

SICK

M40E-70A503AB0

M4000 Advanced Curtain

SAFETY LIGHT CURTAINS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
M40E-70A503AB0	1203222

Illustration may differ

Other models and accessories → www.sick.com/M4000_Advanced_Curtain



Detailed technical data

Features

System part	Receiver
Resolution	14 mm
Scanning range	10 m
Protective field height	1,800 mm
Response time	
Without beam coding	26 ms
With beam coding	56 ms
Synchronization	Optical synchronization

Safety-related parameters

Type	Type 4 (IEC 61496-1)
Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	$28 \cdot 10^{-9}$ (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.

Functions

	Functions	Delivery status
Restart interlock	✓	External
External device monitoring (EDM)	✓	Deactivated
Beam coding	✓	Uncoded
Configurable status output (ADO)	✓	Contamination (OWS)
Sender test	✓	Deactivated
Configurable scanning range	✓	Low scanning range
Safe SICK device communication via EFI	✓	

¹⁾ The muting functions can only be used in combination with the UE403 muting switching amplifier or a suitable safety controller (e.g., Flexi Classic, Flexi Soft).

Differentiation between man and material (muting)	✓ ¹⁾
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Functions - Functions in combination with UE403

Concurrence monitoring	✓
Monitoring of total muting time	✓
Sensor gap monitoring	✓
Belt stop	✓
Muting with override	✓
Exit monitoring	✓
End of muting by ESPE	✓

Interfaces

System connection	
Connection type	Hirschmann male connector M26, 12-pin
Permitted cable length	≤ 50 m ¹⁾
Permitted cross-section	≥ 0.75 mm ²
Extension connection	Female connector M12, 5-pin
Configuration method	Via software
Configuration connection	Female connector M8, 4-pin
Display elements	7-segment display, LEDs
Status display	LEDs

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

Electronics

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V ... 28.8 V)
Residual ripple	≤ 10 % ¹⁾
Power consumption	≤ 0.8 A ²⁾
Output signal switching devices (OSSDs)	
Type of output	2 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	≤ 500 mA
Application diagnostic outputs	
Type of output	PNP semiconductor, short-circuit protected ³⁾
ON state, switching voltage HIGH	24 V DC ($V_S - 4.2$ V DC ... V_S)
OFF state, switching voltage LOW	High resistance
Current-carrying capacity per OSSD	≤ 100 mA

¹⁾ Within the limits of V_S .

²⁾ Without OSSDs, without ADO, without reset required and without UE403.

³⁾ Applies to the voltage range between -30 V and +30 V.

Mechanics

Housing cross-section	52 mm x 55.5 mm
Housing material	Aluminum alloy ALMGSI 0.5
Surface treatment	Powder coated
Front screen material	Polycarbonate, scratch-resistant coating

Ambient data

Enclosure rating	IP65 (EN 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 (EN 60068-2-6)
Shock resistance	10 g, 16 ms (EN 60068-2-27)

Other information

Wave length	850 nm
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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)	✓

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

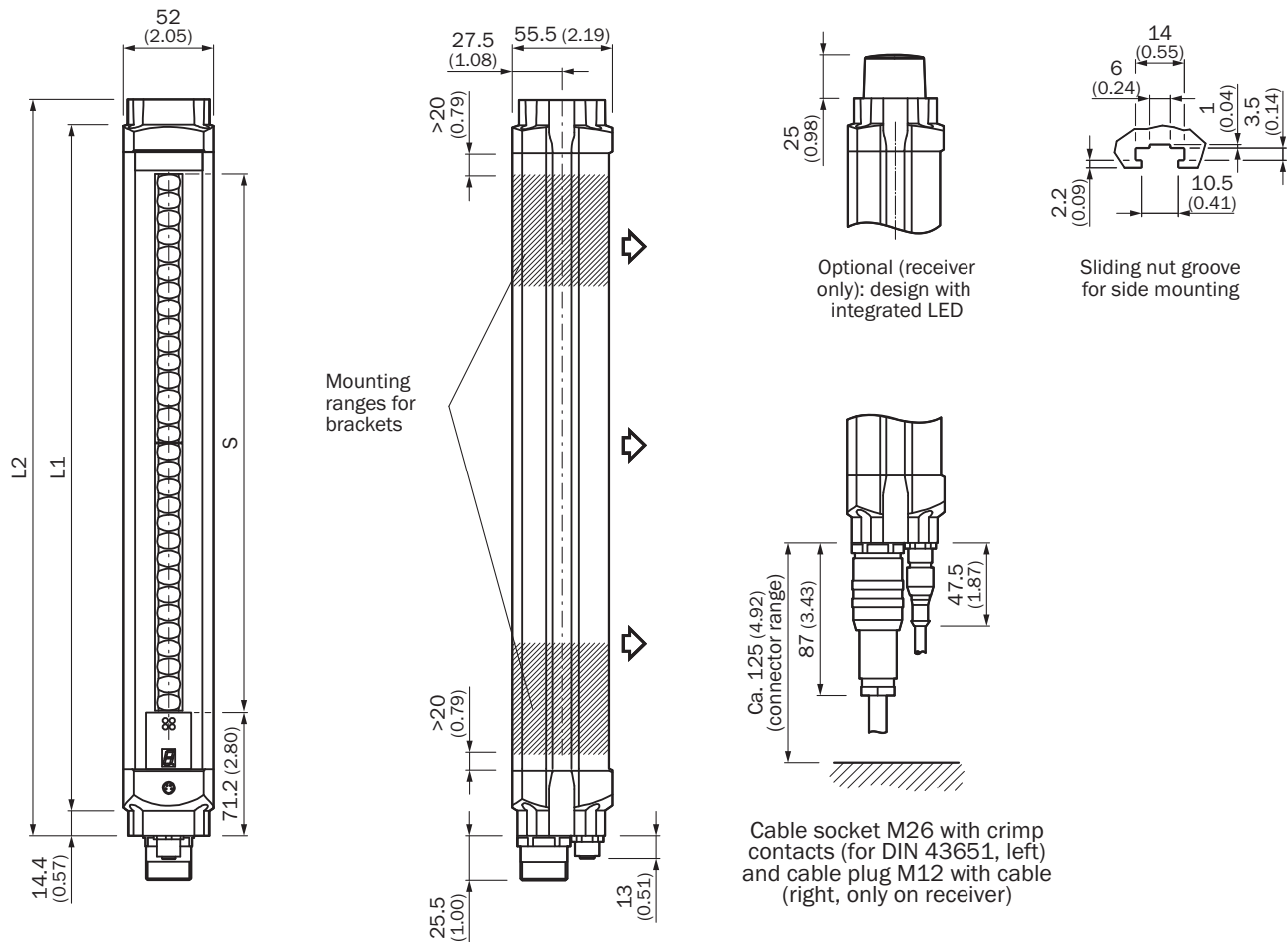
ETIM 8.0

EC002549

UNSPSC 16.0901

46171620

Dimensional drawing



Dimensions in mm (inch)

	L1	L2
300	387	416
450	537	566
600	687	716
750	837	866
900	987	1,016
1,050	1,137	1,166
1,200	1,287	1,316
1,350	1,437	1,466
1,500	1,587	1,616
1,650	1,737	1,766
1,800	1,887	1,916

Recommended accessories

Other models and accessories → www.sick.com/M4000_Advanced_Curtain

	Brief description	Type	part no.
Commissioning aids and test equipment			
	Product: Alignment aids Dimensions (W x H x L): 19 mm 67.3 mm 66.9 mm Description: Laser alignment aid for various sensors, laser class 2 (IEC 60825). Do not look into the beam!	AR60	1015741
	Product: Alignment aids Description: Adapter AR60 for M4000 and M4000 Curtain	AR60 adapter, M4000	4040006
Mounting systems			
	Description: Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers Packing unit: 4 pieces Suitable for: All protective field heights	BEF-3WNGBAST4	7021352
	Description: Mounting kit 12, rotatable, swivel mount Packing unit: 4 pieces Suitable for: All protective field heights	BEF-2SMGEAKU4	2030510
	Description: Mounting kit 6, side bracket, rotatable Material: Zinc diecast Details: Zinc diecast Packing unit: 4 pieces Suitable for: All protective field heights	BEF-1SHABAZN4	2019506

	Brief description	Type	part no.
connectors and cables			
	Connection type head A: Female connector, M26, 12-pin, straight, A-coded Description: Unshielded Connection systems: Crimp contacts Permitted cross-section: 0.5 mm² ... 1.5 mm² Note: 12 crimping contacts enclosed	DOS-0612G000GA3KMC	6020757
	Connection type head A: Male connector, M8, 4-pin, straight Connection type head B: Male connector, USB-A, straight Cable: 10 m, 4-wire, PVC Description: Unshielded	DSL-8U04G10M025KMC	6034575
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 20 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Application: Uncontaminated zones, Zones with chemicals	DOL-0612G20M075KMC	2022549
	Connection type head A: Male connector, M8, 4-pin, straight Connection type head B: Male connector, USB-A, straight Cable: 2 m, 4-wire, PVC Description: Unshielded	DSL-8U04G02M025KMC	6034574
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 15 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Application: Uncontaminated zones, Zones with chemicals	DOL-0612G15M075KMC	2022548
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 10 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Application: Uncontaminated zones, Zones with chemicals	DOL-0612G10M075KMC	2022547
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Cable: 5 m, PVC Description: Unshielded Connection systems: Flying leads Note: Without EFI: Pin 9 and 10 not connected Application: Uncontaminated zones, Zones with chemicals	DOL-0610G05M075KMC	2046888
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Cable: 10 m, PVC Description: Unshielded Connection systems: Flying leads Note: Without EFI: Pin 9 and 10 not connected Application: Uncontaminated zones, Zones with chemicals	DOL-0610G10M075KMC	2046889
	Connection type head A: Female connector, M26, 12-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 12-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Application: Uncontaminated zones, Zones with chemicals	DOL-0612G05M075KMC	2022545
system plugs and extension modules			
	Applications: Muting switching amplifier Compatible sensor types: M4000 Advanced multiple light beam safety devices Mounting: Flexible mounting on the M4000 Advanced or directly in the system	UE403-A0930	1026287

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