



### Model Number

NBB15-U1-A2-Y251569

### Features

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

### Accessories

#### MHW 01

Modular mounting bracket

## Technical Data

### General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	$s_n$	15 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 12.15 mm
Reduction factor $r_{Al}$		0.33
Reduction factor $r_{Cu}$		0.3
Reduction factor $r_{304}$		0.74
Reduction factor $r_{Brass}$		0.41
Output type		4-wire

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V
Switching frequency	$f$	0 ... 200 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2$ V
Design data		
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 20$ mA
Time delay before availability	$t_v$	80 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1230 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	M20 terminal compartment, core cross section $\leq 2.5$ mm <sup>2</sup>
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 <sup>2</sup>
Minimum core cross-section	without wire end ferrule 0.5 mm <sup>2</sup> , with connector sleeves 0.34 mm <sup>2</sup>
Maximum core cross-section	without wire end ferrule 2.5 mm <sup>2</sup> , with connector sleeves 1.5 mm <sup>2</sup>
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) Tightening torque of double nipple: 4.5 Nm Tightening torque of pressure screw: 10 Nm

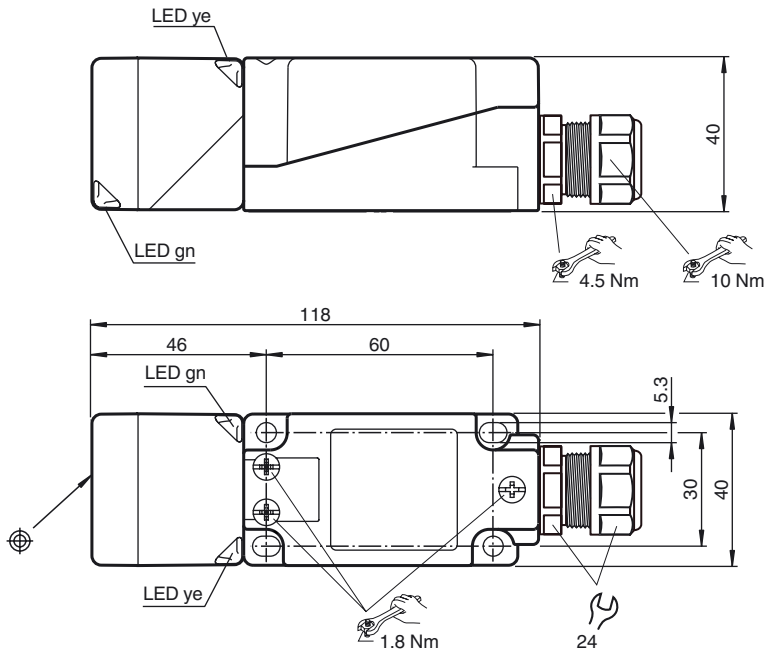
### Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

### Approvals and certificates

CCC approval	CCC approval / marking not required for products rated $\leq 36$ V
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**Dimensions**



**Electrical Connection**

