



### Model Number

NBN40-U1L-Z2

### Features

- Sensor head bidirectional and rotatable
- Basic series
- 40 mm non-flush
- 2-wire DC
- 2 LEDs indicator for 360° visibility

### Accessories

MHW 01

Modular mounting bracket

## Technical Data

### General specifications

Switching element function		DC	NO/NC
Rated operating distance	$s_n$	40 mm	
Installation		non-flush	
Output polarity		DC	
Assured operating distance	$s_a$	0 ... 32.4 mm	
Actual operating distance	$s_r$	36 ... 44 mm typ. 40 mm	
Reduction factor $r_{AI}$		0.39	
Reduction factor $r_{Cu}$		0.37	
Reduction factor $r_{304}$		0.76	

### Nominal ratings

Operating voltage	$U_B$	5 ... 60 V DC
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	$H$	1 ... 10 typ. 5 %
Reverse polarity protection		reverse polarity tolerant
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 5$ V
Voltage drop at $I_L$		... 5 V
		Voltage drop $I_L = 100$ mA, switching element on $U_d$
Rated insulation voltage	$U_{BIS}$	60 V
Operating current	$I_L$	2 ... 200 mA
Off-state current	$I_r$	0 ... 1 mA typ. 0.7 mA
Switching state indicator		2 LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1170 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	-25 ... 85 °C (-13 ... 185 °F)
Storage 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 <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
Sensing face	PA
Housing base	plastic
Degree of protection	IP68 / IP69K
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing)

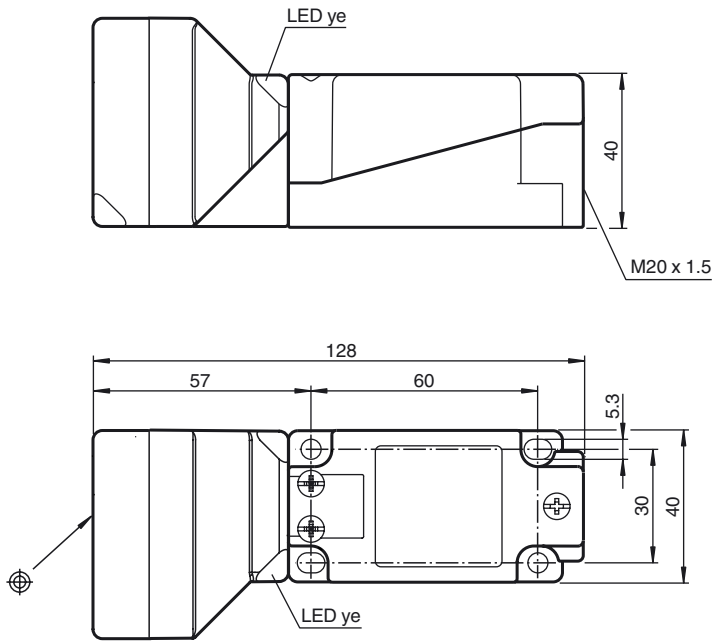
### Compliance with standards and directives

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

### Approvals and certificates

Protection class	II
Rated insulation voltage	$U_i$ 60 V
Rated impulse withstand voltage	$U_{imp}$ 800 V
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose

Dimensions



Electrical Connection

