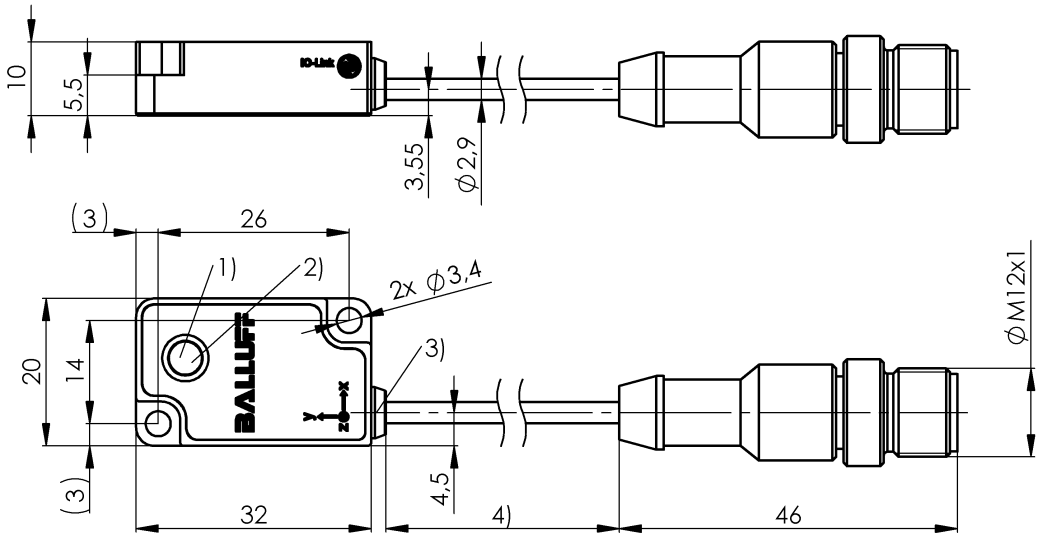
Condition Monitoring Sensors

BCM R15E-002-DI00-01,5-S4
Order Code: BCM0002



1) Membrane, 2) LED orange, 3) LED green, 4) Cable length

Basic features

Approval/Conformity	CE UKCA cULus WEEE
Function	Vibration Velocity Vibration Acceleration Vibration Severity Zone Contact Temperature Relative Humidity Ambient Pressure Sensor Self-Awareness
Principle of operation	Condition Monitoring Sensors
Series	R15

Display/Operation

Display	Run - LED green Communication - LED green, slow flashing (1 Hz) Ping - LED green, asyncronous very fast flashing (4 Hz) and fast flashing (2 Hz) Event - LED orange, fast flashing (2 Hz)

Electrical connection

Bending radius min., fixed cable	3 x D
Bending radius min., flexible cable	5 x D
Cable diameter D	2.9 mm +0.1/-0.05 mm
Conductor cross-section	0.14 mm²
Connection	Cable with connector, M12x1-Male, 3-pin, 1.5 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Current draw max.	10 mA
Operating voltage Ub	18...30 VDC
Protection class	III
Rated operating voltage Ue DC	24 V
Ready delay tv max.	1.5 s

Environmental conditions

Ambient temperature	0...70 °C
EN 61000-4-2, ESD	Severity Level 2
EN 61000-4-3, RFI	Severity Level 3
EN 61000-4-4, Burst	Severity Level 4
EN 61000-4-6, High-frequency fields	Severity Level 3
IP rating	IP67
Storage temperature	-20...70 °C

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Function module ambient pressure

Ambient pressure, measuring range	300…1100 hPa
Ambient pressure, non-linearity	±0.1 % FS
Ambient pressure, resolution	0.15 hPa

Function module contact temperature

Contact temperature, measuring error	±2 % FS
Contact temperature, measuring range	0…70 °C
Contact temperature, non-linearity	±0.75 % FS
Contact temperature, resolution	0.1 °C
Contact temperature, settling time	5 min

Function module relative humidity

Relative humidity, measuring range	5...95 %rF
Relative humidity, non-linearity	±2.5 % FS
Relative humidity, resolution	1 %rF
Relative humidity, settling time	5 min

Function module vibration

Vibration, frequency range	2...3200 Hz
Vibration, measuring principle	MEMS
Vibration, number of measuring axes	3
Vibration, sampling rate	6400 Hz

Function module vibration acceleration

Vibration acceleration, measuring error RMS	±5 %FS @79.4 Hz
Vibration acceleration, measuring range RMS	0…16 g
Vibration acceleration, non-linearity RMS	±2 %FS @79.4 Hz
Vibration acceleration, resolution RMS	0.006 g @79.4 Hz
Vibration acceleration, statistical evaluation variables [for each measuring axis]	RMS Peak to Peak

Function module vibration velocity

Vibration velocity, evaluation variables [for each measuring axis]	RMS Peak to Peak Mean Standard Deviation Crest Factor Skew Kurtosis
Vibration velocity, measuring error RMS	±5 %FS @79.4 Hz
Vibration velocity, measuring range RMS	0…220 mm/s @79.4 Hz
Vibration velocity, non-linearity RMS	±2 %FS @79.4 Hz
Vibration velocity, resolution RMS	0.42 mm/s @79.4 Hz

Interface

Baud rate	COM3 (230,4 kBaud)
Interface	IO-Link 1.1
Interface setting option	Flexible process data configuration Vibration measurement based on ISO 10816-3 Data preprocessing (statistics) Events (pre-alarms and main alarms) Delay times for alarms Search function with LED display (ping)
Process data IN	20 bytes
Process data OUT	0 bytes
Process data cycle min.	10 ms

Material

Housing material	1.4404 stainless steel, Membrane: ePTFE with nylon fleece

Mechanical data

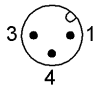
Dimension	20 x 10 x 32 mm
Mounting part	Screw M3 (2x)
Weight	30 g

Remarks

For additional information, refer to user's guide.
Order accessories separately.
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings



Wiring Diagrams

Pin	Color	Signal
1	BN	+24V
3	BU	GND
4	BK	C/Q