



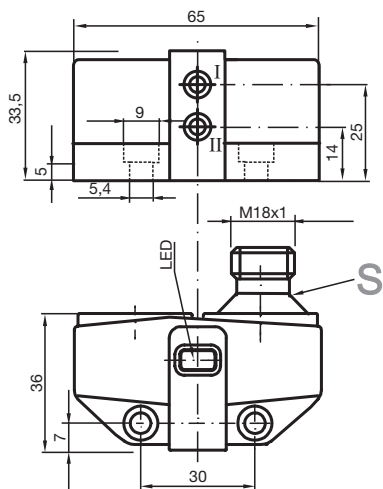
Inductive sensor

NBN3-F31-U8-V18

- Direct mounting on standard actuators
- Compact and stable housing
- Fixed setting



Dimensions



Technical Data

General specifications		
Switching function		2 x normally open (NO)
Rated operating distance	s_n	3 mm
Installation		flush mountable
Output polarity		AC/DC
Assured operating distance	s_a	0 ... 2.43 mm
Reduction factor r_{Al}		0.45
Reduction factor r_{Cu}		0.38
Reduction factor r_{304}		1
Reduction factor r_{S137}		1.04
Output type		4-wire
Nominal ratings		
Operating voltage	U_B	20 ... 253 V AC/DC

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

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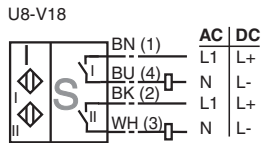
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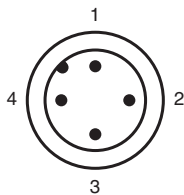
Technical Data

Switching frequency	f	25 Hz
Hysteresis	H	typ. 3 %
Reverse polarity protection		yes
Short-circuit protection		yes
Voltage drop	U _d	≤ 8 V
Operating current	I _L	4 ... 400 mA
Off-state current	I _r	≤ 1.7 mA
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		529 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 EN 60947-5-2/A1:2012 IEC 60947-5-2:2007 IEC 60947-5-2 AMD 1:2012
Approvals and certificates		
Protection class		II
Rated insulation voltage	U _i	253 V
Rated impulse withstand voltage	U _{imp}	4 kV
UL approval		cULus Listed, General Purpose
CSA approval		cCSAus Listed, General Purpose
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Mechanical specifications		
Connection type		Connector plug M18 x 1 , 4-pin
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67

Connection



Connection Assignment



Release date: 2020-03-23 Date of issue: 2020-03-30 Filename: 199144_eng.pdf

Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Matching system components

	BT115A	Activator for F31 series
	BT115X	Activator for F31 series

Accessories

	BT65B	Activator for F31 series
	BT115B	Activator for F31 series
	V18-G	Cable socket in M18 format, ready for make up
	V18-W	Cable socket in M18 format, ready for make up
	BT65A	Activator for F31 series
	BT65X	Activator for F31 series