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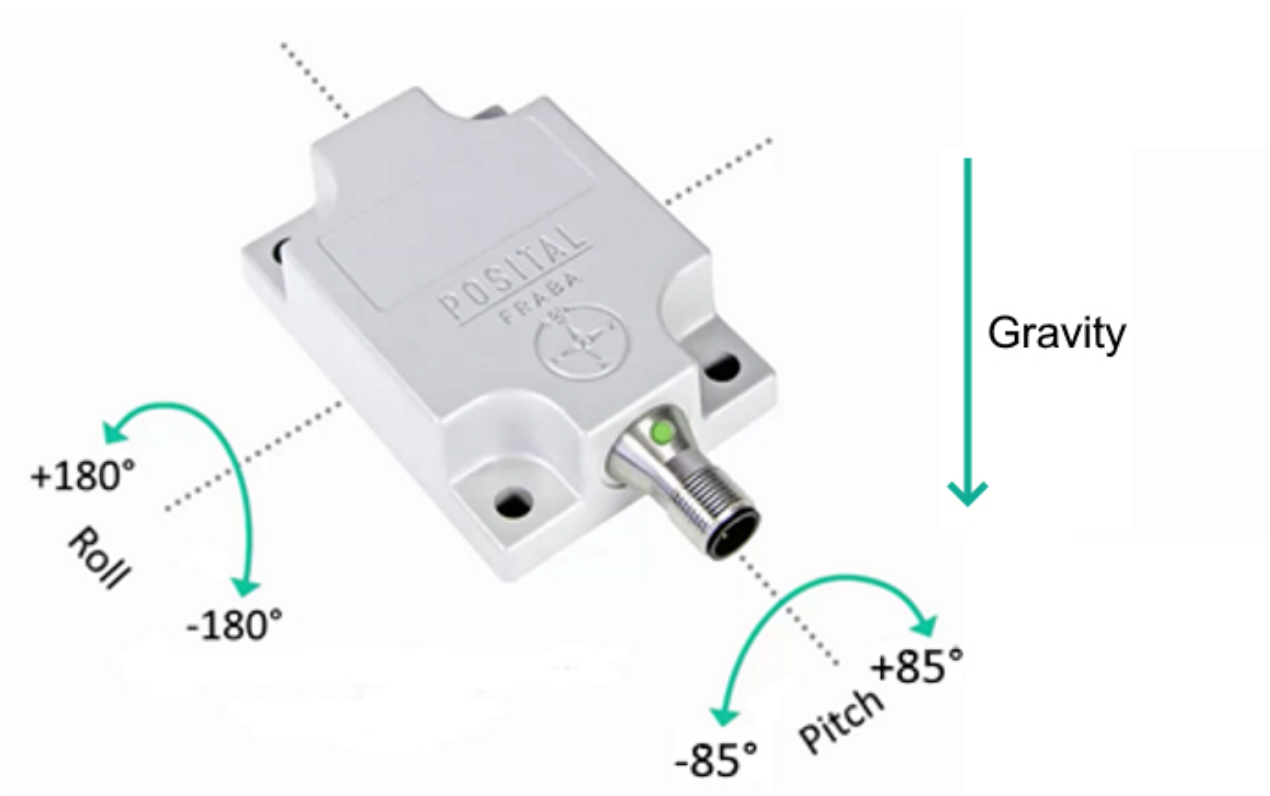
FRABA

TILTIX Inclinometer

AKS-180-E-C901-HK2-PL

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°
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



Electrical Specifications

Supply Voltage	9 - 30 VDC
Current Consumption	$\leq 65 \text{ mA @ } 10 \text{ V DC}$, $\leq 60 \text{ mA @ } 24 \text{ V DC}$

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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)

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 2 x M12 (m+m)
Connector 1	M12, Male, 5 pin, a coded
Connector 2	M12, Male, 5 pin, a coded

Product Life Cycle

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Product Life Cycle New

Certification

Approval CE + E1

Connection Plan

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

Dimensional Drawing

[2D Drawing](#)

Accessories

Connectors & Cables

M12, 5pin A-Coded, Male

5m PUR Cable, 5pin, A-Coded, f

2m PUR Cable, 5pin, A-Coded, f

Angled M12, 5pin A-Coded, Female

2m PUR Cable, 5pin, A-Coded, m

10m PUR Cable, 5pin, A-Coded, f

5m PUR Cable, 5pin, A-Coded, m

POS M12 5pin-A Female+5m PUR Cable

10m PUR Cable, 5pin, A-Coded, m

POS M12 5pin-A Female+2m PUR Cable

POS M12 5pin-A Female+10m PUR Cable

M12, 5pin A-Coded, Female

More

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

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