



DME5000-112

DME5000

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DME5000-112	1023668

Other models and accessories → www.sick.com/DME5000



Detailed technical data

Performance

Measuring range	0.15 m ... 70 m, on reflective tape "Diamond Grade" ¹⁾
Target	Reflector
Resolution	0.05 mm ... 5 mm
Repeatability	0.5 mm ^{1) 2)}
Accuracy	± 2 mm
Response time	6 ms
Output time	2 ms
Light source	Laser, red ³⁾
Laser class	2, complies with 21 CFR 1040.10 and 1040.11 except for the tolerance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014)
Typ. light spot size (distance)	130 mm (at 70 m) 270 mm (at 150 m) 360 mm (at 220 m)
Max. movement speed	10 m/s

¹⁾ On reflective tape "Diamond Grade".

²⁾ Statistical error 1 σ , environmental conditions constant, min. warm-up time 10 min.

³⁾ Average service life of 50,000 h at $T_A = +25^\circ\text{C}$.

Interfaces

PROFIBUS DP	✓
Switching output	Push-pull: PNP/NPN (100 mA) ¹⁾
Multifunctional input (MF)	1 x MF ^{2) 3)}

¹⁾ HIGH = > $V_S - 3\text{ V}$ / LOW = < 2 V.

²⁾ HIGH = > 12 V / LOW = < 3 V.

³⁾ Not reverse-polarity protected.

Mechanics/electronics

Supply voltage V_S	DC 18 V ... 30 V, limit values
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¹⁾ May not fall short of or exceed V_S tolerances.

²⁾ After loss of reflector < 1 s at max. speed $V_{\max} < 1\text{ m/s}$.

³⁾ Max. 100 nF/20 mH.

⁴⁾ Reference voltage DC 32 V.

Ripple	< 5 V _{pp} ¹⁾
Initialization time	1.5 s ²⁾
Connection type	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded
Indication	Display
Weight	Approx. 1,650 g
Output current I_A	≤ 100 mA ³⁾
Current consumption	At 24 V DC < 250 mA
Enclosure rating	IP65
Protection class	II ⁴⁾

¹⁾ May not fall short of or exceed V_S tolerances.

²⁾ After loss of reflector < 1 s at max. speed V_{max} < 1 m/s.

³⁾ Max. 100 nF/20 mH.

⁴⁾ Reference voltage DC 32 V.

Ambient data

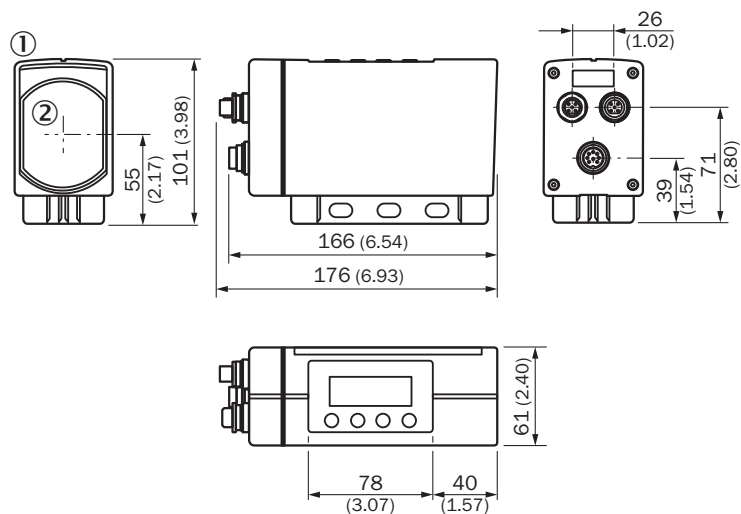
Electromagnetic compatibility (EMC)	EN 61000-6-2, EN 55011
Ambient temperature operation	-10 °C ... +55 °C -10 °C ... +75 °C, operation with cooling case
Ambient storage temperature	-25 °C ... +75 °C
Effect of air pressure	0.3 ppm/hPa
Effect of air temperature	1 ppm/K
Temperature drift	Typ. 0.1 mm/K
Typ. Ambient light immunity	≤ 40,000 lx
Mechanical load	Shock: (EN 600 68-2-27 / -2-29) Sine: (EN 600 68-2-6) Noise: (EN 600 68-2-64)

Classifications

ECI@ss 5.0	27270801
ECI@ss 5.1.4	27270801
ECI@ss 6.0	27270801
ECI@ss 6.2	27270801
ECI@ss 7.0	27270801
ECI@ss 8.0	27270801
ECI@ss 8.1	27270801
ECI@ss 9.0	27270801
ETIM 5.0	EC001825
ETIM 6.0	EC001825
UNSPSC 16.0901	41111613

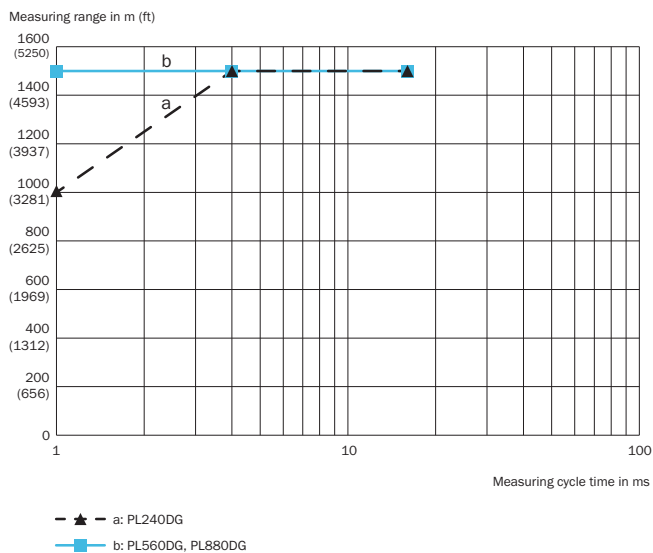
Dimensional drawing (Dimensions in mm (inch))

DME5000 PROFIBUS



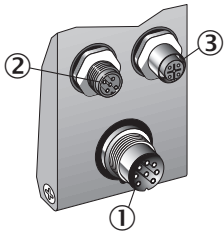
Working range diagram

DL1000 measuring range based on measurement cycle time and reflector type



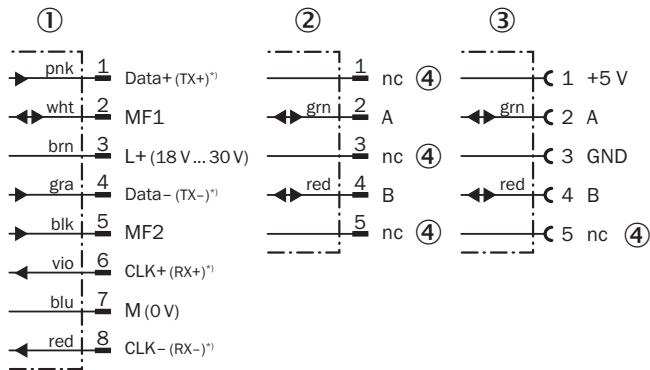
Connection type

DME4/5xxx PROFIBUS Connector 2 x M12, 5-pin, B-coded, BUS IN, BUS OUT, 1 x M16, 8-pin



- ① Connector M16, 8-pin
- ② Connector M12, 5-pin, B-coded, BUS IN
- ③ Connector M12, 5-pin, B-coded, BUS OUT

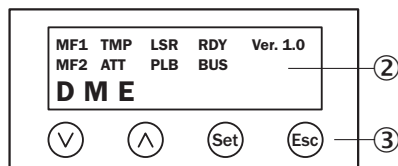
Connection diagram



^{*)} For connection of interface adapter.

- ① Connector M16, 8-pin
- ② Connector M12, 5-pin, B-coded, BUS IN
- ③ Connector M12, 5-pin, B-coded, BUS OUT
- ④ Not assigned

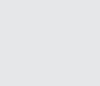
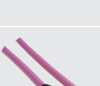
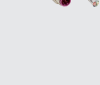
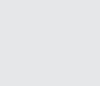
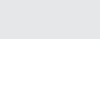
Adjustment possible



- ② LC display
- ③ Keypad

Recommended accessories

Other models and accessories → www.sick.com/DME5000

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Alignment unit for DME5000, stainless steel (1.4541), incl. mounting material, additional base plate mounting kit required, mounting hardware included	BEF-AH-DME5	2027721
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 5 m	DOL-1205-G05MQ	6026006
	Head A: female connector, M12, 5-pin, A-coded Head B: Flying leads Cable: Power, CAN, unshielded, 5 m	DOL-1205-G05M_Can	6021166
	Head A: female connector, M12, 5-pin, straight Head B: Flying leads Cable: CANopen, shielded, 6 m	DOL-1205-G06MK	6028326
	Head A: female connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 10 m	DOL-1205-G10MQ	6026008
	Head A: female connector, M12, 5-pin, straight Head B: Flying leads Cable: CANopen, shielded, 10 m Shielded on pin 1	DOL-1205-G10M_Can	6021175
	Head A: female connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 15 m	DOL-1205-G15MQ	6032637
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 2 m	DOL-1208-G02MAH1	6032448
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m	DOL-1208-G05MAH1	6032449
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m	DOL-1208-G10MAH1	6032450
	Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m	DOL-1608-G05MA	2026742
	Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m	DOL-1608-G10MA	2027193
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 5 m Wire shield Al-Pt film, overall shield C-screen tin-plated	STL-1205-G05MQ	6026005
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 10 m Wire shield Al-Pt film, overall shield C-screen tin-plated	STL-1205-G10MQ	6026007
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 15 m	STL-1205-G15MQ	6036898

	Brief description	Type	Part no.
	Head A: female connector, 7/8", 5-pin, straight Head B: - Cable: DeviceNet™, CANopen, terminal resistor, shielded For field bus technology	DOS-7805-GKEND	6028329
	Head A: male connector, M12, 4-pin, straight, B-coded Cable: PROFIBUS DP, terminal resistor	STE-END-Q	6021156
Reflectors			
	Reflector plate, "diamond grade" reflective tape, 665 mm x 665 mm, base plate material: aluminum, screw connection, Screw-on, 4 hole mounting	PL560DG	1016806

SICK AT A GLANCE

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