



### Model Number

**NBB20-L3M-US-C3-V12**

### Features

- Sensing range 20 mm
- Weld Immune
- 2-corner LED, metal base & mount

### Accessories

#### V12-W-YE2M-PUR-H/S

Connecting cable, 1/2" - 20 UNF, 3-pin, irradiated PUR cable

#### MHW 01

Modular mounting bracket

#### MH 02-L

Mounting aid

## Technical Data

### General specifications

|                            |       |               |
|----------------------------|-------|---------------|
| Switching element function | AC/DC | NO            |
| Rated operating distance   | $s_n$ | 20 mm         |
| Installation               |       | flush         |
| Output polarity            |       | AC/DC         |
| Assured operating distance | $s_a$ | 0 ... 16.2 mm |
| Reduction factor $r_{A1}$  |       | 0.30 - 0.40   |
| Reduction factor $r_{304}$ |       | 0.60 - 0.80   |

### Nominal ratings

|                             |       |                            |
|-----------------------------|-------|----------------------------|
| Operating voltage           | $U_B$ | 20 ... 250 V AC/DC         |
| Switching frequency         | $f$   | 2 Hz                       |
| Hysteresis                  | $H$   | 3 ... 15 typ. 10 %         |
| Reverse polarity protection |       | reverse polarity protected |
| Short-circuit protection    |       | pulsing                    |
| Voltage drop                | $U_d$ | $\leq 7$ V                 |
| Operating current           | $I_L$ | 3 ... 300 mA               |
| Off-state current           | $I_r$ | $\leq 1.7$ mA              |
| No-load supply current      | $I_0$ | $\leq 0.6$ mA              |
| Operating voltage display   |       | LED, green                 |
| Switching state indication  |       | LED, red                   |

### Indicators/operating means

|               |                                   |
|---------------|-----------------------------------|
| LED red/green | Short circuit/overload indication |
|---------------|-----------------------------------|

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
| Storage temperature | -40 ... 85 °C (-40 ... 185 °F) |

### Mechanical specifications

|                   |                              |
|-------------------|------------------------------|
| Connection type   | Connector 1/2"-20 UN , 3-pin |
| Housing material  | Zinc, PTFE coated            |
| Sensing face      | Thermoset Plastic            |
| Housing base      | Zinc, PTFE coated            |
| Protection degree | IP67                         |

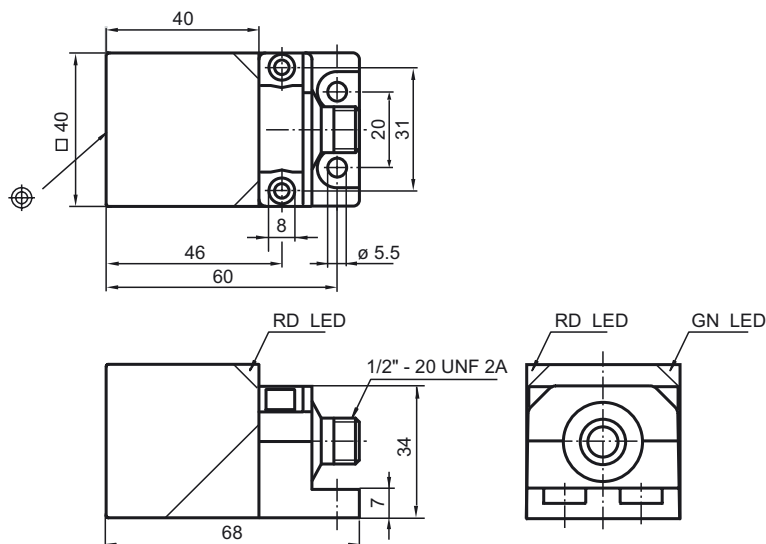
### Compliance with standards and directives

|                     |                                 |
|---------------------|---------------------------------|
| Standard conformity |                                 |
| Standards           | IEC 61000-4 / EN 60947-5-2:2004 |

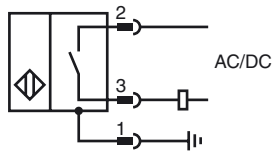
### Approvals and certificates

|              |   |
|--------------|---|
| UL approval  | cULus Listed, General Purpose                     |
| CSA approval | cCSAus Listed, General Purpose                    |
| CCC approval | Certified by China Compulsory Certification (CCC) |

## Dimensions



Electrical Connection



Pinout



Wire colors

|   |       |             |
|---|-------|-------------|
| 1 | GN    | (green)     |
| 2 | RD/BK | (red/black) |
| 3 | RD/WH | (red/white) |