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

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
Indication	Display
Weight	Approx. 1,650 g
Current consumption	At 24 V DC < 250 mA
Enclosure rating	IP65
Protection class	II [3]

[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] Reference voltage DC 32 V.

Performance

Measuring range	0.15 m ... 300 m, on reflective tape "Diamond Grade" [1]
Target	Reflector
Resolution	0.05 mm ... 5 mm
Repeatability	2 mm [1] [2]
Accuracy	± 5 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)

[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 °C.

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 °C.

Interfaces

PROFIBUS DP	✓
Digital output	
Number	2
Type	Push-pull: PNP/NPN
Maximum output current I_A	≤ 100 mA [1] [2]
Multifunctional input (MF)	1 x MF [3] [4]

[1] Max. 100 nF/20 mH.

[2] HIGH = > V_S - 3 V / LOW = < 2 V.

[3] HIGH = > 12 V / LOW = < 3 V.

[4] Not reverse-polarity protected.

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

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

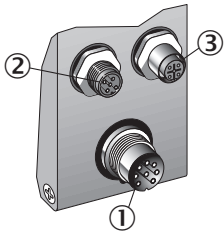## Dimensional drawing (Dimensions in mm (inch))

DME5000 PROFIBUS

① LC display
② Center of optical axis
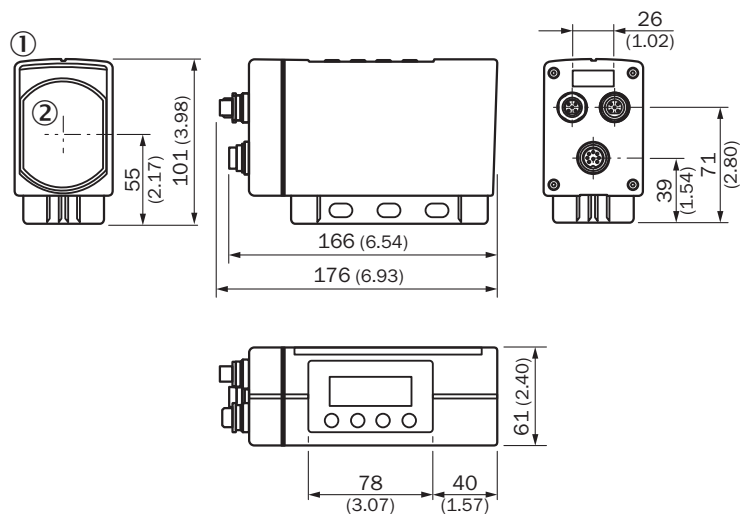
Working range diagram

DL1000 measuring range based on measurement cycle time and reflector type

- - ▲ - a: PL240DG
— ■ — b: PL560DG, PL880DG
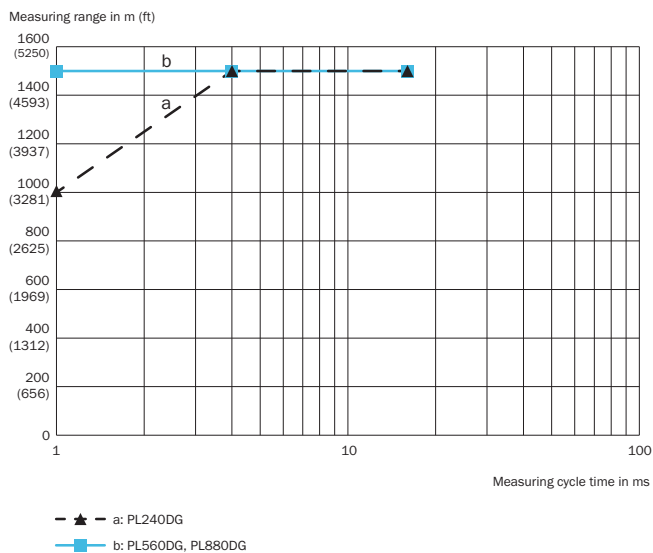
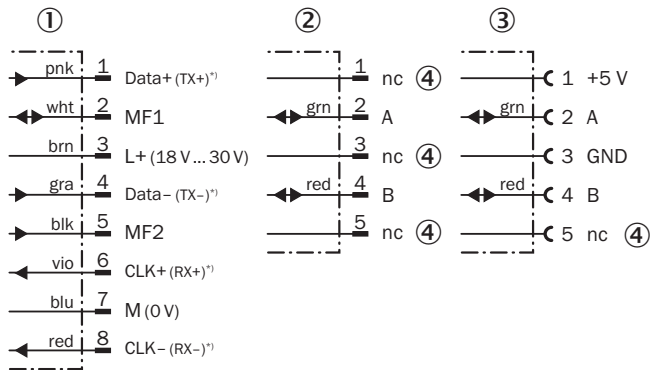## Connection type

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
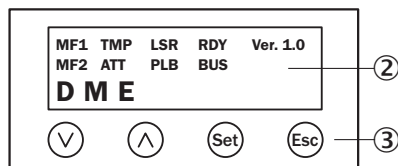③ Connector M12, 5-pin, B-coded, BUS OUT

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

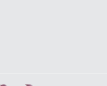## Adjustment possible

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, B-coded Head B: Flying leads Cable: PROFIBUS DP, twisted pair, PUR, halogen-free, shielded, 15 m	DOL-1205-G15MQ	6032637
	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
	Head A: female connector, M12, 5-pin, straight Head B: Flying leads Cable: CANopen, shielded, 10 m Shielded on pin 1	YF2A14-100C1BXLEAX	6021175
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 2 m	YF2A68-020XXXXLEAX	6032448
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m	YF2A68-050XXXXLEAX	6032449
	Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m	YF2A68-100XXXXLEAX	6032450
	Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m	YF2Z18-050XXXXLEBX	2026742
	Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m	YF2Z18-100XXXXLEBX	2027193

	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

Recommended services

Additional services ➜ www.sick.com/DME5000

	Type	Part no.
Warranty extensions		
• **Product area:** Identification solutions, Vision, Distance sensors, Detection and ranging solutions • **Range of services:** The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase), Long-term protection for calculable lump sum. • **Duration:** Five-year warranty from date of purchase.	Five-year extended warranty	1680671

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."

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