



TILTIX Inclinometer

AKS-090-2-CA01-HK2-PW

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General Specifications

Application	Dynamic Inclinometer 2-Axes
Measurement Range	$\pm 90^\circ$
Absolute Accuracy	0.30°
Resolution	0.01°
Repeatability	0.05°
Dynamic Accuracy	0.50°
Cycle Time Base Sensor	5 ms
Hysteresis	0.05°

Electrical Specifications

Supply Voltage	9 - 30 VDC
Current Consumption	$\leq 65 \text{ mA @ } 10 \text{ V DC}, \leq 60 \text{ mA @ } 24 \text{ V DC}$
EMC: Emitted Interference	DIN EN 61000-6-4
EMC: Noise Immunity	DIN EN 61000-6-2
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes

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

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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)

Certificates / Lifetime

MTTF	260 years @ 40 °C
Certificates	CE

Interface

Interface	CANopen
Settling Time	50 ms
Output Driver	Transceiver (ISO 11898), Galvanically Isolated by Opto-Coupl
Profile	DS-410
Transmission Rate	min. 20 kBaud, max. 1 MBaud
Default Transmission Rate	125 kBaud
Default Node ID	1h

Electrical Connection

Connection Type	Connector 2 x M12
Connector 1	M12, Male, 5 pin, a coded
Connector 2	M12, Female, 5 pin, a coded

Product Life Cycle

Product Life Cycle	New
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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

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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

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

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

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

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

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

M12, 5pin A-Coded, Female

More

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All dimension in [inch] mm. This drawing and the information contained is for general presentation purposes only. Please refer to the "Download" section for detailed technical drawings. © FRABA B.V., All rights reserved. We do not assume responsibility for technical inaccuracies or omissions. Specifications are subject to change without notice.

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