



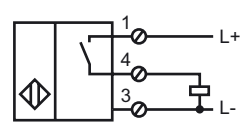
**Model Number**

NBB20-U10-E2

**Features**

- 20 mm embeddable
- 3-wire DC
- 4 LEDs indicator for 360° visibility
- With cable gland for cable diameters from 7 to 10.5 mm (extendable with different gasket)

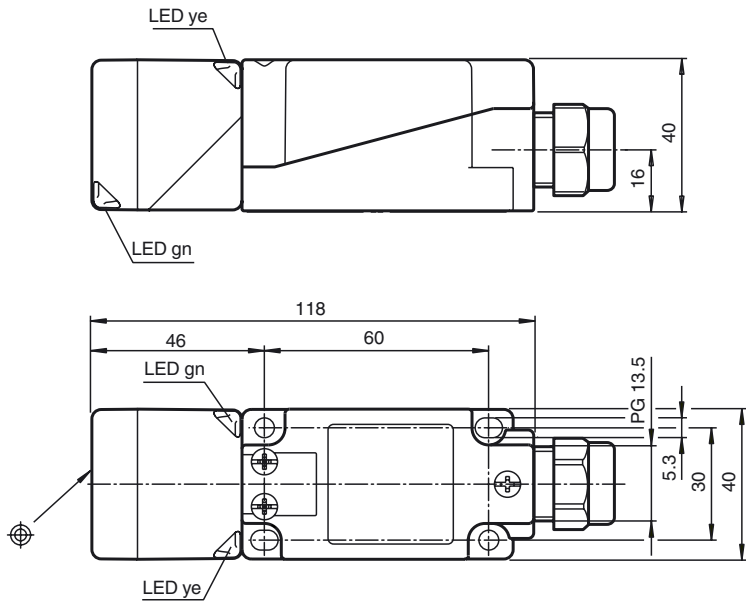
**Connection**



**Accessories**

- V1-M20-80**  
Receptacles, M12/M20; plastic version
- MHW 01**  
Modular mounting bracket
- MH 04-2681F**  
Mounting aid for VariKont, +U1+ and +U9\*

**Dimensions**



**Technical Data**

General specifications			
Switching element function		PNP	NO
Rated operating distance	$s_n$	20 mm	
Installation		embeddable	
Output polarity		DC	
Assured operating distance	$s_a$	0 ... 16.2 mm	
Reduction factor $r_{Al}$		0.33	
Reduction factor $r_{Cu}$		0.31	
Reduction factor $r_{303}$		0.74	
Reduction factor $r_{Brass}$		0.41	
Nominal ratings			
Operating voltage	$U_B$	10 ... 30 V DC	
Switching frequency	$f$	0 ... 150 Hz	
Hysteresis	$H$	typ. 5 %	
Reverse polarity protected		reverse polarity protected	
Short-circuit protection		pulsing	
Voltage drop	$U_d$	$\leq 2$ V	
Operating current	$I_L$	0 ... 200 mA	
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.01 mA	
No-load supply current	$I_0$	$\leq 20$ mA	
Operating voltage display		LED, green	
Indication of the switching state		LED, yellow	
Functional safety related parameters			
MTTF <sub>d</sub>		1460 a	
Mission Time ( $T_M$ )		20 a	
Diagnostic Coverage (DC)		0 %	
Ambient conditions			
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)	
Mechanical specifications			
Connection type		screw terminals	
Core cross-section		$\leq 2.5$ mm <sup>2</sup>	
Housing material		PA/metal with epoxy powder coating	
Sensing face		PA	
Housing base		plastic	
Protection degree		IP68 / IP69K	
Mass		225 g	
Note		Tightening torque: 1.8 Nm (housing) Tightening torque: 1.0 Nm (Screw terminal)	
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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