



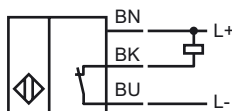
Model Number

NBB8-F33-E1

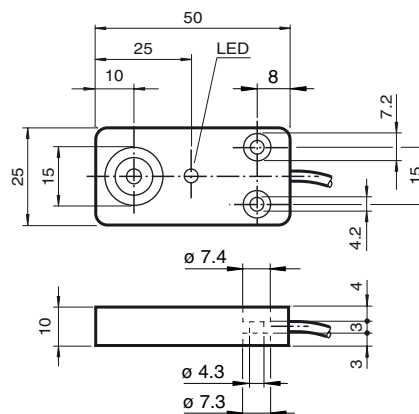
Features

- 8 mm embeddable
- 3-wire DC

Connection



Dimensions



Technical Data

General specifications

Switching element function		NPN	NC
Rated operating distance	s_n	8 mm	
Installation		embeddable	
Output polarity		DC	
Assured operating distance	s_a	0 ... 6.48 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 ... 60 V DC
Switching frequency	f	0 ... 350 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 ... 0.1 mA
No-load supply current	I_0	≤ 10 mA
Indication of the switching state		LED yellow

Functional safety related parameters

MTTF _d	1150 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 PVC , 2 m
Core cross-section	0.34 mm ²
Housing material	PBT
Sensing face	PBT
Protection degree	IP67
Note	Tightening torque: 5 Nm

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	Certified by China Compulsory Certification (CCC)