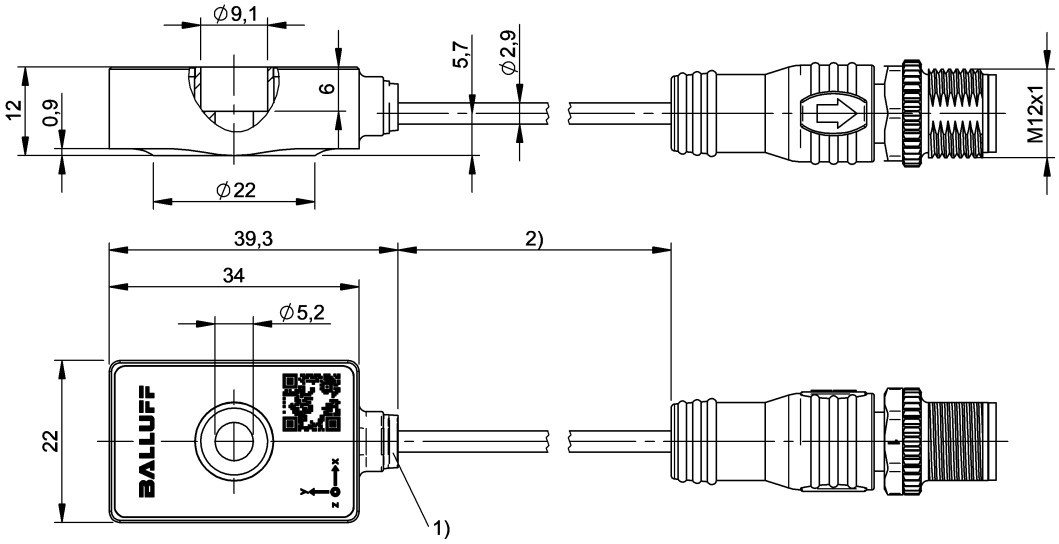
Smart Automation and Monitoring System
Condition Monitoring Sensors

# BCM R16E-004-CI01-01,5-S4
# Order Code: BCM0004




1) LED function indicator, 2) Cable length

## Basic features

| | |
|---|---|
| Approval/Conformity | CE<br>UKCA<br>WEEE<br>cULus |
| Function | Vibration analysis in time domain<br>Contact temperature monitoring |
| Principle of operation | Condition Monitoring Sensors |
| Secondary features | Identification<br>Device Discovery<br>Switching Counter<br>Operating Hours Counter<br>Boot Cycle Counter<br>Voltage and Current Monitoring<br>Pin Assignment |
| Secondary features for condition monitoring | Internal temperature monitoring |
| Series | R16 |

## Display/Operation

| | |
|---|---|
| Display | RGB LED |

## Electrical connection

| | |
|---|---|
| Bending radius min., fixed cable | ≥ 5 D |
| Bending radius min., flexible cable | ≥ 10 D |
| Cable diameter D | 2.9 mm ±0.1 mm |
| Conductor cross-section | 0.10 mm² |
| Connection | Cable with connector, M12x1-Male, 4-pin, 1.5 m, PUR |
| Number of conductors | 4 |
| Polarity reversal protected | yes |
| Protection against device mix-ups | yes |
| Short-circuit protection | yes |

## Electrical data

| | |
|---|---|
| Current draw max. | 30 mA |
| Operating voltage Ub | 10...30 VDC |
| Protection class | III |
| Rated operating voltage Ue DC | 24 V |
| Ready delay tv max. | 7 s |

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## Environmental conditions

| | |
|---|---|
| Ambient temperature | -40...80 °C |
| EN 61000-4-2, ESD | 2A (4kV) |
| EN 61000-4-3, RFI | 80 MHz - 1000 MHz: 3A (12 V/m)<br>1400 MHz - 2000 MHz: 3A (12 V/m)<br>2000 MHz - 2700 MHZ: 2A (4 V/m) |
| EN 61000-4-4, Burst | 4A (2kV) |
| EN 61000-4-6, High-frequency fields | 2A (5Vrms) |
| IP rating | IP67, IP68, IP69K |
| Storage temperature | -40...80 °C |

## Function module contact temperature

| | |
|---|---|
| Contact temperature, measuring error | ±3 °C |
| Contact temperature, measuring range | -40...+80 °C |
| Contact temperature, non-linearity | ±3.5 °C |
| Contact temperature, resolution | 0.1 °C |
| Contact temperature, settling time | 5 min |

## Function module vibration

| | |
|---|---|
| Vibration, Evaluation values time domain | RMS<br>Peak<br>Max<br>Crest Factor |
| Vibration, frequency range | 2...4500 Hz (±10 %)<br>2...6000 Hz (±3 dB) |
| Vibration, measuring principle | MEMS |
| Vibration, measuring range | -16...16 g |
| Vibration, number of measuring axes | 3 |

## Interface

| | |
|---|---|
| Baud rate | COM3 (230,4 kBaud) |
| Interface | IO-Link 1.1.3 |
| Process data IN | 32 bytes |
| Process data OUT | 3 bytes |
| Process data cycle min. | 4 ms |
| Switching output | Pin 2: PNP/NPN/push-pull NO/NC<br>Pin 4: Push-pull NO/NC |

## Material

| | |
|---|---|
| Housing material | Stainless steel 1.4404 (316L) |

## Mechanical data

| | |
|---|---|
| Dimension | 22 x 12 x 34 mm |
| Mounting part | Screw M5 |
| Mounting surface | ≥ Ø22 mm |
| Tightening torque | max. 5 Nm (steel), max. 2.5 Nm (aluminium) |
| Weight | 40.5 g |

## Remarks

For additional information, refer to user's guide.
Order accessories separately.
The recommended tightening torque for mounting refers to the mounting screw enclosed with the sensor.
The UL approval is only valid for an ambient temperature up to a maximum of 70 °C
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

