



Model number

INY160DH-F199-IE2-V19

Features

- **Sturdy housing**
- **High accuracy of $\leq \pm 0,15^\circ$**
- **Analog output 4 mA ... 20 mA**
- **2-axis with $\pm 80^\circ$ measuring range**

Function description

This inclination sensor has an analog output 4 mA ... 20 mA. With its sturdy housing and its high accuracy, it is ideally suited for applications in the fields of solar, wind or mobile equipment.

Technical Data

General specifications

Type	Inclination sensor, 2-axis
Time delay before availability	125 ms
Measurement range	$\pm 80^\circ$
Absolute accuracy	$\leq \pm 0.15^\circ$ for measuring range $\leq \pm 60^\circ$ $\leq \pm 0.4^\circ$ for measuring range $\geq \pm 60^\circ$
Response delay	≤ 100 ms
Resolution	$\leq 0.01^\circ$
Temperature influence	$\leq 0.004^\circ/\text{K}$

Functional safety related parameters

MTTF _d	700 a at 40 °C
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Electrical specifications

Operating voltage U _B	10 ... 30 V DC
No-load supply current I ₀	≤ 65 mA at 10 V DC ≤ 60 mA at 24 V DC

Analog output

Output type	current output 4 ... 20 mA (one output for each axis)
Load resistor	270 Ω at 10 V DC

Ambient conditions

Ambient temperature	-40 ... 85 °C (-40 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

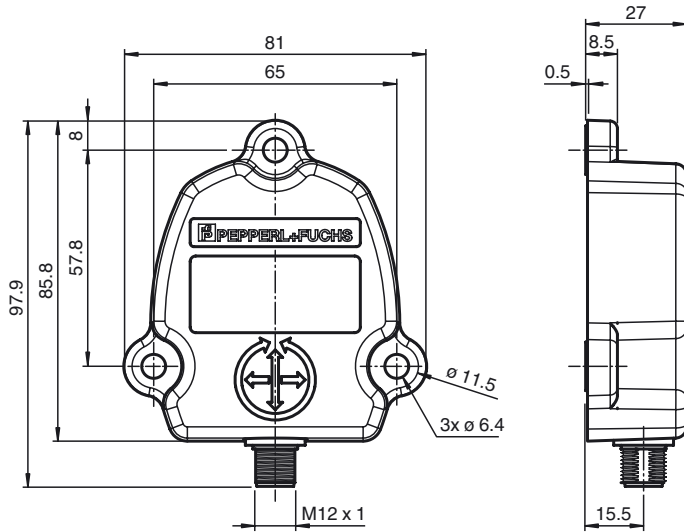
Mechanical specifications

Connection type	8-pin, M12 x 1 connector, A-coded
Housing material	aluminum, corrosion-resistant
Degree of protection	IP68 / IP69
Mass	approx. 200 g

Compliance with standards and directives

Standard conformity	
Noise immunity	EN 61000-6-2
Emitted interference	EN 61000-6-4
Shock and impact resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 20 g, 10 ... 2000 Hz

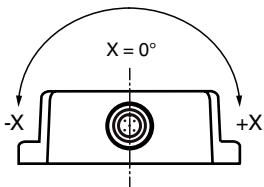
Dimensions



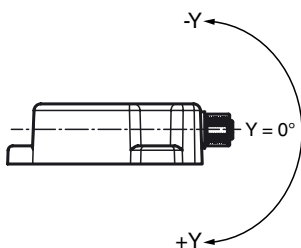
Electrical connection

Signal	8-pin, M12 x 1 connector
+U _b	1
RxD	2
TxD	3
GND	4
Analog output X axis	5
Set 1	6
Analog output Y axis	7
Set 2	8
Pinout	

X-Orientation



Y-Orientation



Accessories

V19-G-2M-PUR-ABG

Female cordset, M12, 8-pin, shielded, PUR cable

V19-G-2M-PUR-ABG-V19-G

Connecting cable, M12 to M12, PUR cable 8-pin, shielded

V19-G-0,5M-PVC-SUBD9

Female cordset, M12, 8-pin, PVC cable

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