



Model Number

NBN40-L2-B3-V1

Features

- Sensor head bidirectional and rotatable
- Basic series
- NO/NC programmable
- Adjustable sensor head
- Oscillator monitoring
- On/Off delay (disconnectable)

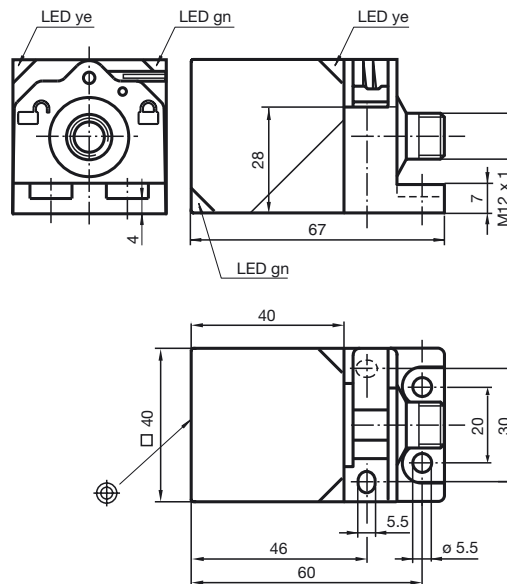
Accessories

- V1-G**
Female connector, M12, 4-pin, field attachable
- V1-W**
Female connector, M12, 4-pin, field attachable
- V1-W-2M-PUR**
Female cordset, M12, 4-pin, PUR cable
- V1-G-2M-PUR**
Female cordset, M12, 4-pin, PUR cable
- MHW 01**
Modular mounting bracket
- MH 02-L**
Mounting aid

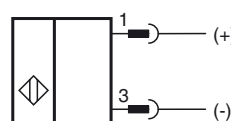
Technical Data

| | |
|---|--|
| General specifications | |
| Switching function | Normally open/closed (NO/NC) programmable |
| Output type | AS-Interface |
| Rated operating distance | s_n 40 mm |
| Installation | non-flush |
| Assured operating distance | s_a 0 ... 32.4 mm |
| Reduction factor r_{AI} | 0.3 |
| Reduction factor r_{Cu} | 0.3 |
| Reduction factor r_{304} | 0.75 |
| Slave type | Standard slave |
| AS-Interface specification | V2.1 |
| 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 ... 50 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 | LED, yellow |
| 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 | IP69K |
| 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

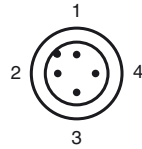


Electrical Connection



Release date: 2019-08-23 12:39 Date of issue: 2019-08-23 226320_eng.xml

Pinout



Programming Instructions

Address 00 preset, alterable via Busmaster or programming units
 IO-Code 1
 ID-Code 1
 ID1-Code F
 ID2-Code F

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 function (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).