



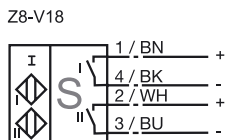
**Model Number**

**NBN3-F31-Z8-V18**

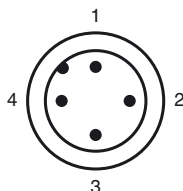
**Features**

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

**Connection**



**Pinout**



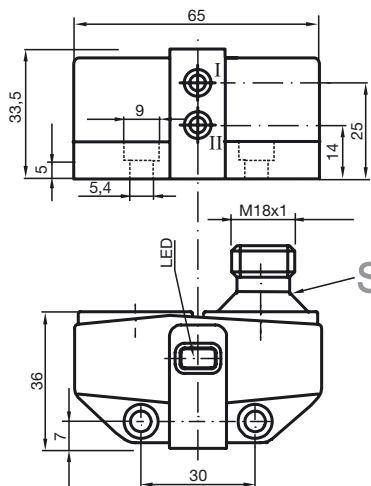
Wire colors in accordance with EN 60947-5-2

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

**Accessories**

- BT65A**  
Activator for F31 series
- BT65X**  
Activator for F31 series
- BT115A**  
Activator for F31 series
- BT115X**  
Activator for F31 series
- BT65B**  
Activator for F31 series
- BT115B**  
Activator for F31 series
- V18-G**

**Dimensions**



**Technical Data**

<b>General specifications</b>	
Switching element function	Dual (NO)
Rated operating distance	$s_n$ 3 mm
Installation	embeddable mountable
Output polarity	DC
Assured operating distance	$s_a$ 0 ... 2.43 mm
Reduction factor $r_{Al}$	0.5
Reduction factor $r_{Cu}$	0.4
Reduction factor $r_{304}$	1
Reduction factor $r_{St37}$	1.1
<b>Nominal ratings</b>	
Operating voltage	$U_B$ 6 ... 60 V DC
Switching frequency	$f$ 0 ... 500 Hz
Hysteresis	$H$ typ. 5 %
Reverse polarity protected	tolerant
Short-circuit protection	no
Voltage drop	$U_d$ $\leq$ 6 V
Operating current	$I_L$ 4 ... 100 mA
Lowest operating current	$I_m$ 4 mA
Off-state current	$I_r$ 0 ... 1 mA typ. 0.7 mA
Indication of the switching state	LED, yellow
<b>Limit data</b>	
Tightening torque, fastening screws	0.4 Nm
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	590 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %
<b>Ambient conditions</b>	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
<b>Mechanical specifications</b>	
Connection type	Device connector M18 x 1 , 4-pin
Housing material	PBT
Sensing face	PBT
Protection degree	IP67
<b>Compliance with standards and directives</b>	
<b>Standard conformity</b>	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007
<b>Approvals and certificates</b>	
UL approval	cULus Listed, General Purpose
CSA approval	cCSAus Listed, General Purpose
CCC approval	Certified by China Compulsory Certification (CCC)

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