



EXS-12D0430A020

deTem

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|-----------------|----------|
| EXS-12D0430A020 | 1097723 |

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

Detailed technical data

Features

| | |
|------------------------------------|--|
| Product version | deTem4 Core Ex |
| Application | Explosive areas |
| Ex-approvals | ATEX for gas: II 2 G Ex db IIB T6 Gb 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 |
| Functional principle | Sender/receiver |
| System part | Sender |
| Scanning range | 14.2 m |
| Dimension of the light path | Typical 0.5 m ... 14.2 m |
| Number of beams | 4 |
| Beam separation | 300 mm |
| Response time | 20 ms |
| Synchronization | Optical synchronization |
| Items supplied | Sender |

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) | 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. |
|---|--|

Interfaces

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|--------------------------|--------------------------|
| System connection | Connecting cable, 5-wire |
| Length of cable | 30 m |
| Cable diameter | 5 mm |
| Conductor cross section | 0.34 mm ² |
| Display elements | LEDs |

Electronics

| | |
|-------------------------------------|---|
| Protection class | III (IEC 61140) |
| Supply voltage V_S | 24 V DC (19.2 V DC ... 28.8 V DC) ¹⁾ |
| Residual ripple | ≤ 10 % ²⁾ |
| Power consumption | ≤ 50 mA |
| Power consumption | ≤ 1.44 W (DC) |

¹⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

²⁾ Within the limits of V_S.

Mechanics

| | |
|------------------------------|---------------------------|
| Dimensions | See dimensional drawing |
| Housing cross-section | 161.8 mm x 142.1 mm |
| Material | |
| Housing | Aluminum extruded profile |
| Weight | 45.88 kg (± 50 g) |

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 ... 150 Hz, 3,5 mm / 1 g (EN 60068-2-6) |
| Shock resistance | 15 g / 6 ms (EN 60068-2-27) |
| Class | 3M4 (IEC TR 60721-4-3) |

Other information

| | |
|----------------------|--------------------------------|
| Type of light | Near-infrared (NIR), invisible |
|----------------------|--------------------------------|

Certificates

| | |
|-------------------------------------|---|
| EU declaration of conformity | ✓ |
| China RoHS | ✓ |
| ATEX certificate | ✓ |
| IECEX certificate | ✓ |
| cULus certificate | ✓ |




Classifications

| | |
|-------------------|----------|
| ECLASS 5.0 | 27272703 |
|-------------------|----------|

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|-----------------------|----------|
| ECLASS 5.1.4 | 27272703 |
| ECLASS 6.0 | 27272703 |
| ECLASS 6.2 | 27272703 |
| ECLASS 7.0 | 27272703 |
| ECLASS 8.0 | 27272703 |
| ECLASS 8.1 | 27272703 |
| ECLASS 9.0 | 27272703 |
| ECLASS 10.0 | 27272703 |
| ECLASS 11.0 | 27272703 |
| ECLASS 12.0 | 27272703 |
| ETIM 5.0 | EC001832 |
| ETIM 6.0 | EC001832 |
| ETIM 7.0 | EC001832 |
| ETIM 8.0 | EC001832 |
| UNSPSC 16.0901 | 46171620 |

Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|---------------|----------|
| Safety relays | | | |
|  | <ul style="list-style-type: none"> Applications: Evaluation unit Compatible sensor types: Safety sensors with OSSDs Connection type: Front connector with spring terminals Restart interlock: yes External device monitoring (EDM): Integrated Outputs: 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) Housing width: 18 mm | RLY3-OSSD200 | 1085344 |
|  | <ul style="list-style-type: none"> Applications: Evaluation unit Compatible sensor types: Safety sensors with OSSDs Connection type: Front connector with spring terminals Restart interlock: yes External device monitoring (EDM): Integrated Outputs: 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) Housing width: 18 mm | RLY3-OSSD300 | 1099969 |
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> Description: Alignment bracket for explosion-proof enclosure Packing unit: 2 pieces | BEF-1SHABRST2 | 2072525 |

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