imall

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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

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SAFETY LIGHT CURTAINS



SAFETY LIGHT CURTAINS



Ordering information

Туре	Part no.
C4C-SA03030A10000	1211462

Other models and accessories -> www.sick.com/deTec



Detailed technical data

Features

Items supplied	Sender	
Compatible receiver	1211464	
Application	Normal industrial environment	
Resolution	30 mm	
Protective field height	300 mm	
Scanning range	15 m	
No blind zones	Yes	
Synchronization	Optical synchronisation	

Safety-related parameters

Туре	Type 4 (IEC 61496-1)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (IEC 62061)
Category	Category 4 (ISO 13849-1)
Performance level	PL e (ISO 13849-1)
$\ensuremath{PFH}_{\ensuremath{D}}$ (mean probability of a dangerous failure per hour)	3.7 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	✓

SAFETY LIGHT CURTAINS

Interfaces

Connection type	Male connector M12, 5-pin
Display elements	LEDs
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET ¹⁾

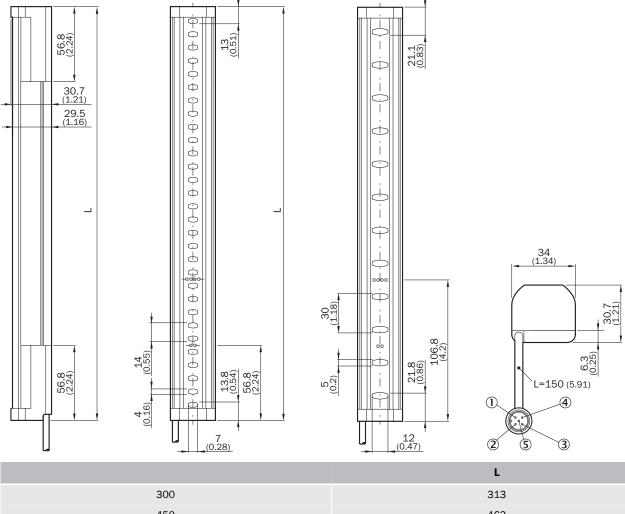
 $^{(1)}$ For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

Electrical data

Protection class	III (IEC 61140)
Supply voltage V _S	24 V DC (19.2 V 28.8 V)
Ripple	≤ 10 %
Mechanical data	
Dimensions	See dimensional drawing
Housing material	Aluminum extruded profile
Ambient data	
Enclosure rating	IP65 (IEC 60529) IP67 (IEC 60529)
Ambient operating temperature	-30 °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	
Wave length	850 nm
Classifications	
ECI@ss 5.0	27272704
ECI@ss 5.1.4	27272704
ECI@ss 6.0	27272704
ECI@ss 6.2	27272704
ECI@ss 7.0	27272704
ECI@ss 8.0	27272704
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SAFETY LIGHT CURTAINS

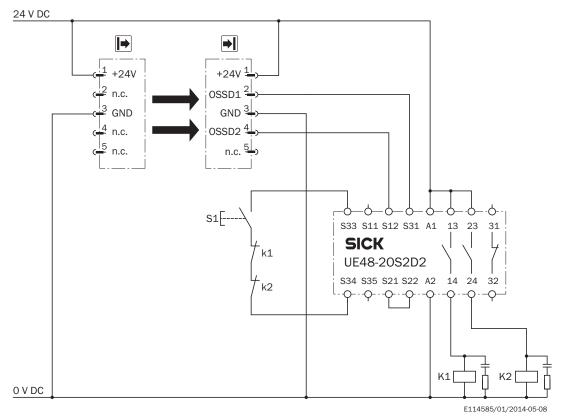
Dimensional drawing (Dimensions in mm (inch))



300	313
450	463
600	613
750	763
900	913
1,050	1,063
1,200	1,213
1,350	1,362
1,500	1,512
1,650	1,662
1,800	1,812
1,950	1,962
2,100	2112

Connection diagram

deTec4 Core safety light curtain to UE48-20S safety relay



Task

Connection of a deTec4 Core safety light curtain to a UE48-20S.

Operating mode: With restart interlock and external device monitoring

Mode of operation

When the light path is clear, the OSSD1 and OSSD2 outputs carry voltage. When K1 and K2 are in a fault-free de-energized position, the system can be switched on and waits for an input signal/switch-on signal. The UE48-20S is switched on by pressing and then releasing the S1 pushbutton. The outputs (contacts 13 - 14 and 23 - 24) switch the K1 and K2 contactors on. When one or more light beams are interrupted, the OSSD1 and OSSD2 outputs switch off the UE48-20S. Contactors K1 and K2 are switched off.

Fault analysis

Cross-circuits and short-circuits of the OSSDs are recognized and lead to the locking state (lock-out). A malfunction with one of the K1 or K2 contactors is detected. The shut-down function is retained. In the event of manipulation (e.g., jamming) of the S1 pushbutton, the UE48-20S will not re-enable the output current circuits.

Comments

¹⁾ Output circuits: These contacts must be incorporated into the control such that the dangerous state is brought to an end if the output circuit is open. For categories 4 and 3, they must be incorporated on two channels (x, y paths). Single-channel incorporation into the control (z path) is only possible with a single-channel control and taking the risk analysis into account.

SAFETY LIGHT CURTAINS

Recommended accessories

Other models and accessories -> www.sick.com/deTec

	Brief description	Туре	Part no.
Adapters an	d distributors		
50	T-piece for simultaneous connection to sender and receiver, splits the cable from the control cabinet to the sender and receiver	DSC-1205T000025KM0	6030664
Plug connec	tors and cables		
N o	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A15-020UB5XLEAX	2095617
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A15-050UB5XLEAX	2095618
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YF2A15-100UB5XLEAX	2095619
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 20 m	YF2A15-200UB5XLEAX	2095614
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 30 m	YF2A15-300UB5XLEAX	2095621
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YG2A15-020UB5XLEAX	2095772
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YG2A15-050UB5XLEAX	2095773
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YG2A15-100UB5XLEAX	2095774
10 ×0	Head A: female connector, M12, 5-pin, straight, A-coded Head B: male connector, M12, 5-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A15-050UB5M2A15	2096010
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: male connector, M12, 5-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YF2A15-100UB5M2A15	2096011
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: male connector, M12, 5-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 15 m	YF2A15-150UB5M2A15	2096171
Test and mo	nitoring tools		
	30 mm diameter	Test rod 30 mm	2022602

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