



Model Number

NBB20-U1-Z2

Features

- **Sensor head bidirectional and rotatable**
- **20 mm flush**
- **2-wire DC**
- **2 LEDs indicator for 360° visibility**

Accessories

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

Technical Data

General specifications

Switching element function	DC	NO/NC
Rated operating distance	s_n	20 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 16.2 mm
Reduction factor r_{AI}		0.3
Reduction factor r_{Cu}		0.3
Reduction factor r_{304}		0.7

Nominal ratings

Operating voltage	U_B	5 ... 60 V DC
Switching frequency	f	0 ... 250 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		yes
Voltage drop	U_d	≤ 5 V
Operating current	I_L	2 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
Switching state indication		2 LED, yellow

Functional safety related parameters

MTTF _d	1162 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
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Mechanical specifications

Connection type	screw terminals
Core cross-section	≤ 2.5 mm ²
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)

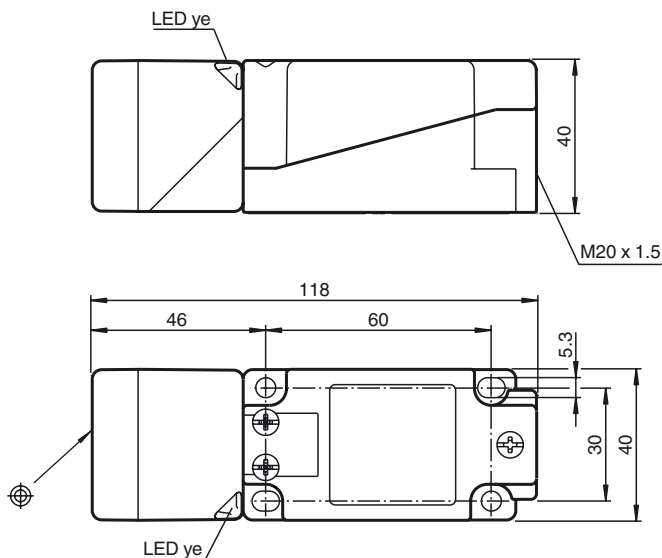
Compliance with standards and directives

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

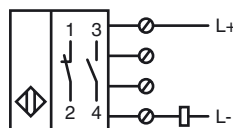
Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

Dimensions



Electrical Connection



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