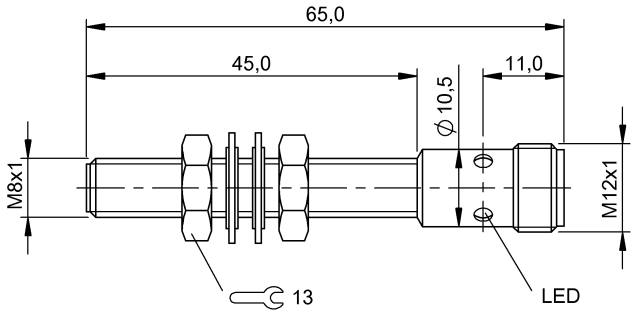
Inductive Sensors

# BES M08MH1-NSC20B-S04G
# Order Code: BES0025




## Basic features

| | |
|---|---|
| Approval/Conformity | CE<br>UKCA<br>cULus<br>WEEE |
| Basic standard | IEC 60947-5-2 |
| Principle of operation | Inductive sensor |

## 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 | 1 µF |
| Min. operating current Im | 0 mA |
| No-load current Io max., damped | 10 mA |
| No-load current Io max., undamped | 5 mA |
| Operating voltage Ub | 12...30 VDC |
| Output resistance Ra | 33.0 kOhm + D |
| Rated insulation voltage Ui | 75 V DC |
| Rated operating current Ie | 200 mA |
| Rated operating voltage Ue DC | 24 V |
| Rated short circuit current | 100 A |
| Ready delay tv max. | 30 ms |
| Residual current Ir max. | 20 µA |
| Ripple max. (% of Ue) | 15 % |
| Switching frequency | 700 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 | IP67 |

## Functional safety

| | |
|---|---|
| MTTF (40 °C) | 880 a |

## Interface

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

Inductive Sensors

# BES M08MH1-NSC20B-S04G
# Order Code: BES0025

## Material

| | |
|---|---|
| Housing material | Brass, nickel-plated |
| Material sensing surface | PA 12 |

## Mechanical data

| | |
|---|---|
| Dimension | Ø 8 x 65 mm |
| Installation | for flush mounting |
| Mounting length | 45.00 mm |
| Size | M8x1 |
| Tightening torque | 3 Nm |

## Range/Distance

| | |
|---|---|
| Assured operating distance Sa | 1.6 mm |
| Hysteresis H max. (% of Sr) | 15.0 % |
| Rated operating distance Sn | 2 mm |
| Real switching distance sr | 2 mm |
| Repeat accuracy max. (% of Sr) | 5.0 % |
| Switching distance marking | ■■ |
| Temperature drift max. (% of Sr) | 10 % |
| Tolerance Sr | ±10 % |

## Remarks

EMC: For operating conditions with noise sources
External protection circuit is required. Document 825345.
Flush: See installation instructions for inductive sensors with extended range 825357.
The sensor is functional again after the overload has been eliminated.
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.

## Wiring Diagrams (Schematic)

