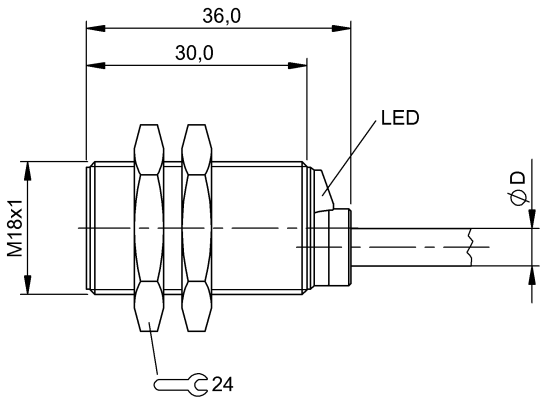
Inductive Sensors

# BES M18MD-NSC50B-BV02-003
# Order Code: BES04CZ




IND. CONT. EQ.
81U2
Class 2 Type 1

## Basic features

| | |
|---|---|
| **Approval/Conformity** | CE<br>cULus<br>EAC<br>WEEE |
| **Basic standard** | IEC 60947-5-2 |
| **Trademark** | Global |

## Display/Operation

| | |
|---|---|
| **Function indicator** | yes |
| **Power indicator** | no |

## Electrical connection

| | |
|---|---|
| **Cable diameter D** | 4.70 mm |
| **Cable length L** | 2 m |
| **Conductor cross-section** | 0.34 mm² |
| **Connection type** | Cable, 2.00 m, PVC |
| **Number of conductors** | 3 |
| **Polarity reversal protected** | yes |
| **Protection against device mix-ups** | yes |
| **Short-circuit protection** | yes |

## Electrical data

| | |
|---|---|
| **Load capacitance max. at Ue** | 1 µF |
| **Min. operating current Im** | 0 mA |
| **No-load current Io max., damped** | 25 mA |
| **No-load current Io max., undamped** | 12 mA |
| **Operating voltage Ub** | 10...30 VDC |
| **Output resistance Ra** | 2.2 kOhm + D + LED |
| **Rated insulation voltage Ui** | 75 V DC |
| **Rated operating current Ie** | 130 mA |
| **Rated operating voltage Ue DC** | 24 V |
| **Rated short circuit current** | 100 A |
| **Ready delay tv max.** | 10 ms |
| **Residual current Ir max.** | 80 µA |
| **Ripple max. (% of Ue)** | 15 % |
| **Switching frequency** | 375 Hz |
| **Utilization category** | DC -13 |
| **Voltage drop static max.** | 3.5 V |

## Environmental conditions

| | |
|---|---|
| **Ambient temperature** | -25...70 °C |
| **Contamination scale** | 3 |
| **EN 60068-2-27, Shock** | Half-sinus, 30 gn, 11 ms |
| **EN 60068-2-6, Vibration** | 55 Hz, amplitude 1 mm, 3x30 min |
| **Protection degree** | IP67 |

## Material

| | |
|---|---|
| **Housing material** | Brass, nickel plated |
| **Material jacket** | PVC |
| **Material sensing surface** | PA 12 |
| **Surface protection** | nickel plated |

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## Mechanical data

| | |
|---|---|
| **Dimension** | Ø 18 x 36 mm |
| **Installation** | for flush mounting |
| **Size** | M18x1 |
| **Tightening torque** | 35 Nm |

## Output/Interface

| | |
|---|---|
| **Switching output** | NPN normally open (NO) |

## Range/Distance

| | |
|---|---|
| **Assured operating distance Sa** | 4 mm |
| **Hysteresis H max. (% of Sr)** | 15.0 % |
| **Rated operating distance Sn** | 5 mm |
| **Real switching distance sr** | 5 mm |
| **Repeat accuracy max. (% of Sr)** | 5.0 % |
| **Temperature drift max. (% of Sr)** | 10 % |
| **Tolerance Sr** | ±10 % |

## Remarks

The sensor is functional again after the overload has been eliminated.

## Wiring Diagrams