Condition Monitoring Sensors
BCM R15E-001-DI00-01,5-S4
Order Code: BCM0001

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1) LED green, 2) Cable length

Basic features

Approval/Conformity	CE
	UKCA
	cULus
	WEEE
Function	Vibration Velocity
	Vibration Acceleration
	Vibration Severity Zone
	Contact Temperature
	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)

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

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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, IP68, IP69K
Storage temperature	-20...70 °C

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 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

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.

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Connector Drawings

Wiring Diagrams

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

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