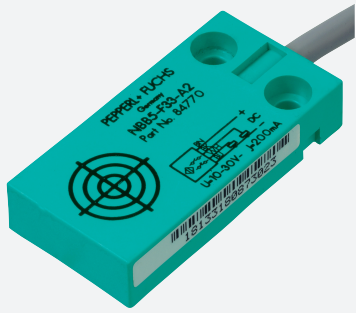


# Inductive sensor

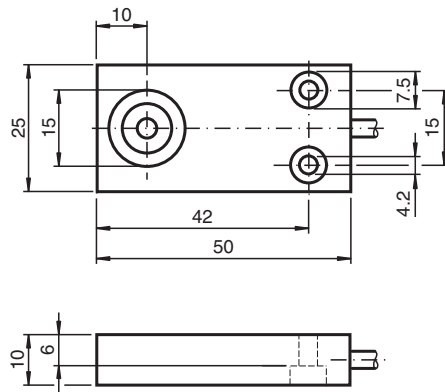
## NBB5-F33-A2



- 5 mm flush
- 4-wire DC



### Dimensions



### Technical Data

General specifications		
Switching function		complementary
Output type		PNP
Rated operating distance	$s_n$	5 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 4.05 mm
Reduction factor $r_{Al}$		0.3
Reduction factor $r_{Cu}$		0.2
Reduction factor $r_{304}$		0.6
Output type		4-wire
Nominal ratings		
Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 500 Hz
Hysteresis	$H$	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing

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## Technical Data

Voltage drop	$U_d$	$\leq 3 \text{ V}$
Operating current	$I_L$	0 ... 200 mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.1 $\mu\text{A}$
No-load supply current	$I_0$	$\leq 20 \text{ mA}$
Time delay before availability	$t_v$	$\leq 10 \text{ ms}$
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		820 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN IEC 60947-5-2
<b>Approvals and certificates</b>		
UL approval		cULus Listed, General Purpose
CCC approval		CCC approval / marking not required for products rated $\leq 36 \text{ V}$
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>		
Connection type		cable
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Cable		
Wire end ferrules		yes
Cable diameter		4.8 mm $\pm$ 0.1 mm
Bending radius		> 10 x cable diameter
Material		PVC
Color		grey
Number of cores		4
Core cross section		0.34 mm <sup>2</sup>
Length	L	2 m
Dimensions		
Height		10 mm
Width		25 mm
Length		50 mm
Tightening torque		$\leq 5 \text{ Nm}$

## Connection

