



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	≤ 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	≤ 200 mA
Off-state current	I_r	0 ... 0.5 mA typ. 0.01 mA
No-load supply current	I_0	≤ 15 mA
Time delay before availability	t_v	≤ 100 ms
Switching state indicator		LED, yellow

Functional safety related parameters

MTTF _d	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 ²
Housing material	Stainless steel 1.4305 / AISI 303
Sensing face	PBT
Degree of protection	IP66 / 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

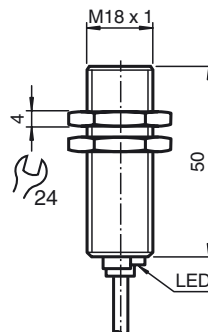
Compliance with standards and directives

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

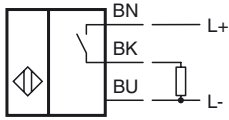
Approvals and certificates

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

Dimensions



Electrical Connection



Release date: 2019-06-25 12:02 Date of issue: 2019-06-25 310632_eng.xml

Data for application in connection with hazardous areas

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

Equipment protection level Gc (nA)

Type of protection	"n"
CE marking	CE

Certificates

ATEX certificate	PF15CERT3754X
------------------	---------------

ATEX marking	Ex II 3G Ex nA IIC T6 Gc
--------------	--------------------------

Standards	EN 60079-0:2012+A11:2013 , EN 60079-15:2010
-----------	---

Surge protection	The protection against transient overvoltage with amplitude U is realized. U = 500 V at 1.2/50 µs, 500 Ω
------------------	---

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}
--------------------------	--

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)
---	---

Equipment protection level Dc

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

Certificates

ATEX certificate	PF15CERT3774X
------------------	---------------

ATEX marking	Ex II 3D Ex tc IIIC T80 °C Dc
--------------	-------------------------------

Standards	EN 60079-0:2012+A11:2013 , EN 60079-31:2014
-----------	---

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}
--------------------------	--

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)
---	---



SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

www.scatts.co.uk