



**Model Number**

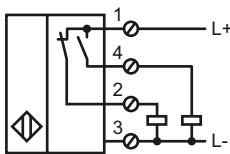
NRN40-U1-A2

Inductive sensor

**Features**

- 40 mm not embeddable
- Reduction factor = 1
- Magnetic field resistant
- 4 LEDs indicator for 360° visibility

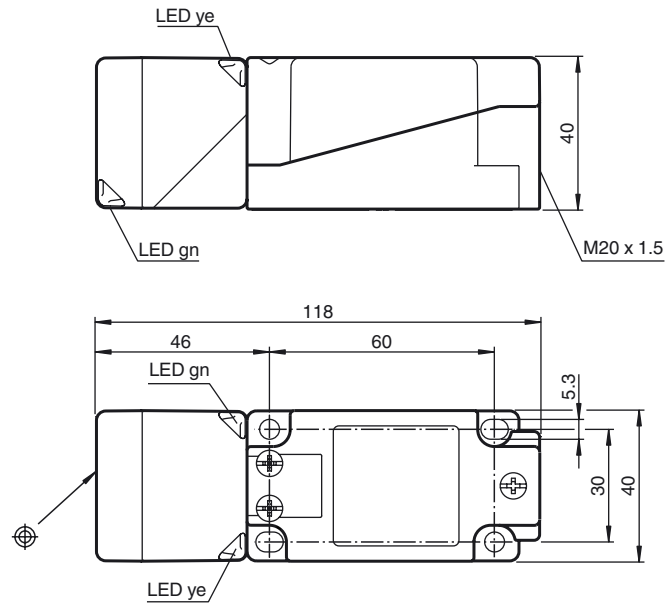
**Connection**



**Accessories**

- MHW 01**  
Modular mounting bracket
- MH 04-2681F**  
Mounting aid for VariKont, +U1+ and +U9\*

**Dimensions**



**Technical Data**

**General specifications**

Switching element function	PNP	NO/NC
Rated operating distance	$s_n$	40 mm
Installation	not embeddable	
Output polarity	switched high	
Assured operating distance	$s_a$	0 ... 32.4 mm
Reduction factor $r_{AI}$	1	
Reduction factor $r_{Cu}$	1	
Reduction factor $r_{303}$	1	
Reduction factor $r_{SI37}$	1	

**Nominal ratings**

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 100 Hz
Hysteresis	$H$	2 ... 15 %
Reverse polarity protected	reverse polarity protected	
Short-circuit protection	pulsing	
Voltage drop	$U_d$	$\leq 2.5$ 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	$I_0$	$\leq 25$ mA
Constant magnetic field	$B$	200 mT
Alternating magnetic field	$B$	200 mT
Operating voltage display	LED, green	
Indication of the switching state	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
Core cross-section	$\leq 2.5$ mm <sup>2</sup>
Housing material	PA/metal with epoxy powder coating
Sensing face	PA 6 Grivory GVN-35H
Housing base	plastic
Protection degree	IP67
Mass	225 g
Note	Tightening torque: 1.8 Nm (housing) Tightening torque: 1.0 Nm (Screw terminal)

**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
Design-impulse-voltage withstand	$U_{imp}$ 800 V
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of $\leq 36$ V do not bear a CCC marking because they do not require approval.

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