



Model Number

NBN40-L2-B3-V1

Features

- Sensor head bidirectional and rotatable
- Basic series
- 40 mm non-flush
- 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 element function		NO/NC programmable
Rated operating distance	s_n	40 mm
Installation		non-flush
Output polarity		AS-Interface
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

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 display		LED, green
Switching state indication		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 M12 x 1, 4-pin
Housing material	PA
Sensing face	PA
Protection degree	IP69K

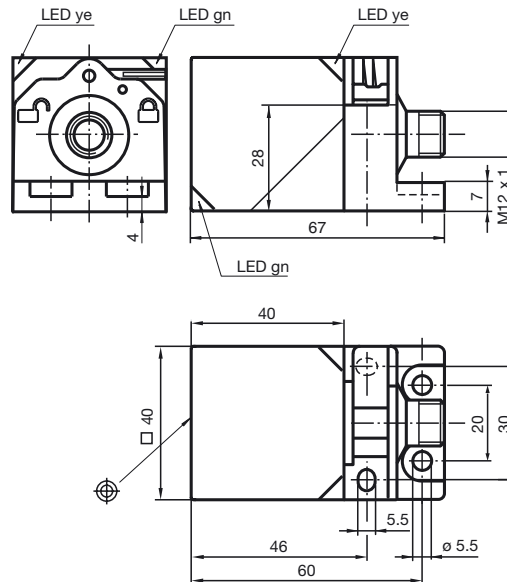
Compliance with standards and directives

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

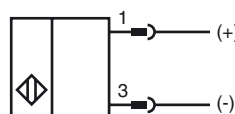
Approvals and certificates

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

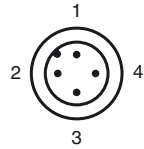


Electrical Connection



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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 state¹⁾
(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 function²⁾
(0 = NC; 1 = NO)

P2 not used

P3 not used

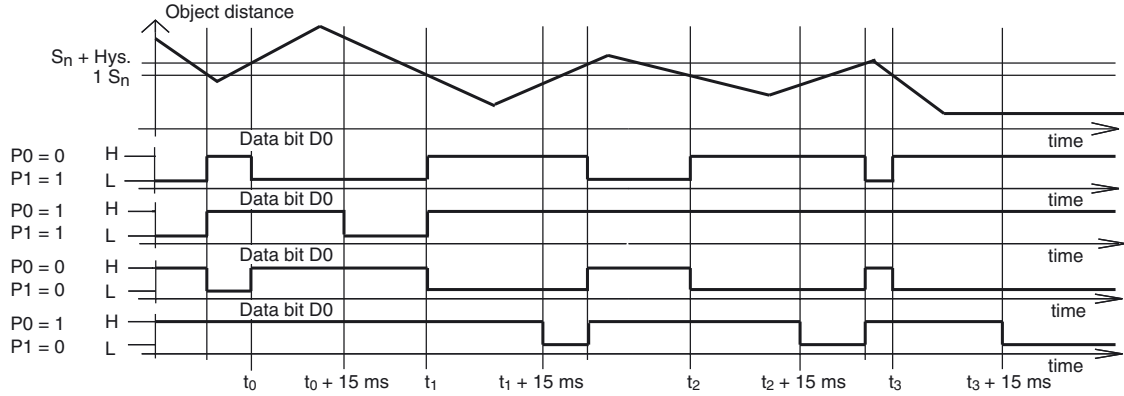
¹⁾ Applies to NO funktion (P1 = 1; preset),
with NC funktion (P1 = 0) reversed characteristics

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).