

Inductive sensor

NBN3-F31K2M-E8-B23-S



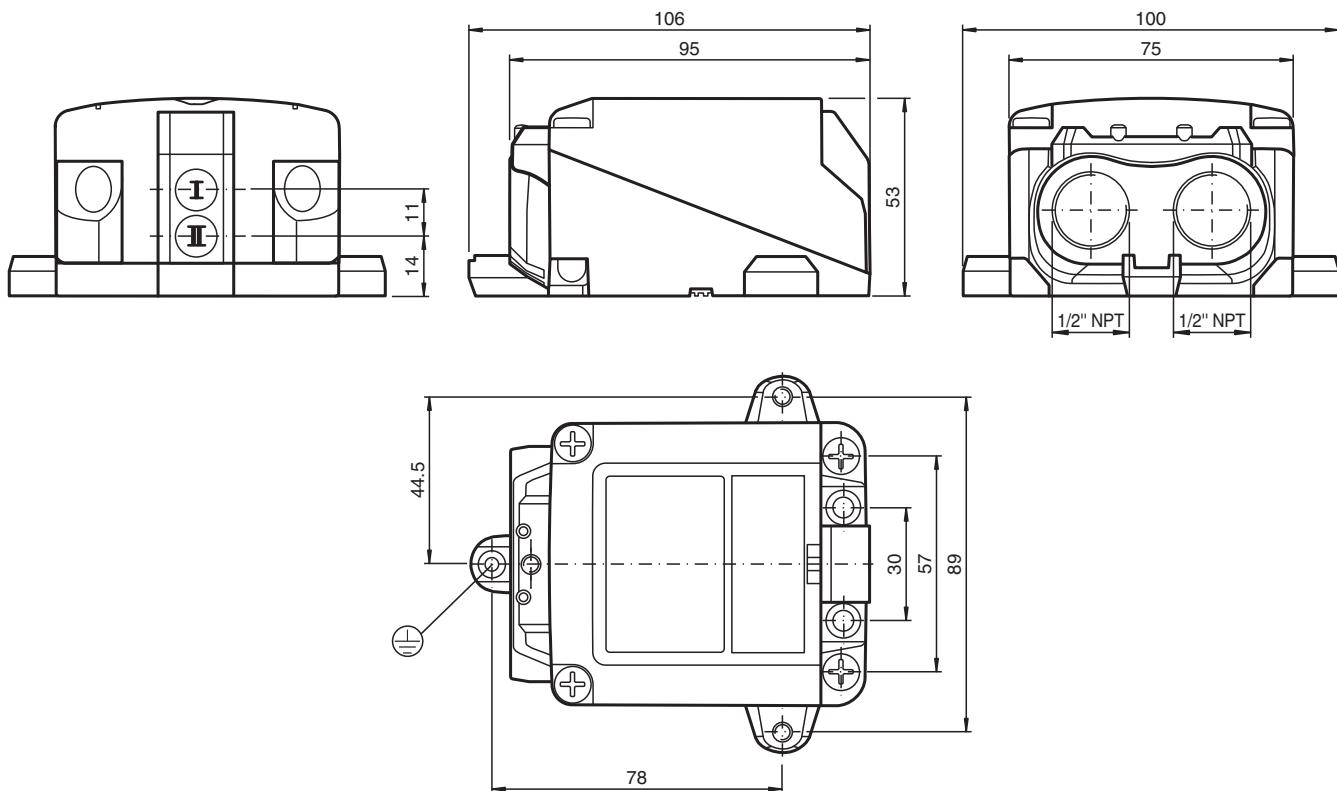
- Direct mounting on standard actuators
- Rugged metal base
- Weatherproof housing for outdoor applications
- Temperature range -40 ... 167 °F (-40°C to 75°C)
- LED for power on
- LEDs for switching state of sensor and solenoid valve
- Plug-in terminals



Installation

The connections to this sensor are sealed with stopping plugs to protect against dirt and moisture. If not all of the connections are used in your application, then seal the remaining stopping plugs on the sensor permanently or check during initial installation and when performing regular maintenance work that the stopping plugs are secure and impermeable. If necessary, tighten the stopping plugs to a torque of 1 Nm.

Dimensions



Technical Data

General specifications

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Switching function 2 x normally open (NO)

Output type PNP

Rated operating distance s_n 2.5 mm

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

Installation	for non-flush mounting	
Output polarity	DC	
Assured operating distance	s _a	0 ... 2.05 mm
Output type	4-wire	
Nominal ratings		
Operating voltage	U _B	10 ... 30 V
Switching frequency	f	0 ... 100 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		all connections
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
No-load supply current	I ₀	≤ 25 mA
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Valve status indicator		LED, yellow
Functional safety related parameters		
MTTF _d		490 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Valve circuit		
Voltage		max. 32 V DC
Current		max. 240 mA
Short-circuit protection		no
Reverse polarity protection		yes, with reversed output LED is out of function, therefore more power for solenoid valve
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
UL approval		cULus Listed, General Purpose, Class 2 Power Source
Ambient conditions		
Ambient temperature		-40 ... 75 °C (-40 ... 167 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection (system side)		screw terminal , 1/2" NPT cable gland
Core cross section (system side)		1.5/2.5 mm ² flexible/rigid
Connection (valve side)		screw terminal , 1/2" NPT cable gland
Housing material		rugged, translucent polycarbonate (PC) optimised for outdoor use
Housing base		powder coated aluminum
Degree of protection		IP66 / IP68 / IP69
Tightening torque, fastening screws		≤ 5 Nm
Tightening torque, housing screws		1.5 Nm
Tightening torque, earthing screw		1.5 Nm
Tightening torque, cable gland		Refer to NEC (National Electrical Code), hand-tight then wrench tightened (max. 3 turns)
Tightening torque, stopping plug		2 Nm
Dimensions		
Height		53 mm
Width		100 mm
Length		106 mm

Connection

