable device non-flush)	M8 x 50 mm
Mounting	Flush / non-flush (see selection table)
Enclosure rating	IP 67[3]
Material, housing	Brass, nickel-plated
Material, front surface (flush)	LCP
Material, front surface (non-flush)	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] Non-flush devices [2] Flush devices [3] With connected IP 67 plug

Switching distance	Mounting	Switching output	Switching frequency, f (ti/tp 1:1)	Type of connection	Part number	Article number
2 mm	Flush	PNP	≤ 3000 Hz	Plug, M8x1, 3-pin	IMT 8-2B-PS-M3	697-01046
2 mm	Flush	PNP	≤ 3000 Hz	Cable, 2 m, 3-wire	IMT 8-2B-PS-K3	697-01044
2 mm	Non-flush	PNP	≤ 1500 Hz	Plug, M12x1, 3-pin[4]	IMT 8-2N-PS-L4	697-01015
2 mm	Non-flush	PNP	≤ 1500 Hz	Cable, 2 m, 3-wire	IMT 8-2N-PS-K3	697-01013

Plug connection (flush)	Plug connection (non-flush)
 153-00881	 153-00865
Cable connection (flush)	**Cable connection (non-flush)**
 153-00880	 153-00864

Connection plug, 3-pin[4]	Connection cable, 3-wire
 154-00294	 154-00294

[4] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

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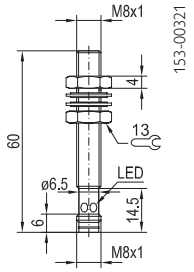
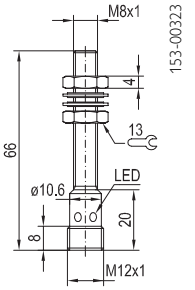
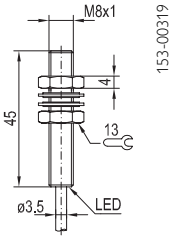
IS 58

Inductive sensor

CE

Plug connection (M8x1)	Plug connection (M12x1)	Cable connection
		

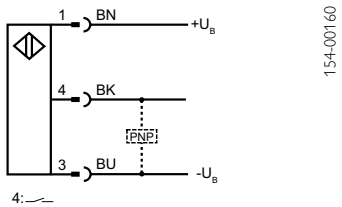
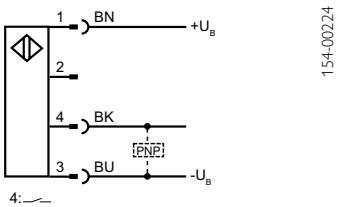
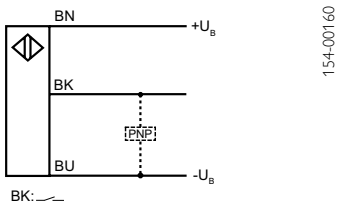
Sensor data	
Switching distance	3 mm
Repeatability	0.15 mm[1]
Hysteresis	≤ 15 %[2]
Reduction factor, Al	0.33
Reduction factor, Cu	0.27
Reduction factor, V2A	0.72
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.41

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz

Mechanical data	
Dimensions	See selection table
Enclosure rating	IP 67[4]
Mounting	Flush
Material, housing	Nickel silver, chrome-plated
Material, front surface	PBTP (PPS)
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

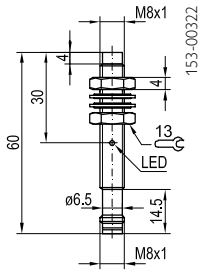
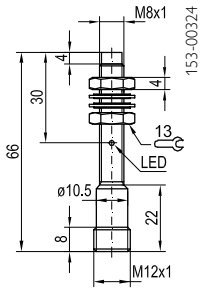
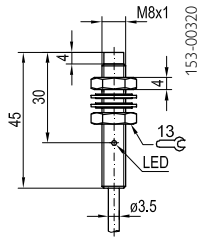
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 3-pin	Connection plug, 4-pin	Connection cable, 3-wire
		

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
3 mm	PNP	M8 x 60 mm	Plug, M8x1, 3-pin	IS 58-12 T	996-50587
3 mm	PNP	M8 x 66 mm	Plug, M12x1, 4-pin	IS 58-42	9996-09965
3 mm	PNP	M8 x 45 mm	Cable, 2 m, 3-wire	IS 58-02	996-09413

IS 58

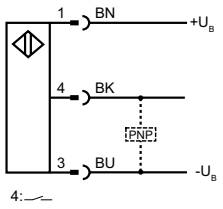
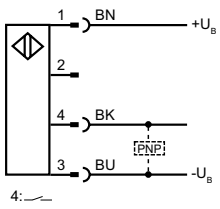
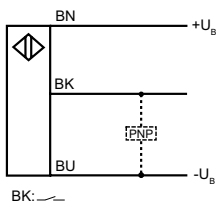
Inductive sensor with expanded switching distance

Plug connection (M8x1)	Plug connection (M12x1)	Cable connection
		

Sensor data		Functions	
Switching distance	6 mm	Indicator LED, yellow	Switching output indicator
Repeatability	≤ 0.3 mm		
Reduction factor, Al	0.47		
Reduction factor, Cu	0.44		
Reduction factor, V2A	0.77		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[1]	Dimensions	See selection table
No-load current, I_0	≤ 10 mA	Enclosure rating	IP 67[2]
Output current, Ie	≤ 200 mA	Mounting	Non-flush
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Brass, chrome-plated
Protective circuits	Short-circuit protection (Q) / overload protection	Material, front surface	PBTP
		Type of connection	See selection table
Power On Delay	50 ms	Ambient temperature: operation	-25 … +70 °C
Switching output, Q	PNP		
Output function	N.O.		
Switching frequency, f (ti/tp 1:1)	≤ 500 Hz		

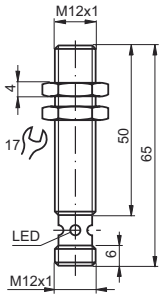
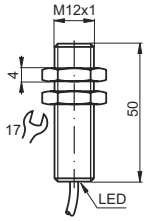
[1] Max. 20 % ripple, within U_B [2] With connected IP 67 plug

Connection plug, 3-pin	Connection plug, 4-pin	Connection cable, 3-wire
		

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
6 mm	PNP	M8 x 60 mm	Plug, M8x1, 3-pin	IS 58-14-S	996-51456
6 mm	PNP	M8 x 66 mm	Plug, M12x1, 4-pin	IS 58-44-S	996-51460
6 mm	PNP	M8 x 45 mm	Cable, 3-wire	IS 58-04-S	996-51461

IMT 12-2

Inductive sensor

Plug connection	Cable connection
 153-00867	 153-00866

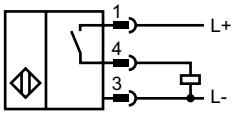
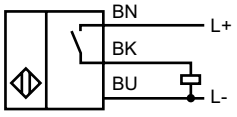
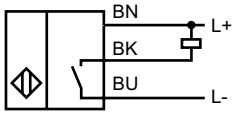
Sensor data	
Switching distance	2 mm
Ensured switching distance	0 … 1.62 mm
Reduction factor, Al	0.30
Reduction factor, Cu	0.20
Reduction factor, V2A	0.70

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 17 mA
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP / NPN (see selection table)
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1500 Hz

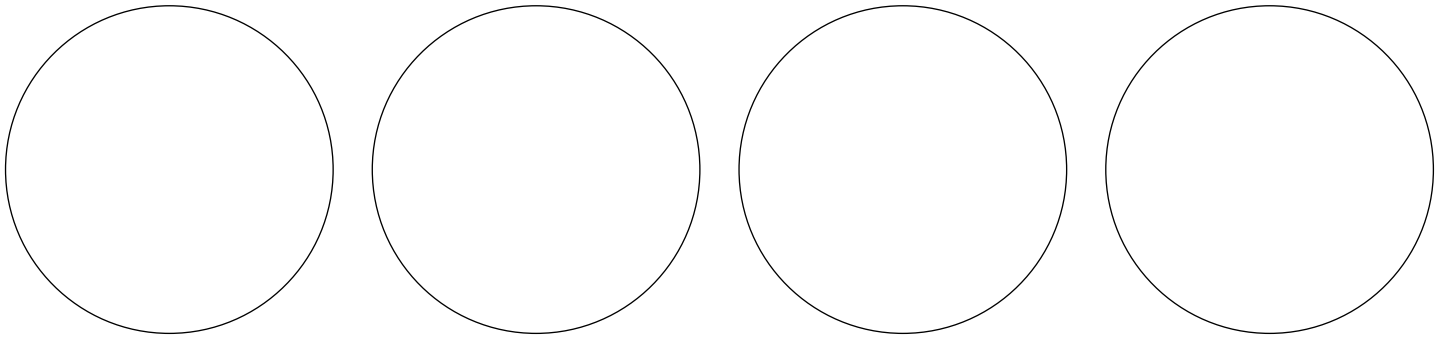
Mechanical data	
Dimensions (plug device)	M12 x 65 mm
Dimensions (cable device)	M12 x 50 mm
Mounting	Flush
Enclosure rating	IP 67[1]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] With connected IP 67 plug

Connection plug, 3-pin (PNP)[2]	Connection cable, 3-wire (PNP)	Connection cable, 3-wire (NPN)
 154-00294	 154-00294	 154-00293

[2] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

Switching distance	Switching output	Type of connection	Part number	Article number
2 mm	PNP	Plug, M12x1, 3-pin[2]	IMT 12-2B-PS-L4	697-01019
2 mm	PNP	Cable, 2 m, 3-wire	IMT 12-2B-PS-K3	697-01017
2 mm	NPN	Cable, 2 m, 3-wire	IMT 12-2B-NS-K3	697-01016



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IMT 12-4

Inductive sensor

Sensor data	
Switching distance	4 mm
Ensured switching distance	0 … 3.24 mm
Reduction factor, Al (flush)	0.45[1] / 0.39[2]
Reduction factor, Cu (flush)	0.35
Reduction factor, V2A (flush)	0.7[1] / 0.75[2]
Reduction factor, Al (non-flush)	0.50
Reduction factor, Cu (non-flush)	0.40
Reduction factor, V2A (non-flush)	0.80

Functions	
Indicator LED, yellow	Switching output indicator

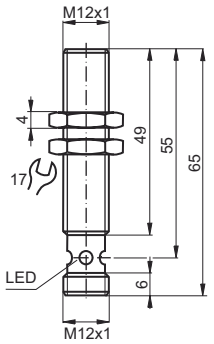
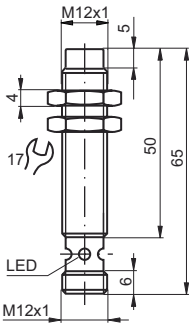
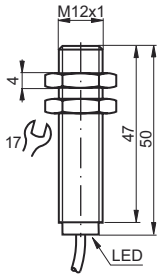
Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 15 mA[3] / ≤ 17 mA[4]
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP / NPN (see selection table)
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	See selection table

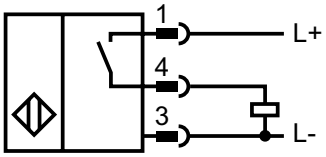
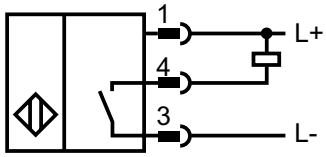
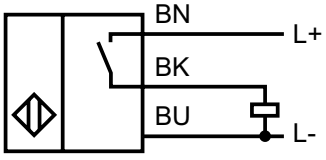
Mechanical data	
Dimensions (plug device)	M12 x 65 mm
Dimensions (cable device)	M12 x 50 mm
Mounting	Flush / non-flush (see selection table)
Enclosure rating	IP 67[5]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] PNP variants [2] NPN variants [3] Flush devices [4] Non-flush devices [5] With connected IP 67 plug

Switching distance	Mounting	Switching output	Switching frequency, f (ti/tp 1:1)	Type of connection	Part number	Article number
4 mm	Flush	PNP	≤ 1000 Hz	Plug, M12x1, 3-pin[6]	IMT 12-4B-PS-L4	697-01050
4 mm	Flush	NPN	≤ 800 Hz	Plug, M12x1, 3-pin[6]	IMT 12-4B-NS-L4	697-01051
4 mm	Flush	PNP	≤ 1000 Hz	Cable, 2 m, 3-wire	IMT 12-4B-PS-K3	697-01048
4 mm	Non-flush	PNP	≤ 1200 Hz	Plug, M12x1, 3-pin[6]	IMT 12-4N-PS-L4	697-01023

Version: 02/2019. Subject to changes; diagrams similar

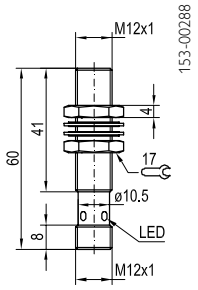
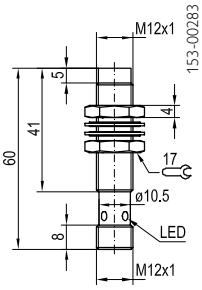
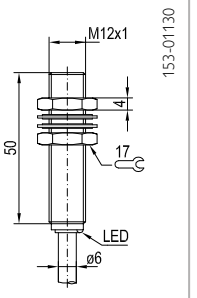
Plug connection (flush)	Plug connection (non-flush)
 153-00883	 153-00869
Cable connection (flush)	
 153-00882	

Connection plug, 3-pin (PNP)[6]	Connection plug, 3-pin (NPN)[6]
 154-00294	 154-00293
Connection cable, 3-wire (PNP)	
 154-00294	

[6] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

IT 12

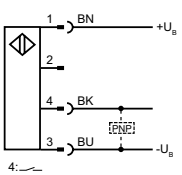
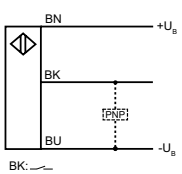
Inductive sensor with expanded switching distance

Plug connection (flush)	Plug connection (non-flush)	Cable connection (flush)
		

Sensor data		Functions	
Switching distance[1]	6 mm	Indicator LED, yellow	Switching output indicator
Switching distance[2]	10 mm		
Repeatability[1]	0.3 mm[4]		
Repeatability[2]	0.5 mm[4]		
Hysteresis	≤ 15 %[5]		
Reduction factor, Al[3]	1.00 / 1.00		
Reduction factor, Cu[3]	0.85 / 0.80		
Reduction factor,V2A 1 mm thick[3]	0.50 / no detection		
Reduction factor,V2A 2 mm thick[3]	0.90 / 0.65		
Reduction factor, steel FE 360[3]	1.00 / 1.00		
Reduction factor, brass[3]	1.30 / 1.40		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[6]	Dimensions	M12 x 60 mm
No-load current, I_0	≤ 10 mA	Mounting	Flush / non-flush (see selection table)
Operating current, I_L	≤ 200 mA	Enclosure rating	IP 69K & IP 68[7]
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Stainless steel,V2A
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection	Material, front surface	Stainless steel,V2A
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	See selection table	Vibration and impact resistance	IEC 60947-5-2 / 7.4

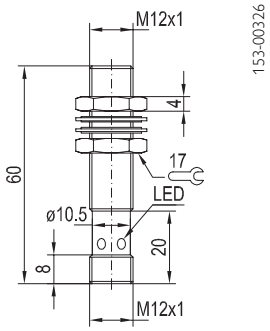
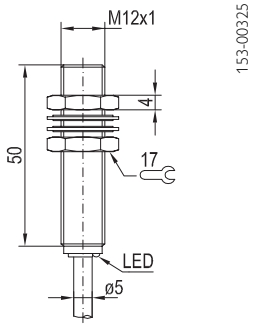
[1] Flush devices [2] Non-flush devices [3] Flush / non-flush devices [4] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [5] Refers to switching distance
[6] Max. 20 % ripple, within U_B [7] With connected IP 68 / IP 69K plug

Connectionplug, 4-pin	Connection cable, 3-wire
	

Switching distance	Mounting	Switching output	Switching frequency, f (ti/tp 1:1)	Type of connection	Part number	Article number
6 mm	Flush	PNP	≤ 600 Hz	Plug, M12x1, 4-pin	IT 12 BM-PSL4	996-51480
10 mm	Non-flush	PNP	≤ 400 Hz	Plug, M12x1, 4-pin	IT 12 NBM-PSL4	996-51481
6mm	Flush	PNP	≤ 600 Hz	Cable, 2 m, 3-wire	IT 12 BM-PSK3	996-51487

IS 512

Inductive sensor with expanded switching distance

Plug connection	Cable connection
	

Sensor data	
Switching distance	6 mm
Repeatability	0.3 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.30
Reduction factor, Cu	0.25
Reduction factor, V2A	0.70
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.40

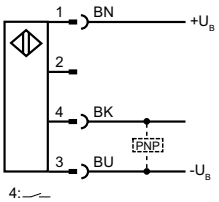
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP / NPN (see selection table)
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 800 Hz

Mechanical data	
Dimensions	See selection table
Enclosure rating	IP 67[4]
Mounting	Quasi-flush
Material, housing	Brass, chrome-plated
Material, front surface	PBTP (PPS)
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

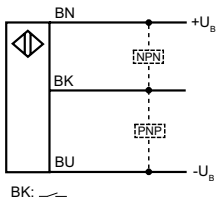
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 4-pin



154-00224

Connection cable, 3-wire

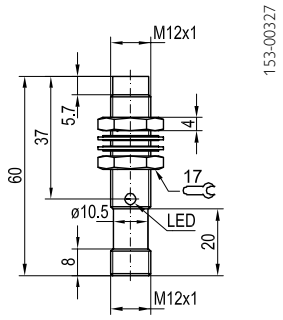
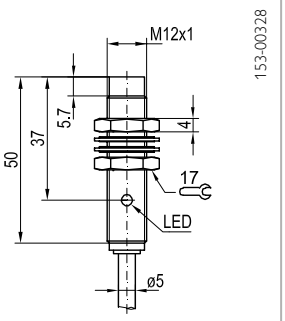


154-00163

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
6 mm	PNP	M12 x 60 mm	Plug, M12x1, 4-pin	IS 512-42	996-09969
6 mm	PNP	M12 x 50 mm	Cable, 2 m, 3-wire	IS 512-02	996-09421
6 mm	NPN	M12 x 50 mm	Cable, 2 m, 3-wire	IS 512-01	996-09420

IS 512

Inductive sensor with expanded switching distance

Plug connection	Cable connection
	

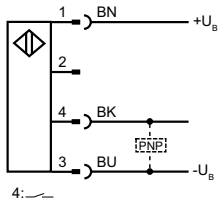
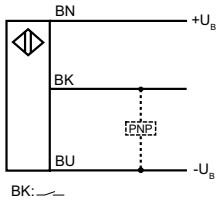
Sensor data	
Switching distance	10 mm
Repeatability	≤ 0.3 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.49
Reduction factor, Cu	0.45
Reduction factor, V2A	0.77
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.56

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 400 Hz

Mechanical data	
Dimensions	See selection table
Enclosure rating	IP 67[4]
Mounting	Non-flush
Material, housing	Brass, chrome-plated
Material, front surface	PBTP (PPS)
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

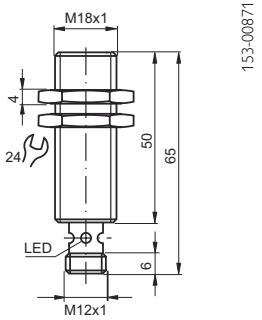
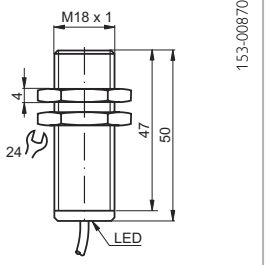
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 4-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
10 mm	PNP	M12 x 60 mm	Plug, M12x1, 4-pin	IS 512-44-S	996-51449
10 mm	PNP	M12 x 50 mm	Cable, 2 m, 3-wire	IS 512-04-S	996-51458

IMT 18-5

Inductive sensor

Plug connection	Cable connection
	

Sensor data	
Switching distance	5 mm
Ensured switching distance	0 … 4.05 mm
Reduction factor, Al	0.30
Reduction factor, Cu	0.30
Reduction factor, V2A	0.70

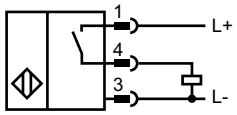
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 20 mA
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 800 Hz

Mechanical data	
Dimensions (plug device)	M18 x 65 mm
Dimensions (cable device)	M18 x 50 mm
Mounting	Flush
Enclosure rating	IP 67[1]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] With connected IP 67 plug

Connection plug, 3-pin[2]



[2] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

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Switching distance	Switching output	Type of connection	Part number	Article number
5 mm	PNP	Plug, M12x1, 3-pin[2]	IMT 18-5B-PS-L4	697-01027

IMT 18-8

Inductive sensor

Sensor data	
Switching distance	8 mm
Ensured switching distance	0 … 6.48 mm
Reduction factor, Al	0.45[1] / 0.50[2]
Reduction factor, Cu	0.40
Reduction factor, V2A	0.70

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 15 mA[1] / ≤ 18 mA[2]
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 500 Hz

Mechanical data	
Dimensions (plug device)	M18 x 65 mm
Dimensions (cable device)	M18 x 50 mm
Mounting	Flush / non-flush (see selection table)
Enclosure rating	IP 67[3]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] Flush devices [2] Non-flush devices [3] With connected IP 67 plug

Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
8 mm	Flush	PNP	Plug, M12x1, 3-pin[4]	IMT 18-8B-PS-L4	697-01054
8 mm	Flush	PNP	Cable, 2 m, 3-wire	IMT 18-8B-PS-K3	697-01052
8 mm	Non-flush	PNP	Plug, M12x1, 3-pin[4]	IMT 18-8N-PS-L4	697-01031

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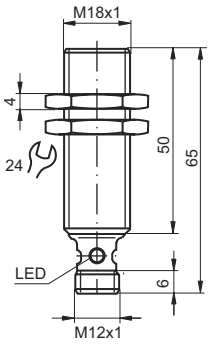
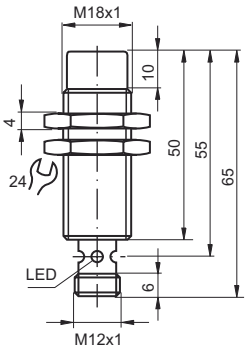
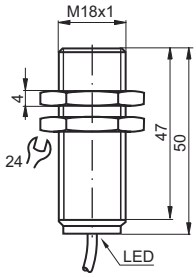
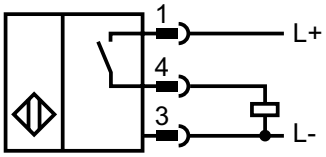
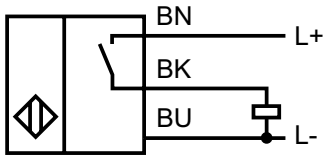
Version: 02/2019. Subject to changes; diagrams similar

Plug connection (flush)	Plug connection (non-flush)
 153-00885	 153-00873
Cable connection (flush)	
 153-00884	

Connection plug, 3-pin[4]	Connection cable, 3-wire
 154-00294	 154-00294

[4] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

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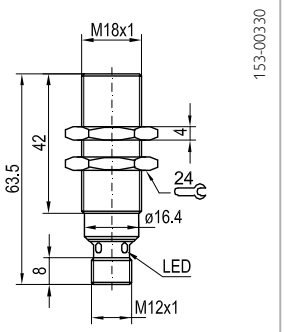
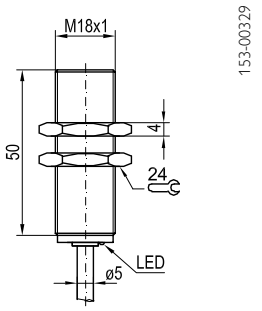
IS 518

Inductive sensor with expanded switching distance

Plug connection	Cable connection
	

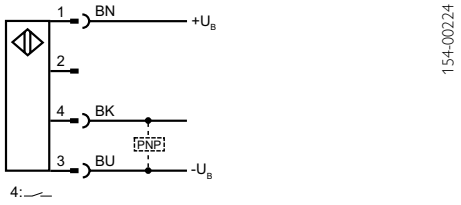
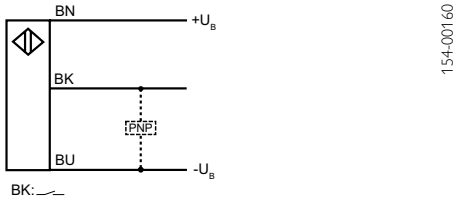
Sensor data	
Switching distance	12 mm
Repeatability	0.6 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.26
Reduction factor, Cu	0.20
Reduction factor, V2A	0.63
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.33

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 500 Hz

Mechanical data	
Dimensions	See selection table
Mounting	Quasi-flush
Enclosure rating	IP 67[4]
Material, housing	Brass, chrome-plated
Material, front surface	PBTP
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

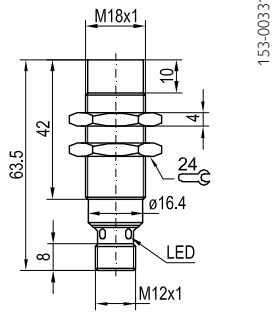
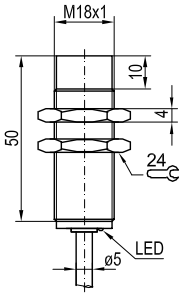
[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 4-pin	Connection cable, 3-wire
	

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
12 mm	PNP	M18 x 63.5 mm	Plug, M12x1, 4-pin	IS 518-42	996-09973
12 mm	PNP	M18 x 50 mm	Cable, 2 m, 3-wire	IS 518-02	996-09429

IS 518

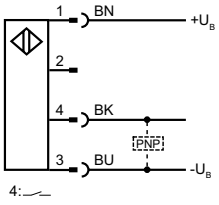
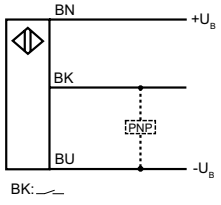
Inductive sensor with expanded switching distance

Plug connection	Cable connection
 153-00331	 153-00332

Sensor data		Functions	
Switching distance	20 mm	Indicator LED, yellow	Switching output indicator
Reduction factor, Al	0.40		
Reduction factor, Cu	0.35		
Reduction factor,V2A	0.66		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[1]	Dimensions	See selection table
No-load current, I_0	≤ 10 mA	Mounting	Non-flush
Output current, Ie	≤ 200 mA	Enclosure rating	IP 67[2]
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Brass, nickel-plated
Protective circuits	Short-circuit protection (Q) / overload protection	Type of connection	See selection table
Power On Delay	100 ms	Ambient temperature: operation	-25 … +70 °C
Switching output, Q	PNP		
Output function	N.O.		
Switching frequency, f (ti/tp 1:1)	≤ 200 Hz		

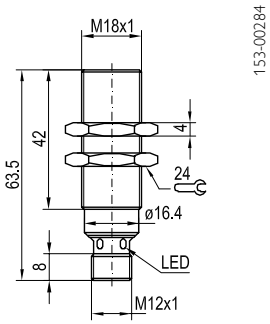
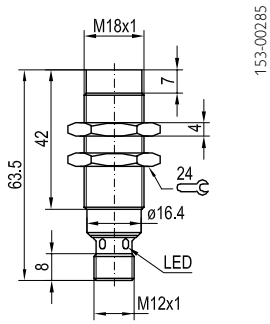
[1] Max. 20 % ripple, within U_B [2] With connected IP 67 plug

Connection plug, 4-pin	Connection cable, 3-wire
 154-00224	 154-00160

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
20 mm	PNP	M18 x 63.5 mm	Plug, M12x1, 4-pin	IS 518-44-S	996-51453
20 mm	PNP	M18 x 50 mm	Cable, 3-wire	IS 518-04-S	996-51450

IT 18

Inductive sensor with expanded switching distance

Plug connection (flush)	Plug connection (non-flush)
	

Sensor data	
Switching distance[1]	10 mm
Switching distance[2]	20 mm
Repeatability[1]	0.5 mm[4]
Repeatability[2]	1 mm[4]
Hysteresis	≤ 15 %[5]
Reduction factor, Al[3]	1.00 / 1.00
Reduction factor, Cu[3]	0.80 / 0.90
Reduction factor,V2A 1 mm thick[3]	0.50 / 0.30
Reduction factor,V2A 2 mm thick[3]	0.90 / 0.60
Reduction factor, steel FE 360[3]	1.00 / 1.00
Reduction factor, brass[3]	1.20 / 1.35

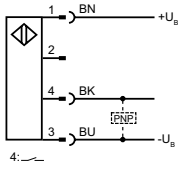
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[6]
No-load current, I_0	≤ 10 mA
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 200 Hz

Mechanical data	
Dimensions	M18 x 63,5 mm
Mounting	Flush / non-flush (see selection table)
Enclosure rating	IP 69K & IP 68[7]
Material, housing	Stainless steel,V2A
Material, front surface	Stainless steel,V2A
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] Flush devices [2] Non-flush devices [3] Flush / non-flush devices [4] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [5] Refers to switching distance
[6] Max. 20 % ripple, within U_B [7] With connected IP 68 / IP 69K plug

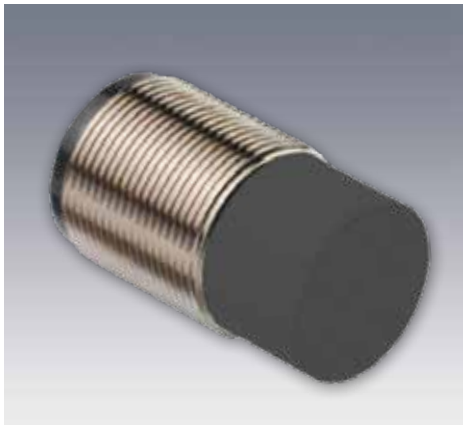
Connection, 4-pin

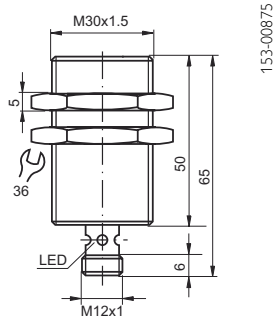
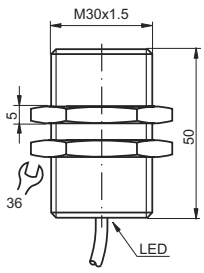


Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
10 mm	Flush	PNP	Plug, M12x1, 4-pin	IT 18 BM-PSL4	996-51482
20 mm	Non-flush	PNP	Plug, M12x1, 4-pin	IT 18 NBM-PSL4	996-51483

IMT 30-10

Inductive sensor



Plug connection	Cable connection
	

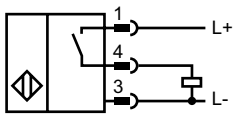
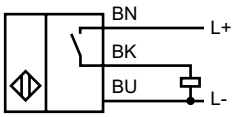
Sensor data	
Switching distance	10 mm
Ensured switching distance	0 … 8.1 mm
Reduction factor, Al	0.30
Reduction factor, Cu	0.30
Reduction factor, V2A	0.80

Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 20 mA
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 200 Hz

Mechanical data	
Dimensions (plug device)	M30 x 65 mm
Dimensions (cable device)	M30 x 50 mm
Mounting	Flush
Enclosure rating	IP 67[1]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] With connected IP 67 plug

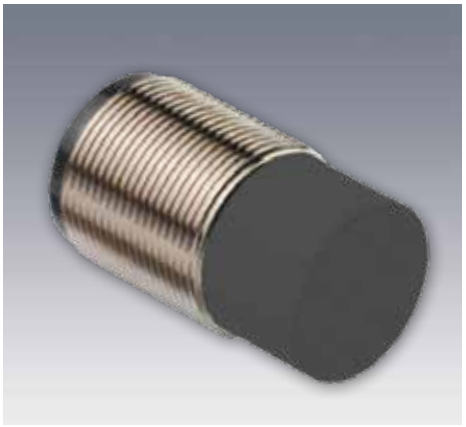
Connection plug, 3-pin[2]	Connection cable, 3-wire
	

[2] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

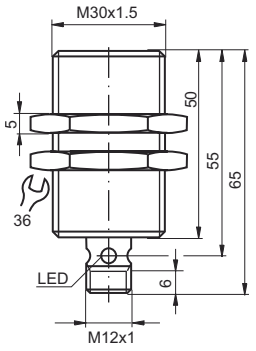
Switching distance	Switching output	Type of connection	Part number	Article number
10 mm	PNP	Plug, M12x1, 3-pin[2]	IMT 30-10B-PS-L4	697-01035
10 mm	PNP	Cable, 2 m, 3-wire	IMT 30-10B-PS-K3	697-01033

IMT 30-15

Inductive sensor



Plug connection (flush)



Sensor data	
Switching distance	15 mm
Ensured switching distance	0 … 12.15mm
Reduction factor, Al	0.30[1] / 0.50[2]
Reduction factor, Cu	0.30[1] / 0.40[2]
Reduction factor, V2A	0.75[1] / 0.80[2]

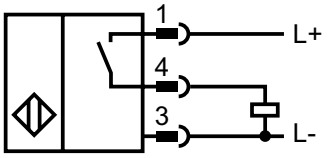
Functions	
Indicator LED, yellow	Switching output indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
No-load current, I_0	≤ 15 mA
Operating current, I_L	≤ 200 mA
Voltage drop, U_D	≤ 3 V
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 200 Hz

Mechanical data	
Dimensions (plug device)	M30 x 65 mm
Dimensions (cable device)	M30 x 50 mm
Mounting	Flush / non-flush (see selection table)
Enclosure rating	IP 67[3]
Material, housing	Brass, nickel-plated
Material, front surface	PBT
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C

[1] Flush devices [2] Non-flush devices [3] With connected IP 67 plug

Connection plug, 3-pin[4]



[4] Plug M12x1 3-pin is compatible with M12x1 4- or 5-pin sockets

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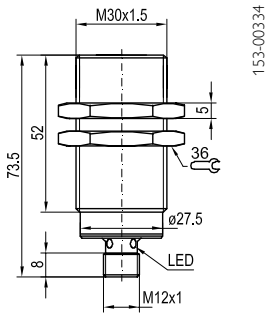
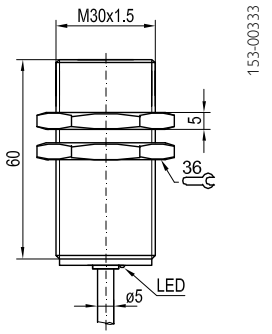
Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
15 mm	Flush	PNP	Plug, M12x1, 3-pin[5]	IMT 30-15B-PS-L4	697-01058

IS 530

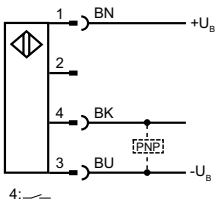
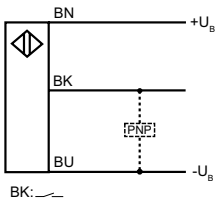
Inductive sensor with expanded switching distance

Plug connection	Cable connection
	

Sensor data		Functions	
Switching distance	22 mm	Indicator LED, yellow	Operating voltage indicator
Repeatability	1.1 mm[1]		
Hysteresis	≤ 10 %[2]		
Reduction factor, Al	0.40		
Reduction factor, Cu	0.35		
Reduction factor, V2A	0.66		
Reduction factor, steel FE 360	1.00		
Reduction factor, brass	0.35		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]	Dimensions	See selection table
No-load current, I_0	≤ 10 mA	Mounting	Quasi-flush
Output current, Ie	≤ 200 mA	Enclosure rating	IP 67[4]
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Brass, chrome-plated
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection	Material, front surface	PBTP
		Type of connection	See selection table
Switching output, Q	PNP / NPN (see selection table)	Ambient temperature: operation	-25 … +70 °C
Output function	N.O.	Vibration and impact resistance	IEC 60947-5-2 / 7.4
Switching frequency, f (ti/tp 1:1)	≤ 200 Hz		

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 4-pin	Connection cable, 3-wire
	

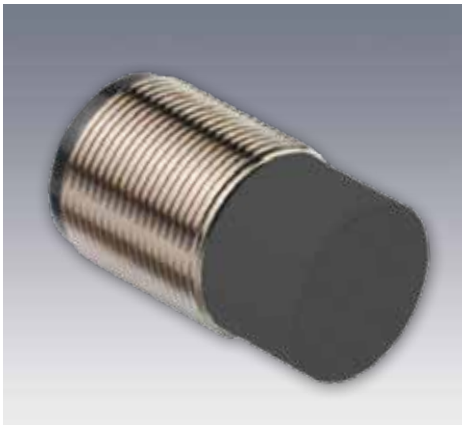
154-00224

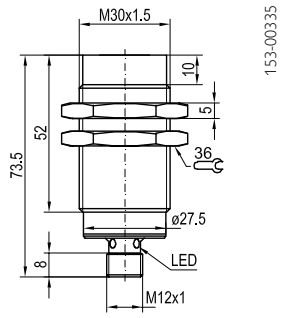
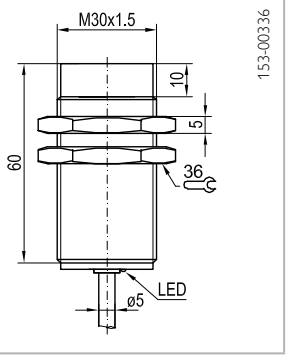
154-00160

Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
22 mm	PNP	M30 x 73.5 mm	Plug, M12x1, 4-pin	IS 530-42	996-09905
22 mm	PNP	M30 x 60 mm	Cable, 2 m, 3-wire	IS 530-02	996-09437

IS 530

Inductive sensor with expanded switching distance



Plug connection	Cable connection
	

Sensor data	
Switching distance	40 mm
Repeatability	2 mm[1]
Hysteresis	≤ 10 %[2]
Reduction factor, Al	0.42
Reduction factor, Cu	0.37
Reduction factor, V2A	0.78
Reduction factor, steel FE 360	1.00
Reduction factor, brass	0.47

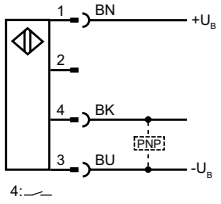
Functions	
Indicator LED, yellow	Operating voltage indicator

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Voltage drop, U_D	≤ 2 V at 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection
Switching output, Q	PNP
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 100 Hz

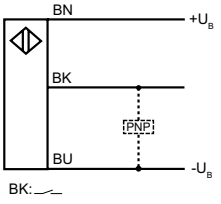
Mechanical data	
Dimensions	See selection table
Mounting	Non-flush
Enclosure rating	IP 67[4]
Material, housing	Brass, chrome-plated
Material, front surface	PBTP
Type of connection	See selection table
Ambient temperature: operation	-25 … +70 °C
Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [2] Refers to switching distance [3] Max. 20 % ripple, within U_B [4] With connected IP 67 plug

Connection plug, 4-pin



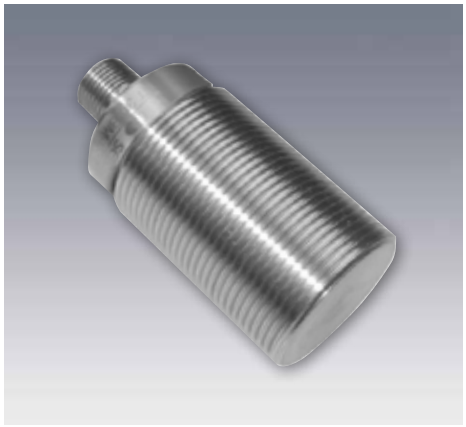
Connection cable, 3-wire

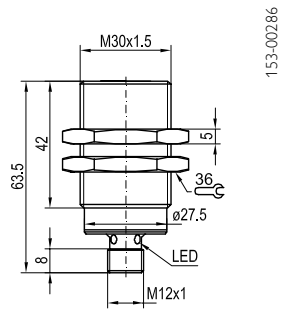
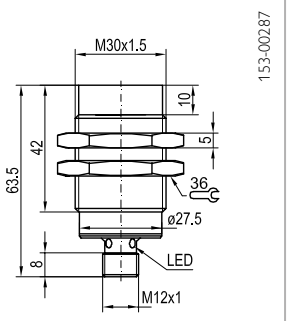


Switching distance	Switching output	Dimensions	Type of connection	Part number	Article number
40 mm	PNP	M30 x 73.5 mm	Plug, M12x1, 4-pin	IS 530-44-S	996-51454
40 mm	PNP	M30 x 60 mm	Cable, 2 m, 3-wire	IS 530-04-S	996-51452

IT 30

Inductive sensor with expanded switching distance



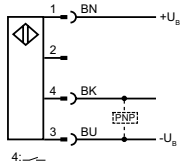
Plug connection (flush)	Plug connection (non-flush)
	

Sensor data		Functions	
Switching distance[1]	20 mm	Indicator LED, yellow	Switching output indicator
Switching distance[2]	40 mm		
Repeatability[1]	1 mm[4]		
Repeatability[2]	2 mm[4]		
Hysteresis	≤ 15 %[5]		
Reduction factor, Al[3]	1.00 / 1.00		
Reduction factor, Cu[3]	0.90 / 0.90		
Reduction factor, V2A 1 mm thick[3]	0.35 / no detection		
Reduction factor, V2A 2 mm thick[3]	0.70 / 0.25		
Reduction factor, steel FE 360[3]	1.00 / 1.00		
Reduction factor, brass[3]	1.30 / 1.20		

Electrical data		Mechanical data	
Operating voltage, $+U_B$	10 … 30 V DC[6]	Dimensions	M30 x 63.5 mm
No-load current, I_0	≤ 10 mA	Mounting	Flush / non-flush (see selection table)
Operating current, I_L	≤ 200 mA	Enclosure rating	IP 69K & IP 68[7]
Voltage drop, U_D	≤ 2 V at 200 mA	Material, housing	Stainless steel, V2A
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q) / induction protection	Material, front surface	Stainless steel, V2A
Switching output, Q	PNP	Type of connection	See selection table
Output function	N.O.	Ambient temperature: operation	-25 … +70 °C
Switching frequency, f (ti/tp 1:1)	See selection table	Vibration and impact resistance	IEC 60947-5-2 / 7.4

[1] Flush devices [2] Non-flush devices [3] Flush / non-flush devices [4] U_B = 20 … 30 V DC, T_A = 23 °C ± 5 °C [5] Refers to switching distance
[6] Max. 20 % ripple, within U_B [7] With connected IP 68 / IP 69K plug

Connection, 4-pin



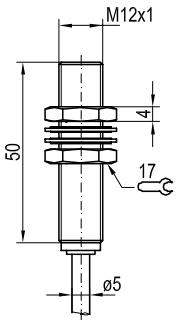
Switching distance	Mounting	Switching output	Switching frequency, f (ti/tp 1:1)	Type of connection	Part number	Article number
20 mm	Flush	PNP	≤ 100 Hz	Plug, M12x1, 4-pin	IT 30 BM-PSL4	996-51484
40 mm	Non-flush	PNP	≤ 90 Hz	Plug, M12x1, 4-pin	IT 30 NBM-PSL4	996-51485

IS 512-02 AI

Inductive sensor with analogue output

CE

Cable connection



153-00337

Sensor data

Switching distance	0 … 6 mm
Repeatability	≤ 0.3 mm

Electrical data

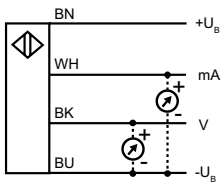
Operating voltage, $+U_B$	15 … 30 V DC[1]
No-load current, I_0	≤ 10 mA
Min. load resistance	0 Ω
Max. load resistance	200 Ω
Protective circuits	Short-circuit protection (Q) / overload protection
Analogue output	0 … 10 V / 4 … 20 mA

Mechanical data

Dimensions	M12 x 50 mm
Enclosure rating	IP 67[2]
Mounting	Quasi-flush
Material, housing	Brass, chrome-plated
Type of connection	See selection table
Ambient temperature: operation	-10 … +60 °C

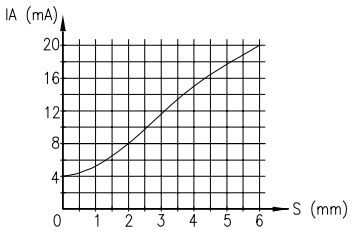
[1] Max. 10 % ripple, within U_B [2] With connected IP 67 plug

Connection, 4-wire



154-00215

Characteristic output curve



091-13282

Switching distance	Analogue output	Type of connection	Part number	Article number
6 mm	0 … 10 V / 4 … 20 mA	Cable, 4-wire	IS 512-02 AI	996-51479

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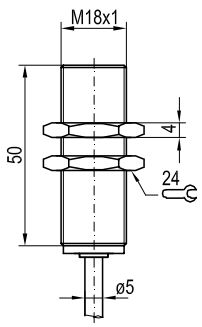
Version: 02/2019. Subject to changes; diagrams similar

IS 518-02 A

Inductive sensor with analogue output

CE

Cable connection



153-00338

Sensor data

Switching distance	0 … 10 mm
Repeatability	≤ 0.3 mm

Electrical data

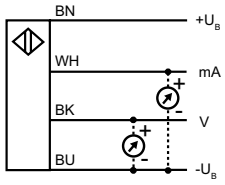
Operating voltage, $+U_B$	15 … 30 V DC[1]
No-load current, I_0	≤ 10 mA
Min. load resistance	0 Ω
Max. load resistance	200 Ω
Protective circuits	Short-circuit protection (Q) / overload protection
Analogue output	0 … 10 V / 4 … 20 mA

Mechanical data

Dimensions	M18 x 50 mm
Mounting	Quasi-flush
Enclosure rating	IP 67[2]
Material, housing	Brass, chrome-plated
Type of connection	See selection table
Ambient temperature: operation	-10 … +60 °C

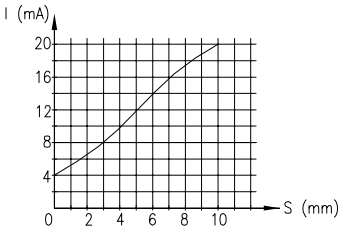
[1] Max. 10 % ripple, within U_B [2] With connected IP 67 plug

Connection, 4-wire



154-00215

Characteristic output curve



091-13294

Switching distance	Analogue output	Type of connection	Part number	Article number
10 mm	0 … 10 V / 4 … 20 mA	Cable, 4-wire	IS 518-02 A	996-09435

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