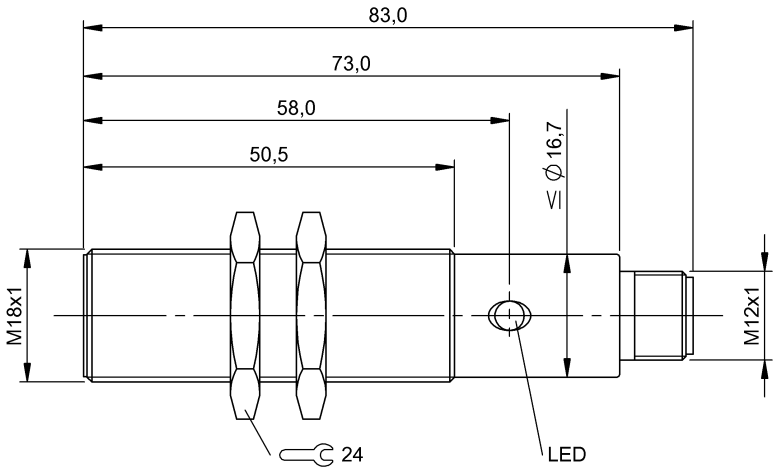
Inductive Sensors

# BES M18MI2-PAH80B-S04G
# Order Code: BES0495




## Basic features

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

## Display/Operation

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

## Electrical connection

| | |
|---|---|
| **Connection** | M12x1-Male, 4-pin, A-coded |
| **Polarity reversal protected** | yes |
| **Protection against device mix-ups** | yes |
| **Short-circuit protection** | yes |

## Electrical data

| | |
|---|---|
| **Load capacitance max. at Ue** | 0.5 µF |
| **Min. operating current Im** | 0 mA |
| **No-load current Io max., damped** | 17 mA |
| **No-load current Io max., undamped** | 12 mA |
| **Operating voltage Ub** | 10...55 VDC |
| **Output resistance Ra** | 33.0 kOhm + D/33.0 kOhm + D |
| **Protection class** | II |
| **Rated insulation voltage Ui** | 250 V AC |
| **Rated operating current Ie** | 200 mA |
| **Rated operating voltage Ue DC** | 24 V |
| **Rated short circuit current** | 100 A |
| **Ready delay tv max.** | 15 ms |
| **Residual current Ir max.** | 20 µA |
| **Ripple max. (% of Ue)** | 15 % |
| **Switching frequency** | 1000 Hz |
| **Utilization category** | DC -13 |
| **Voltage drop static max.** | 2.5 V |

## Environmental conditions

| | |
|---|---|
| **Ambient temperature** | -25...70 °C |
| **Contamination scale** | 3 |
| **EN 60068-2-27, Shock** | Half-sinus, 30 $g_n$, 11 ms |
| **EN 60068-2-6, Vibration** | 55 Hz, amplitude 1 mm, 3x30 min |
| **IP rating** | IP68 |

## Interface

| | |
|---|---|
| **Switching output** | PNP normally open/normally closed (NO/NC) |

Inductive Sensors

# BES M18MI2-PAH80B-S04G
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## Material

| | |
|---|---|
| **Housing material** | Brass, Nickel-free coated |
| **Material sensing surface** | PBT |

## Mechanical data

| | |
|---|---|
| **Dimension** | Ø 18 x 83 mm |
| **Installation** | for flush mounting |
| **Size** | M18x1 |
| **Tightening torque** | 25 Nm |

## Range/Distance

| | |
|---|---|
| **Assured operating distance Sa** | 6.4 mm |
| **Hysteresis H max. (% of Sr)** | 15.0 % |
| **Rated operating distance Sn** | 8 mm |
| **Real switching distance sr** | 8 mm |
| **Repeat accuracy max. (% of Sr)** | 5.0 % |
| **Switching distance marking** | ■■ |
| **Temperature drift max. (% of Sr)** | 10 % |
| **Tolerance Sr** | ±10 % |

## Remarks

Flush: See installation instructions for inductive sensors with extended range 939221.
The sensor is functional again after the overload has been eliminated.

## Connector Drawings




## Wiring Diagrams

