



Model Number

NBB15-U1-E2

Features

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

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		PNP	NO
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_{Al}		0.33	
Reduction factor r_{Cu}		0.31	
Reduction factor r_{304}		0.74	
Reduction factor r_{Brass}		0.41	

Nominal ratings

Operating voltage	U_B	10 ... 30 V	
Switching frequency	f	0 ... 560 Hz	
Hysteresis	H	typ. 5 %	
Reverse polarity protection		reverse polarity protected	
Short-circuit protection		pulsing	
Voltage drop	U_d	≤ 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	≤ 20 mA	
Time delay before availability	t_v	80 ms	
Operating voltage indicator		LED, green	
Switching state indicator		LED, yellow	

Functional safety related parameters

MTTF _d		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
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)

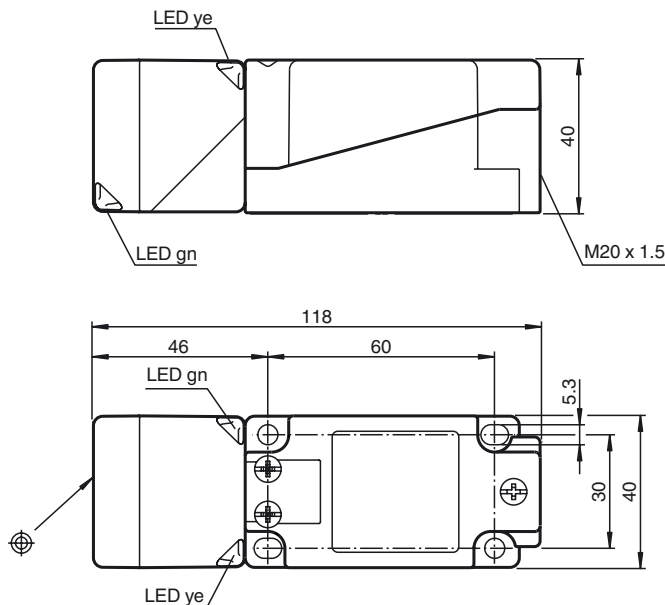
Compliance with standards and directives

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		CCC approval / marking not required for products rated ≤ 36 V

Dimensions



Release date: 2016-09-29 11:37 Date of issue: 2016-10-10 194767_eng.xml

Electrical Connection

