



Model Number

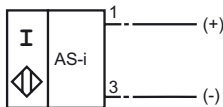
NBB20+U1A+B3-V1

Features

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

Connection

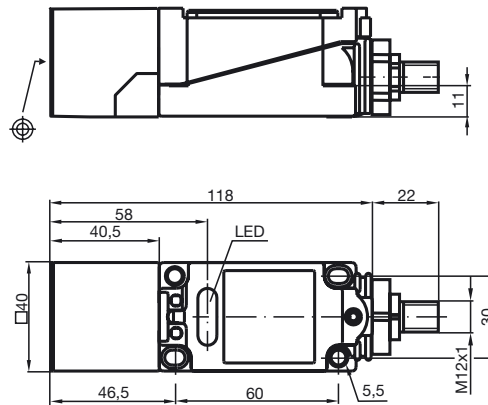
B3 (...+V1)



Accessories

- V1-G**
4-pin, M12 female field-attachable connector
- V1-W**
4-pin, M12 female field-attachable connector
- V1-W-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- V1-G-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- MHW 01**
Modular mounting bracket
- MH 04-2681F**
Mounting aid for VariKont, +U1+ and +U9*

Dimensions



Technical Data

General specifications

Switching element function		NO/NC programmable
Rated operating distance	s_n	20 mm
Installation		flush
Output polarity		AS-Interface
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

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 protected		reverse polarity protected
No-load supply current	I_0	≤ 25 mA
Operating voltage display		LED, green
Indication of the switching state		LED, yellow

Ambient conditions

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

Mechanical specifications

Connection type	Device connector M12 x 1 , 4-pin
Housing material	PBT
Sensing face	PBT
Protection degree	IP67
Mass	240 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	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Release date: 2012-05-04 09:25 Date of issue: 2012-05-04 086623_eng.xml

Programming Instructions

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

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 not used
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