



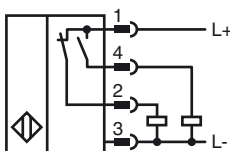
**Model Number**

NBB15-30GM60-A2-V1

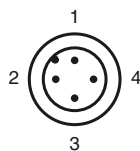
**Features**

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

**Connection**



**Pinout**



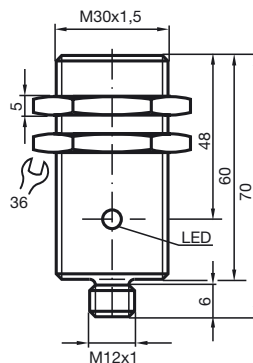
Wire colors in accordance with EN 60947-5-2

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 $r_{Al}$		0.3
Reduction factor $r_{Cu}$		0.3
Reduction factor $r_{303}$		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 <sub>M</sub> )	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.

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