



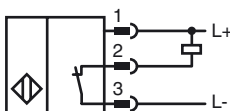
**Model Number**

NEN20-18GM50-E1-V1

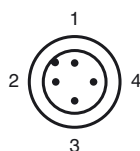
**Features**

- Increased operating distance
- 20 mm non-flush

**Connection**



**Pinout**



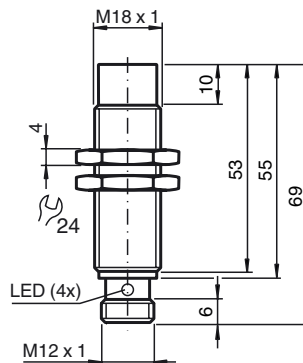
Wire colors in accordance with EN 60947-5-2

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

**Accessories**

- BF 18**  
Mounting flange, 18 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
- EXG-18**  
Quick mounting bracket with dead stop

**Dimensions**



**Technical Data**

**General specifications**

Switching element function		NPN	NC
Rated operating distance	$s_n$	20 mm	
Installation		non-flush	
Output polarity		DC	
Assured operating distance	$s_a$	0 ... 16.2 mm	
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 60 mm x 60 mm x 1 mm	
Reduction factor $r_{Al}$		0.35	
Reduction factor $r_{Cu}$		0.3	
Reduction factor $r_{304}$		0.7	
Reduction factor $r_{Brass}$		0.45	

**Nominal ratings**

<b>Installation conditions</b>	
A	in steel 1.0037 (St37): 20 mm
B	30 mm
C	60 mm
F	78 mm
Operating voltage	$U_B$ 10 ... 30 V
Switching frequency	f 0 ... 200 Hz
Hysteresis	H 0.1 ... 2 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	1 mm
Operating current	$I_L$ 0 ... 200 mA
Off-state current	$I_r$ $\leq$ 10 $\mu$ A
No-load supply current	$I_0$ $\leq$ 11 mA
Time delay before availability	$t_v$ $\leq$ 50 ms
Indication of the switching state	LED, yellow

**Functional safety related parameters**

MTTF <sub>d</sub>	1960 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	30 g
Tightening torque, fastening screws	max. 20 Nm

**Compliance with standards and directives**

<b>Standard conformity</b>	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

**Approvals and certificates**

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

