



Model Number

NBB4-F1-A2

Features

- 4 mm flush
- 4-wire DC

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
Reduction factor r_{304}		0.8
Reduction factor r_{Brass}		0.55
Output type		4-wire

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 %

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
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Mechanical specifications

Connection type	cable PVC , 2 m
Core cross-section	0.5 mm ²
Housing material	PA
Sensing face	PA
Degree of protection	IP67
Cable	
Cable diameter	5.2 mm \pm 0.2 mm
Tightening torque, fastening screws	Threading M3 max: 1.1 Nm

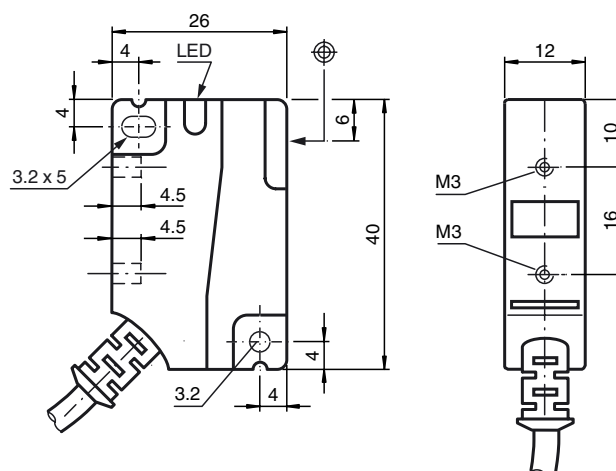
Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012

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

Dimensions



Electrical Connection

