

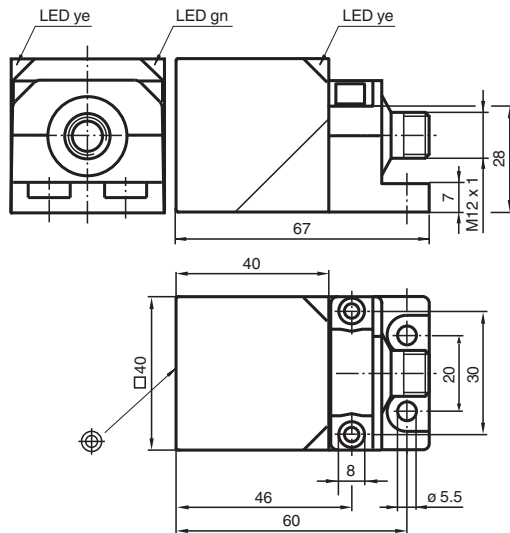
# Inductive sensor

## NBB20-L3M-A2-C3-V1

- 20 mm flush
- 4-wire DC
- Weld Immune
- Active surface thermostat
- 2-way LED indicator



### Dimensions



### Technical Data

#### General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	$s_n$	20 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 16.2 mm
Actual operating distance	$s_r$	18 ... 22 mm
Reduction factor $r_{Al}$		0.42
Reduction factor $r_{Cu}$		0.38
Reduction factor $r_{304}$		0.75
Reduction factor $r_{Brass}$		0.49
Output type		4-wire

#### Nominal ratings

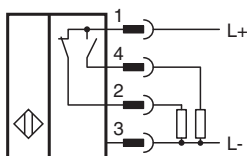
Operating voltage	$U_B$	10 ... 30 V DC
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## Technical Data

Switching frequency	f	0 ... 5 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA
No-load supply current	$I_0$	$\leq 20$ mA
Time delay before availability	$t_v$	350 ms
Alternating magnetic field	B	200 mT
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		1420 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 30 V DC Output Switching Current: 200 mA
CCC approval		CCC approval / marking not required for products rated $\leq 36$ V
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug
Housing material		GD-ZnAl4Cu1, Coated metal fixing flange, coated.
Sensing face		Duroplast
Degree of protection		IP67
Connector		
Threading		M12 x 1
Number of pins		4
Dimensions		
Height		40 mm
Width		40 mm
Length		67 mm

## Connection Assignment



## Connection Assignment



Wire colors in accordance with EN 60947-5-2

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