



Model Number

NBB8-F33-A2-M1-Y293755

Features

- 8 mm flush
- 4-wire DC
- Raised EMC resistance 36 V/m
- E1-Type approval

Technical Data

General specifications

Switching function		complementary
Output type		PNP
Rated operating distance	s_n	8 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 6.48 mm
Reduction factor r_{AI}		0.3
Reduction factor r_{CU}		0.2
Reduction factor r_{304}		0.6
Output type		3-wire

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 350 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 3 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
No-load supply current	I_0	≤ 25 mA
Time delay before availability	t_v	≤ 5 ms
Switching state indicator		LED yellow

Functional safety related parameters

MTTF _d	1240 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Ambient conditions

Ambient temperature	-35 ... 70 °C (-31 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

Mechanical specifications

Connection type	Cable connector M12 x 1, PUR, L = 0.3 m
Core cross-section	0.5 mm ²
Housing material	PBT
Sensing face	PBT
Degree of protection	IP67 / IP69K
Note	Tightening torque: 5 Nm

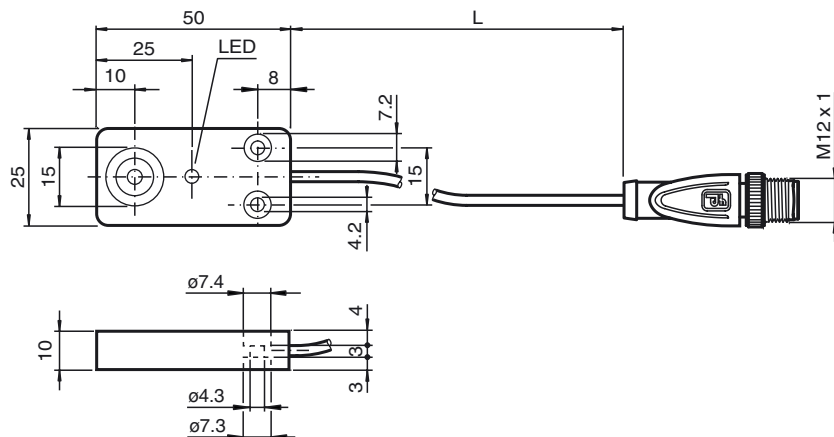
Compliance with standards and directives

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

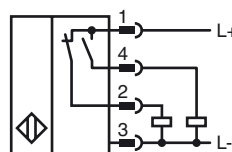
Approvals and certificates

UL approval	cULus Listed, Class 2 Power Source, Type 1 enclosure
E1 Type approval	10R-04

Dimensions



Electrical Connection



Pinout



Wire colors in accordance with EN 60947-5-2

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