



EXE-12D6813A020

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
EXE-12D6813A020	1097713

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

Detailed technical data

Features

Product version	deTec4 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
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 synchronization
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 x 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)	✓

Electronics

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V ... 28.8 V)
Ripple	≤ 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 V DC ... V _S)
OFF state, switching voltage LOW	≤ 2 V DC
Current-carrying capacity per OSSD	≤ 500 mA
Application diagnostic output (ADO)	
Type of output	PNP semiconductor, short-circuit protected ¹⁾
Output voltage HIGH (active)	≥ V _S – 3 V
Output voltage LOW (deactivated)	High resistance
Output current HIGH (active)	≤ 100 mA

¹⁾ 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
Housing material	Aluminum cast/AISI7Mg0.6

Ambient data

Enclosure rating	IP65 (IEC 60529)
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	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)

Certificates

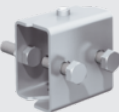
EU declaration of conformity	✓
China RoHS	✓
ATEX certificate	✓
IECEx certificate	✓
cULus certificate	✓

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.
Safety relays			
	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
	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
Commissioning aids and test equipment			
	Product: Test equipment Description: 30 mm diameter, 250 mm length	Test rod 30 mm	2022602
	Product: Alignment aids Dimensions (W x H x L): 19 mm 67.3 mm 66.9 mm Description: Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741
Mounting systems			
	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:

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