



### Model Number

NRN75-FP-A2-C-P3-V1

### Features

- 75 mm non-flush
- Reduction factor = 1
- Weld Immune

### Accessories

#### V1-G

Female connector, M12, 4-pin, field attachable

#### V1-W

Female cordset, 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

## Technical Data

### General specifications

Switching element function		PNP	NO/NC
Rated operating distance	$s_n$	75 mm	
Installation		non-flush	
Output polarity		DC	
Assured operating distance	$s_a$	0 ... 55 mm	
Reduction factor $r_{Al}$		1	
Reduction factor $r_{Cu}$		1	
Reduction factor $r_{304}$		1	
Reduction factor $r_{S37}$		1	

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 1 Hz
Hysteresis	$H$	typ. 3 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Rated insulation voltage	$U_{BIS}$	50 V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 20$ mA
Time delay before availability	$t_v$	$\leq 300$ ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	824 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	0 ... 50 °C (32 ... 122 °F) ( $\pm 10$ % changing operating distance)
	-25 ... 70 °C (-13 ... 158 °F) ( $\pm 20$ % changing operating distance)

### Mechanical specifications

Connection type	Connector M12 x 1, 4-pin
Housing material	PBT/metal
Sensing face	PBT, PTFE coated
Housing base	PBT
Degree of protection	IP68

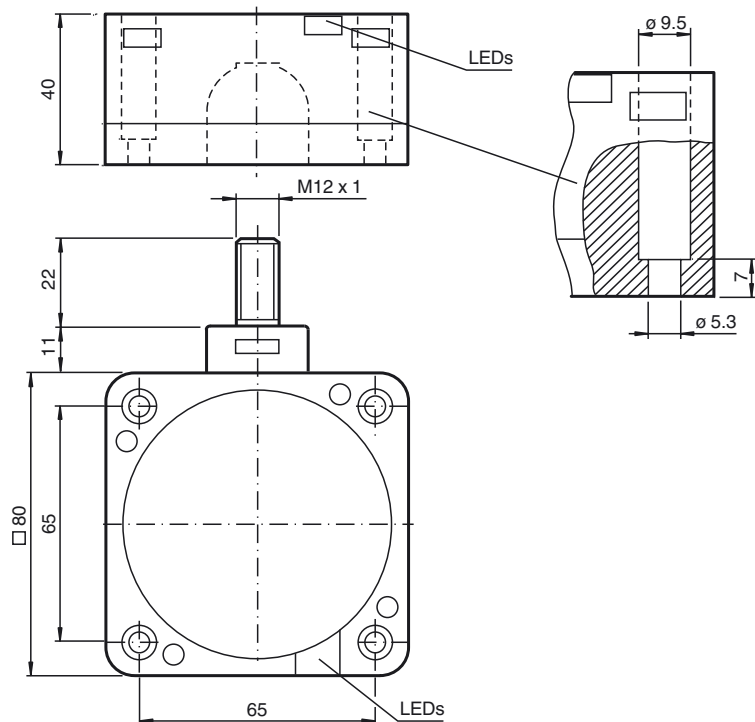
### Compliance with standards and directives

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

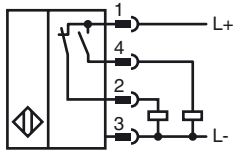
### Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

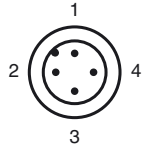
## Dimensions



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 Hint**

These sensors are also suitable for mounting on metal. The stated switching distance is achieved with a metal base plate, min. dimensions 225 mm x 225 mm.

When mounted on a non-metallic base plate the switching distance is reduced by approx. 10 %.

