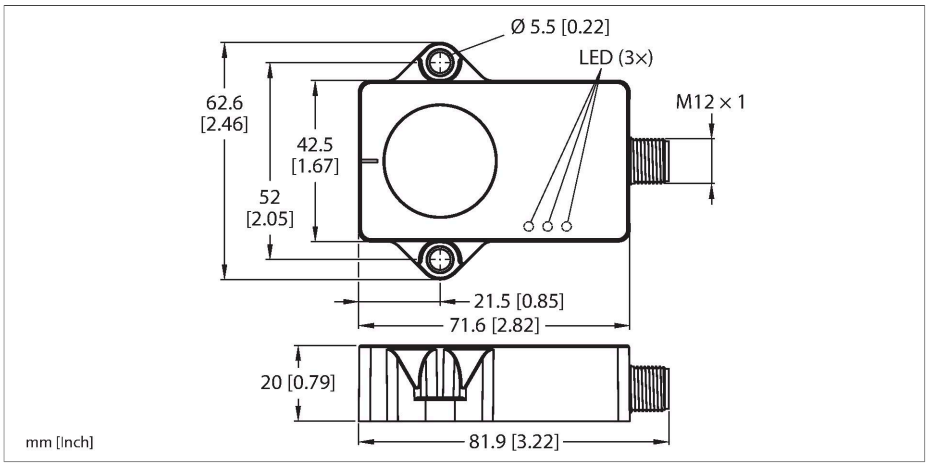
B2N85H-QR20-2LI2X3-H1151
Inclinometer



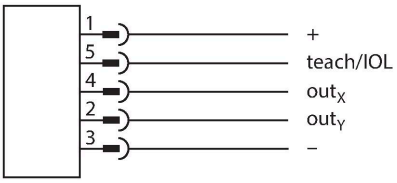
Technical data

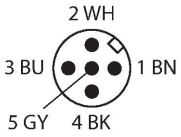
Type	B2N85H-QR20-2LI2X3-H1151
ID	100031455
Measuring principle	Acceleration
General data	
Resolution	16 bit
Measuring range	-85…85 °
Number of measuring axes	2
Repeat accuracy	≤ 0.1 % of full scale
Linearity deviation	≤ 0.3 %
Temperature drift	≤ ± 0.012 %/K
Electrical data	
Operating voltage	15…30 VDC
Residual ripple	≤ 10 % U_{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes / yes
Output function	5-pin, Analog output
Current output	4…20 mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance current output	≤ 0.4 kΩ
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

Features

- Rectangular, plastic, Ultem
- Status displayed via LED
- Angle detection along two axes with ±85 ° measuring range
- High protection class IP68/IP69K
- Protected against salt spray and rapid temperature change
- 15…30 VDC
- M12 × 1 male connector, 5-pin
- Analog output 4…20 mA
- The center point of the measuring range can be adjusted using teach adaptor TX1-Q20L60
- Individual parameterization possible with USB-2-IOL-0002

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.

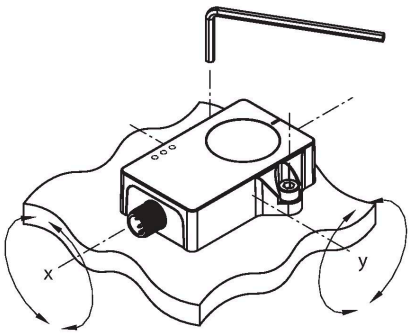
Technical data

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	297 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	LED, yellow

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

Mounting instructions

Mounting instructions/Description

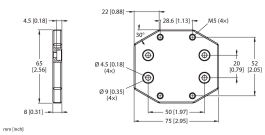


4 mm
3 Nm

The measuring principle used makes mounting and commissioning the device easy, e.g. because being adjacent to metal does not interfere with the measuring principle.
A green LED indicates whether the sensor is being properly supplied with power. The green flashing LED indicates that FDT/IODD communication is active.
One yellow LED per inclination axis acts as a zero-position indicator to aid commissioning. It is constantly illuminated when the position of the inclinometer is in a window of ±0.5 ° around the center point. The LED flashes with increasing frequency the nearer the sensor gets to the center point position.

Accessories

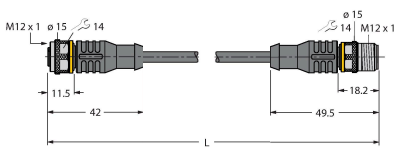
AP-Q20L60-QR20	100029224



Adapter plate for mounting the QR20 housing with mounting holes for the Q20L60 housing

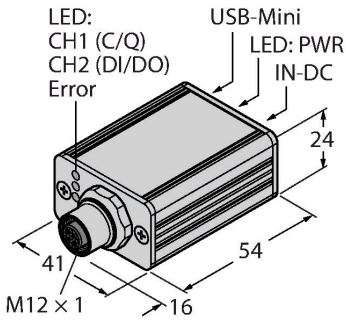
Accessories

Dimension drawing	Type	ID	
	RKC5.301T-1.5-RSC4T/TXL320	6625005	Adapter cable (for uses such as connecting the sensor to the USB-2-IOL-0002 programming unit); M12 female connector, straight, 5-pin to M12 male connector, straight, 3-pin; cable length: 1.5 m; jacket material: PUR, black; cULus approved; RoHS compliant; protection class IP67



Accessories

Dimension drawing	Type	ID	
	USB-2-IOL-0002	6825482	IO-Link Master with integrated USB port



	TX1-Q20L60	6967114	Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors