



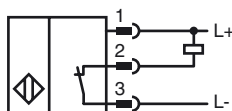
### Model Number

NEB6-12GM50-E1-V1

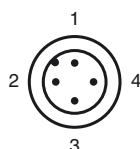
### Features

- Increased operating distance
- 6 mm embeddable

### 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 12

Mounting flange, 12 mm

#### V1-G

4-pin, M12 female field-attachable connector

#### V1-W

4-pin, M12 female field-attachable connector

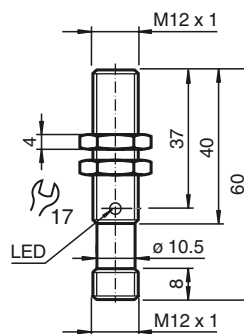
#### V1-G-2M-PUR

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	NPN	NC
Rated operating distance	$s_n$	6 mm
Installation		quasi embedd.
Output polarity		DC
Assured operating distance	$s_a$	0 ... 4.8 mm
Actuating element		structural steel, e. g. 1.0037, SR235JR (formerly St37-2) 18 mm x 18 mm x 1 mm
Reduction factor $r_{Al}$		0.28
Reduction factor $r_{Cu}$		0.2
Reduction factor $r_{304}$		0.7
Reduction factor $r_{Brass}$		0.35

#### Nominal ratings

Installation conditions	
A	in steel 1.0037 (St37): 2.4 mm in other metal: 1.2 mm
B	12 mm
C	18 mm
F	24 mm
Operating voltage	$U_B$ 10 ... 30 V DC
Switching frequency	$f$ 0 ... 800 Hz
Hysteresis	H 0.06 ... 1.2 mm
Reverse polarity protected	yes
Short-circuit protection	pulsing
Overload resistance	yes
Wire breakage protection	yes
Surge suppression	yes
Ripple	10 %
Voltage drop	$U_d$ $\leq 2$ V
Repeat accuracy	0.3 mm
Operating current	$I_L$ 0 ... 200 mA, above 70 °C (158 °F) $\leq 150$ mA
Off-state current	$I_r$ $\leq 10$ $\mu$ A
No-load supply current	$I_0$ $\leq 15$ mA
Indication of the switching state	LED, yellow

#### Functional safety related parameters

MTTF <sub>d</sub>	1740 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	Device connector M12 x 1, 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	IP67
Mass	20 g

#### 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
CCC approval	Products with a maximum operating voltage of $\leq 36$ V do not bear a CCC marking because they do not require approval.

Installation conditions

