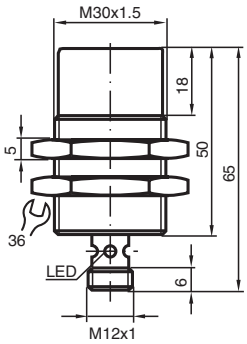


Inductive sensor

NBN20-30GM50-EI-V1

- 20 mm non-flush
- Extended temperature range -40 ... +85 °C
- Digital current output

Dimensions



Technical Data

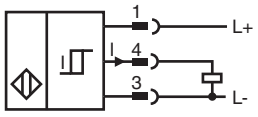
General specifications		
Output type		Digital current output
Rated operating distance	s_n	20 mm
Installation		non-flush
Output polarity		DC
Assured operating distance	s_a	0 ... 16.2 mm
Actuating element		mild steel, e. g. 1.0037, SR235JR (formerly St37-2) 12 mm x 12 mm x 1 mm
Reduction factor r_{Al}		0.45
Reduction factor r_{Cu}		0.4
Reduction factor r_{304}		0.7
Reduction factor r_{Brass}		0.45
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	9 ... 30 V DC
Switching frequency	f	0 ... 1000 Hz
Hysteresis	H	2 ... 15 %

Release date: 2025-07-23 Date of issue: 2025-07-23 Filename: 281570_eng.pdf

Technical Data

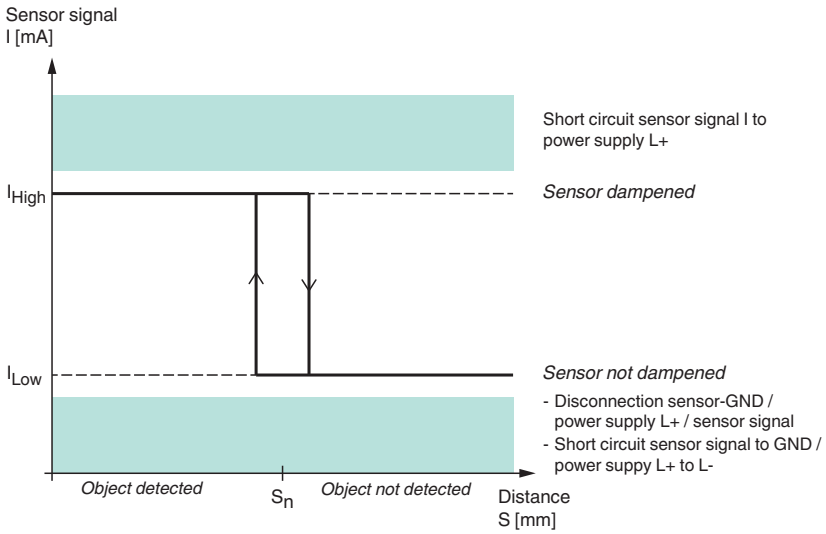
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Temperature drift		≤ 10 %
Time delay before availability	t_v	≤ 5 ms
Load resistor		100 ... 250 Ohm
Switching state indicator		LED, yellow
Functional safety related parameters		
$MTTF_d$		1672 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Digital output		
Output value		object detected: 10 mA ± 1 mA object not detected: 5 mA ± 1 mA
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
UL approval		cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Supply/Switching Voltage: 30 V DC Output Switching Current: 10 mA
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug
Housing material		brass, nickel-plated
Sensing face		PBT
Degree of protection		IP68 / IP69K
Connector		
Threading		M12 x 1
Number of pins		3
Dimensions		
Length		65 mm
Diameter		30 mm
General information		
Scope of delivery		2 self locking nuts in scope of delivery

Connection Assignment



Release date: 2025-07-23 Date of issue: 2025-07-23 Filename: 281570_eng.pdf

Characteristic Curve



Release date: 2025-07-23 Date of issue: 2025-07-23 Filename: 281570_eng.pdf