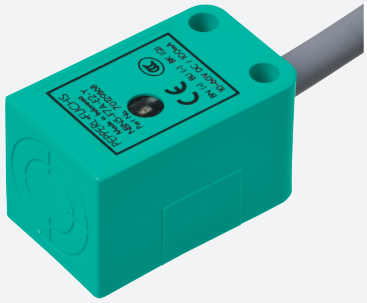
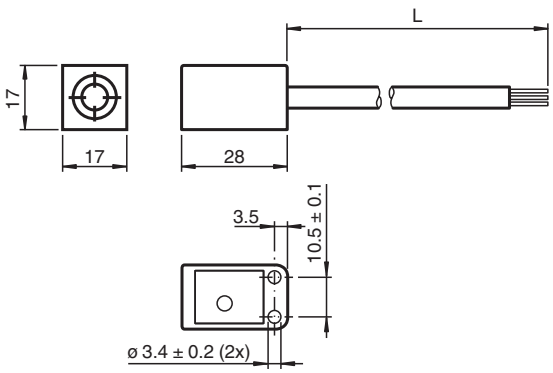


Inductive sensor

NBN5-F7A-E0

- Extended operating voltage range
- Operating distance 5 mm

Dimensions



Technical Data

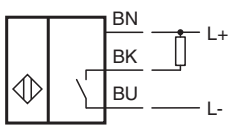
General specifications		
Switching function		Normally open (NO)
Output type		NPN
Rated operating distance	s_n	5 mm
Installation		single-sided flush mountable
Output polarity		DC
Assured operating distance	s_a	0 ... 4.05 mm
Reduction factor r_{Al}		0.4
Reduction factor r_{Cu}		0.37
Reduction factor r_{304}		0.89
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	10 ... 60 V
Switching frequency	f	0 ... 500 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 ... 100 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.1 µA at 25 °C

Release date: 2026-03-18 Date of issue: 2026-03-18 Filename: 70163727_eng.pdf

Technical Data

No-load supply current	I_0	≤ 9 mA
Switching state indicator		LED, yellow
Safety-relevant product characteristics		
$MTTF_d$		1396 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
UL approval		cULus Listed Load Type: General Purpose Circuitry: Class 2 Power Source Enclosure Type Rating: Type 1 Supply/Switching Voltage: 60 V DC Output Switching Current: 100 mA
CCC approval		Certified by China Compulsory Certification (CCC)
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F) -30 ... 70 °C (-22 ... 158 °F) , fixed installation
Storage temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection type		cable
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Cable		
Wire end ferrules		yes
Cable diameter		3.5 mm ± 0.2 mm
Bending radius		> 10 x cable diameter
Material		PVC
Color		grey
Number of cores		3
Core cross section		0.14 mm^2
Length	L	2 m
Tightening torque, fastening screws		≤ 0.3 Nm
Dimensions		
Height		17 mm
Width		17 mm
Length		28 mm

Connection Assignment



Release date: 2026-03-18 Date of issue: 2026-03-18 Filename: 70163727_eng.pdf