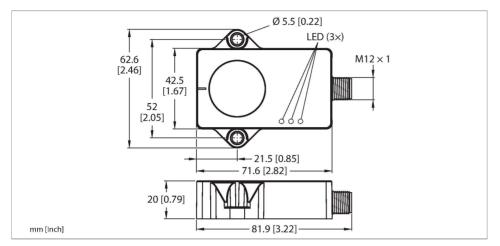


B2NF85H-QR20-IOLX3-H1141 Dynamic Inclinometer – IO-Link





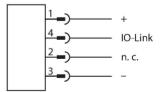
Type	B2NF85H-QR20-IOLX3-H1141
ID	100020901
Measuring principle	Combination of gyroscopes and accelerometers
General data	
Measuring range	-8585 °
Number of measuring axes	2
Repeat accuracy	≤ 0.06 % of full scale
Linearity deviation	≤ 0.15 %
Temperature drift	≤ ± 0.012 %/K
Resolution	≤ 0.01 °
Electrical data	
Operating voltage U _B	1830 VDC
Ripple U _{ss}	≤ 10 % U _{Bmax}
Isolation test voltage	0.5 kV
Wire break/reverse polarity protection	yes
Communication protocol	IO-Link
Current consumption	< 50 mA
IO-Link	
Communication mode	COM 3 (230.4 kBaud)
Minimum cycle time	1.3 ms
Function pin 4	IO-Link
Mechanical data	
Design	Rectangular, QR20

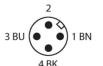


Features

- Rectangular, plastic, Ultem
- Status displayed via LED
- Angle detection via two axes with ±85 ° measuring range
- ■Temperature detection from -40 °C to 85 °C
- High protection class IP68/IP69K
- Protected against salt spray and rapid temperature change
- ■18...30 VDC
- ■M12 × 1 connector, 4-pin
- ■Communication via IO-Link

Wiring diagram





Functional principle

The dynamic inclinometers use an acceleration measuring cell and a gyroscope sensor to determine angles. Influences caused by vibrations or interfering acceleration are minimized by applying an intelligent fusion

Technical data

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)	200 g; 4 ms ½ sine
Protection class	IP68 IP69K
MTTF	548 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	LED, yellow
UL certificate	E351232

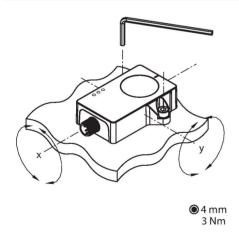
algorithm to the acceleration data and the rotation rate values. This enables the sensor to output a robust signal with impressive precision and speed, even in moving, dynamic applications.

The measuring principle used makes mounting and commissioning the device easy. 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.

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

Mounting instructions

Mounting instructions/Description



Accessories

AP-Q20L60-QR20

100029224

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

The measuring principle enables simple mounting and commissioning, for example because a metal environment does not interfere with the measuring principle.

A green LED indicates whether the sensor is being supplied properly. The green flashing LED indicates that IO-Link 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 more the sensor approaches the center point position.