



Model number

INY160DH-F199-B30-2V15

Features

- **Sturdy housing**
- **High accuracy of $\leq \pm 0,15^\circ$**
- **Communication via MODBUS RTU**
- **2-axis with $\pm 80^\circ$ measuring range**

Function description

This inclination sensor has a MODBUS RTU interface. 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	320 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	≤ 25 ms
Resolution	$\leq 0.01^\circ$
Temperature influence	$\leq 0.004^\circ/\text{K}$

Functional safety related parameters

MTTF _d	900 a at 40 °C
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Electrical specifications

Operating voltage U _B	4.5 ... 30 V DC
No-load supply current I ₀	≤ 100 mA at 5 V DC ≤ 25 mA at 24 V DC

Interface

Interface type	MODBUS RTU
Transfer rate	2.4 ... 115200 kBit/s , programmable in 7 steps , factory setting 19,2 kBit/s
Data format	even parity, 1 start bit, 1 stop bit, 8 data bits
Node ID	1 ... 247 , programmable , factory setting 127 decimal
Output driver	line driver RS485

Ambient conditions

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

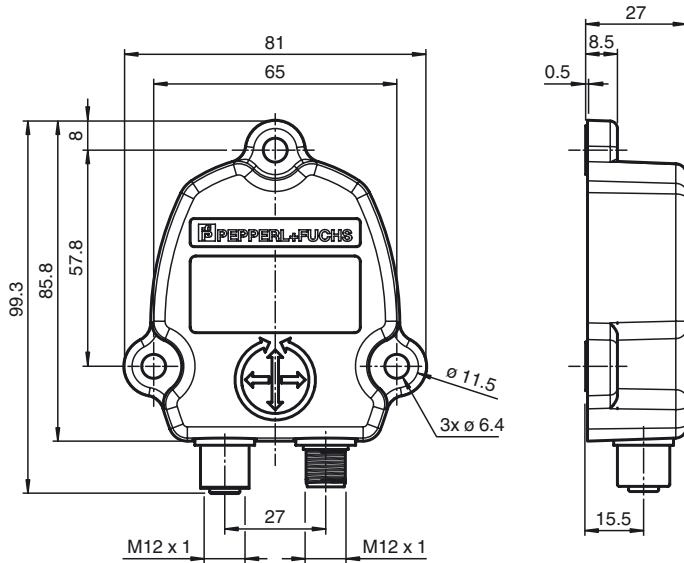
Mechanical specifications

Connection type	5-pin, M12 x 1 connector , A-coded 5-pin, M12 x 1 socket , 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



Accessories

V15-G-2M-PUR-CAN-V15-G

DeviceNet/CANOpen bus cable, M12 to M12, PUR cable 5-pin

V15-G-5M-PUR-CAN-V15-G

DeviceNet/CANOpen bus cable, M12 to M12, PUR cable 5-pin

V15-G-10M-PUR-CAN-V15-G

DeviceNet/CANOpen bus cable, M12 to M12, PUR cable 5-pin

ICZ-TR-CAN/DN-V15

Terminal resistor for DeviceNet, CANopen

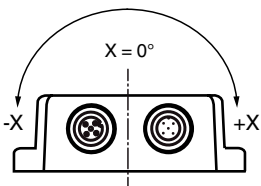
V15S-T-CAN/DN-V15

Y distributor, M12 socket on M12 connector/socket

Electrical connection

Signal	Bus Out, 5-pin, M12 x 1 socket	Bus In, 5-pin, M12 x 1 connector
n. c.	1	1
+U _b	2	2
GND	3	3
RS485 A +	4	4
RS485 B -	5	5
Pinout		

X-Orientation



Y-Orientation

