EXS-12D0430A020

deTem

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.

EXS-12D0430A020 | deTem
SAFETY MULTIBEAM SENSORS

Ordering information

deTem4 Core Ex

	Scanning range	Number of beams	Beam separation	System part	Type	Part no.
Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 5-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.	14.2 m	4	300 mm	Sender	EXS-12D0430A020	1097723

Illustration may differ

Sensor pre-assembled in explosion-proof enclosure including connecting cable (30 m, 5-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/deTem

Detailed technical data

Features

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
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 synchronisation
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.

Functions

Protective operation	✓

Interfaces

System connection	Connecting cable, 5-wire
Length of cable	30 m
Cable diameter	5 mm
Conductor cross section	0.34 mm²
Display elements	LEDs

Electrical data

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$_S$.

Mechanical data

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 g, 10 Hz … 55 Hz (IEC 60068-2-6)
Shock resistance	10 g, 16 ms (IEC 60068-2-27)

Other information

Type of light	Near-infrared (NIR), invisible

Classifications

eCl@ss 5.0	27272703
eCl@ss 5.1.4	27272703
eCl@ss 6.0	27272703
eCl@ss 6.2	27272703
eCl@ss 7.0	27272703
eCl@ss 8.0	27272703
eCl@ss 8.1	27272703
eCl@ss 9.0	27272703
eCl@ss 10.0	27272703
eCl@ss 11.0	27272703
eCl@ss 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.
Plug connectors and cables			
	Cable gland for the European market	Cable gland	5329001
Terminal and alignment brackets			
	2 pieces, alignment bracket for explosion-proof enclosure	BEF-1SHABRST2	2072525
Safety switching amplifier			
	• **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

	Brief description	Type	Part no.
	• **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

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."

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