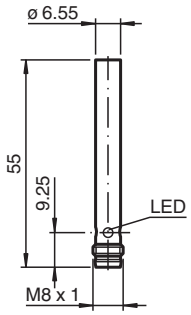


# Inductive sensor

## NEB3-6,5M45-E0-V3

- Increased operating distance
- 3 mm quasi flush
- Extended temperature range -40 ... +85 °C

## Dimensions




## Technical Data

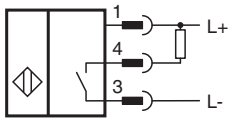
| | | |
|---|---|---|
| **General specifications** | | |
| Switching function | | Normally open (NO) |
| Output type | | NPN |
| Rated operating distance | $s_n$ | 3 mm |
| Installation | | quasi flush |
| Output polarity | | DC |
| Assured operating distance | $s_a$ | 0 ... 2.43 mm |
| Actuating element | | mild steel, e. g. 1.0037, SR235JR (formerly St37-2)<br>9 mm x 9 mm x 1 mm |
| Reduction factor $r_{Al}$ | | 0.4 |
| Reduction factor $r_{Cu}$ | | 0.3 |
| Reduction factor $r_{304}$ | | 0.7 |
| Reduction factor $r_{Brass}$ | | 0.45 |
| Output type | | 3-wire |
| **Nominal ratings** | | |
| Installation conditions | | |
| A | | in steel 1.0037 (St37): 1 mm |
| B | | 6 mm |
| C | | 9 mm |
| F | | 16 mm |
| Operating voltage | $U_B$ | 5 ... 30 V |
| Switching frequency | f | 0 ... 3500 Hz |

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## Technical Data

| | | |
|---|---|---|
| Hysteresis | H | typ. 5% |
| Reverse polarity protection | | reverse polarity protected |
| Short-circuit protection | | pulsing |
| Voltage drop | $U_d$ | ≤ 1.5 V |
| Operating current | $I_L$ | 0 ... 100 mA |
| Off-state current | $I_r$ | 0 ... 0.2 mA |
| No-load supply current | $I_0$ | ≤ 10 mA |
| Time delay before availability | $t_v$ | ≤ 100 ms |
| Switching state indicator | | Multihole-LED, yellow |
| **Functional safety related parameters** | | |
| $MTTF_d$ | | 960 a |
| Mission Time ($T_M$) | | 20 a |
| Diagnostic Coverage (DC) | | 0 % |
| **Compliance with standards and directives** | | |
| Standard conformity | | |
| Standards | | EN IEC 60947-5-2 |
| **Approvals and certificates** | | |
| UL approval | | cULus Listed, General Purpose |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| **Ambient conditions** | | |
| Ambient temperature | | -40 ... 70 °C (-40 ... 158 °F) |
| Storage temperature | | -40 ... 85 °C (-40 ... 185 °F) |
| **Mechanical specifications** | | |
| Connection type | | Connector plug M8 x 1 , 3-pin |
| Housing material | | brass, nickel-plated |
| Sensing face | | LCP |
| Degree of protection | | IP65 / IP66 / IP67 |
| Mass | | 8 g |
| Dimensions | | |
| Length | | 55 mm |
| Diameter | | 6.5 mm |

## Connection




## Connection Assignment



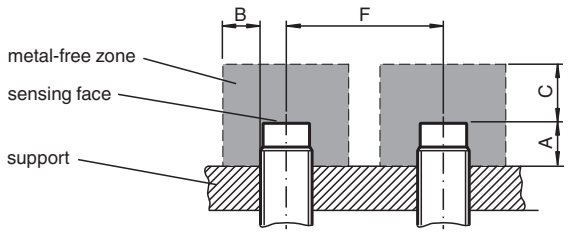

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## Connection Assignment

Wire colors in accordance with EN 60947-5-2

| | | | |
|---|---|---|---|
| 1 | \| | BN | (brown) |
| 3 | \| | BU | (blue) |
| 4 | \| | BK | (black) |

## Installation




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