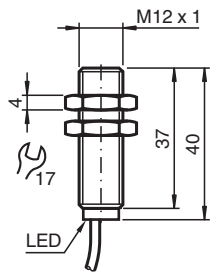


Inductive sensor NBB4-12GM40-EU-M1

- 4 mm flush
- 0.5 / 4.5 VDC switching output for mobile equipment controls
- Raised EMC resistance 30 V/m
- Extended temperature range
-40 ... +85 °C
- Highly shock and vibration resistant
- With increased sealing, protection class
IP68 / IP69K



Dimensions



Technical Data

General specifications

Output type		Digital voltage output
Rated operating distance	s_n	4 mm
Installation		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}		0.4
Reduction factor r_{Cu}		0.3
Reduction factor r_{304}		0.7
Reduction factor r_{Brass}		0.45
Output type		3-wire

Nominal ratings

Operating voltage	U_B	7 ... 30 V DC
Switching frequency	f	0 ... 2200 Hz
Hysteresis	H	2 ... 15 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		yes
Temperature drift		≤ 10 %
No-load supply current	I_0	≤ 15 mA
Time delay before availability	t_v	≤ 100 ms
Load resistor		min. 20 kΩ
Switching state indicator		LED, yellow

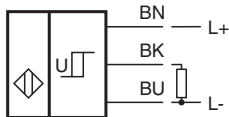
Digital output

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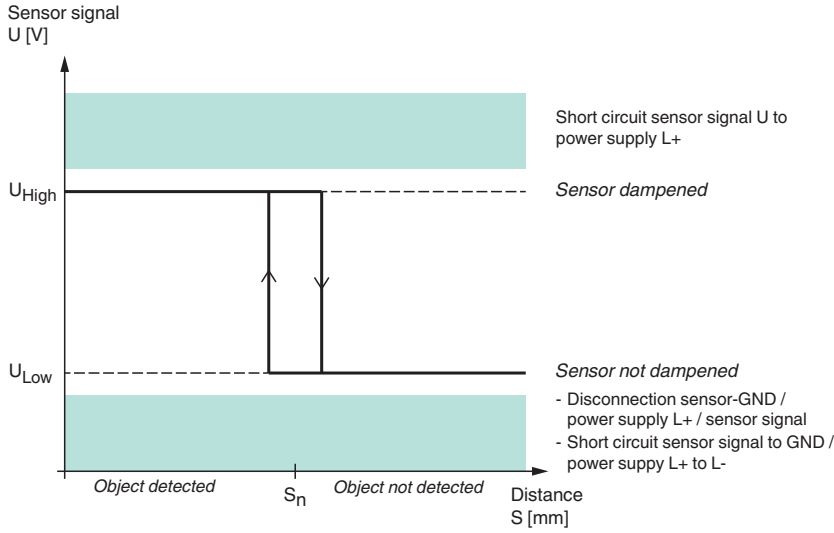
Technical Data

Output value		object detected: 4.5 V \pm 0.2 V object not detected: 0.5 V \pm 0.2 V
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		cable
Housing material		brass , white bronze coated
Sensing face		PBT , green
Degree of protection		IP68 / IP69K
Cable		
Cable diameter		6 mm \pm 0.2 mm
Bending radius		> 10 x cable diameter
Material		TPE
Color		black
Number of cores		3
Core cross section		0.75 mm ²
Length	L	2 m
Dimensions		
Length		43 mm
Diameter		12 mm
General information		
Scope of delivery		2 self locking nuts in scope of delivery

Connection



Operation



Technical Features

Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2a	2b	3a	3b	4
Severity level	III	III	III	III	III	III
Failure criterion	A	A	C	A	A	C

EN 61000-4-2: CD: 8 kV / AD: 15 kV
Severity level IV IV

EN 61000-4-3: 36 V/m (80...2500 MHz)
Severity level IV

EN 61000-4-4: 2 kV
Severity level III

EN 61000-4-6: 30 V (0.01...80 MHz)
Severity level III

EN 55011: Class A

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