



### Model Number

**NEN10-12GM50-E3-V1**

### Features

- Increased operating distance
- 10 mm non-flush

### Accessories

#### 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

#### BF 12

Mounting flange, 12 mm

## Technical Data

### General specifications

Switching function		Normally closed (NC)
Output type		PNP
Rated operating distance	$s_n$	10 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 8.1 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 30 mm x 30 mm x 1 mm
Reduction factor $r_{Al}$		0.45
Reduction factor $r_{Cu}$		0.4
Reduction factor $r_{304}$		0.75
Reduction factor $r_{Brass}$		0.45
Output type		3-wire

### Nominal ratings

Installation conditions		
A		in steel 1.0037 (St37): 10 mm
B		12 mm
C		30 mm
F		42 mm
Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 600 Hz
Hysteresis	$H$	0.06 ... 1 mm
Reverse polarity protection		yes
Short-circuit protection		pulsing
Overload resistance		yes
Wire breakage protection		yes
Inductive overvoltage protection		yes
Surge suppression		yes
Ripple		10 %
Voltage drop	$U_d$	$\leq 2$ V
Repeat accuracy	$R$	0.3 mm
Operating current	$I_L$	0 ... 200 mA, above 70°C $\leq 150$ mA
Off-state current	$I_r$	$\leq 10$ $\mu$ A
No-load supply current	$I_0$	$\leq 15$ mA
Time delay before availability	$t_v$	$\leq 50$ ms
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	2650 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

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

### Mechanical specifications

Connection type	Connector M12 x 1, 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Degree of protection	IP67
Mass	20 g
Tightening torque, fastening screws	max. 10 Nm

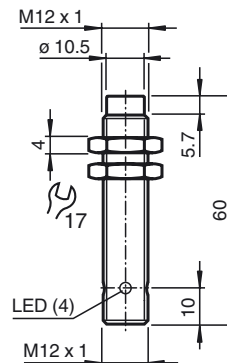
### Compliance with standards and directives

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

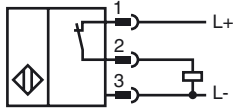
### Approvals and certificates

EAC conformity	TR CU 020/2011
UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

## Dimensions



**Electrical Connection**



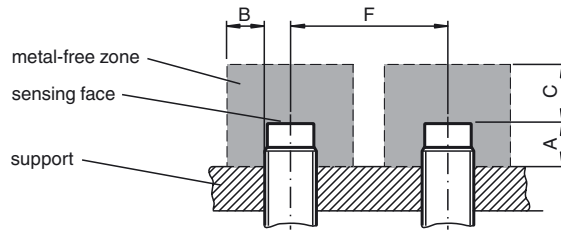
**Pinout**



Wire colors in accordance with EN 60947-5-2

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

**Installation Conditions**



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