



DME5000-312

DME5000

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DME5000-312	1025245

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



Detailed technical data

Performance

Measuring range	0.15 m ... 300 m, on reflective tape "Diamond Grade" ¹⁾
Resolution	0.05 mm ... 5 mm
Repeatability	2 mm ^{1) 2)}
Accuracy	± 5 mm
Output time	2 ms
Light source	Laser, red ³⁾
Laser class	2 (EN 60825-1 / CDRH)
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

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

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
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

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⁾ Short-circuit protected, overload-protected. Max. 100 nF / 20 mH.

Indication	Display
Weight	Approx. 1,650 g
Output current I_A	≤ 100 mA ³⁾
Current consumption	At 24 V DC < 250 mA

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

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

3) Short-circuit protected, overload-protected. Max. 100 nF / 20 mH.

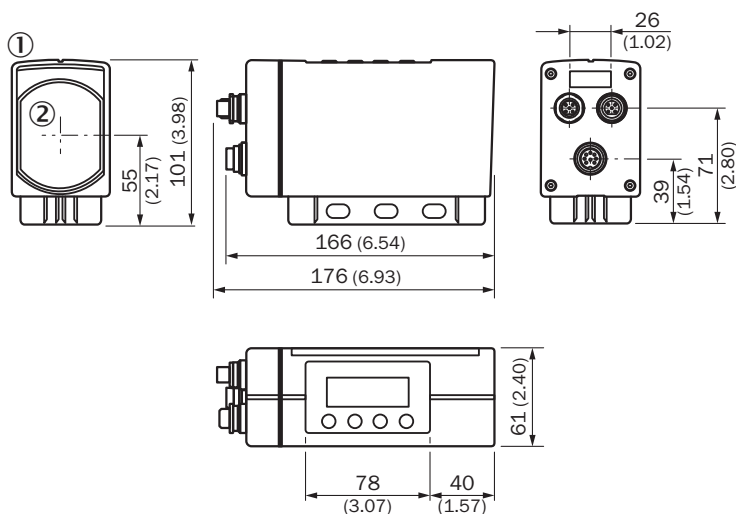
Ambient data

Enclosure rating	IP 65
Protection class	II ¹⁾
Electromagnetic compatibility (EMC)	EN 61000-6-2, EN 55011
Ambient temperature	Operation: -10 °C ... +55 °C Operation with cooling case: -10 °C ... +75 °C Storage: -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
Mechanical load	Shock: (EN 600 68-2-27 / -2-29) Sine: (EN 600 68-2-6) Noise: (EN 600 68-2-64)

1) Reference voltage DC 32 V.

Dimensional drawing (Dimensions in mm (inch))

DME5000 PROFIBUS

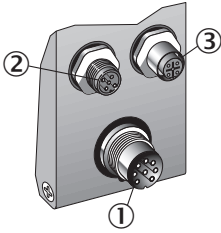


① LC display

② Center of optical axis

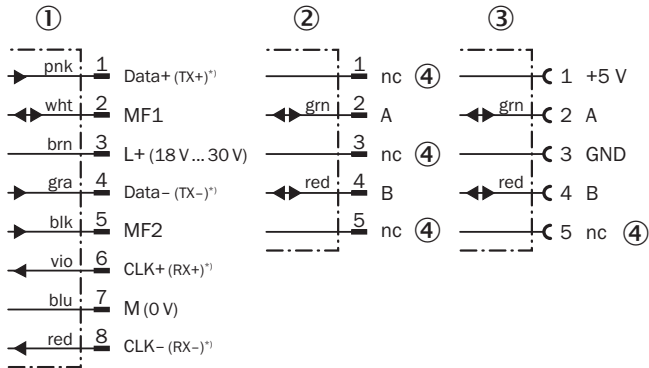
Connection type

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

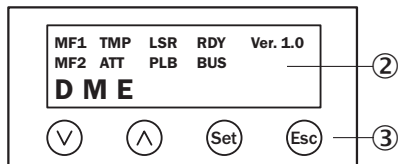
Connection diagram



* 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 Head B: cable Cable: PROFIBUS DP, PUR, halogen-free, shielded, 5 m	DOL-1205-G05MQ	6026006
	Head A: female connector, M12, 5-pin, A-coded Head B: cable Cable: Power, CAN, unshielded, 5 m	DOL-1205-G05M_Can	6021166
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: CANOpen, Shielded cable, 6 m	DOL-1205-G06MK	6028326
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PROFIBUS DP, PVC, shielded, 10 m	DOL-1205-G10MQ	6026008
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: CAN/CANOpen, shielded, 10 m Shielded on pin 1	DOL-1205-G10M_Can	6021175
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PROFIBUS DP, shielded, 15 m	DOL-1205-G15MQ	6032637
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: PUR, halogen-free, shielded, 2 m	DOL-1208-G02MAH1	6032448
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, shielded, 5 m	DOL-1208-G05MAH1	6032449
	Head A: female connector, M12, 8-pin, straight Head B: cable Cable: PUR, halogen-free, shielded, 10 m	DOL-1208-G10MAH1	6032450
	Head A: female connector, M16, 8-pin, straight Head B: cable Cable: PUR, halogen-free, shielded, 5 m	DOL-1608-G05MA	2026742
	Head A: female connector, M16, 8-pin, straight Head B: cable Cable: PUR, halogen-free, shielded, 10 m	DOL-1608-G10MA	2027193
	Head A: male connector, M12, 5-pin, straight, B-coded Head B: cable Cable: PROFIBUS DP, drag chain use, 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: cable Cable: PROFIBUS DP, drag chain use, 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: cable Cable: PROFIBUS DP, drag chain use, 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, DeviceNet Safety, 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, reflective tape "Diamond Grade", 665 mm x 665 mm, material base plate: aluminum, screw connection, Screw-on, 4 hole mounting	PL560DG	1016806

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