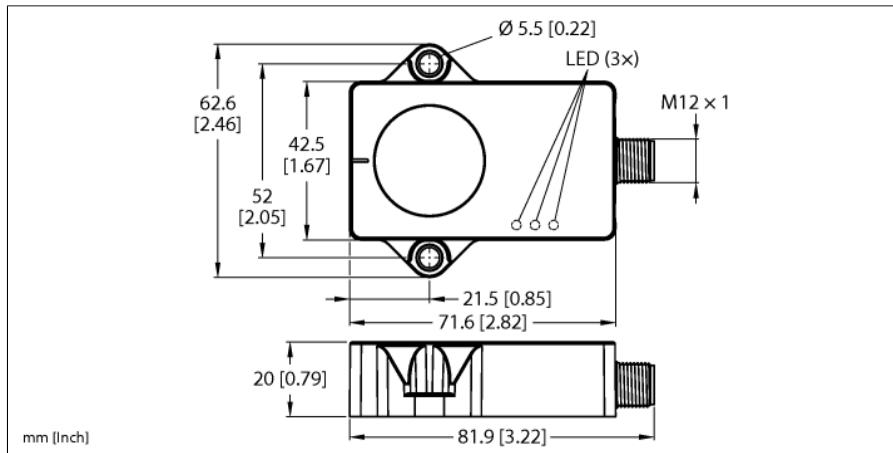


Magnetic Field Sensor

For Condition Monitoring with IO-Link

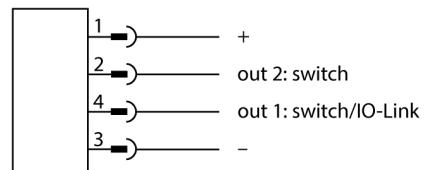
CMMT-QR20-IOL6X3-H1141



Type	CMMT-QR20-IOL6X3-H1141
ID	100041125
General data	
Function	Magnetic field sensor
Magnetic measuring range	≥ -2500...≤ 2500 µT
Magnetic flux density resolution	1 µT
Hysteresis	10 µT
Measuring frequency	≥ 100 Hz
Measuring range	-25...70 °C
Resolution — temperature	0.1 K
Electrical data	
Operating voltage U _b	18...30 VDC
Residual ripple	< 10 % U _{ss}
DC rated operating current I _e	≤ 80 mA
No-load current I _o	≤ 24 mA
Short-circuit protection	yes/Cyclic
Reverse polarity protection	yes
Output function	Programmable, IO-Link
Output 2	Switching output
max. load current I _o	250 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
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

- 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 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.

Mechanical data		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.
Design	Rectangular, QR20	
Housing material	Plastic, Ultem	
Electrical connection	Connector, M12 × 1	
Ambient temperature	-25...+70 °C	
Protection class	IP68 IP69K	In addition, the sensor detects the internal temperature.
Power-on indication	LED, Green	
Switching state	2 × LEDs, Yellow	
EMV	EN 61326-1	