C2MT-12024BBC03FE0

miniTwin2

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.

C2MT-12024BBC03FE0 | miniTwin2

SAFETY LIGHT CURTAINS

Ordering information

Type	Part no.
C2MT-12024BBC03FE0	1207846

1.) Concerns installation as a replacement part for previous type 2 device in machine: Regarding Machinery Directive 2006/42/EC, Article 1, Paragraph (2a) this type 2 device may only be used as a replacement part for identical PL d / SIL2 devices within the EU if the machine was put into circulation before 2015-05-10. Keep this note with your machine documentation. If the machine is sold on, this note and the information it contains must be passed on to every subsequent buyer. 2.) Concerns installation on 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 PL c / SIL1 as of 2015-05-10.

Other models and accessories ➜ www.sick.com/miniTwin2

Detailed technical data

Features

Usage	miniTwin2 as a standalone device or cascade end unit
Mounting system type	C-fix or L-fix bracket
Resolution	24 mm
Protective field height	1,200 mm
Scanning range	
Minimum	0 m ... 6 m
Typical	0 m ... 8 m
Response time	≤ 13 ms [1]
Synchronization	Optical, without separate synchronization

[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) SILCL1 (EN 62061)
Category	Category 2 (EN ISO 13849)
Test rate (internal test)	58 /s
Maximum demand rate	≤ 34 min⁻¹ (EN ISO 13849) [1]
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: 2.4×10^{-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	
Connection type	Male connector M12, 5-pin
Length of cable	700 mm
Permitted cable length	≤ 20 m [1]
Conductor cross-section	0.34 mm²
Extension connection	
Length of cable	700 mm
Configuration method	Hard wired
Display elements	LEDs
Fieldbus, industrial network	
Integration via Flexi Soft safety controller	CANopen, DeviceNet™, EtherCAT®, EtherNet/IP™, Modbus TCP, PROFIBUS DP, PROFINET [2]

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

[2] For additional information on Flexi Soft -> www.sick.com/Flexi_Soft.

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	420 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
ETIM 5.0	EC002549
ETIM 6.0	EC002549
UNSPSC 16.0901	46171620

Dimensional drawing (Dimensions in mm (inch))

15 (0.59)

8.7 (0.34)

S

94 (3.70)

32 (1.26)

10 (0.39)

6.5 (0.26)

23.8 (0.94)

4.5 (0.18)

4 (0.16)

15 (0.59)
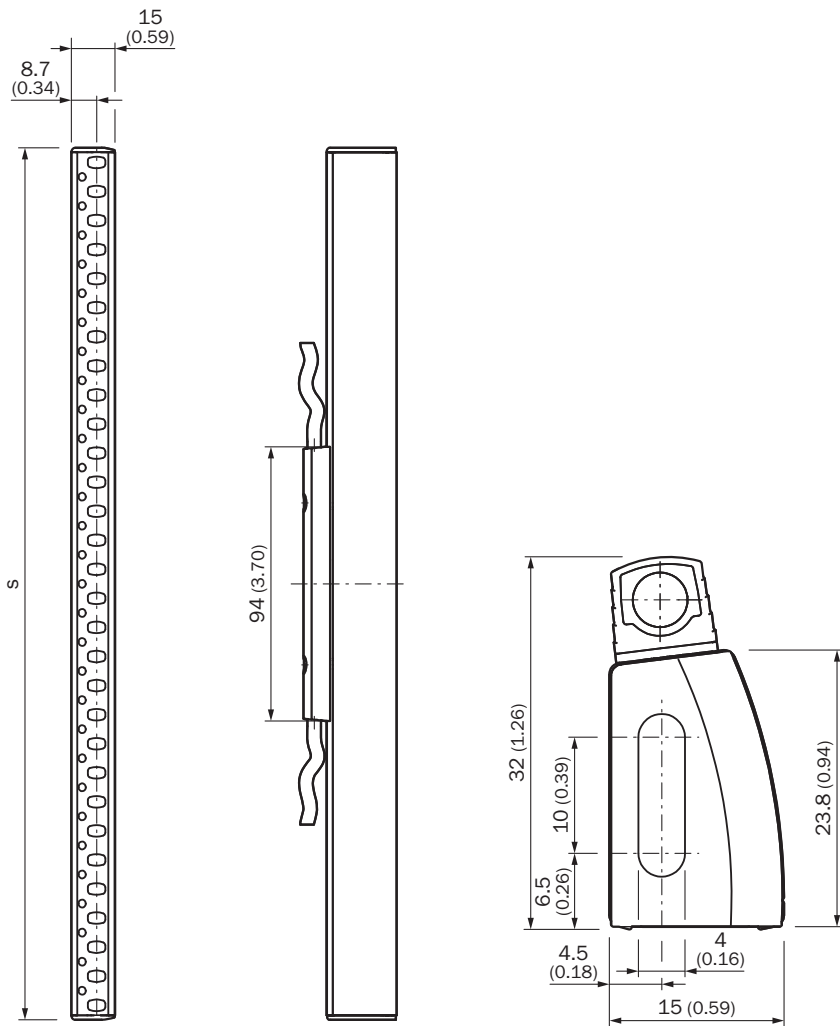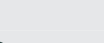
S = protective field height = housing length

Recommended accessories

Other models and accessories → www.sick.com/miniTwin2

	Brief description	Type	Part no.
Mounting brackets and plates			
	2 pieces, C-Fix-Flex bracket, adjustable +4°/–4°, metal version, for flat and connector side assembly/assembling/construction/mounting, for all protective field heights, die-cast aluminum GD-AlSi12(CU)	BEF-1SHABMAL2	2056598
	2 pieces, Combination C-Fix bracket with L-Fix bracket, 2 pieces each, for all sizes, for all protective field heights	BEF-3AAA0MKU2S04	2045843
	2 pieces, O-Fix bracket, 2 pieces, for all sizes, for all protective field heights	BEF-3SHAEMKU2	2045835

	Brief description	Type	Part no.
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
Alignment aids			
	Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741
	Adapter AR60 for miniTwin4 and miniTwin2	AR60 adapter, miniTwin	4064710
Test and monitoring tools			
	24 mm diameter	Test rod 24 mm	2045592

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."

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