

EXP-06D0250A020

deTem

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
EXP-06D0250A020	1097715

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	Pair
Scanning range	14.2 m
Dimension of the light path	
Typical	0.5 m ... 14.2 m
Number of beams	2
Beam separation	500 mm
Response time	20 ms
Synchronization	Optical synchronization
Items supplied	Sender Receiver "Notes for explosion protection" label(s) Safety instruction Mounting instructions Operating instructions for download

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

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	$\leq 10\%$ ²⁾
Output signal switching devices (OSSDs)	2 PNP semiconductors, short-circuit protected, cross-circuit monitored ³⁾
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	$\leq 300\text{ mA}$

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 .

³⁾ Applies to the voltage range between -30 V and +30 V.

Mechanics

Dimensions	See dimensional drawing
Housing cross-section	161.8 mm x 142.1 mm
Material	
Housing	Aluminum extruded profile
Weight	$\pm 50\text{ g}$

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
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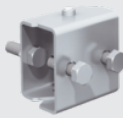
Classifications

ECLASS 5.0	27272703
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