



## Model Number

NJ5-18GK-N-150

## Features

- 5 mm flush
- Temperature range  
-40 ... 150 °C (-40 ... 302 °F)

## Technical Data

### General specifications

|                            |                      |
|----------------------------|----------------------|
| Switching function         | Normally closed (NC) |
| Output type                | NAMUR                |
| Rated operating distance   | $s_n$ 5 mm           |
| Installation               | flush                |
| Assured operating distance | $s_a$ 0 ... 4.05 mm  |
| Reduction factor $r_{AI}$  | 0.4                  |
| Reduction factor $r_{Cu}$  | 0.3                  |
| Reduction factor $r_{304}$ | 0.85                 |
| Output type                | 2-wire               |

### Nominal ratings

|                              |  |
|------------------------------|--|
| Nominal voltage              | $U_o$ 8.2 V ( $R_i$ approx. 1 k $\Omega$ ) |
| Switching frequency          | $f$ 0 ... 500 Hz                           |
| Current consumption          |  |
| Measuring plate not detected | $\geq 3$ mA                                |
| Measuring plate detected     | $\leq 1$ mA                                |

### Functional safety related parameters

|                          |        |
|--------------------------|--------|
| MTTF <sub>d</sub>        | 4542 a |
| Mission Time ( $T_M$ )   | 20 a   |
| Diagnostic Coverage (DC) | 0 %    |

### Ambient conditions

|                     |                                 |
|---------------------|---------------------------------|
| Ambient temperature | -40 ... 150 °C (-40 ... 302 °F) |
|---------------------|---------------------------------|

### Mechanical specifications

|                      |                       |
|----------------------|-----------------------|
| Connection type      | cable SIHF, 2 m       |
| Core cross-section   | 0.34 mm <sup>2</sup>  |
| Housing material     | PPS                   |
| Sensing face         | PPS                   |
| Degree of protection | IP65                  |
| Cable                |                       |
| Bending radius       | > 10 x cable diameter |

### General information

|                           |                         |
|---------------------------|-------------------------|
| Use in the hazardous area | see instruction manuals |
| Category                  | 1G; 2G                  |

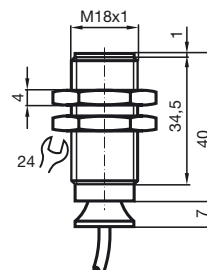
### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| NAMUR               | EN 60947-5-6:2000<br>IEC 60947-5-6:1999   |
| Standards           | EN 60947-5-2:2007<br>EN 60947-5-2/A1:2012<br>IEC 60947-5-2:2007<br>IEC 60947-5-2 AMD 1:2012 |

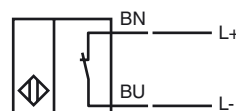
### Approvals and certificates

|                |  |
|----------------|--|
| EAC conformity | TR CU 012/2011   |
| UL approval    | cULus Listed, General Purpose                                      |
| CSA approval   | cCSAus Listed, General Purpose                                     |
| CCC approval   | CCC approval / marking not required for products rated $\leq 36$ V |


## Dimensions



## Electrical Connection




#### Equipment protection level Ga

|   |   |   |
|---|---|---|
| CE marking                              | CE 0102   |   |
| ATEX marking                            |  II 1G Ex ia IIC T6...T1 Ga<br>The Ex-related marking can also be printed on the enclosed label.   |   |
| Standards                               | EN 60079-0:2012+A11:2013, EN 60079-11:2012<br>Ignition protection "Intrinsic safety"<br>Use is restricted to the following stated conditions  |   |
| Appropriate type                        | NJ5-18GK-N-150...   |   |
| Effective internal inductivity          | $C_i$   | $\leq 70 \text{ nF}$ ; a cable length of 10 m is considered.          |
| Effective internal inductance           | $L_i$   | $\leq 50 \text{ }\mu\text{H}$ ; a cable length of 10 m is considered. |
| Highest permissible ambient temperature | Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EU-type examination certificate.<br><b>Note:</b> Use the temperature table for category 1 !!! The 20 % reduction in accordance with EN 1127-1 has already been applied to the temperature table for category 1. |   |


#### Special conditions

#### Equipment protection level Gb

|   |  |   |
|---|--|---|
| CE marking  | CE 0102  |   |
| ATEX marking                                      |  II 1G Ex ia IIC T6...T1 Ga<br>The Ex-related marking can also be printed on the enclosed label.  |   |
| Standards   | EN 60079-0:2012+A11:2013, EN 60079-11:2012<br>Ignition protection "Intrinsic safety"<br>Use is restricted to the following stated conditions   |   |
| Appropriate type                                  | NJ5-18GK-N-150...  |   |
| Effective internal inductivity                    | $C_i$  | $\leq 70 \text{ nF}$ ; a cable length of 10 m is considered.          |
| Effective internal inductance                     | $L_i$  | $\leq 50 \text{ }\mu\text{H}$ ; a cable length of 10 m is considered. |
| Maximum permissible ambient temperature $T_{amb}$ | Details of the correlation between the type of circuit connected, the maximum permissible ambient temperature, the temperature class, and the effective internal reactance values can be found on the EU-type examination certificate. |   |

#### Special conditions

#### Equipment protection level Da

|                                |   |  |
|--------------------------------|---|--|
| CE marking                     | CE 0102   |  |
| ATEX marking                   |  II 1D Ex ia IIIC T135°C Da<br>The Ex-related marking can also be printed on the enclosed label. |  |
| Standards                      | EN 60079-0:2012+A11:2013, EN 60079-11:2012<br>Ignition protection "Intrinsic safety"<br>Use is restricted to the following stated conditions                                      |  |
| Appropriate type               | NJ5-18GK-N-150...   |  |
| Effective internal inductivity | $C_i$   | $\leq 70 \text{ }\mu\text{F}$<br>A cable length of 10 m is considered. |
| Effective internal inductance  | $L_i$   | $\leq 50 \text{ }\mu\text{H}$<br>A cable length of 10 m is considered. |

#### Special conditions