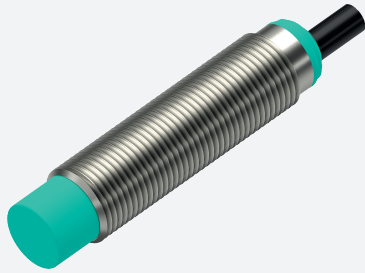
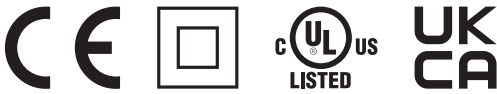


Inductive sensor

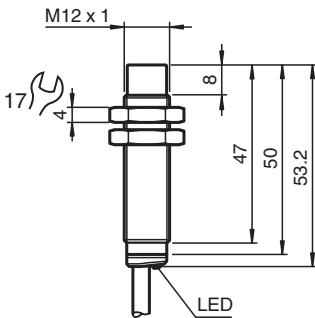
NBN4-12GM50-E2-10M-Y0177



- 4 mm non-flush
- Extended temperature range
-40 ... +85 °C
- Extended operating voltage range
- Flexible use with versatile mounting opportunities



Dimensions



Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	4 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 3.24 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor r_{Al}		0.47
Reduction factor r_{Cu}		0.43
Reduction factor r_{304}		0.85
Reduction factor r_{Brass}		0.55
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	5 ... 36 V
Switching frequency	f	0 ... 2650 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 1 V
Operating current	I_L	0 ... 200 mA

Release date: 2025-02-21 | Date of issue: 2025-02-21 | Filename: 326163-0177_eng.pdf

Technical Data

Off-state current	I_r	max. 20 μ A
No-load supply current	I_0	\leq 10 mA
Time delay before availability	t_v	\leq 10 ms
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1707 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Conformity		
PWIS conformity		VDMA 24364-C1/T100°C-W
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
Protection class		II
Rated insulation voltage	U_i	36 V
Rated impulse withstand voltage	U_{imp}	500 V
UL approval		cULus Listed, General Purpose, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated \leq 36 V
Ambient conditions		
Ambient temperature		sensor: -40 ... 85 °C (-40 ... 185 °F) Cable: -25 ... 75 °C (-13 ... 167 °F)
Storage temperature		-40 ... 80 °C (-40 ... 176 °F)
Mechanical specifications		
Connection type		cable shielded
Housing material		brass , white bronze coated
Sensing face		PBT , green
Degree of protection		IP65 / IP66 / IP67 / IP68
Cable		
Wire end ferrules		yes
Cable diameter		3 mm - 0.2 mm
Bending radius		$>$ 10 x cable diameter
Material		PVC
Color		grey (similar to RAL 7001)
Number of cores		3
Core cross section		0.14 mm ²
Length	L	10 m
Dimensions		
Length		53 mm
Diameter		12 mm
Mounting		with nuts, M12
Tightening torque		\leq 10 Nm
General information		
Scope of delivery		2 self locking nuts in scope of delivery

Connection



Release date: 2025-02-21 | Date of issue: 2025-02-21 | Filename: 326163-0177_eng.pdf