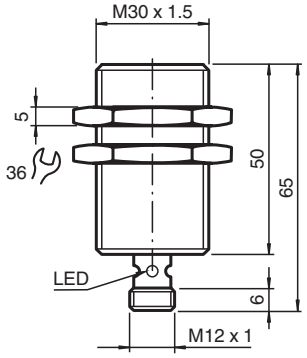
Inductive sensor

NRB13-30GS50-E2-V1



- Reduction factor = 1
- Magnetic field resistant
- Stainless steel housing

Dimensions



Technical Data

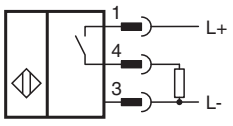
General specifications		
Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	13 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 10.53 mm
Reduction factor r_{Al}		1
Reduction factor r_{Cu}		1
Reduction factor r_{304}		1
Reduction factor r_{St37}		1
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 750 Hz
Hysteresis	H	typ. 3 %

Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 306533-0406_eng.pdf

Technical Data

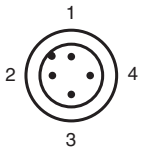
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2 V
Rated insulation voltage	U_{BIS}	60 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 µA at 25 °C
No-load supply current	I_0	≤ 14 mA
Time delay before availability	t_v	max. 15 ms
Constant magnetic field	B	200 mT
Alternating magnetic field	B	200 mT
Switching state indicator		Multihole-LED, yellow
Functional safety related parameters		
$MTTF_d$		1140.2 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
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	60 V
Rated impulse withstand voltage	U_{imp}	800 V
UL approval		cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug M12 x 1 , 4-pin
Housing material		Stainless steel 1.4305 / AISI 303
Sensing face		PBT
Degree of protection		IP67
Mass		113 g
General information		
Scope of delivery		2 self locking nuts in scope of delivery

Connection



Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 306533-0406_eng.pdf

Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Accessories

	**BF 30**	Mounting flange, 30 mm
	**EXG-30**	Quick mounting bracket with dead stop
	**V1-W-2M-PUR**	Female cordset, M12, 4-pin, PUR cable
	**V1-G-OR2M-POC**	Female cordset single-ended M12 A-coded 4-pin, TPE cable welding-bead resistant orange
	**V1-G-2M-PUR**	Female cordset, M12, 4-pin, PUR cable

Release date: 2020-03-24 Date of issue: 2020-03-30 Filename: 306533-0406_eng.pdf