



EXE-12D6803B020

deTec

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
EXE-12D6803B020	1068415

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

Detailed technical data

Features

Product version	deTec4 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
System part	Receiver
Compatible sender	1068416
Resolution	30 mm
Scanning range	10 m
Protective field height	1,500 mm
Response time	13 ms
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 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)	3.7×10^{-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	✓

Interfaces

System connection	Connecting cable, 30 m, flying leads, 5-wire
Length of cable	30 m
Cable diameter	7.4 mm
Conductor cross section	0.75 mm ²
Display elements	LEDs

Electronics

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V ... 28.8 V)
Ripple	≤ 10 %
Power consumption typical	2.4 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	≤ 300 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) 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

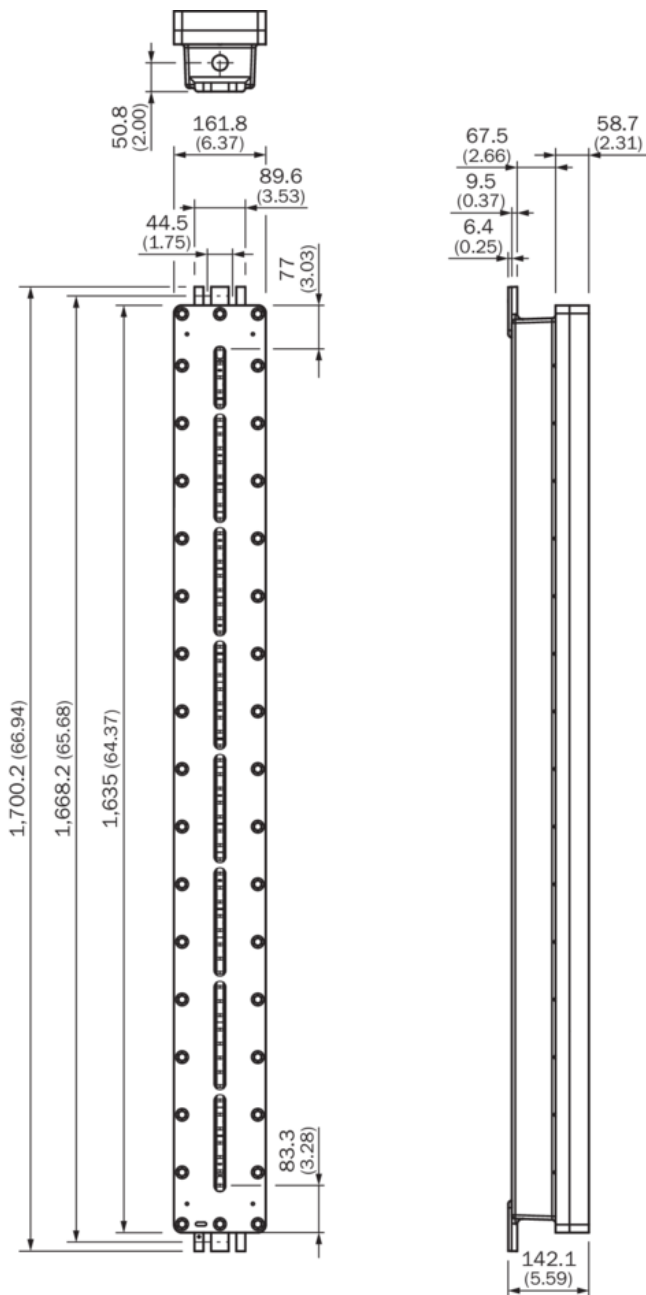
EU declaration of conformity	✓
China RoHS	✓
ATEX certificate	✓
IECEX certificate	✓
cULus certificate	✓

China EX Type-Examination certificate	✓
Japan EX Type-Examination 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





Dimensional drawing deTec4 Core Ex, 1,500 mm



Dimensions in mm (inch)

Recommended accessories

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

	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: 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe) • Housing width: 18 mm 	RLY3-OSSD300	1099969
	<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
Commissioning aids and test equipment			
	<ul style="list-style-type: none"> • Product: Test equipment • Description: 30 mm diameter, 250 mm length 	Test rod 30 mm	2022602
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