



# POSITAL

## FRABA

### TILTIX Inclinometer

**AKS-180-F-C901-VK2-PV**

POSITAL  
FRABA



#### 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	Vertical

### Sold & Serviced By:



*Canadian and International Sales*

**ELECTROMATE**

877-737-8698

[sales@electromate.com](mailto:sales@electromate.com)

[www.electromate.com](http://www.electromate.com)

*U.S. Sales*

**SERVO2GO.com**

877-378-0240

[sales@servo2go.com](mailto:sales@servo2go.com)

[www.servo2go.com](http://www.servo2go.com)

Data Sheet

Printed at 4-06-2021 15:06



# POSITAL

## FRABA



### 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)



# POSITAL

## FRABA

### 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
--------------------	-----

### Certification

Approval	CE + E1
----------	---------

### Connection Plan

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

### Dimensional Drawing

[2D Drawing](#)

### Accessories

Connectors & Cables

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

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

Data Sheet

Printed at 4-06-2021 15:06



# POSITAL FRABA

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!**

**Sold & Serviced By:**

  
Canadian and International Sales  
**ELECTROMATE**  
877-737-8698  
[sales@electromate.com](mailto:sales@electromate.com)  
[www.electromate.com](http://www.electromate.com)

U.S. Sales  
  
**SERVO2GO.com**  
877-378-0240  
[sales@servo2go.com](mailto:sales@servo2go.com)  
[www.servo2go.com](http://www.servo2go.com)

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.