Model number

INY160DH-F199-B16-V15

Features

- **Sturdy housing**
- **High accuracy of ≤ ± 0,15°**
- **CANopen interface**
- **2-axis with ±80° measuring range**

Function description

This inclination sensor has a CANopen 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	150 ms
Measurement range	± 80 °
Absolute accuracy	≤ ± 0.15 ° for measuring range ≤ ± 60° ≤ ± 0.4 ° for measuring range ≥ ± 60°
Response delay	≤ 25 ms
Resolution	≤ 0.01 °
Temperature influence	≤ 0.004 °/K
Functional safety related parameters	
$MTTF_d$	700 a at 40 °C
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %
Indicators/operating means	
Status indicator	dual-LED, green/red
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
Interface	
Interface type	CANopen
Device profile	DS 410
Transfer rate	20 ... 1000 kBit/s , programmable , factory setting 125 kBit/s
Node ID	1 ... 127 , programmable , factory setting 1 decimal
Output driver	transceiver according ISO 11898, galvanically isolated by means of photocouplers
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
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

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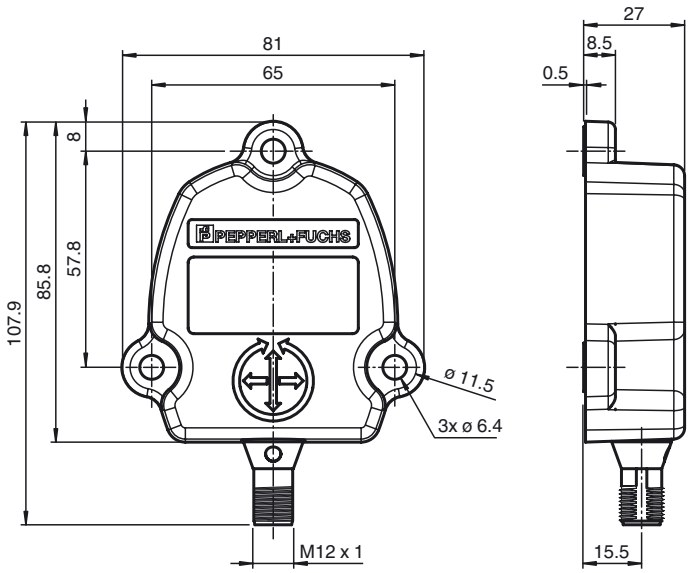
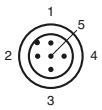
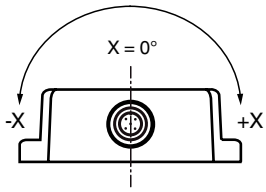
Dimensions



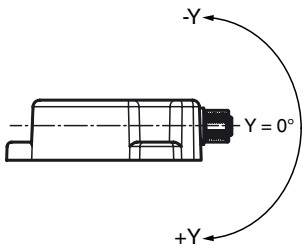
Electrical connection

Signal	5-pin, M12 x 1 connector
CAN GND	1
$+V_S$	2
GND	3
CAN-High	4
CAN-Low	5
Pinout	

X-Orientation



Y-Orientation



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

V15S-T-CAN/DN-V15
Y distributor, M12 socket on M12 connector/socket

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Indicating elements

LED-indicator with dual color LED

CAN Run (green)	State	Description
Flashing	Pre-Operational	Boot up message is sent, device configuration is possible, device is in CAN state „Pre-Operational“
Single flash	Stopped	The device is in CAN state „Stopped“
On	Operational	The device is in CAN state „Operational“
Off		No power supply

Err (red)	State	Description
Off	No error	The device is in operating mode
Flashing	Configuration fault	General configuration fault (such as wrong baudrate)
Single flash	Warning limit reached	At least one of the error counters of the CAN controller has reached or exceeded the warning level (too many error frames)
Double flash	Error control event	A guard event (NTM slave or NTM master) or a heartbeat event has occured
On	Bus off	The CAN controller is in stae bus off. No communication possible anymore. Too many error frames in the network.

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