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DATA SHEET

M40Z-025000RR0, PSD01-1501

M4000 Standard A/P
Safety multibeam sensors

SICK Sensor Intelligence



Illustration may differ

SAFETY MULTIBEAM SENSORS

M40Z-025000RR0, PSD01-1501

ORDERING INFORMATION

System part	Type	part no.
Active unit	M40Z-025000RR0	1200120
Passive unit	PSD01-1501	1027906

Further device versions and accessories at www.sick.com/M4000_Standard_A_P

DETAILED TECHNICAL DATA

FEATURES

Specialty	Without additional options
Functional principle	Active/passive
System part	Pair
Type of diversion	Mirror deflection
Scanning range	0.5 m ... 7.5 m
Number of beams	2
Beam separation	500 mm
Response time	10 ms

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.

FUNCTIONS

	Functions	Delivery status
Beam coding	✓	Uncoded
Restart interlock	✓	Internal
External device monitoring (EDM)	✓	Activated

Configurable application diagnostic output	✓	Contamination (OWS)

INTERFACES

System connection	Male connector M12, 8-pin
Permitted cable length	15 m [1]
Permitted cross-section	≥ 0.25 mm²
Configuration method	Configuration buttons
Display elements	LEDs 7-segment display

[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 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.

MECHANICS

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

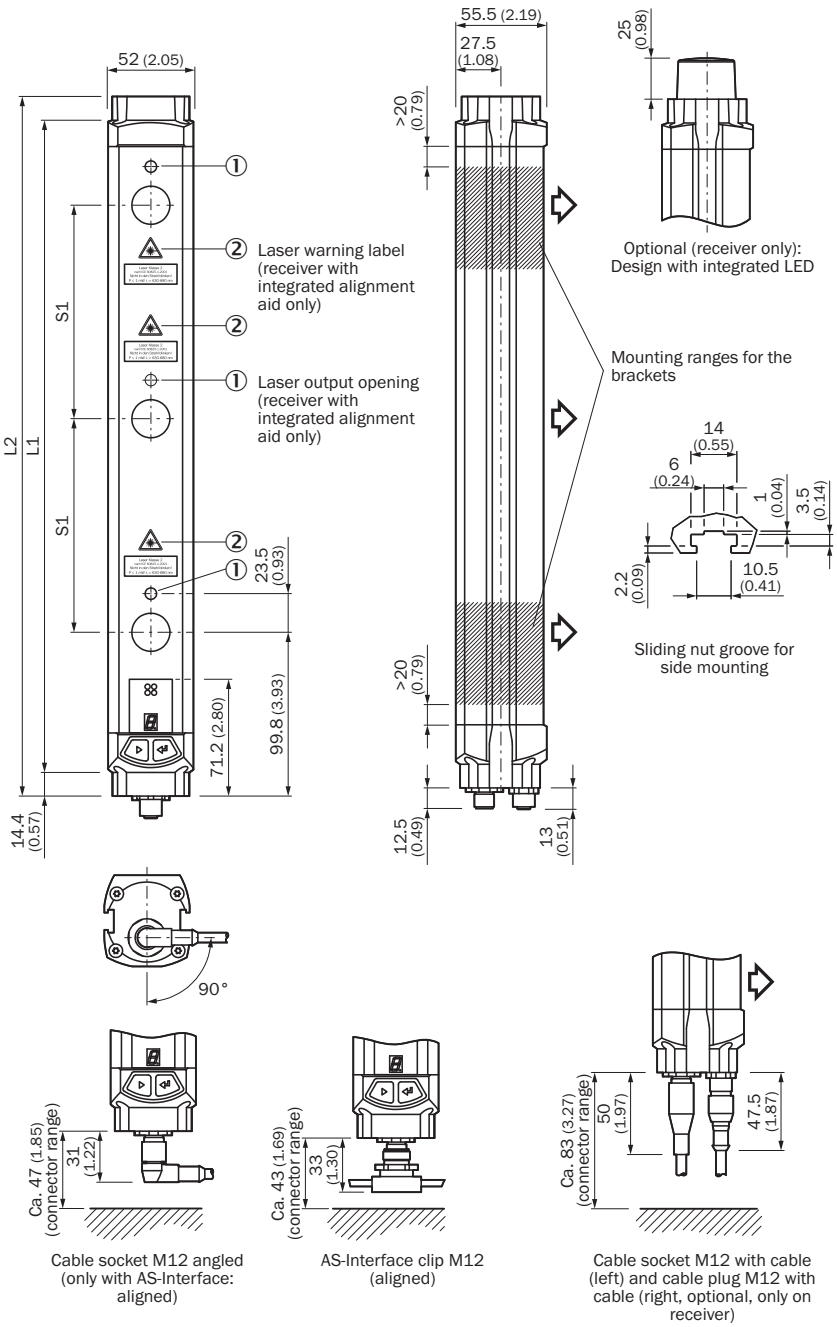
AMBIENT DATA

Enclosure rating	IP65 (EN 60529)
Ambient operating temperature	–30 °C ... +55 °C
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

DIMENSIONAL DRAWING ACTIVE UNIT



Cable socket M12 angled (only with AS-Interface: aligned)

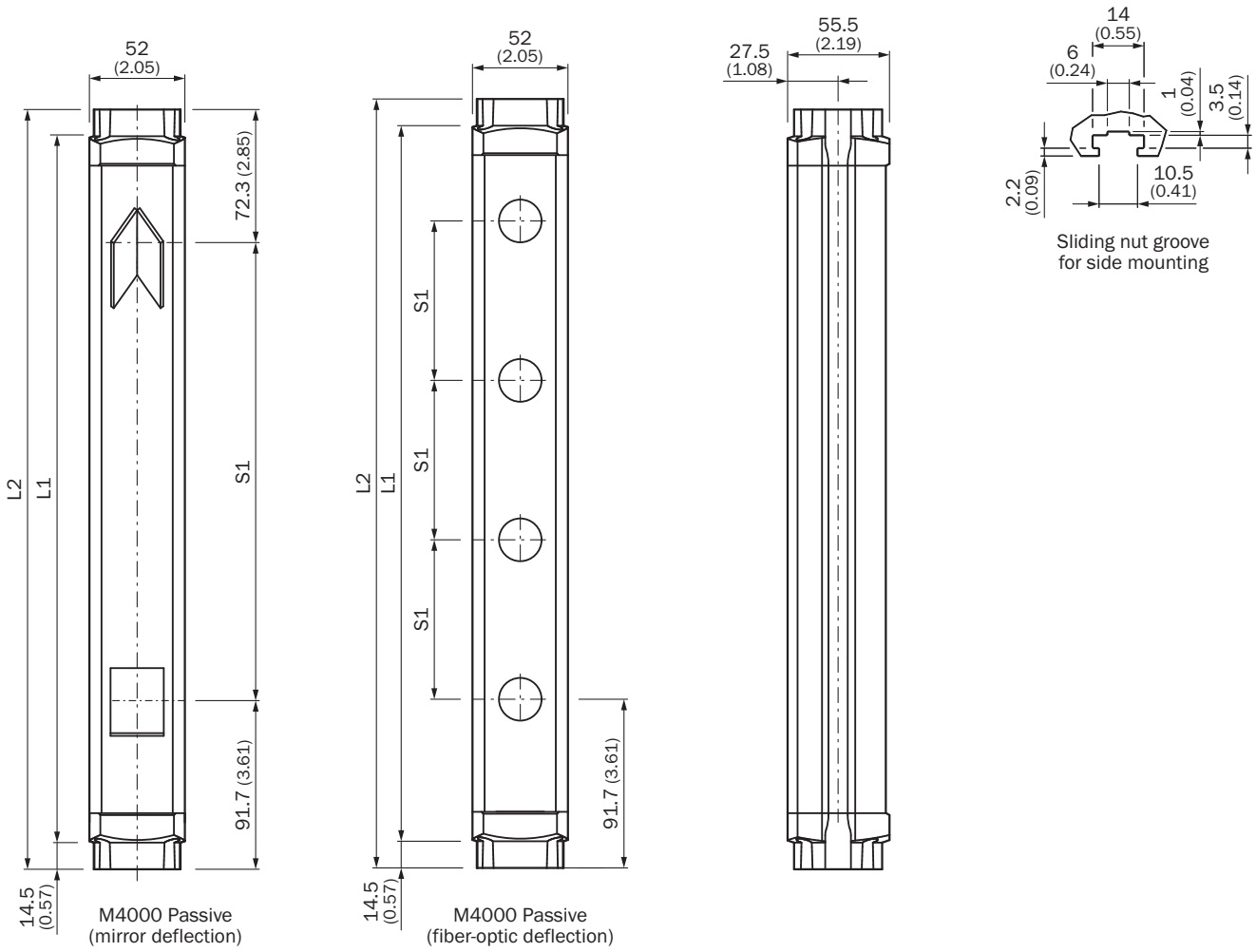
AS-Interface clip M12 (aligned)

Cable socket M12 with cable (left) and cable plug M12 with cable (right, optional, only on receiver)

Dimensions in mm (inch)
Sender/receiver in one housing

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

DIMENSIONAL DRAWING PASSIVE UNIT



Dimensions in mm (inch)

deflector unit

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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1200120

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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