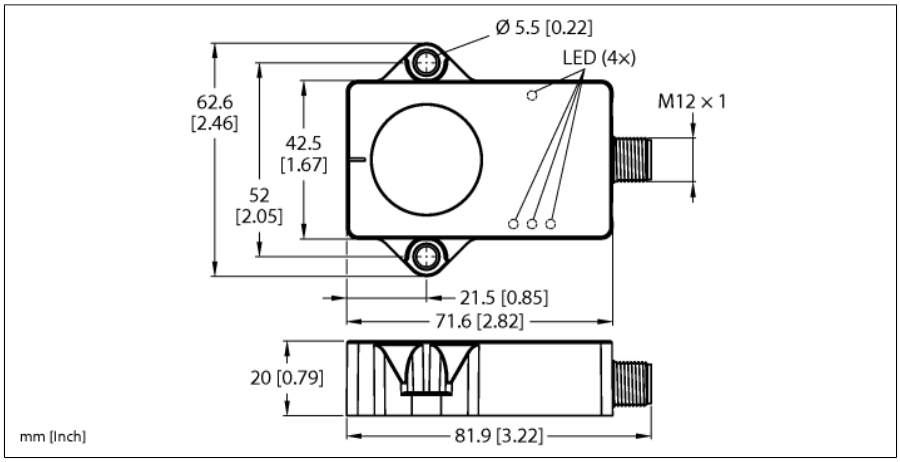
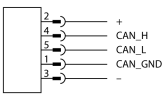
Inclinometer
CANopen
B1N360V-QR20-CNX4-H1150

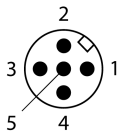


Type	B1N360V-QR20-CNX4-H1150
ID	100046441
Measuring principle	Acceleration
General data	
Resolution	16 bit
Measuring range	0…360°
Number of measuring axes	1
Repeat accuracy	≤ 0.05 % of full scale
Linearity deviation	≤ 0.2 %
Temperature drift	≤ ± 0.006 %/K
Resolution	≤ 0.01 °
Electrical data	
Operating voltage U_B	8…36 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
Isolation test voltage	0.5 kV
Communication protocol	CANopen
Node ID	1...127; Werkseinstellung: 10
Baud rate	125/250/500/1000 kbps, factory setting 500 kbps
Current consumption	< 80 mA
Mechanical data	
Design	Rectangular, QR20
Dimensions	71.6 x 62.6 x 20 mm
Housing material	Plastic, Ultem
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-40…+85 °C
Temperature changes (EN60068-2-14)	-40… +85 °C; 20 cycles
Vibration resistance (EN 60068-2-6)	20 g; 5 h/axis; 3 axes
Shock resistance (EN 60068-2-27)	150 g; 4 ms ½ sine
Protection class	IP68 IP69K
MTTF	339 years acc. to SN 29500 (Ed. 99) 40 °C

- Rectangular, plastic, Ultem
- Status displayed via LED
- Angle detection over one axis with 360° measuring range
- Temperature detection from -40…85 °C
- High protection class IP68/IP69K
- Increased interference immunity 100 V/m acc. to ISO 11452-2, 200 mA acc. to ISO 11452-4
- Protection against conducted interference acc. to ISO 7637-2 severity degree Level 4 and load dump acc. to ISO 16750-2 for 12-V/24-V systems
- Withstands rapid temperature change
- 8…36 VDC
- Connector, M12 × 1, 5-pin, CAN in
- Acc. to CiA 301, CiA 305, CiA 410

Wiring Diagram





Functional principle

The inclinometers use an acceleration measuring cell to determine the angle. The Earth's gravity is used as a reference. If the inclinometer changes its angle relative to the Earth's gravity, this is detected by the acceleration measuring cell. The signal is then linearized so that a value proportional to the angle is output.

The measuring principle used makes mounting and commissioning the device easy. The robust sensors are positioned with the cast

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Power-on indication	LED, Green
Status CANopen	Green/red
Measuring range display	LED, yellow
UL certificate	E351232

side on a flat surface so that the casting compound is covered. The sensor is then secured with two screws.

The sensor can also record the temperature, which can be used to monitor the condition of the machine.

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