



Model Number

NBN40-U1L-E2

Features

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

Accessories

MHW 01

Modular mounting bracket

Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
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
Reduction factor r_{Al}		0.39
Reduction factor r_{Cu}		0.37
Reduction factor r_{304}		0.75
Reduction factor r_{Brass}		0.45
Output type		3-wire

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 100 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	120 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	1310 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
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
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 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

Approvals and certificates

Protection class	II
Rated insulation voltage	U_i 230 V
Rated impulse withstand voltage	U_{imp} 2.5 kV
UL approval	cULus Listed, General Purpose
CCC approval	CCC approval / marking not required for products rated ≤ 36 V

Technical drawing of the LED module showing front and top views with dimensions and labels.

Front View (Top):

- Overall height: 55
- LED ye (Yellow LED) label pointing to the top LED chip.
- LED gn (Green LED) label pointing to the bottom LED chip.
- Distance from bottom edge to LED gn: 25
- Distance from bottom edge to LED ye: 50
- Distance from LED ye to the right edge: 40
- Thread specification: M20 x 1.5

Top View (Bottom):

- Overall width: 128
- Distance from left edge to LED gn: 56
- Distance from LED gn to the right edge: 60
- LED gn label pointing to the left LED chip.
- LED ye label pointing to the right LED chip.
- Distance from right edge to LED ye: 5.3
- Distance from right edge to the bottom edge: 30
- Overall height: 40
- Reference symbol: A