



Model Number

NRB3-12GM40-E2-C-V1

Features

- Reduction factor = 1
- Magnetic field resistant
- Weld Immune

Accessories

BF 12

Mounting flange, 12 mm

EXG-12

Quick mounting bracket with dead stop

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

V1-G-OR2M-POC

Female cordset, M12, 4-pin, TPE cable, welding-bead resistant

Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	3 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 2.43 mm
Reduction factor r_{AI}		1
Reduction factor r_{CU}		1
Reduction factor r_{304}		1
Reduction factor r_{Si37}		1
Output type		3-wire

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 2000 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2 V
Rated insulation voltage	U_{BIS}	60 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	≤ 14 mA
Time delay before availability	t_v	≤ 15 ms
Constant magnetic field	B	200 mT
Alternating magnetic field	B	200 mT
Switching state indicator		Multihole-LED, yellow

Functional safety related parameters

MTTF _d	1140.2 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

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

Mechanical specifications

Connection type	Connector plug M12 x 1, 4-pin
Housing material	Brass, PTFE coated
Sensing face	PPS
Degree of protection	IP67
Mass	15 g

General information

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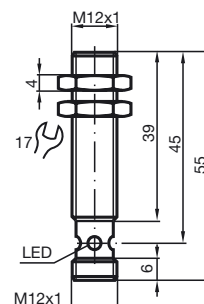
Compliance with standards and directives

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

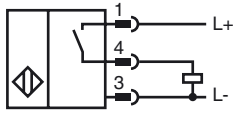
Approvals and certificates

Protection class	II
Rated insulation voltage	U_i 60 V
Rated impulse withstand voltage	U_{imp} 800 V
UL approval	cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

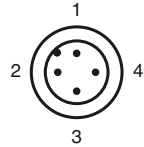
Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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