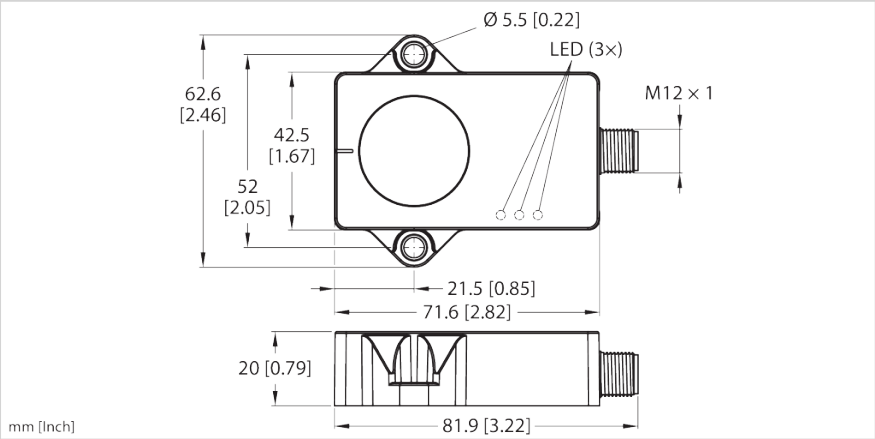
CMMT-QR20-IOL6X3-H1141

Magnetic Field Sensor
For Condition Monitoring with IO-Link





Type designation	CMMT-QR20-IOL6X3-H1141
Ident-No.	100041125

Technical data

General data	
Detection type	contactless
Measuring principle	Contactless
Detection area/measuring range	
	10 µT
	100 Hz
Measuring range	-25...70 °C
Magnetic measuring range	-2500...2500 µT
	1 µT
Temperature	
Temperature measuring range	-25...70 °C
Power supply	
Operating voltage U_B	18...30 VDC
Electrical data	
No-load current	80 mA
Output function	4-wire, Programmable, IO-Link SIO Mode
Short-circuit protection	yes/Cyclic
Wire break/reverse polarity protection	yes/yes

Features

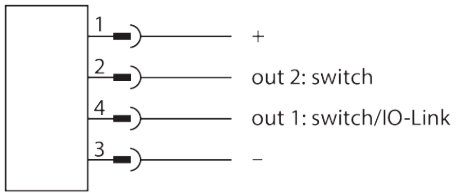
- Connection: male connector, M12 × 1
- Protection class IP68/IP69K
- Three-axis magnetic field measurement and sum vector calculation
- Temperature measurement
- Output 1: PNP/NPN, IO-Link
- Output 2: PNP/NPN
- Offset settings, limit value determination for each axis and assignment of the axes to the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

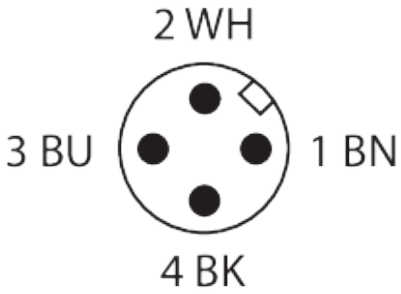
| 09-10-2026 15:10 | Subject to technical changes |

Technical data

DC rated operational current	≤ 250 mA
Isolation test voltage	≤ 0,5 kV
Residual ripple	<10 % u_{ss}
Response time	Min. 8 s
Interfaces	
Communication protocol	IO-Link
Outputs	
Output 1	Switching output or IO-Link mode
Output 2	Switching output
Accuracy/deviation	
Resolution — temperature	0,1 K
IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A
Communication mode	COM 3 (230.4 kBaud)
Transmission rate	COM 3/230.4 kBit/s
Process data width	128 bit
Measured value information	96 bit
Switching point information	8 bit
Frame type	2.2
Minimum cycle time	1,3 ms
Function Pin 2	SIO
Function pin 4	IO-Link/SIO
Maximum cable length	20 m
Profile support	Smart Sensor Profile
Mechanical data	
Design	Rectangular, QR20
Construction type designation	QR20
Dimensions	71,6 mm x 62,6 mm x 20 mm
Housing material	Plastic, Ultem
Electrical connection	Connector, M12 x 1
Ambient conditions	
Ambient temperature	-25...+70 °C
EMV	EN 61326-1
Protection class	IP68 IP69K
Displays/controls	
Power-on indication	LED, Green

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 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.

| 09-10-2026 15:10 | Subject to technical changes |

Technical data

Switching state	2 × LEDs, Yellow
Setting option	IO-Link

| 09-10-2026 15:10 | Subject to technical changes |