



### Model Number

NBN40-U4-A2-V1

### Features

- Sensor head bidirectional and rotatable
- Basic series
- 40 mm non-flush
- 4-wire DC
- 4 LEDs indicator for 360° visibility

### Accessories

#### V1-G

Female connector, M12, 4-pin, field attachable

#### V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

#### MH 04-2681F

Mounting aid for VariKont, +U1+ and +U9\*

#### V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

#### V1-W

Female connector, M12, 4-pin, field attachable

#### MHW 01

Modular mounting bracket

## Technical Data

### General specifications

|                              |       |               |       |
|------------------------------|-------|---------------|-------|
| Switching element function   |       | PNP           | NO/NC |
| Rated operating distance     | $s_n$ | 40 mm         |       |
| Installation                 |       | non-flush     |       |
| Output polarity              |       | DC            |       |
| Assured operating distance   | $s_a$ | 0 ... 32.4 mm |       |
| Reduction factor $r_{Al}$    |       | 0.31          |       |
| Reduction factor $r_{Cu}$    |       | 0.3           |       |
| Reduction factor $r_{304}$   |       | 0.74          |       |
| Reduction factor $r_{Brass}$ |       | 0.39          |       |

### Nominal ratings

|                                |       |                            |
|--------------------------------|-------|----------------------------|
| Operating voltage              | $U_B$ | 10 ... 30 V DC             |
| Switching frequency            | $f$   | 0 ... 150 Hz               |
| Hysteresis                     | $H$   | typ. 5 %                   |
| Reverse polarity protection    |       | reverse polarity protected |
| Short-circuit protection       |       | pulsing                    |
| Voltage drop                   | $U_d$ | $\leq 2$ V                 |
| Operating current              | $I_L$ | 0 ... 200 mA               |
| Off-state current              | $I_r$ | 0 ... 0.5 mA               |
| No-load supply current         | $I_0$ | $\leq 20$ mA               |
| Time delay before availability | $t_v$ | 80 ms                      |
| Operating voltage indicator    |       | LED, green                 |
| Switching state indicator      |       | LED, yellow                |

### Functional safety related parameters

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 1230 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 85 °C (-13 ... 185 °F) |
|---------------------|--------------------------------|

### Mechanical specifications

|                      |                                     |
|----------------------|-------------------------------------|
| Connection type      | Connector M12 x 1, 4-pin            |
| Housing material     | PA/metal with epoxy powder coating  |
| Sensing face         | PA                                  |
| Housing base         | metal                               |
| Degree of protection | IP68 / IP69K                        |
| Mass                 | 225 g                               |
| Note                 | Tightening torque: 1.8 Nm (housing) |

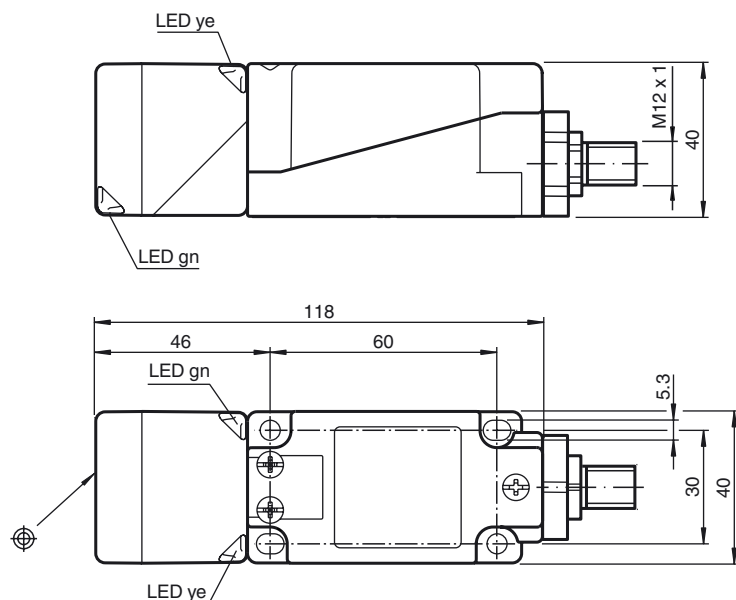
### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| Standards           | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

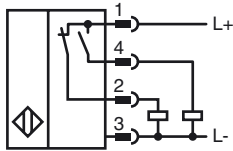
### Approvals and certificates

|              |  |
|--------------|--|
| UL approval  | cULus Listed, General Purpose                                      |
| CCC approval | CCC approval / marking not required for products rated $\leq 36$ V |

## Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

|   |    |         |
|---|----|---------|
| 1 | BN | (brown) |
| 2 | WH | (white) |
| 3 | BU | (blue)  |
| 4 | BK | (black) |