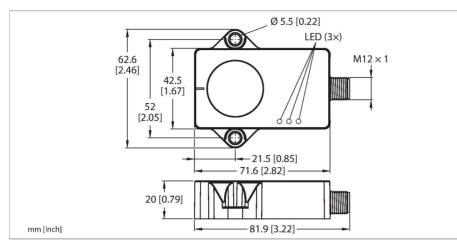


# B2NF85H-QR20-IOLX3-H1141 Dynamic Inclinometer – IO-Link



### Technical data

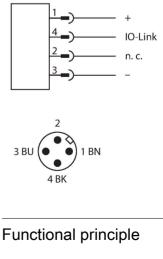
Туре	B2NF85H-QR20-IOLX3-H1141	
ID	100020901	
Measuring principle	Combination of gyroscopes and accelerometers	
General data		
Measuring range	-8585 °	
Number of measuring axes	2	
Repeat accuracy	≤ 0.06 % of full scale	
Linearity deviation	≤ 0.15 %	
Temperature drift	≤ ± 0.012 %/K	
Resolution	≤ 0.01 °	
Electrical data		
Operating voltage $U_{\scriptscriptstyle B}$	1830 VDC	
Ripple U <sub>ss</sub>	$\leq$ 10 % U <sub>Bmax</sub>	
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



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		

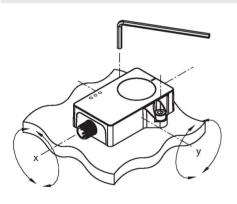
algorithm to the acceleration data and the rotation rate values. This enables the sensor to output a robust signal with impressive precision and speed, even in moving, dynamic applications.

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

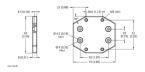
#### Mounting instructions/Description



● 4 mm 3 Nm

### 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  $\pm 0.5^{\circ}$  around the center point. The LED flashes with increasing frequency the more the sensor approaches the center point position.



# Wiring accessories

Dimension drawing	Туре	ID	
M12x1 e 15 5 14 + 11.5 + + 42 - + 49.5 - + + 49.5 - + + 49.5 - + + 49.5 - + + 49.5 - + + 49.5 - + + 49.5 - + + + + + + + + + + + + + + + + + +	RKC4T-2-RSC4T/TXL	6625604	Extension cable, M12 female connector, straight, 3-pin to M12 male connector, straight, 3-pin; cable length: 2 m, jacket material: PUR, black; cULus approval
M12x1 s 15 /5 14 11.5 + 42	RKC4T-2/TXL	6625500	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval