



EXE-12D6813A020

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Note | Resolution | Scanning range | Protective field height | System part | Type | Part no. |
|---|------------|----------------|-------------------------|-------------|-----------------|----------|
| <p>Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 8-wire, flying leads). Depending on national regulations and requirements, a cable gland may have to be installed. The cable gland is available as an accessory., Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 8-wire, flying leads). Depending on national regulations and requirements, a cable gland may have to be installed. The cable gland is available as an accessory.</p> | 30 mm | 25.2 m | 1,500 mm | Receiver | EXE-12D6813A020 | 1097713 |

Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 8-wire, flying leads). Depending on national regulations and requirements, a cable gland may have to be installed. The cable gland is available as an accessory.

Other models and accessories → www.sick.com/deTec



Detailed technical data

Features

| | |
|--------------------------------|--|
| Sub product family | deTec4 Ex |
| Application | Explosive areas |
| Ex-approvals | ATEX for gas: II 2 G Ex db IIB T6 ATEX for dust: II 2 D Ex tb IIIC T56 °C Db IP6X NFPA 70/NEC 500 Class I, Div. 1, Groups C and D NFPA 70/NEC 500 Class II, Div. 1, Groups E, F and G NFPA 70/NEC 500 Class III, Div. 1 |
| System part | Receiver |
| Resolution | 30 mm |
| Scanning range | 25.2 m |
| Protective field height | 1,500 mm |
| Response time | 13 ms (Uncoded) 22 ms (code 1 or code 2) |
| Synchronization | Optical synchronisation |
| Items supplied | Receiver in explosion-proof enclosure with connecting cable, 30 m 2 handles including screws Test rod with diameter corresponding to the resolution of the safety light curtain Safety instruction Mounting instructions Operating instructions on CD-ROM |

Safety-related parameters

| | |
|---|--|
| Type | Type 4 (IEC 61496-1) |
| Safety integrity level | SIL 3 (IEC 61508) |
| Category | Category 4 (ISO 13849-1) |
| Performance level | PL e (ISO 13849-1) |
| PFH_D (mean probability of a dangerous failure per hour) | 15.3×10^{-9} |
| T_M (mission time) | 20 years (ISO 13849-1) |
| Safe state in the event of a fault | At least one OSSD is in the OFF state. |

Functions

| | |
|--|---|
| Protective operation | ✓ |
| Automatic calibration of the protective field width | ✓ |
| Beam coding | ✓ |
| Restart interlock | ✓ |
| External device monitoring (EDM) | ✓ |

Interfaces

| | |
|-----------------------------|---|
| System connection | Connecting cable, 30 m, flying lead, 8-wire |
| Cable diameter | 5.8 mm |
| Conductor cross section | 0.25 mm ² |
| Extension connection | - |
| Configuration method | DIP switch on system plug |
| Display elements | LEDs |

| | |
|---|---|
| Display of the synchronization status of the upper and lower beams | ✓ |
| Application diagnostic output (ADO) | ✓ |

Electrical data

| | |
|--|--|
| Protection class | III (IEC 61140) |
| Supply voltage V_s | 24 V DC (19.2 V ... 28.8 V) |
| Ripple | $\leq 10 \%$ |
| Power consumption typical | 3.76 W (DC) |
| Output signal switching devices (OSSDs) | |
| Type of output | 2 PNP semiconductors, short-circuit protected, cross-circuit monitored ¹⁾ |
| ON state, switching voltage HIGH | 24 V DC ($V_s - 2.25 \text{ V DC} \dots V_s$) |
| OFF state, switching voltage LOW | $\leq 2 \text{ V DC}$ |
| Current-carrying capacity per OSSD | $\leq 500 \text{ mA}$ |
| Application diagnostic output (ADO) | |
| Type of output | PNP semiconductor, short-circuit protected ¹⁾ |
| Output voltage HIGH (active) | $\geq V_s - 3 \text{ V}$ |
| Output voltage LOW (deactivated) | High resistance |
| Output current HIGH (active) | $\leq 100 \text{ mA}$ |

¹⁾ Applies to the voltage range between -30 V and +30 V.

Mechanical data

| | |
|------------------------------|--------------------------|
| Dimensions | See dimensional drawing |
| Housing cross-section | 161.8 mm x 142.1 mm |
| Housing material | Aluminum cast/AISi7Mg0.6 |

Ambient data

| | |
|--------------------------------------|--------------------------------------|
| Enclosure rating | IP65 (IEC 60529) IP66 (IEC 60529) |
| Ambient operating temperature | -20 °C ... +55 °C |
| Storage temperature | -30 °C ... +70 °C |
| Air humidity | 15 % ... 95 %, Non-condensing |
| Vibration resistance | 5 g, 10 Hz ... 55 Hz (IEC 60068-2-6) |
| Shock resistance | 10 g, 16 ms (IEC 60068-2-27) |






Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27272704 |
| ECLASS 5.1.4 | 27272704 |
| ECLASS 6.0 | 27272704 |
| ECLASS 6.2 | 27272704 |
| ECLASS 7.0 | 27272704 |
| ECLASS 8.0 | 27272704 |
| ECLASS 8.1 | 27272704 |
| ECLASS 9.0 | 27272704 |
| ECLASS 10.0 | 27272704 |

| | |
|-----------------------|----------|
| ECLASS 11.0 | 27272704 |
| ECLASS 12.0 | 27272704 |
| ETIM 5.0 | EC002549 |
| ETIM 6.0 | EC002549 |
| ETIM 7.0 | EC002549 |
| ETIM 8.0 | EC002549 |
| UNSPSC 16.0901 | 46171620 |

Recommended accessories

Other models and accessories → www.sick.com/deTec

| | Brief description | Type | Part no. |
|---|---|----------------|----------|
| Alignment aids | | | |
|  | Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!, 19 mm x 67.3 mm x 66.9 mm | AR60 | 1015741 |
| Test and monitoring tools | | | |
|  | 30 mm diameter, 250 mm length | Test rod 30 mm | 2022602 |
| Terminal and alignment brackets | | | |
|  | 2 pieces, alignment bracket for explosion-proof enclosure | BEF-1SHABRST2 | 2072525 |
| Safety switching amplifier | | | |
|  | <ul style="list-style-type: none"> • Applications: Output expansion module for OSSDs • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: no • External device monitoring (EDM): Via path • Outputs: 2 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe) • Housing width: 18 mm | RLY3-OSSD100 | 1085343 |
|  | <ul style="list-style-type: none"> • Applications: Output expansion module for OSSDs • Compatible sensor types: Safety sensors with OSSDs • Connection type: Front connector with spring terminals • Restart interlock: no • External device monitoring (EDM): Via path • Outputs: 4 enabling current paths (safe), 1 feedback current path (for use as external device monitoring, not safe), 1 signaling current path (not safe) • Housing width: 28 mm | RLY3-OSSD400 | 1099971 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com