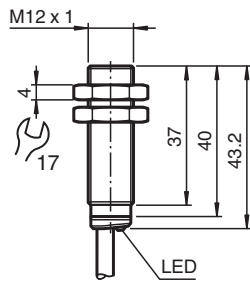


## Inductive sensor NBB4-12GM40-A2-8M

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



### Dimensions



### Technical Data

#### General specifications

Switching function	complementary	
Output type	PNP	
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 $r_{Cu}$	0.35	
Reduction factor $r_{304}$	0.79	
Reduction factor $r_{Brass}$	0.49	
Output type	4-wire	

#### Nominal ratings

Operating voltage	$U_B$	5 ... 36 V
Switching frequency	$f$	0 ... 2550 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection	reverse polarity protected	
Short-circuit protection	pulsing	
Voltage drop	$U_d$	$\leq 1$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	max. 20 $\mu$ A
No-load supply current	$I_0$	$\leq 10$ mA
Time delay before availability	$t_v$	$\leq 10$ ms
Switching state indicator	LED, yellow	

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## Technical Data

Functional safety related parameters		
MTTF <sub>d</sub>		1721 a
Mission Time (T <sub>M</sub> )		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 <sub>i</sub>	36 V
Rated impulse withstand voltage	U <sub>imp</sub>	500 V
UL approval		cULus Listed, General Purpose, Class 2 Power Source
CCC approval		CCC approval / marking not required for products rated ≤36 V
Marine approval		DNVGL TAA00003AK
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		IP65 / IP66 / IP67 / IP68
Cable		
Wire end ferrules		yes
Cable diameter		4.3 mm ± 0.15 mm
Bending radius		> 10 x cable diameter
Material		PVC
Color		black
Number of cores		4
Core cross section		0.34 mm <sup>2</sup>
Length	L	8 m
Mass		277 g
Dimensions		
Length		43 mm
Diameter		12 mm
Mounting		with nuts, M12
Tightening torque		≤ 10 Nm
General information		
Scope of delivery		2 self locking nuts in scope of delivery

## Connection

