



CE



Model Number

NBB20+U1A+B3

Features

- Basic series
- NO/NC programmable
- Adjustable sensor head
- Oscillator monitoring

Accessories

V1-M20-80

Receptacles, M12/M20; plastic version

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

MHW 01

Modular mounting bracket

V1-G

Female connector, M12, 4-pin, field attachable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

Technical Data

General specifications

Switching function	Normally open/closed (NO/NC) programmable
Output type	AS-Interface
Rated operating distance	s_n 20 mm
Installation	flush
Assured operating distance	s_a 0 ... 16.2 mm
Reduction factor r_{Al}	0.4
Reduction factor r_{Cu}	0.35
Reduction factor r_{304}	0.85
Output type	2-wire

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
Design data		
Time delay before availability	t_v	≤ 1000 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

Standard conformity

EMC in accordance with	IEC / EN 60947-5-2:2004
Standards	IEC / EN 60947-5-2:2004

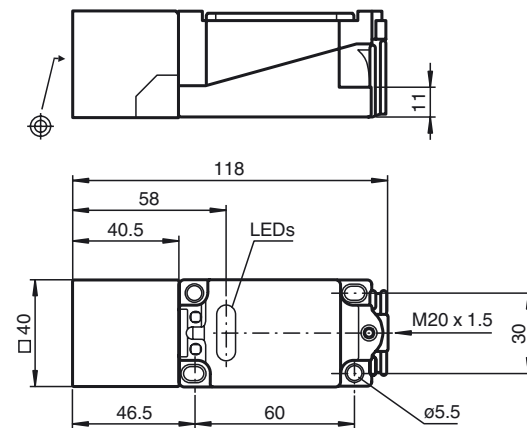
Ambient conditions

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

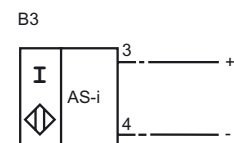
Mechanical specifications

Core cross-section	up to 2.5 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68

Dimensions



Electrical Connection



Programming Instructions

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

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	not used
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