



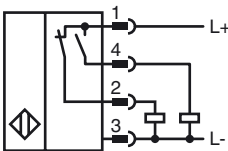
### Model Number

NBB15-30GM60-A2-V1

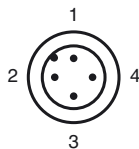
### Features

- 15 mm embeddable
- Increased operating distance
- Extended temperature range

### 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 30

Mounting flange, 30 mm

#### EXG-30

Quick mounting bracket with dead stop

#### V1-G

4-pin, M12 female field-attachable connector

#### V1-W

4-pin, M12 female field-attachable connector

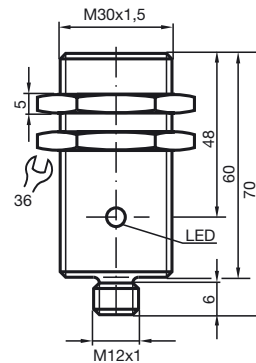
#### V1-G-2M-PUR

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	PNP	NO/NC
Rated operating distance	$s_n$	15 mm
Installation		embeddable
Output polarity		DC
Assured operating distance	$s_a$	0 ... 12.15 mm ( -25 ... 70 °C ( -13 ... 158 °F ) ) 0 ... 11.4 mm ( -40 ... -25 °C ( -40 ... -13 °F ) )
Reduction factor $r_{AI}$		0.3
Reduction factor $r_{Cu}$		0.3
Reduction factor $r_{304}$		0.75

#### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 200 Hz
Hysteresis	$H$	typ. 5%
Reverse polarity protected		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C
No-load supply current	$I_0$	$\leq 25$ mA
Indication of the switching state		LED, yellow

#### Functional safety related parameters

MTTF <sub>d</sub>	1000 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %

#### Ambient conditions

Ambient temperature	-40 ... 70 °C (-40 ... 158 °F)
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#### Mechanical specifications

Connection type	Device connector M12 x 1 , 4-pin
Housing material	brass, nickel-plated
Sensing face	PBT
Protection degree	IP67

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