



# POSITAL

## FRABA

### TILTIX Inclinometer

**AKS-180-E-C901-HK2-PV**

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#### General Specifications

Application	Dynamic Inclinometer 2-Axes with Pitch and Roll
Measurement Range	Pitch $\pm 85^\circ$ , Roll $\pm 180^\circ$
Absolute Accuracy	$\pm 0.30^\circ$
Resolution	$0.01^\circ$
Repeatability	$\leq 0.05^\circ$
Dynamic Accuracy	$\pm 0.50^\circ$
Cycle Time Base Sensor	5 ms
Hysteresis	$\leq 0.05^\circ$
Device Orientation	Horizontal

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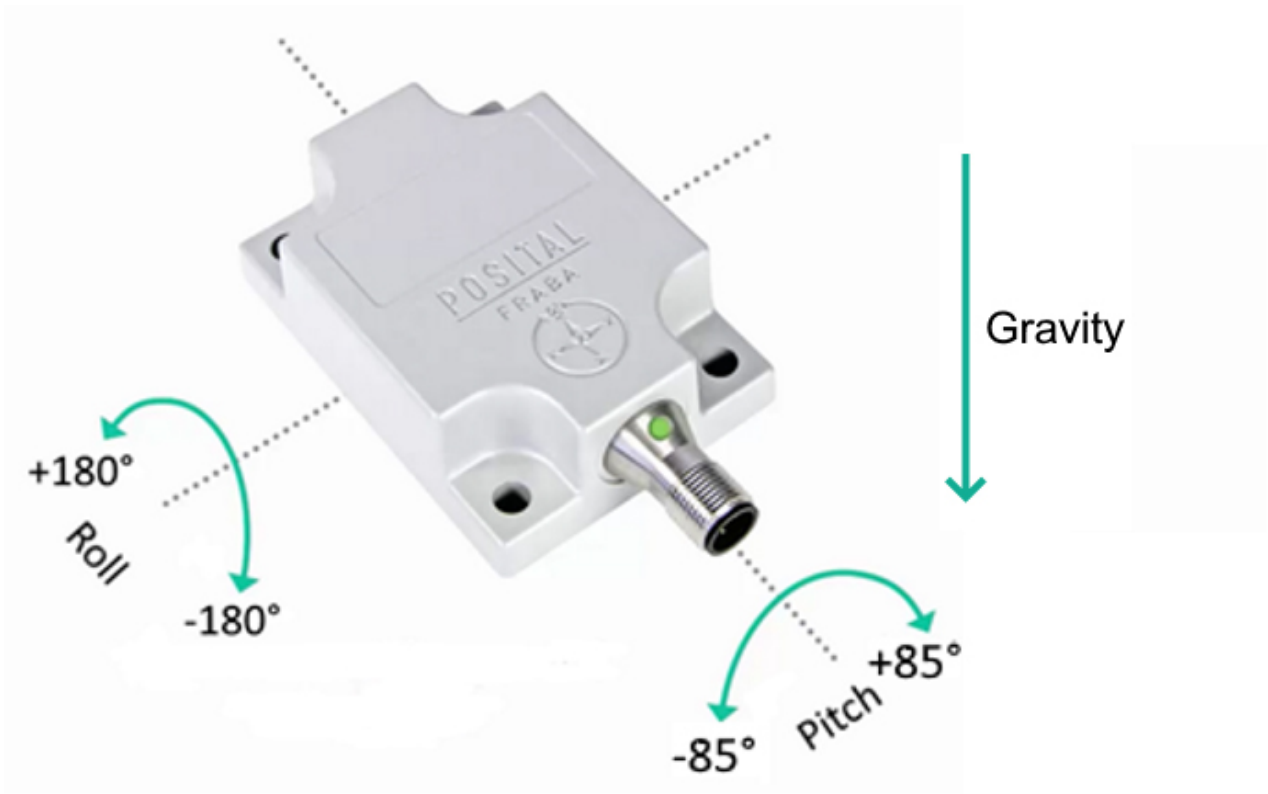
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### Electrical Specifications

Supply Voltage	9 - 30 VDC
Current Consumption	≤ 65 mA @ 10 V DC, ≤ 60 mA @ 24 V DC
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 61000-6-2
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
MTTF	260 years @ 40 °C

### Environmental Specifications

Operating Temperature	-40 °C (-40 °F) - +75 °C (+167 °F)
Storage Temperature	-40 °C (-40 °F) - +85 °C (+185 °F)
Temperature Gradient	0.008°/ K
Protection Class	IP68/IP69K
Shock Resistance	≤ 100 g (half sine 6 ms, EN 60068-2-27)
Vibration Resistance	1.5 mm (10 Hz - 58 Hz) & ≤ 20 g (58 Hz to 2000 Hz)



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### Mechanical Specifications

Housing Material	Die-Cast Aluminum Alloy
Potting Material	PUR (Polyurethane)
Weight	220 g (0.49 lb)

### Interface

Interface	J1939
Settling Time	50 ms
Output Driver	Transceiver (ISO 11898), Galvanically Isolated by Opto-Coupl
Transmission Rate	125 KBaud, 250 KBaud, 500 KBaud
Default Transmission Rate	250 kBaud
Default Node ID	C0h
Default PGN	PGN 65280 (Pitch, Roll, Acceleration x, Acceleration y) + PGN 65281 (Acceleration z, Gyro x, Gyro y, Gyro z)

### Electrical Connection

Connection Type	Connector M12
Connector	M12, Male, 5 pin, a coded

### Product Life Cycle

Product Life Cycle	New
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### Certification

Approval	CE + E1
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### Connection Plan

SIGNAL	PIN NUMBER
Power Supply	2
GND	3
CAN High	4
CAN Low	5
CAN GND	1

### Dimensional Drawing

[2D Drawing](#)

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### Accessories

#### Connectors & Cables

5m PUR Cable, 5pin, A-Coded, f  
2m PUR Cable, 5pin, A-Coded, f  
10m PUR Cable, 5pin, A-Coded, f  
POS M12 5pin-A Female+5m PUR Cable  
POS M12 5pin-A Female+2m PUR Cable  
POS M12 5pin-A Female+10m PUR Cable  
10m PUR Cable, 5pin, A-Coded, f IP69K  
M12, 5pin A-Coded, Female  
More

**Got questions? Need an individual solution? We are here to help!**

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