



### Model Number

NJ5-18GM50-E2-3G-3D

### Features

- Basic series

### Accessories

#### BF 18

Mounting flange, 18 mm

#### EXG-18

Quick mounting bracket with dead stop

## Technical Data

### General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	$s_n$	5 mm
Installation		flush
Output polarity		DC
Assured operating distance	$s_a$	0 ... 4.05 mm
Actual operating distance	$s_r$	4.5 ... 5.5 mm typ. 5 mm
Reduction factor $r_{Al}$		0.2
Reduction factor $r_{Cu}$		0.13
Reduction factor $r_{304}$		0.62
Reduction factor $r_{Brass}$		0.26
Output type		3-wire

### Nominal ratings

Operating voltage	$U_B$	10 ... 30 V DC
Switching frequency	$f$	0 ... 2000 Hz
Hysteresis	$H$	3 ... 15 typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	$U_d$	$\leq 3$ V
Voltage drop at $I_L$		
Voltage drop $I_L = 200$ mA, switching element on $U_d$		1 ... 2 V typ. 1.5 V
Design data		
Operating current	$I_L$	$\leq 200$ mA
Off-state current	$I_r$	0 ... 0.5 mA typ. 0.01 mA
No-load supply current	$I_0$	$\leq 15$ mA
Time delay before availability	$t_v$	$\leq 100$ ms
Switching state indicator		LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1504 a
Mission Time ( $T_M$ )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

### Mechanical specifications

Connection type	cable PVC , 2 m
Core cross-section	0.5 mm <sup>2</sup>
Housing material	Stainless steel 1.4305 / AISI 303
Sensing face	PBT
Degree of protection	IP67
Cable	
Bending radius	> 10 x cable diameter

### General information

Scope of delivery	2 self locking nuts in scope of delivery
Use in the hazardous area	see instruction manuals

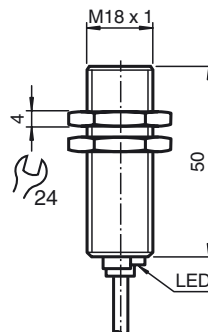
### Compliance with standards and directives

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

UL approval	cULus Listed, General Purpose, Class 2 Power Source
CCC approval	CCC approval / marking not required for products rated $\leq 36$ V

## Dimensions



Electrical Connection



**Data for application in connection with hazardous areas**

Equipment protection level	Gc (nA) , Dc
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**Equipment protection level Gc (nA)**

Type of protection	"n"
CE marking	CE

**Certificates**

ATEX certificate	PF15CERT3754X
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ATEX marking	⊕ II 3G Ex nA IIC T6 Gc
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Standards	EN 60079-0:2012+A11:2013 , EN 60079-15:2010
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Surge protection	The protection against transient overvoltage with amplitude U is realized. U = 500 V at 1.2/50 μs, 500 Ω
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Possible characteristics	maximum operating voltage $U_{Bmax}$ , maximum load current $I_{Lmax}$ , minimum series resistance $R_V$ , maximum analog output voltage $U_{Amax}$ , maximum analog output current $I_{Amax}$
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Maximum permissible ambient temperature $T_{amb}$	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_{Bmax} = 30\text{ V}$ , $I_L = 200\text{ mA}$ : 52 °C (125.6 °F) at $U_{Bmax} = 30\text{ V}$ , $I_L = 100\text{ mA}$ : 54 °C (129.2 °F) at $U_{Bmax} = 30\text{ V}$ , $I_L = 50\text{ mA}$ : 55 °C (131 °F)
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**Equipment protection level Dc**

Type of protection	Protection by enclosure "tc"
CE marking	CE

**Certificates**

ATEX certificate	PF15CERT3774X
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ATEX marking	⊕ II 3D Ex tc IIIC T80 °C Dc
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Standards	EN 60079-0:2012+A11:2013 , EN 60079-31:2014
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Possible characteristics	maximum operating voltage $U_{Bmax}$ , maximum load current $I_{Lmax}$ , minimum series resistance $R_V$ , maximum analog output current $I_{Amax}$ , maximum analog output voltage $U_{Amax}$
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Maximum permissible ambient temperature $T_{amb}$	Also observe the maximum permissible ambient temperature stated in the general technical data. Keep to the lower of the two values. at $U_{Bmax} = 30\text{ V}$ , $I_L = 200\text{ mA}$ : 52 °C (125.6 °F) at $U_{Bmax} = 30\text{ V}$ , $I_L = 100\text{ mA}$ : 54 °C (129.2 °F) at $U_{Bmax} = 30\text{ V}$ , $I_L = 50\text{ mA}$ : 55 °C (131 °F)
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