



Model Number

NBN40-U1-B3B

Features

- Sensor head bidirectional and rotatable
- 40 mm non-flush
- A/B slave with extended addressing possibility for up to 62 slaves
- Adjustable sensor head
- NO/NC programmable
- Oscillator monitoring
- On/Off delay (disconnectable)

Accessories

V1-M20-80

Receptacles, M12/M20; plastic version

MHW 01

Modular mounting bracket

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_{Al}		0.5
Reduction factor r_{Cu}		0.45
Reduction factor r_{304}		0.85
Slave type		A/B slave
AS-Interface specification		V3.0
Required master specification		≥ V2.1

Nominal ratings

Operating voltage	U_B	26.5 ... 31.9 V via AS-i bus system
Switching frequency	f	0 ... 150 Hz
Hysteresis	H	1 ... 15 typ. 5 %
Reverse polarity protection		reverse polarity protected
No-load supply current	I_0	≤ 25 mA
Time delay before availability	t_v	≤ 1000 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Error indicator		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	screw terminals
Core cross-section	≤ 2.5 mm ²
Housing material	PA/metal with epoxy powder coating
Sensing face	PBT
Housing base	plastic
Degree of protection	IP68 / IP69K

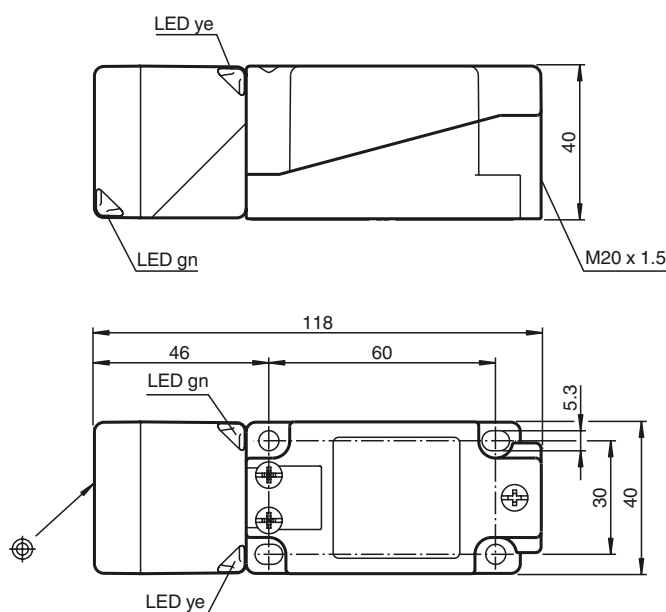
Compliance with standards and directives

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

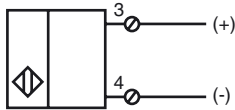
Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤36 V

Dimensions



Electrical Connection



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).