



CE

Model Number

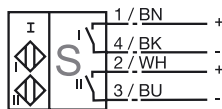
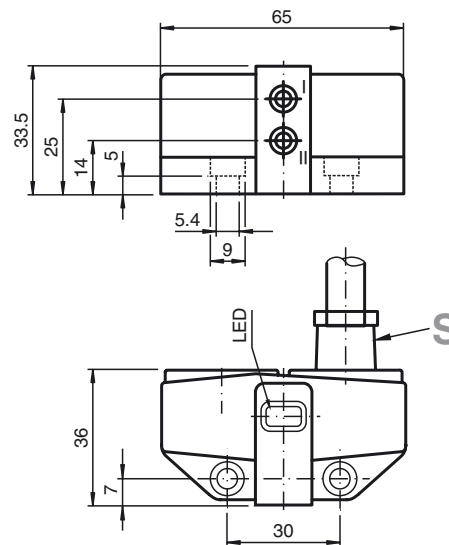
NBN3-F31-Z8-K-3D

Features

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

Connection

Z8-K

**Dimensions****Technical Data****General specifications**

| | | |
|-----------------------------|-----------------|---------------|
| Switching element function | PNP | Dual 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 | ≤ 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 |
|-------------------------------------|--------|

Standard conformity

| | |
|------------------------|-------------------------|
| EMC in accordance with | IEC / EN 60947-5-2:2004 |
| Standards | IEC / EN 60947-5-2:2004 |

Ambient conditions

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

Mechanical specifications

| | |
|----------------------------------|----------------------|
| Connection (system side) | 5 m, PVC cable |
| Core cross-section (system side) | 0.75 mm ² |
| Housing material | PBT |
| Sensing face | PBT |
| Protection degree | IP67 |

General information

| | |
|---------------------------|-------------------------|
| Use in the hazardous area | see instruction manuals |
| Category | 3D |

ATEX 3D

Instruction

Manual electrical apparatus for hazardous areas**Device category 3D**

Directive conformity

Standard conformity

for use in hazardous areas with non-conducting combustible dust

94/9/EG

EN 50281-1-1


Protection via housing

Use is restricted to the following stated conditions

CE symbol



Ex-identification

 II 3D IP67 T 94 °C (201.2 °F) X

General

The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual.
The data stated in the data sheet are restricted by this operating instruction! The special conditions must be adhered to!

Installation, Commissioning

Laws and/or regulations and standards governing the use or intended usage goal must be observed.

Maintenance

No changes can be made to apparatus, which are operated in hazardous areas.

Repairs to these apparatus are not possible.

Special conditionsMaximum operating current I_L

The maximum permissible load current must be restricted to the values given in the following list.
High load currents and load short-circuits are not permitted.

Maximum operating voltage U_{Bmax}

The maximum permissible operating voltage U_{Bmax} must be restricted to the values given in the following list. Tolerances are not permitted.

Maximum heating (Temperature rise)

dependant of the load current I_L and the max. operating voltage U_{Bmax} .
Information can be taken from the following list. The maximum surface temperature at maximum ambient temperature is given in the Ex identification of the apparatus.

at $U_{Bmax}=60$ V, $I_L=100$ mA

24 K

at $U_{Bmax}=60$ V, $I_L=50$ mA

14 K

at $U_{Bmax}=60$ V, $I_L=25$ mA

12 K

Protection from mechanical danger

The sensor must not be mechanically damaged.

Protection of the connection cable

The connection cable must be prevented from being subjected to tension and torsional loading.