CMMT-QR20-IOL6X3-H1141
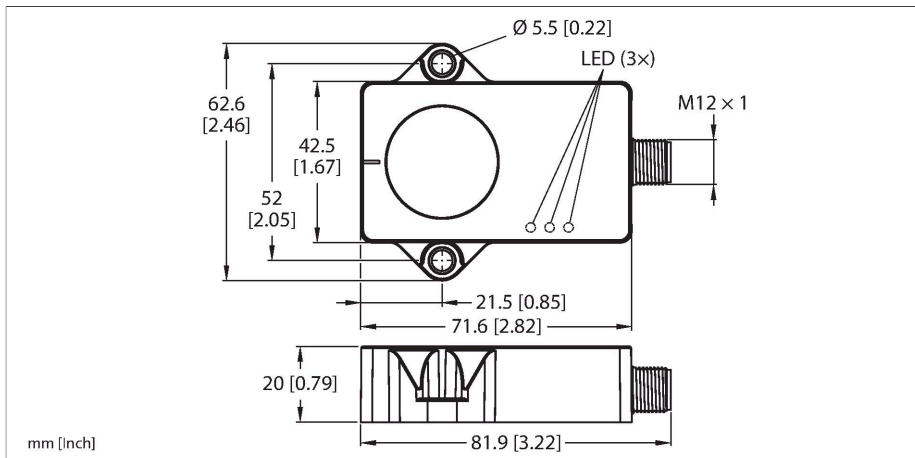# Magnetic Field Sensor –   For Condition Monitoring with IO-Link
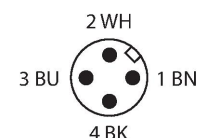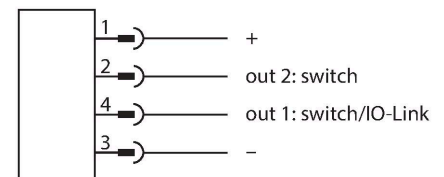

Technical data

Type	CMMT-QR20-IOL6X3-H1141
ID	100041125
General data	
Function	Magnetic field sensor
Magnetischer Messbereich	≥ -2500…≤ 2500 µT
Auflösung magnetische Flussdichte	1 µT
Hysterese	10 µT
Messfrequenz	≥ 100 Hz
Measuring range	-25…70 °C
Resolution — temperature	0.1 K
Electrical data	
Operating voltage	18…30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 80 mA
No-load current	≤ 24 mA
Short-circuit protection	yes/Cyclic
Reverse polarity protection	yes
Output function	Programmable, IO-Link SIO Mode
Output 2	Switching output
max. load current I_o	0.25 mA
Setting option	IO-Link
IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A
Communication mode	COM 3 (230.4 kBaud)
Process data width	128 bit

Features

- Connection: male connector, M12 × 1
- Protection class IP68/IP69K
- Three-axis magnetic field measurement and sum vector calculation
- Temperature measurement
- Sensor-2-cloud compatible
- Output 1: PNP/NPN, IO-Link
- Output 2: PNP/NPN
- Offset settings, limit value determination for each axis and assignment of the axes to the outputs via IO-Link

Wiring diagram

Functional principle

Condition monitoring sensors are specially designed for use in system parts in which the environmental parameters can have a significant influence on machine availability or process quality. By monitoring characteristic data within the application, e.g. application temperature, humidity, vibration, etc., process deviations can be detected at an early stage and countermeasures initiated. For this purpose, the continuous detection value is transferred to the controller via IO-Link
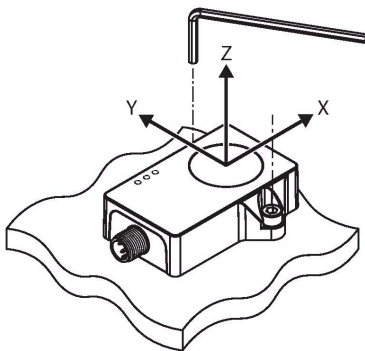
Technical data

Measured value information	96 bit
Switchpoint information	8 bit
Frame type	2.2
Minimum cycle time	1.3 ms
Function pin 4	IO-Link/SIO
Function Pin 2	SIO
Maximum cable length	20 m
Profile support	Smart Sensor Profile
Mechanical data	
Design	Rectangular, QR20
Dimensions	71.6 x 62.6 x 20 mm
Housing material	Plastic, Ultem
Electrical connection	Connector, M12 × 1
Ambient temperature	-25…+70 °C
Protection class	IP68 IP69K
Power-on indication	LED, Green
Switching state	2 × LEDs, Yellow
EMV	EN 61326-1

process data and customer-specific limit value exceedance/shortfall is additionally transported. The robust sensor design can be used indoors as well as outdoors for more challenging applications.
Using the CMMT to capture the magnetic environment can be useful in many applications, such as detecting permanent magnets in packaging or moving parts within a metal structure.
In addition, the sensor detects the internal temperature.

Mounting instructions

Mounting instructions/Description

4 mm
3 Nm