



Model Number

NBN8-12GM50-E3-V1-M1

Features

- 8 mm non-flush
- Increased operating distance
- Extended temperature range -40 ... +85 °C
- With increased sealing, protection class IP68 / IP69K
- E1-Type approval

Accessories

BF 12

Mounting flange, 12 mm

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-2M-PUR

Female cordset, M12, 4-pin, PUR cable

V1-W-2M-PUR

Female cordset, M12, 4-pin, PUR cable

Technical Data

General specifications

Switching function	Normally closed (NC)
Output type	PNP
Rated operating distance	s_n 8 mm
Installation	non-flush
Output polarity	DC
Assured operating distance	s_a 0 ... 6.48 mm
Actuating element	mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 24 mm x 24 mm x 1 mm
Reduction factor r_{Al}	0.5
Reduction factor r_{Cu}	0.45
Reduction factor r_{304}	0.7
Reduction factor r_{Brass}	0.5
Output type	3-wire

Nominal ratings

Operating voltage	U_B 7 ... 30 V
Switching frequency	f 0 ... 1200 Hz
Hysteresis	H typ. 5%
Reverse polarity protection	reverse polarity protected
Short-circuit protection	pulsing
Voltage drop	U_d ≤ 2 V
Operating current	I_L 0 ... 200 mA
Off-state current	I_r 0 ... 0.5 mA typ. 4 μ A at 25 °C
No-load supply current	I_0 ≤ 10 mA
Time delay before availability	t_v ≤ 100 ms
Switching state indicator	Multihole-LED, yellow

Functional safety related parameters

MTTF _d	1484 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-40 ... 85 °C (-40 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type	Connector M12 x 1, 3-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP68 / IP69K
Mass	18 g

General information

Scope of delivery	2 self locking nuts in scope of delivery
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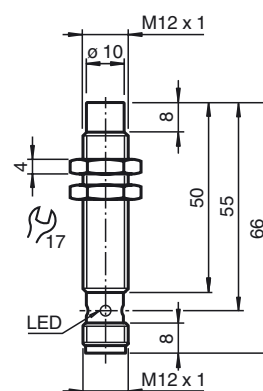
Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012 EN 12895: 2015

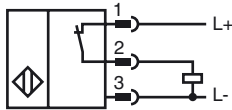
Approvals and certificates

UL approval	cULus Listed, General Purpose, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated ≤ 36 V
E1 Type approval	10R-04

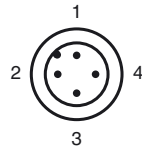
Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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

Installation Hint

Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2a	2b	3a	3b	4
Severity level	III	III	III	III	III	III
Failure criterion	A	A	C	A	A	C

EN 61000-4-2:	CD: 8 kV / AD: 15 kV
Severity level	IV IV
EN 61000-4-3:	36 V/m (80...2500 MHz)
Severity level	IV
EN 61000-4-4:	2 kV
Severity level	III
EN 61000-4-6:	30 V (0.01...80 MHz)
Severity level	III
EN 55011:	Class A