

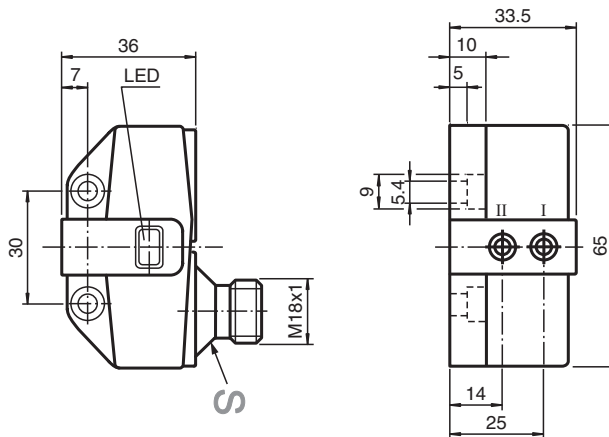


## Inductive sensor NBN3-F31-U8-V18

- 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 $r_{St37}$		1.04
Output type		4-wire
Nominal ratings		
Operating voltage	$U_B$	20 ... 253 V AC/DC
Switching frequency	$f$	25 Hz
Hysteresis	$H$	typ. 3 %
Reverse polarity protection		yes
Short-circuit protection		yes

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

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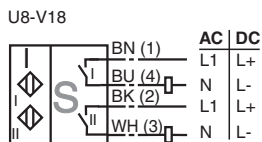
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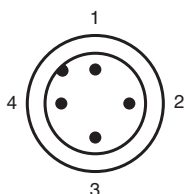
## Technical Data

Voltage drop	$U_d$	$\leq 8\text{ V}$
Operating current	$I_L$	4 ... 400 mA
Off-state current	$I_r$	$\leq 1.7\text{ mA}$
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		529 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Compliance with standards and directives</b>		
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
<b>Approvals and certificates</b>		
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
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>		
Connection type		Connector plug M18 x 1 , 4-pin
Housing material		PBT
Sensing face		PBT
Degree of protection		IP67
Tightening torque, fastening screws		4 Nm ... 5 Nm

## Connection



## Connection Assignment










## Connection Assignment

Wire colors in accordance with EN 60947-5-2

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

## Accessories

	<b>BT65A</b>	Activator for F31 series
	<b>BT65B</b>	Activator for F31 series
	<b>BT65X</b>	Activator for F31 series
	<b>BT115A</b>	Activator for F31 series
	<b>BT115B</b>	Activator for F31 series
	<b>V18-G</b>	Cable socket in M18 format, ready for make up
	<b>V18-W</b>	Cable socket in M18 format, ready for make up

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