



Mutingsystem M40Z, Komplett-Paket, Säulen- höhe 2270 mm

M4000 Advanced A/P

SAFETY MULTIBEAM SENSORS

SICK
Sensor Intelligence.

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Illustration may differ

Ordering information

Scanning range	Number of beams	Beam separation	System part	Type	Part no.
0.5 m ... 4.5 m	2	500 mm	Set	Mutingsystem M40Z, Komplett-Paket, Säulenhöhe 2270 mm	1051081

Included in delivery: BEF-2SMGEAAL2 (2), BEF-KHS-N01 (4), GL10-F4551 (2), M40Z-025023TB0 (1), PSD01-2501 (1), Round steel arm (4), UE403-A0930 (1), YF2A15-010UB5M2A15 (1), YG2A14-020S01M2A13 (2), PU3H22-00000000 (2), DOS-0612G000GA3KM0 (1), P250 (2)

Further technical data, CAD models, operating instructions, software and much more can be found with the individual components.

Other models and accessories → www.sick.com/M4000_Advanced_A_P



Detailed technical data

Features

Column height	2,270 mm
Scanning range	0.5 m ... 4.5 m
Number of beams	2
Beam separation	500 mm
Response time	10 ms
Synchronization	Optical synchronisation
End cap with integrated LED	✓
Items supplied	1 × active unit M40Z-S109 (corresponds to #1200125 preconfigured), premounted in device column PU3H22 (#2045645, column height 2,270 mm, 1st beam 400 mm above floor) 1 × passive unit PSD01-2501 with fiber-optic deflection (#1027907), premounted in device column PU3H22 (#2045645, column height 2,270 mm, 1st beam 400 mm above floor) 1 × safety switching amplifier UE403 (#1026287) 2 × muting sensor GL10-F4551 (#1071153), premounted on universal bracket (#2044953) on a 400 mm muting arm (#2045879), incl. connection cable M12, 4-pin (#2105152) for connecting to UE403 2 × reflector P250 (#5304812), premounted on universal bracket (#2044953) on a 400 mm muting arm (#2045879) 1 × for active unit on the system connection: Ready to assemble Hirschmann female cable connector M26, 12-pin (#6020757) 1 × for active unit on the extension connection: Connection cable M12, 5-pin (#2096007) for connecting to UE403

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)	6.6 × 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.
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Functions

	Functions	Delivery status
Beam coding	✓	Muting status
Restart interlock	✓	
External device monitoring (EDM)	✓	
Configurable application diagnostic output	✓	
Safe SICK device communication via EFI	✓	
Differentiation between man and material (muting)	✓	
Type of human-material differentiation	Cross muting (2 sensors)	

Interfaces

System connection	Hirschmann male connector M26, 12-pin
Permitted cable length	50 m ¹⁾
Permitted cross-section	≥ 0.75 mm ²
Configuration connection	Female connector M8, 4-pin
Configuration method	PC with CDS (Configuration and Diagnostic Software)
Display elements	LEDs 7-segment display
End cap with integrated LED	✓
Application diagnostic output (ADO)	✓

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

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	≤ 0.6 A ³⁾
Output signal switching devices (OSSDs)	2 PNP semiconductors, short-circuit protected, cross-circuit monitored ⁴⁾
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 V_S .

³⁾ Without load.

⁴⁾ Applies to the voltage range between -30 V and +30 V.

Mechanical data

Dimensions	See dimensional drawing
Material	
Housing	Aluminum alloy ALMGSI 0.5, powder coated
Front screen	Polycarbonate, scratch-resistant coating

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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
Shock resistance	10 g, 16 ms (IEC 60068-2-29)

Other information

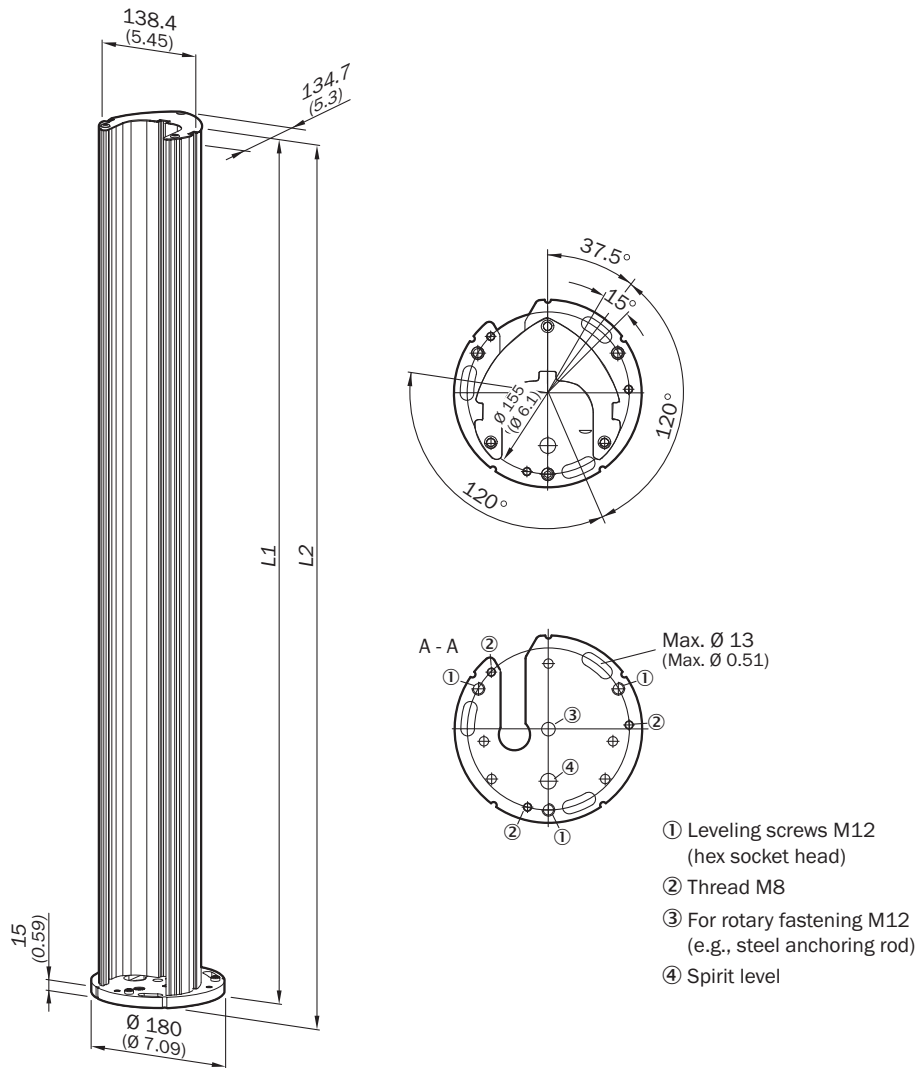
Wave length	850 nm
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Classifications

ECLASS 5.0	27272703
ECLASS 5.1.4	27272703
ECLASS 6.0	27272703
ECLASS 6.2	27272703
ECLASS 7.0	27272703
ECLASS 8.0	27272703
ECLASS 8.1	27272703
ECLASS 9.0	27272703
ECLASS 10.0	27272703
ECLASS 11.0	27272703
ECLASS 12.0	27272703
ETIM 5.0	EC001832
ETIM 6.0	EC001832
ETIM 7.0	EC001832
ETIM 8.0	EC001832
UNSPSC 16.0901	46171620

Dimensional drawing (Dimensions in mm (inch))

PU3



- ① Leveling screws M12 (hex socket head)
- ② Thread M8
- ③ For rotary fastening M12 (e.g., steel anchoring rod)
- ④ Spirit level

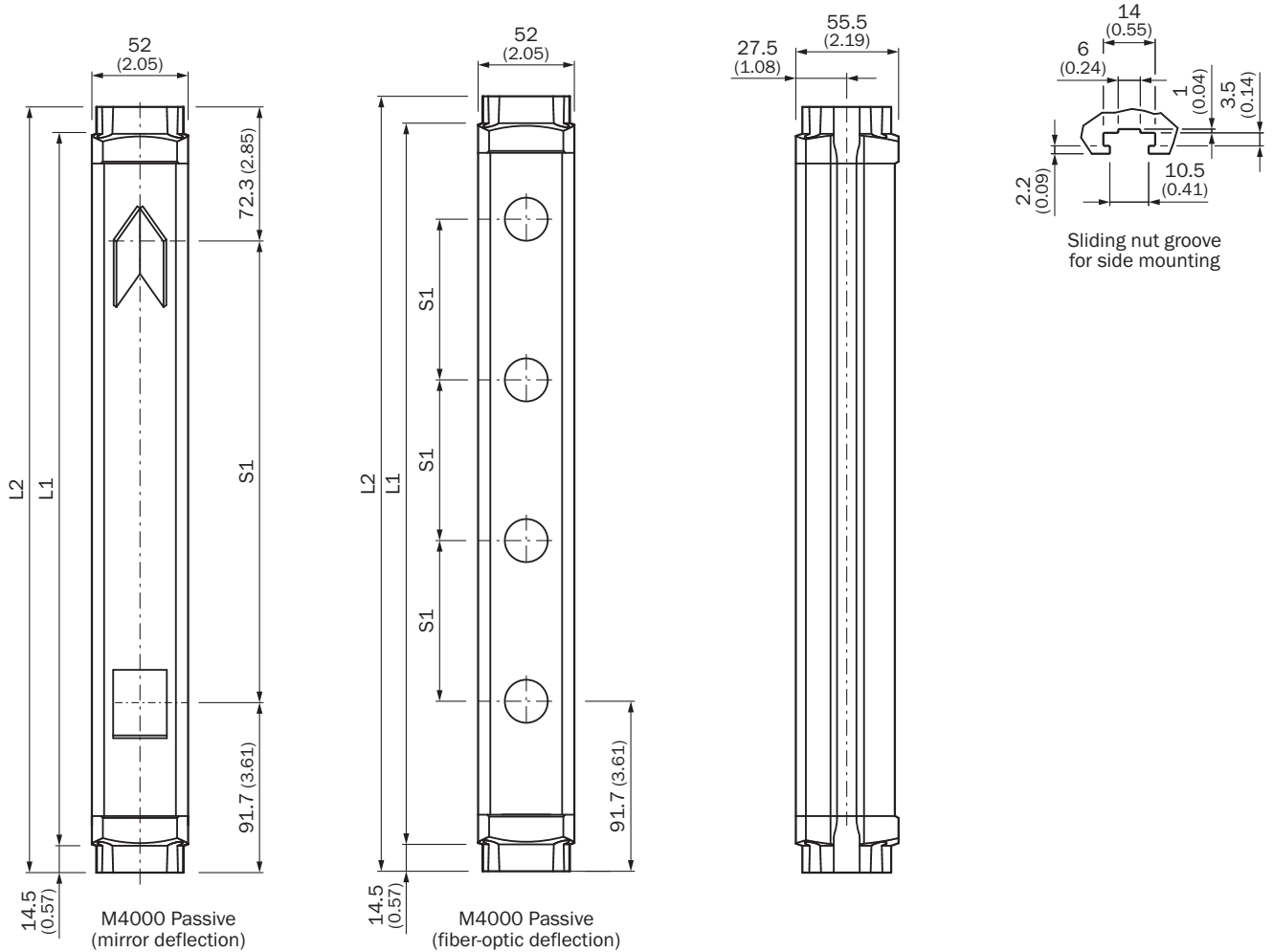
Type	Part no.	L1 = Column profile height	L2 = Column height (incl. base plate)	Safety light curtains		Safety light-beam sensors	
				Suitable for protective field height		Suitable for number of beams	Suitable for beam separation
				deTec	C2000, C4000, M4000 Curtain		
PU3H96-00000000	2045490	965	985	≤ 900 mm	≤ 600 mm	2	500 mm
PU3H11-00000000	2045641	1.165	1.185	≤ 1.050 mm	≤ 900 mm	3	400 mm
PU3H13-00000000	2045642	1.265	1.285	≤ 1.200 mm	≤ 1.050 mm	4	300 mm
PU3H15-00000000	2068813	1.550	1.570	≤ 1.500 mm	≤ 1.350 mm	Any	Any
PU3H17-00000000	2045643	1.720	1.740	≤ 1.650 mm	≤ 1.350 mm	Any	Any
PU3H21-00000000	2045644	2.020	2.040	≤ 1.950 mm	≤ 1.650 mm	Any	Any

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Type	Part no.	L1 = Column profile height	L2 = Column height (incl. base plate)	Safety light curtains		Safety light-beam sensors	
				Suitable for protective field height		Suitable for number of beams	Suitable for beam separation
				deTec	C2000, C4000, M4000 Curtain		
PU3H22-00000000	2045645	2.250	2.270	≤ 2.100 mm	≤ 1.800 mm	Any	Any
PU3H24-00000000	2045646	2.400	2.420	≤ 2.100 mm	≤ 1.800 mm	Any	Any

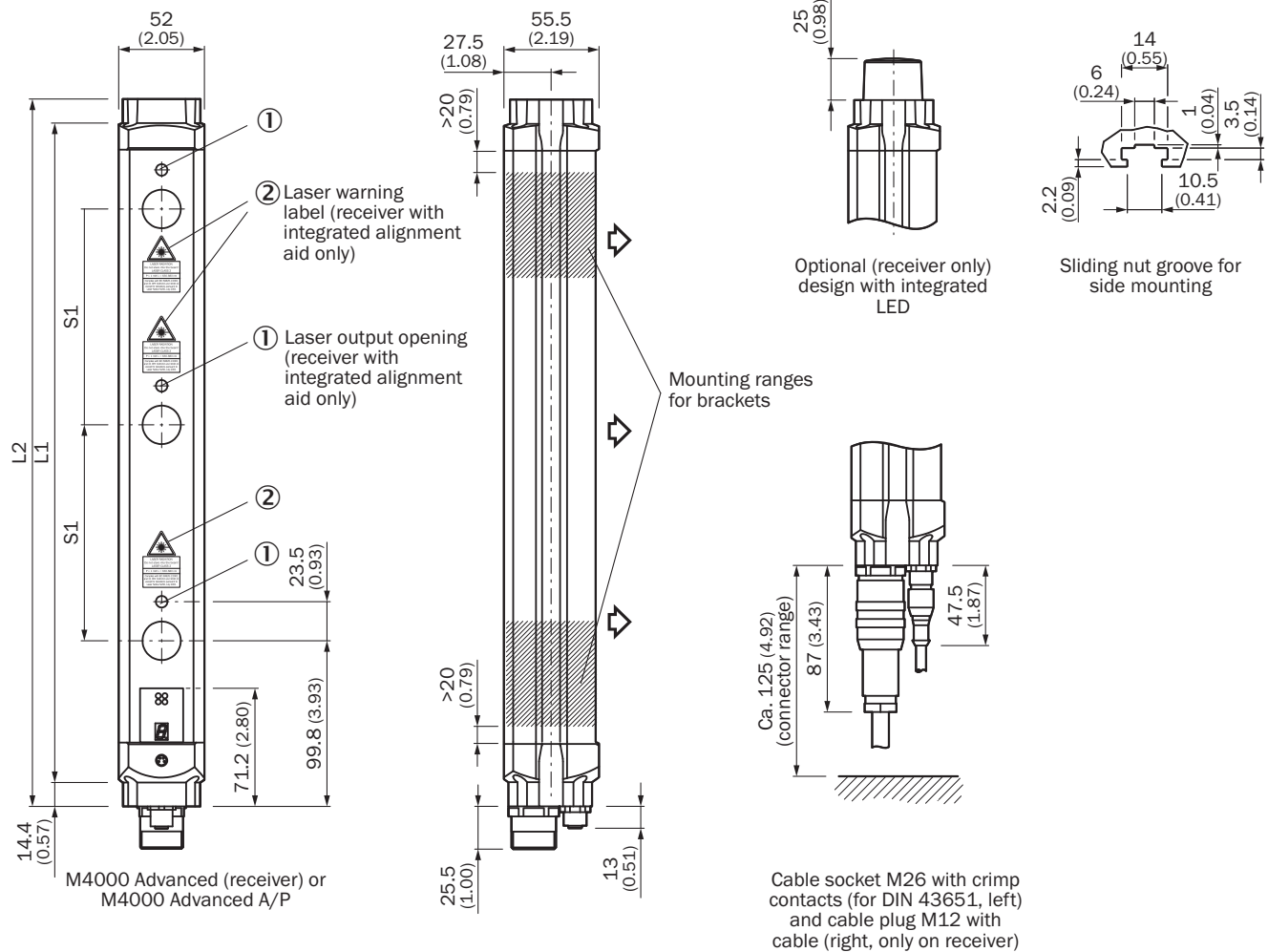
Passive unit



Deflector unit

		L1	L2
2	500	643	672
4	300	1,043	1,072

Active unit





Sender/receiver in one housing






		L1	L2
2	500	643	672
4	300	1,043	1,072

Recommended accessories

Other models and accessories → www.sick.com/M4000_Advanced_A_P

	Brief description	Type	Part no.
	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

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	Brief description	Type	Part no.
Muting accessories			
	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
Mounting brackets and plates			
	4 pieces, Mounting kit 1, mounting bracket, rigid, L-shaped, including fixing screws and washers	BEF-3WNGBAST4	7021352
Terminal and alignment brackets			
	4 pieces, Mounting kit 6, side bracket, rotatable, zinc diecast	BEF-1SHABAZN4	2019506
	4 pieces, Omega bracket, rotatable, fixable with only one screw, for mounting on the swivel mount, including spacer discs	BEF-2SMGEAAL4	2044846
	4 pieces, Mounting kit 12, rotatable, swivel mount	BEF-2SMGEAKU4	2030510
Others			
	<ul style="list-style-type: none"> • 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-0612G000GA3KM0	6020757
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M26, 12-pin, angled, A-coded • Description: Unshielded • Connection systems: Crimp contacts • Permitted cross-section: 0.5 mm² ... 1.5 mm² • Note: 12 crimping contacts enclosed 	DOS-0612W000GA3KM0	6020758
	<ul style="list-style-type: none"> • 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 	DOL-0612G05M075KM0	2022545
Switching amplifiers			
	<ul style="list-style-type: none"> • Applications: Muting switching amplifier • Compatible sensor types: M4000 Advanced multiple light beam safety devices 	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:

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