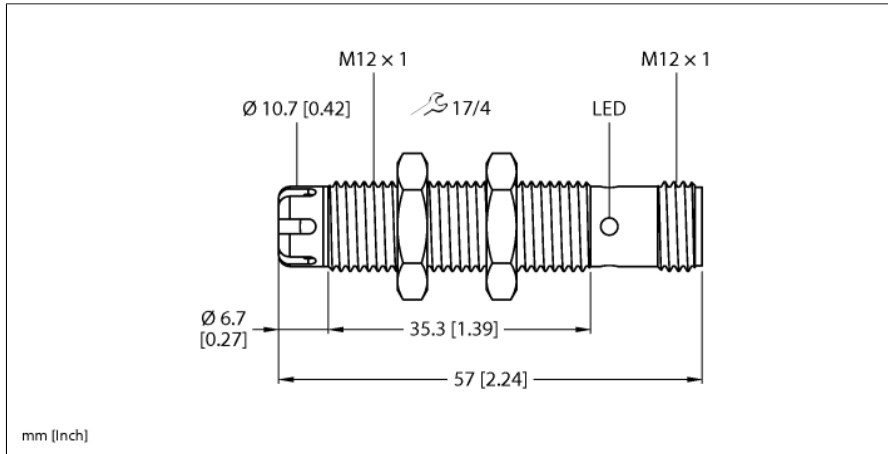


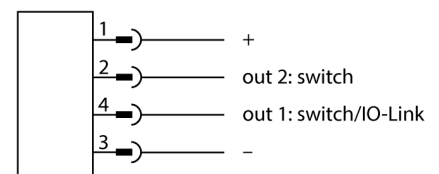
Humidity and Temperature Sensor For Condition Monitoring with IO-Link CMTH-M12-IOL6X2-H1141



Type	CMTH-M12-IOL6X2-H1141
ID	100016580
General data	
Function	Temperature/humidity sensor
Measuring range	-40...100 °C
	-40...212 °F
Accuracy	±0.8 °C
Resolution — temperature	0.1 K
Repeat accuracy	0.2 °C
Measuring range	0...100 % RH
Accuracy	±5 % RH (10...90 % RH)
	±7 % RH (0...10 % RH/90...100 % RH)
Resolution — relative humidity	0.1 % rH
Electrical data	
Operating voltage U_s	18...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 150 mA
No-load current I_0	≤ 10 mA
Short-circuit protection	yes/Cyclic
Reverse polarity protection	yes
Output function	Programmable, IO-Link
Output 2	Switching output
max. load current I_L	50 mA
Response time	RH % (t63) 6 s
Setting option	IO-Link

- Sensor for condition monitoring
- Accurate temperature and humidity measurement
- Sensor-2-cloud compatible
- DC 4-wire, 18...30 VDC
- M12 × 1 male connector
- Configuration and communication via IO-Link v1.1
- Smart sensor profile 4
- Continuous process values for temperature and humidity
- Temperature monitoring with adjustable switching thresholds or windows
- Humidity monitoring with adjustable switching thresholds or windows
- Operating hours and switching threshold counter
- Dew point calculation and output as well as temperature and humidity histogram 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 the application temperature or the humidity within the application, process deviations can be detected at an ear-

IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A
Communication mode	COM 3 (230.4 kBaud)
Process data width	64 bit
Measured value information	24 bit
Switchpoint information	4 bit
Frame type	2.2
Minimum cycle time	10 ms
Function pin 4	IO-Link
Function Pin 2	SIO
Maximum cable length	20 m
Profile support	Smart Sensor Profile

ly 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	
Design	Cylindrical/threaded, M12
Dimensions	Ø 12 x 57 mm
Housing material	Metal, CuZn, Chrome-plated
Electrical connection	Connector, M12 × 1
Ambient temperature	-40...+100 °C
Storage temperature	-40...+100°C
Process Pressure	10 bar
Protection class	IP67

Power-on indication	LED, Green
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Tests/approvals	
MTTF	610 years
Vibration resistance	IEC 60060-2-6: (10...150 Hz) 20 g
Shock test	IEC 60068-2-27: 50 g (6 ms)
EMV	EN 61326-1
Approvals	CE, UL