



POSITAL

FRABA

TILTIX Inclinometer

AKS-180-F-C901-VK2-PW

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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° |
| Repeatability | $\leq 0.05^\circ$ |
| Dynamic Accuracy | $\pm 0.50^\circ$ |
| Cycle Time Base Sensor | 5 ms |
| Hysteresis | $\leq 0.05^\circ$ |
| Device Orientation | Vertical |

Sold & Serviced By:



Canadian and International Sales

ELECTROMATE

877-737-8698

sales@electromate.com

www.electromate.com

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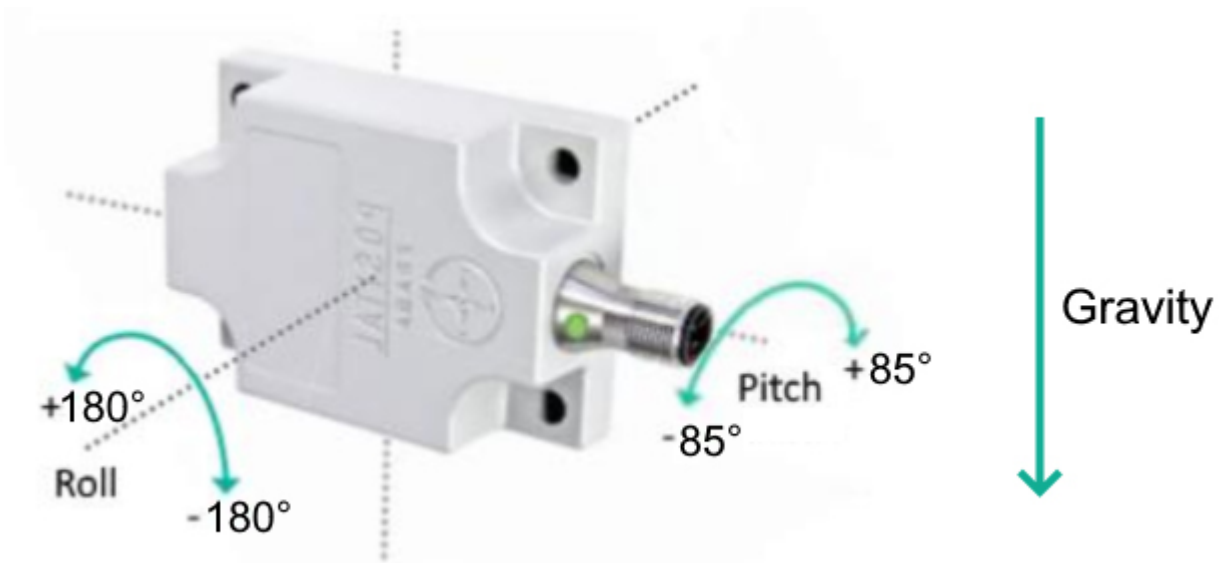
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Electrical Specifications

| | |
|-----------------------------|--------------------------------------|
| 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) |

Mechanical Specifications

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



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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+f) |
| Connector 1 | M12, Male, 5 pin, a coded |
| Connector 2 | M12, Female, 5 pin, a coded |

Product Life Cycle

| | |
|--------------------|-----|
| 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



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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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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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