

M40S-026003AA0, M40E-026003RB0 M4000 Advanced



MULTIPLE LIGHT BEAM SAFETY DEVICES

M40S-026003AA0, M40E-026003RB0 | M4000 Advanced

MULTIPLE LIGHT BEAM SAFETY DEVICES



System part	Туре	Part no.
Sender	M40S-026003AA0	1200070
Receiver	M40E-026003RB0	1200096

Other models and accessories -> www.sick.com/M4000_Advanced





Detailed technical data

Features

Scanning range	0.5 m 70 m, configurable
Low scanning range	0.5 m 20 m
Great scanning range	9 m 70 m
Number of beams	2
Beam separation	600 mm
Response time	10 ms
Synchronization	Optical synchronisation

Safety-related parameters

Туре	Type 4 (IEC 61496-1)
Safety integrity level	SIL3 (IEC 61508) SILCL3 (EN 62061)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
$\mbox{PFH}_{\mbox{D}}$ (mean probability of a dangerous failure per hour)	6.6 x 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
Beam coding	1	Uncoded
Restart interlock	1	Internal
External device monitoring (EDM)	(EDM) ✓ Activated	
Sender test	1	Deactivated
Configurable scanning range	1	0.5 m 20 m
Configurable application diagnostic output	1	Contamination (OWS)
Safe SICK device communication via EFI	1	

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	Functions	Delivery status
Differentiation between man and material (muting)	1	
Interfaces		
System connection	Hirschmann male connector M26, 12-pin	
Permitted cable length	50 m ¹⁾	
Permitted cross-section	≥ 0.75 mm²	
Extension connection	Female connector M12, 5-pin	
Configuration connection	Female connector M8, 4-pin	
Configuration method	PC with CDS (Configuration and Diagnostic Software)	
Display elements	LEDs 7-segment display	
Fieldbus, industrial network		
Integration via Flexi Soft safety controller	CANopen ²⁾ DeviceNet™ EtherCAT [®] EtherNet/IP™ Modbus TCP PROFIBUS DP PROFINET	

 $^{1)}$ 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 (IEC 61140)
Supply voltage V _S	24 V DC (19.2 V DC 28.8 V DC) ¹⁾
Residual ripple	< 10 % ²⁾
Power consumption	0.2 A: 0.6 A (depending on type)
Output signal switching devices (OSSDs)	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

¹⁾ The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

 $^{2)}$ Within the limits of $\mathrm{V}_{\mathrm{S}}.$

 $^{\rm (3)}$ Applies to the voltage range between –30 V and +30 V.

Mechanical data

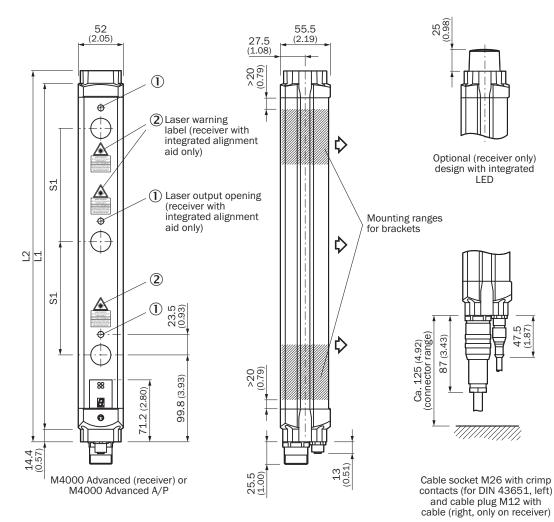
Dimensions	See dimensional drawing
Housing cross-section	52 mm x 55.5 mm
Material	
Housing	Aluminum alloy ALMGSI 0.5, powder coated
Front screen	Polycarbonate, scratch-resistant coating
Ambient data	
Enclosure rating	IP65 (EN 60529)
Ambient operating temperature	-30 °C +55 °C

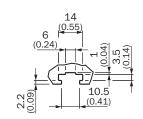
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Storage temperature	-30 °C +70 °C
Air humidity	15 % 95 %, Non-condensing
Shock resistance	10 g, 16 ms (IEC 60068-2-29)
Other information	
Wave length	950 nm
Classifications	
ECI@ss 5.0	27272703
ECI@ss 5.1.4	27272703
ECI@ss 6.0	27272703
ECI@ss 6.2	27272703
ECI@ss 7.0	27272703
ECI@ss 8.0	27272703
ECI@ss 8.1	27272703
ECI@ss 9.0	27272703
ECI@ss 10.0	27272703
ECI@ss 11.0	27272703
ETIM 5.0	EC001832
ETIM 6.0	EC001832
ETIM 7.0	EC001832
ETIM 8.0	EC001832
UNSPSC 16.0901	46171620

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Dimensional drawing (Dimensions in mm (inch))





Sliding nut groove for side mounting

Illustration sender (receiver mirror image)

Number of beams Beam separation S1 L1 L2 2 643 (25.31) 672 (26.46) 500 (19.69) 743 (29.25) 600 (23.62) 772 (30.39) 3 220 (8.66) 583 (22.95) 612 (24.09) 400 (15.75) 943 (37.13) 972 (38.27) 450 (17.72) 1,043 (41.06) 1,072 (42.20) 220 (8.66) 803 (31.61) 832 (32.76) 4 300 (11.81) 1,043 (41.06) 1,072 (42.20) 5 220 (8.66) 1,023 (40.28) 1,052 (41.42) 1,272 (50.08) 6 1,243 (48.94) 7 1,462 (57.56) 1,491 (58.70) 8 1,682 (66.22) 1,711 (67.36)

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Recommended accessories

Other models and accessories → www.sick.com/M4000_Advanced

	Brief description	Туре	Part no.
Alignment ai	ds		
Ũ	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 M4000 and M4000 Curtain	AR60 adapter, M4000	4040006
Muting acces	ssories		
11	Parallel muting (2 sensors), muting sensor brackets for mounting on M4000 housing profile or device columns with external mounting grooves	Muting arm kit M4000, 2 sensors, parallel muting	2060157
	Parallel muting (2 sensors), muting sensor brackets for mounting on M4000 housing profile or device column with external mounting grooves	Muting arm kit M4000, 2 sensors, parallel muting	2060156
Mounting bra	ackets and plates		
	4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers	BEF-3WNGBAST4	7021352
Plug connect	ors and cables		
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	DOL-0612G05M075KM0	2022545
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 10 m	DOL-0612G10M075KM0	2022547
	Head A: female connector, M26, 12-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 20 m	DOL-0612G20M075KM0	2022549
	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 2 m	DSL-8U04G02M025KM1	6034574
	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 10 m	DSL-8U04G10M025KM1	6034575
N 0 N 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, 2 m	YF2A15-020UB5M2A15	2096009
	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, 0.6 m	YF2A15-C60UB5M2A15	2096006
	Head A: female connector, M26, 12-pin, straight Cable: unshielded 12 crimping contacts enclosed	DOS-0612G000GA3KM0	6020757
6	Head A: female connector, M26, 12-pin, angled Cable: unshielded 12 crimping contacts enclosed	DOS-0612W000GA3KM0	6020758

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	Brief description	Туре	Part no.	
Terminal and	Terminal and alignment brackets			
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506	
Q	4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount, including spacer discs	BEF-2SMGEAAL4	2044846	
6	4 pieces, Mounting kit 12, rotatable, swivel mount	BEF-2SMGEAKU4	2030510	
Switching amplifiers				
1 <mark>.88888.</mark> 1	 Applications: Muting switching amplifier Compatible sensor types: M4000 Advanced multiple light beam safety devices Connection type: Female connector M12, 5-pin Housing width: 76.5 mm 	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



Online data sheet

