



## Model Number

NRN40-U1-A2

Inductive sensor

## Features

- Sensor head bidirectional and rotatable
- 40 mm non-flush
- Reduction factor = 1
- Magnetic field resistant
- 4 LEDs indicator for 360° visibility

## Accessories

MHW 01

Modular mounting bracket

MH 04-2681F

Mounting aid for VariKont, +U1+ and +U9\*

## Technical Data

### General specifications

Switching element function		PNP	NO/NC
Rated operating distance	$s_n$	40 mm	
Installation		non-flush	
Output polarity		switched high	
Assured operating distance	$s_a$	0 ... 32.4 mm	
Actual operating distance	$s_r$	36 ... 44 mm	
Reduction factor $r_{AI}$		1	
Reduction factor $r_{Cu}$		1	
Reduction factor $r_{304}$		1	
Reduction factor $r_{S37}$		1	

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	$H$	2 ... 15 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	≤ 2.5 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	$I_0$	≤ 25 mA
Time delay before availability	$t_v$	80 ms
Constant magnetic field	$B$	200 mT
Alternating magnetic field	$B$	200 mT
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	880 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 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/metal with epoxy powder coating
Sensing face	PA 6 Grivory GVN-35H
Housing base	plastic
Degree of protection	IP67
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing)

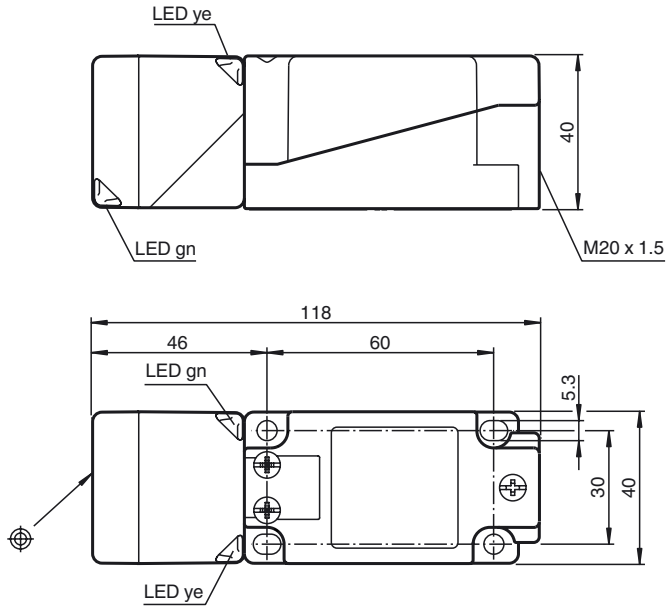
### Compliance with standards and directives

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

Dimensions



Electrical Connection

