



### Model Number

NBN4-F25-E8-V1

### Features

- Direct mounting on standard actuators
- Small construction with sturdy plastic housing of protection class IP 67
- LED for power on
- M12 male connector

### Accessories

#### BT32

Activator for F25 series

#### BT33

Activator for F25 series

#### BT34

Activator for F25 series

#### BT32XAS

Activator for F25 series

#### BT43-RG-01

Activator for F25 series including protective housing and mounting plate

## Technical Data

### General specifications

|                             |       |                        |
|-----------------------------|-------|------------------------|
| Switching function          |       | 2 x normally open (NO) |
| Output type                 |       | PNP                    |
| Rated operating distance    | $s_n$ | 4 mm                   |
| Installation                |       | flush mountable        |
| Output polarity             |       | DC                     |
| Assured operating distance  | $s_a$ | 0 ... 3.24 mm          |
| Actual operating distance   | $s_r$ | 3.6 ... 4.4 mm typ.    |
| Reduction factor $r_{AI}$   |       | 0.5                    |
| Reduction factor $r_{Cu}$   |       | 0.4                    |
| Reduction factor $r_{304}$  |       | 1                      |
| Reduction factor $r_{St37}$ |       | 1.1                    |
| Output type                 |       | 3-wire                 |

### Nominal ratings

|                                |       |  |
|--------------------------------|-------|--|
| Operating voltage              | $U_B$ | 10 ... 30 V DC                         |
| Switching frequency            | $f$   | 0 ... 1000 Hz                          |
| Hysteresis                     | $H$   | typ. 5 %                               |
| Reverse polarity protection    |       | reverse polarity protected             |
| Short-circuit protection       |       | pulsing                                |
| Voltage drop                   | $U_d$ | $\leq 2.5$ V                           |
| Design data                    |       |  |
| Operating current              | $I_L$ | 0 ... 200 mA                           |
| Off-state current              | $I_r$ | 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C |
| No-load supply current         | $I_0$ | $\leq 22.5$ mA                         |
| Time delay before availability | $t_v$ | $\leq 100$ ms                          |
| Operating voltage indicator    |       | LED, green                             |
| Switching state indicator      |       | LED, yellow                            |

### Functional safety related parameters

|                          |       |
|--------------------------|-------|
| MTTF <sub>d</sub>        | 860 a |
| Mission Time ( $T_M$ )   | 20 a  |
| Diagnostic Coverage (DC) | 0 %   |

### Ambient conditions

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

### Mechanical specifications

|                                     |                               |
|-------------------------------------|-------------------------------|
| Connection type                     | Connector plug M12 x 1, 4-pin |
| Connector housing                   | metal                         |
| Housing material                    | PBT                           |
| Sensing face                        | PC                            |
| Degree of protection                | IP67                          |
| Mass                                | 48 g                          |
| Tightening torque, fastening screws | M5 x 25 : 2.7 Nm              |
| Note                                | Mounted on mechanical drive   |

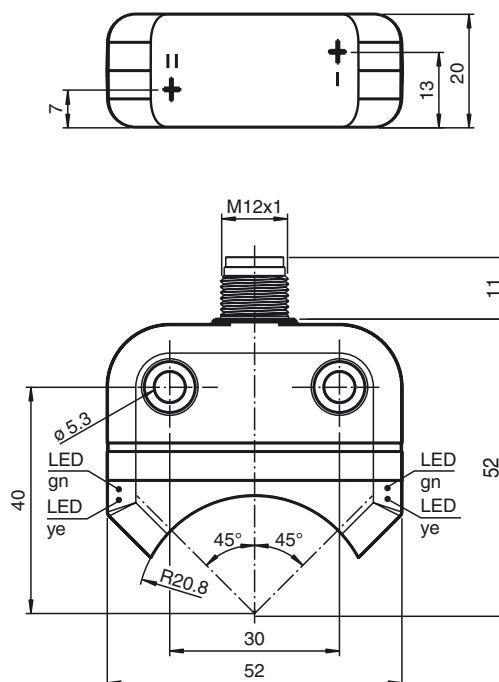
### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| Standards           | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |

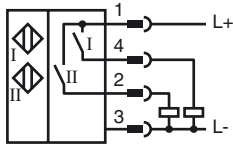
### Approvals and certificates

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

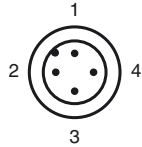
## Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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