



**Model Number**

**NBB5-F33X-E2-AMP**

**Features**

- 5 mm flush
- 3-wire DC
- Amp connector

**Technical Data**

**General specifications**

Switching element function	PNP	NO
Rated operating distance	$s_n$	5 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 4.05 mm
Reduction factor $r_{Al}$		0.25
Reduction factor $r_{Cu}$		0.2
Reduction factor $r_{304}$		0.6
Reduction factor $r_{Brass}$		0.35

**Nominal ratings**

Operating voltage	$U_B$	10 ... 60 V DC
Switching frequency	$f$	0 ... 500 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 2.5$ V
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.1 mA
No-load supply current	$I_0$	$\leq 10$ mA
Time delay before availability	$t_v$	$\leq 50$ ms
Switching state indicator		LED yellow

**Functional safety related parameters**

MTTF <sub>d</sub>	1891 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Ambient conditions**

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

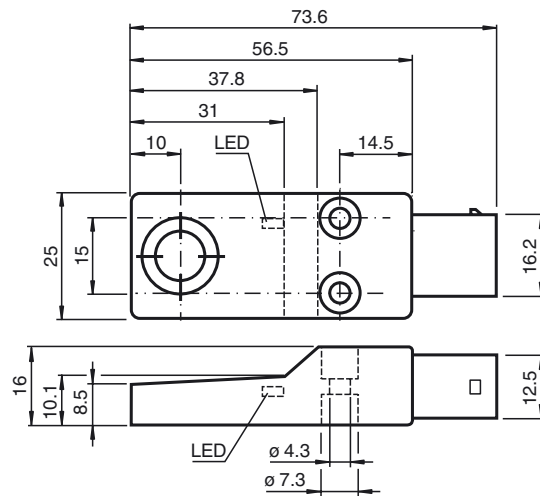
**Mechanical specifications**

Connection type	Connector , AMP connector
Housing material	PBT , black
Degree of protection	IP67
Note	Tightening torque: 5 Nm

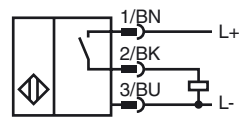
**Compliance with standards and directives**

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

**Dimensions**

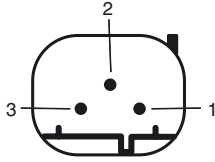


**Electrical Connection**



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Pinout



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