



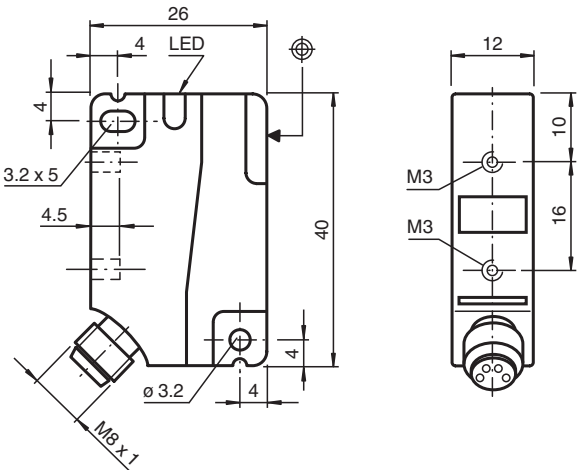
Inductive sensor

NBB4-F1-A2-V31

- 4 mm flush
- 4-wire DC



Dimensions



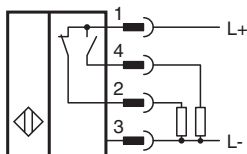
Technical Data

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
Reduction factor r _{Al}		0.4
Reduction factor r _{Cu}		0.45

Technical Data

Reduction factor r_{304}		0.8
Reduction factor r_{Brass}		0.55
Nominal ratings		
Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 1400 Hz
Hysteresis	H	typ. 5%
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2.5 V
Rated insulation voltage	U_{BIS}	60 V
Operating current	I_L	0 ... 250 mA
Off-state current	I_r	0 ... 0.01 mA typ. 0.1 μ A at 25 °C
No-load supply current	I_0	≤ 15 mA
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1640 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
Protection class		II
Rated insulation voltage	U_i	60 V
Rated impulse withstand voltage	U_{imp}	800 V
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated ≤ 36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection type		Connector M8 x 1 , 4-pin
Housing material		PA
Sensing face		PA
Degree of protection		IP67
Tightening torque, fastening screws		Threading M3 max: 1.1 Nm

Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Accessories

	V31-WM-2M-PUR	Female cordset single-ended, M8, 4-pin, PUR cable
	V31-GM-2M-PUR	Female cordset single-ended, M8, 4-pin, PUR cable

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