



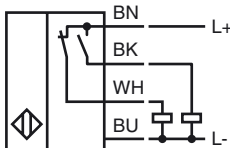
Model Number

NBB5-F33M-A2

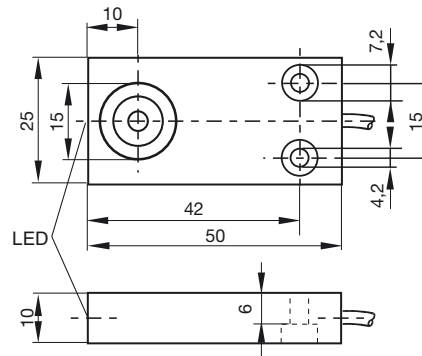
Features

- 5 mm embeddable
- 4-wire DC
- Metal housing

Connection



Dimensions



Technical Data

General specifications

Switching element function	PNP	NO/NC
Rated operating distance	s_n	5 mm
Installation	embeddable	
Output polarity	DC	
Assured operating distance	s_a	0 ... 4.05 mm
Reduction factor r_{Al}	0.3	
Reduction factor r_{Cu}	0.2	
Reduction factor r_{303}	0.6	

Nominal ratings

Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 500 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protected	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 typ. 0.1 μ A
No-load supply current	I_0	≤ 20 mA
Indication of the switching state	LED	

Functional safety related parameters

MTTF _d	800 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	0.34 mm ²
Housing material	metal
Sensing face	PBT
Protection degree	IP67

Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates

UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Products with a maximum operating voltage of ≤ 36 V do not bear a CCC marking because they do not require approval.

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