



### Model Number

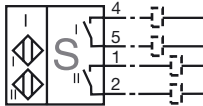
NBN3-F31K-Z8

### Features

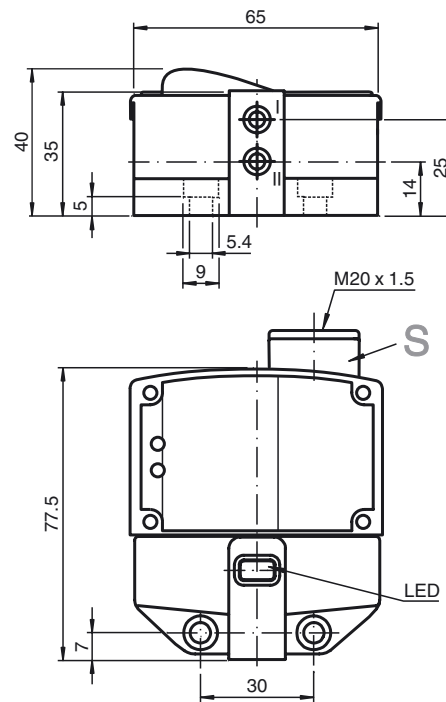
- Direct mounting on standard actuators
- Compact and stable housing
- Fixed setting
- Satisfies machinery directive

### Connection

Z8



## Dimensions



## Technical Data

### General specifications

|                             |       |                 |
|-----------------------------|-------|-----------------|
| Switching element function  |       | DC binary NO    |
| Rated operating distance    | $s_n$ | 3 mm            |
| Installation                |       | flush mountable |
| Output polarity             |       | DC              |
| Assured operating distance  | $s_a$ | 0 ... 2.43 mm   |
| Reduction factor $r_{AI}$   |       | 0.5             |
| Reduction factor $r_{Cu}$   |       | 0.4             |
| Reduction factor $r_{V2A}$  |       | 1               |
| Reduction factor $r_{SI37}$ |       | 1.1             |

### Nominal ratings

|                                   |       |                        |
|-----------------------------------|-------|------------------------|
| Operating voltage                 | $U_B$ | 6 ... 60 V             |
| 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            |

### Limit data

|                                     |        |
|-------------------------------------|--------|
| Tightening torque, fastening screws | 0.4 Nm |
|-------------------------------------|--------|

### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 70 °C (-13 ... 158 °F) |
|---------------------|--------------------------------|

### Mechanical specifications

|                                   |  |
|-----------------------------------|--|
| Connection (system side)          | Cage tension spring terminals          |
| Core cross-section (system side)  | 1.5/2.5 mm <sup>2</sup> flexible/rigid |
| Housing material                  | PBT                                    |
| Sensing face                      | PBT                                    |
| Protection degree                 | IP67                                   |
| Tightening torque, housing screws | 1 Nm                                   |
| Tightening torque, cable gland    | M20 x 1.5 ; $\leq 7$ Nm                |

### Compliance with standards and directives

|                     |   |
|---------------------|---|
| Standard conformity |   |
| Standards           | EN 60947-5-2:2007<br>IEC 60947-5-2:2007 |

### Approvals and certificates

|              |                                |
|--------------|--------------------------------|
| UL approval  | cULus Listed, General Purpose  |
| CSA approval | cCSAus Listed, General Purpose |