Product data sheet

C2MT-01814BBC03BB0

miniTwin

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

miniTwin2 as a standalone device

System connection	Resolution	Length of cable	Protective field height	Type	Part no.
Male connector M12, 5-pin	14 mm	160 mm	180 mm	C2MT-01814BBC03BB0	1207924

This article includes 1 twin stick. Please order 2 for a functioning miniTwin2 system. Important notes: 1.) Concerns installation as a spare part: This type 2 device may be used as per section 1, paragraph (2a) of Machinery Directive 2006/42/EC within the EU as a spare part for identical PL d/SIL2 devices only if the machine was put on the market before 10/5/2015. Keep this note with your machine documentation. If the machine is resold, this note must be passed on to the next buyer. 2.) Concerns installation in new machines: Due to the amendment to the EN/IEC 61496-1 standard, this type 2 device may only be installed on new machines up to PLc/SIL1 as of 5/10/2015.

Other models and accessories ➜ www.sick.com/miniTwin

Detailed technical data

Features

System part	1 Twin-Stick
Usage	miniTwin2 as a standalone device
Mounting system type	O-fix bracket
Resolution	14 mm
Scanning range	
Minimum	0 m ... 6 m
Typical	0 m ... 8 m
Protective field height	180 mm
Response time	≤ 14 ms [1]
Synchronization	Optical, without separate synchronization
Items supplied	Twin stick System plug O-Fix bracket, 2 pieces Test rod with diameter corresponding to the resolution of the safety light curtain Safety instruction Mounting instructions Operating instructions for download

[1] Standalone devices, no cascaded systems. Other response times can be found in the operating instructions.

Safety-related parameters

Type	Type 2 (IEC 61496-1)
Safety integrity level	SIL1 (IEC 61508)
Category	Category 2 (EN ISO 13849)
Test rate (internal test)	58 /s
Maximum demand rate	≤ 34 min^{-1} (EN ISO 13849) [1]

[1] Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.
[2] The performance level does not include any specific requirements regarding aspects such as optical performance features. For more information, see page xx.

Performance level	PL c (EN ISO 13849), Pay attention to optical characteristics! [2]
PFH_D (mean probability of a dangerous failure per hour)	Standalone system: 2.4 x 10^{-8} (EN ISO 13849)
T_M (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	At least one OSSD is in the OFF state.

[1] Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.
[2] The performance level does not include any specific requirements regarding aspects such as optical performance features. For more information, see page xx.

Functions

	Functions	Delivery status
Restart interlock	✓	Deactivated
External device monitoring (EDM)	✓	Deactivated
Beam coding	Automatic	

Interfaces

System connection	Male connector M12, 5-pin
Length of cable	160 mm
Conductor cross section	0.34 mm²
Permitted cable length	≤ 20 m [1]
Configuration method	Hard wired
Display elements	LEDs

[1] Depending on load, power supply and wire cross-section. The technical specifications must be observed.

Electrical data

Protection class	III (EN 61140)
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC)
Ripple	≤ 10 % [1]
Power consumption	≤ 3 A [2]
Output signal switching devices (OSSDs)	
Type of output	PNP semiconductors, short-circuit protected, cross-circuit monitored [3]
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] Within the limits of V_S.
[2] Maximum power consumption of a host/guest/guest system with 1,200 mm protective field height and a resolution of 14 mm.
[3] Applies to the voltage range between –30 V and +30 V.

Mechanical data

Housing cross-section (incl. system connection)	15 mm x 32 mm
Housing material	Aluminum alloy ALMGSI 0.5
Weight	75 g

Ambient data

Enclosure rating	IP65 (EN 60529)
Ambient operating temperature	–20 °C ... +55 °C

Storage temperature	–25 °C ... +70 °C
Air humidity	15 % ... 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz ... 55 Hz (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-27)

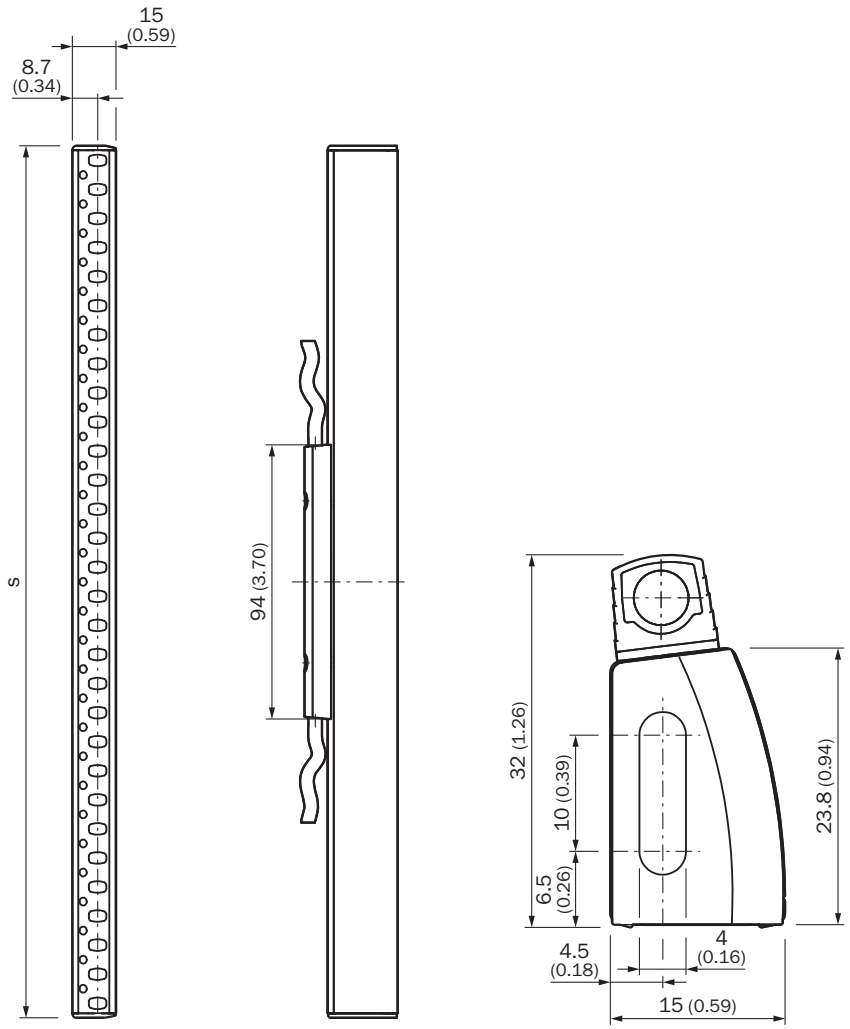
Other information

Wave length	850 nm

Classifications

eCl@ss 5.0	27272704
eCl@ss 5.1.4	27272704
eCl@ss 6.0	27272704
eCl@ss 6.2	27272704
eCl@ss 7.0	27272704
eCl@ss 8.0	27272704
eCl@ss 8.1	27272704
eCl@ss 9.0	27272704
eCl@ss 10.0	27272704
eCl@ss 11.0	27272704
eCl@ss 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 (Dimensions in mm (inch))



S = protective field height = housing length

Recommended accessories

Other models and accessories ➜ www.sick.com/miniTwin

	Brief description	Type	Part no.
Alignment aids			
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!, 19 mm x 67.3 mm x 66.9 mm	AR60	1015741
	Adapter AR60 for miniTwin4 and miniTwin2	AR60 adapter, miniTwin	4064710

	Brief description	Type	Part no.
Test and monitoring tools			
	14 mm diameter	Test rod 14 mm	2022599
Mounting brackets and plates			
	2 pieces, Bracket for miniTwin, for all protective field heights, scope of delivery: 2 C-Fix brackets and 2 L-Fix brackets (suitable for 2 miniTwin devices)	BEF-3AAA0MKU2S04	2045843
	2 pieces, O-Fix bracket, 2 pieces, for all sizes, for all protective field heights	BEF-3SHAEMKU2	2045835
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A15-050VB5XLEAX	2096240
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	YF2A15-100VB5XLEAX	2096241
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 15 m	YF2A15-150VB5XLEAX	2096242
	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, 1 m	YF2A15-010UB5M2A15	2096007
	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, 2 m	YF2A15-020UB5M2A15	2096009
	Head A: female connector, M12, 5-pin, straight Cable: unshielded	DOS-1205-G	6009719
	Head A: female connector, M12, 5-pin, straight Cable: unshielded Test voltage 1.0 kV eff/60 s, insulation group C to VDE 0110	DOS-1205-GX	6047950
	Head A: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083
	Cable: unshielded, 160 mm	Cascade system plug	2046452
	Cable: unshielded, 350 mm	Cascade system plug	2046454
	Cable: unshielded, 700 mm	Cascade system plug	2046456
	Cable: unshielded, 10 m	Stand-alone system plug	2051290

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