



Model Number

NBB15-U1-Z2

Features

- Sensor head bidirectional and rotatable
- 15 mm flush
- 2 LEDs indicator for 360° visibility

Accessories

MHW 01

Modular mounting bracket

V1-M20-80

Receptacles, M12/M20; plastic version

V1-G

Female connector, M12, 4-pin, field attachable

V1-W

Female connector, M12, 4-pin, field attachable

Technical Data

General specifications

Switching element function		DC	NO/NC
Rated operating distance	s_n	15 mm	
Installation		flush	
Output polarity		DC	
Assured operating distance	s_a	0 ... 12.15 mm	
Actual operating distance	s_r	13.5 ... 16.5 mm typ. 15 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
Switching frequency	f	0 ... 400 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		yes
Voltage drop	U_d	≤ 5 V
Voltage drop at I_L		... 5 V
		Voltage drop $I_L = 100$ mA, switching element on U_d
Operating current	I_L	2 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
Switching state indicator		2 LED, yellow

Functional safety related parameters

MTTF _d	1133 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
Information for connection	A maximum of two conductors with the same core cross-section may be mounted on one terminal connection! tightening torque 1.2 Nm + 10 %
Core cross-section	up to 2.5 mm ²
Minimum core cross-section	without wire end ferrule 0.5 mm ² , with connector sleeves 0.34 mm ²
Maximum core cross-section	without wire end ferrule 2.5 mm ² , with connector sleeves 1.5 mm ²
Housing material	PA/metal with epoxy powder coating
Sensing face	PA
Housing base	plastic
Degree of protection	IP68 / IP69K
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing)

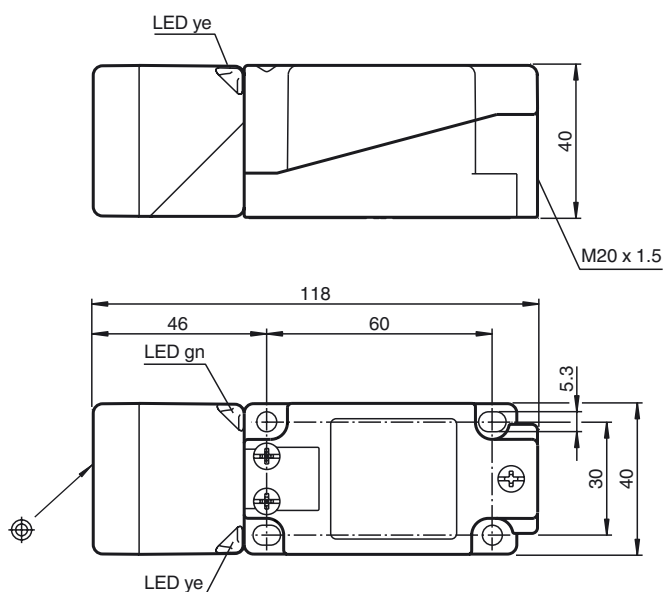
Compliance with standards and directives

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

Approvals and certificates

EAC conformity	TR CU 020/2011
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

Dimensions



Electrical Connection

