



C4IT-03014ABA01KA0
TWINOX4

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
C4IT-03014ABA01KA0	1094833

Other models and accessories → www.sick.com/TWINOX4

Detailed technical data

Features

Description	This article includes 1 twin stick. Please order 2 for a functioning TWINOX4 system.
Resolution	14 mm
Protective field height	300 mm
Scanning range	4.5 m
Response time	14 ms
Synchronization	Optical synchronization
Items supplied	1 twin stick with pre-mounted connecting cable, 10 m Test rod with diameter corresponding to the resolution of the safety light curtain 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)	4.3×10^{-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

	Functions	Delivery status
Protective operation	✓	
Restart interlock	✓	Deactivated
External device monitoring (EDM)	✓	Deactivated

Beam coding	✓	Code 1
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Interfaces

System connection	
Connection type	Connecting cable (10 m) with flying leads, 5-wire
Permitted cable length	$\leq 20 \text{ m}^{1)}$
Permitted cross-section	$\geq 0.34 \text{ mm}^2$
Display elements	LEDs

¹⁾ The 10 m connecting cable attached to the twin stick can either be shortened as required or extended to a maximum of 20 m. the permissible wire cross-section must be observed.

Electronics

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V ... 28.8 V)
Residual ripple	$\leq 10 \%^{1)}$
Power consumption	Approx. 161 mA
Power consumption typical	3.1 W (DC)
Output signal switching devices (OSSDs)	
Type of output	PNP semiconductors, short-circuit protected, cross-circuit monitored ²⁾
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⁾ Within the limits of V_S .

²⁾ Applies to the voltage range between -30 V and +30 V.

Mechanics

Housing cross-section	40.5 mm x 20 mm
Housing material	Stainless steel V4A (1.4404, 316L)
Average roughness R_a	$\leq 0.8 \mu\text{m}$
Front screen material	Chemically prestressed float glass
Material of the end caps	Stainless steel V4A (1.4404, 316L)
Seal material	EPDM
PCB material	Glass fiber reinforced epoxy resin with flame retardant TBBPA
External material of the connecting cable	TPU (PUR)

Ambient data

Enclosure rating	IP65 (IEC 60529) IP67 (IEC 60529)
Ambient operating temperature	-20 °C ... +55 °C
Storage temperature	-25 °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)
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 60068-2-6)

Shock resistance	10 g, 16 ms (EN 60068-2-27)
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Other information

Wave length	850 nm
Type of light	Near-infrared (NIR), invisible

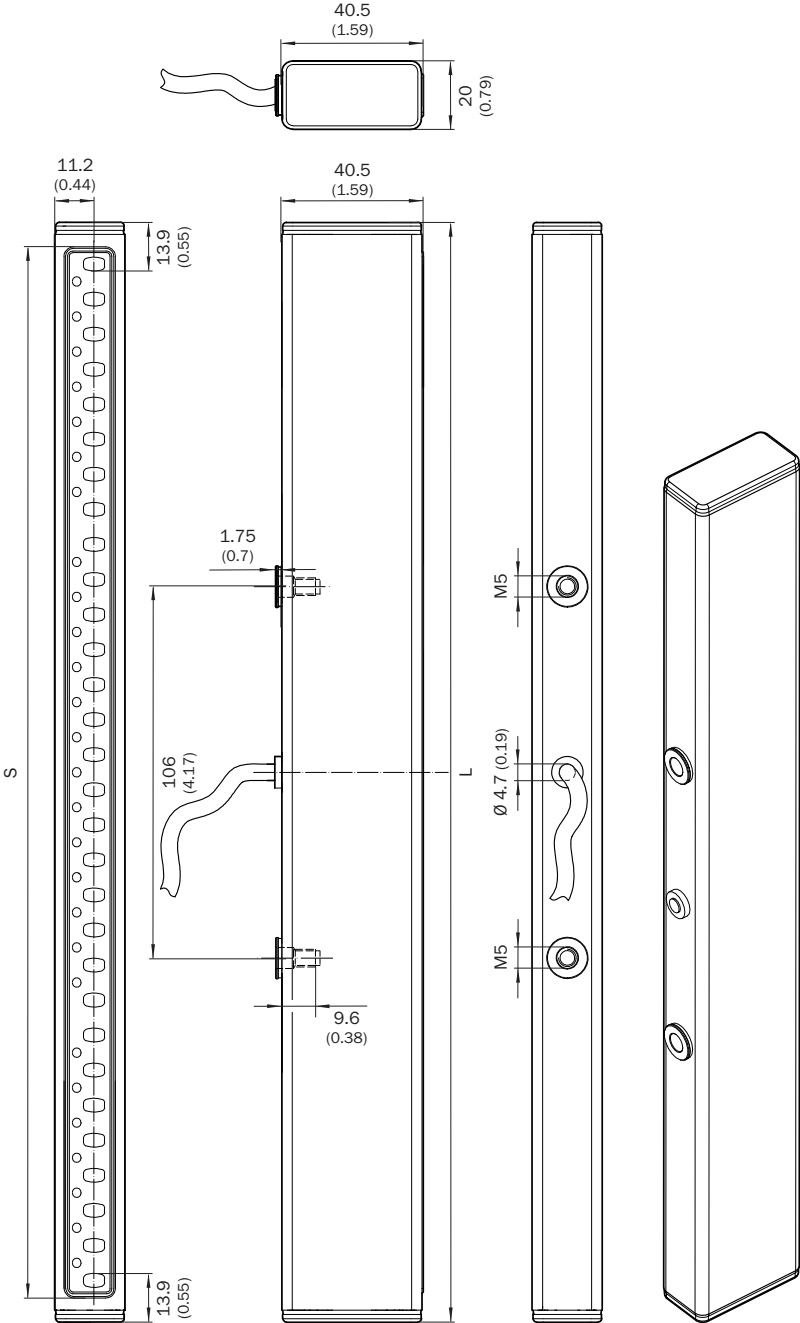
Classifications

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ULus approval	✓
cUL approval	✓
EC-Type-Examination approval	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

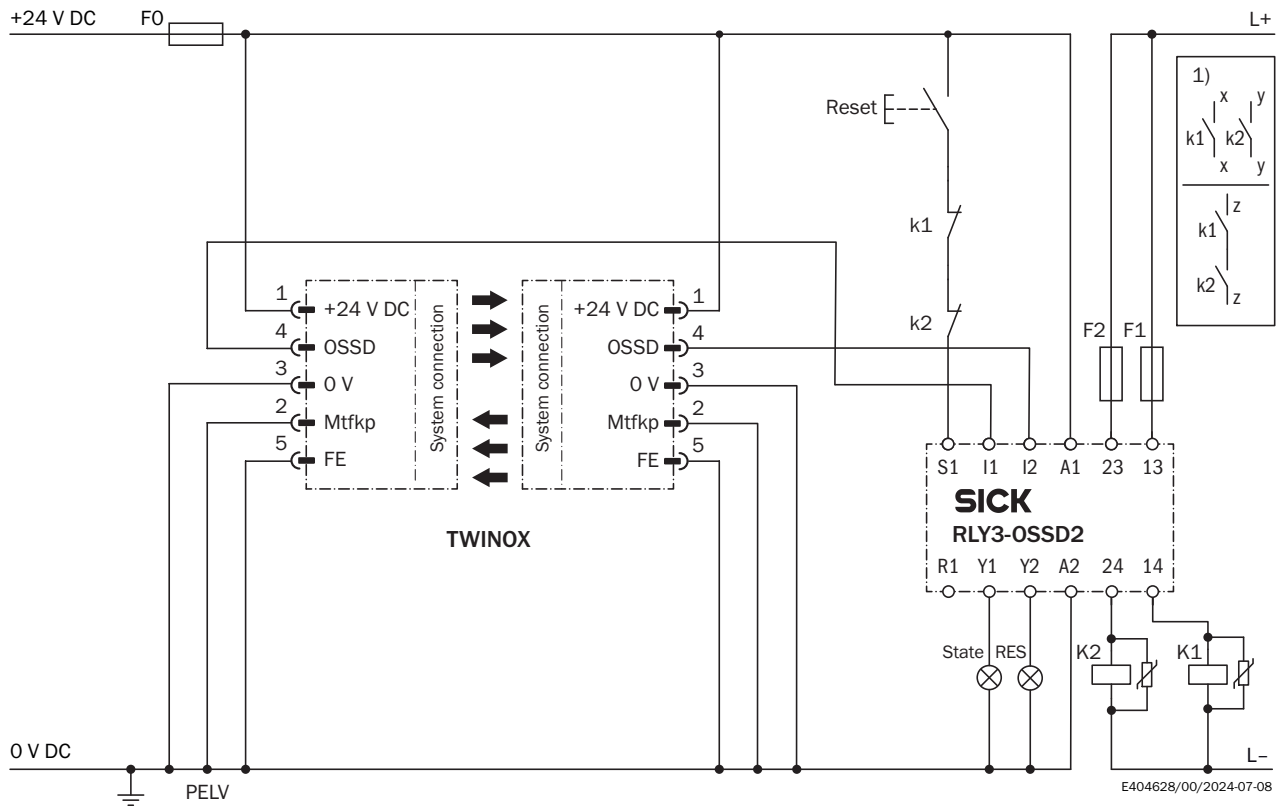
Dimensional drawing



Dimensions in mm (inch)

Protective field height	Housing length
300	314
420	434
600	614

Connection diagram TWINOX4 safety light curtain to RLY3-OSSD2 safety relay with restart interlock and external device monitoring




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 dual-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.

The diagram illustrates the electrical connections for the TWINOX system. It shows a power supply section with +24 V DC and 0 V DC rails. A Reset button is connected to the 0 V DC rail. The TWINOX unit has five terminals: 1 (+24 V DC), 4 (OSSD), 3 (0 V), 2 (Mtfkp), and 5 (FE). These are connected to the SICK RLY3-OSSD1 relay, which has terminals I1, I2, 31, 23, 13, A2, 32, 24, and 14. The relay is also connected to a control circuit with a Reset button and a power supply. A legend in the top right corner shows the terminal connections for the relay: 1) x, y, k1, k2, x, y, k1, k2, z, z.

1) x y
k1 k2 x y
k1 k2 z z

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	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: TWINOX4 bracket, stainless steel, for 1 twin stick, ± 2° adjustment• Material: Stainless steel• Details: Bracket material: stainless steel V4A (1.4404, 316L), Seal material: EPDM• Packing unit: 1 piece• Suitable for: For 1 twin stick	BEF-4SHAHMES1	2101024

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