



Model Number

NBN30-L2-B3B-V1

Features

- Sensor head bidirectional and rotatable
- Basic series
- A/B slave with extended addressing possibility for up to 62 slaves
- NO/NC selectable
- Oscillator monitoring
- On/Off delay (disconnectable)

Accessories

V1-W

Female connector, M12, 4-pin, field attachable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

MHW 01

Modular mounting bracket

MH 02-L

Mounting aid

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

V1-G

Female connector, M12, 4-pin, field attachable

Technical Data

General specifications

| | |
|-------------------------------|---|
| Switching function | Normally open/closed (NO/NC) programmable |
| Output type | AS-Interface |
| Rated operating distance | s_n 30 mm |
| Installation | non-flush |
| Assured operating distance | s_a 0 ... 24.3 mm |
| Reduction factor r_{AI} | 0.3 |
| Reduction factor r_{Cu} | 0.3 |
| Reduction factor r_{304} | 0.75 |
| Reduction factor r_{Brass} | 0.38 |
| Slave type | A/B slave |
| AS-Interface specification | V3.0 |
| Required master specification | \geq V2.1 |
| Output type | 2-wire |

Nominal ratings

| | |
|--------------------------------|---|
| Operating voltage | U_B 26.5 ... 31.9 V via AS-i bus system |
| Switching frequency | f 0 ... 100 Hz |
| Hysteresis | H typ. 5 % |
| Reverse polarity protection | reverse polarity protected |
| No-load supply current | I_0 \leq 40 mA |
| Time delay before availability | t_v \leq 1000 ms |
| Operating voltage indicator | LED, green |
| Switching state indicator | dual-LED, yellow |
| Error indicator | dual-LED, red |

Functional safety related parameters

| | |
|--------------------------------|--------|
| MTTF _d | 1330 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 |
| Housing material | PA |
| Sensing face | PA |
| Degree of protection | IP67 |
| Mass | 210 g |

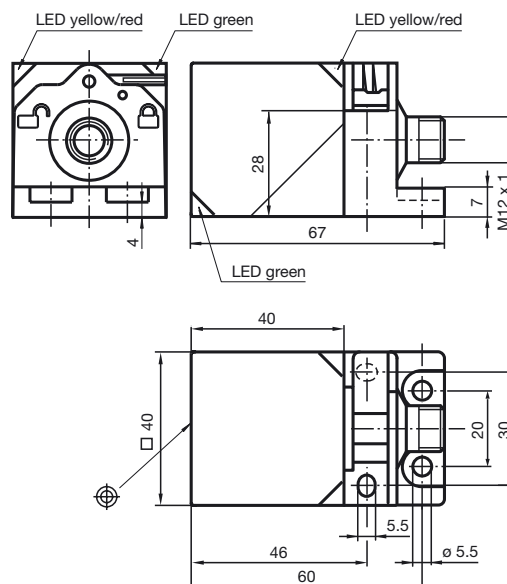
Compliance with standards and directives

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

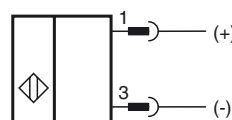
Approvals and certificates

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

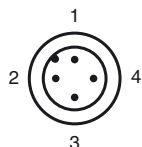
Dimensions



Electrical Connection



Pinout

**Programming Instructions**

Adress 00 preset, alterable
via Busmaster
or programming units

IO-Code 0
ID-Code A
ID1-Code 7
ID2-Code E

Data bit

| Bit | Function |
|-----|---|
| D0 | switching state ¹⁾ (0 = damped; 1 = undamped) |
| D1 | not used |
| D2 | oscillator monitoring (0= oscillator defective, 1=normal operation) |
| D3 | not used |

Parameter bit

| Bit | Function |
|-----|--|
| P0 | ON / Off delay activated* / deactivated |
| P1 | switching element function ²⁾ (0 = NC; 1 = NO) |
| P2 | not used |
| P3 | not used |

- ¹⁾ Applies to NO funktion (P1 = 1; preset),
with NC funktion (P1 = 0) reversed characteristics
- ²⁾ Default setting: NO

Indication depending on the operation mode

| Symptoms | green LED (POWER) | red LED (FAULT) | Data bit D2 |
|-------------------|----------------------|--------------------|----------------|
| normal operation | on | off | 1 |
| Oscillator defect | flashing | flashing | 0 |
| no communication | off | on | 1 |

On/off delay:

The on/off delay is preset and switched on (P0=1). On delay approx.15 ms, when P0=1 and NO function (P1=1). Off delay approx.15 ms, when P0=1 and NC function (P1=0).