



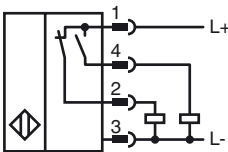
Model Number

NBB8-18GM60-A2-V1

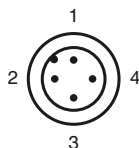
Features

- 8 mm embeddable
- Increased operating distance

Connection



Pinout



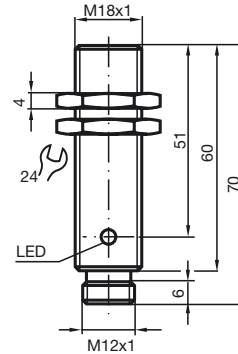
Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Accessories

- BF 18**
Mounting flange, 18 mm
- EXG-18**
Quick mounting bracket with dead stop
- V1-G**
4-pin, M12 female field-attachable connector
- V1-W**
4-pin, M12 female field-attachable connector
- V1-G-2M-PUR**
Cable socket, M12, 4-pin, PUR cable
- V1-W-2M-PUR**
Cable socket, M12, 4-pin, PUR cable

Dimensions



Technical Data

General specifications

Switching element function	PNP	NO/NC
Rated operating distance	s_n	8 mm
Installation		embeddable
Output polarity		DC
Assured operating distance	s_a	0 ... 6.48 mm (-25 ... 70 °C (-13 ... 158 °F)) 0 ... 6.08 mm (-40 ... -25 °C (-40 ... -13 °F))
Reduction factor r_{AI}		0.45
Reduction factor r_{Cu}		0.4
Reduction factor r_{304}		0.7

Nominal ratings

Operating voltage	U_B	10 ... 30 V
Switching frequency	f	0 ... 500 Hz
Hysteresis	H	typ. 5%
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 μ A at 25 °C
No-load supply current	I_0	≤ 25 mA
Indication of the switching state		LED, yellow

Functional safety related parameters

MTTF _d	1110 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-40 ... 70 °C (-40 ... 158 °F)
---------------------	--------------------------------

Mechanical specifications

Connection type	Device connector M12 x 1 , 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	IP67

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: 2011-07-14 10:53 Date of issue: 2012-02-03 085567_eng.xml