



Model Number

NBB2-12GM60-WS-V11

Features

- Basic series
- 2 mm flush
- 2-wire AC

Technical Data

General specifications

Switching element function		AC	NO
Rated operating distance	s_n	2 mm	
Installation		flush	
Output polarity		AC	
Assured operating distance	s_a	0 ... 1.62 mm	
Reduction factor r_{Al}		0.5	
Reduction factor r_{Cu}		0.4	
Reduction factor r_{304}		0.8	

Nominal ratings

Operating voltage	U_B	20 ... 150 V
Switching frequency	f	0 ... 25 Hz
Hysteresis	H	3 ... 15 typ. 5 %
Reverse polarity protection		reverse polarity tolerant
Voltage drop	U_d	≤ 5 V
Momentary current (20 ms, 0.1 Hz)		0 ... 1700 mA
Operating current	I_L	5 ... 200 mA
Off-state current	I_r	0 ... 1.7 mA typ.
Time delay before availability	t_v	≤ 20 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	1592 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
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Mechanical specifications

Connection type	M12 connector, male, 4-pin, B-coded
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP67
Mass	125 g
Note	In the temperature range below 0 °C, permissible operating voltage U_b 80...150 V Safety fuse ≤ 0.3 A (quick-blow) according to IEC 60127-2 Sheet 1 Recommendation: after a short circuit, check that the device is functioning correctly.

General information

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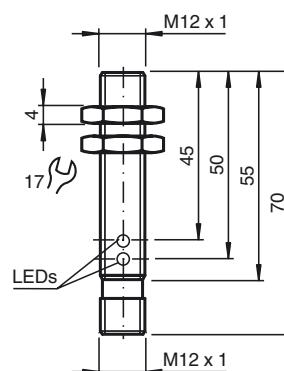
Compliance with standards and directives

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

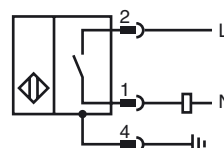
Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

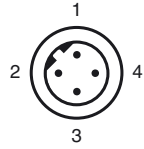
Dimensions



Electrical Connection



Pinout



Wire colors

1	BU	(blue)
2	BN	(brown)
4	GN/YE	(green/yellow)