



# DME5000-322

## DME5000

LONG RANGE DISTANCE SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
DME5000-322	1025247

Other models and accessories → [www.sick.com/DME5000](http://www.sick.com/DME5000)



### Detailed technical data

#### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	DC 18 V ... 30 V, limit values
<b>Ripple</b>	$< 5 V_{pp}^{1)}$
<b>Initialization time</b>	1.5 s <sup>2)</sup>
<b>Housing material</b>	Metal (zinc diecast)
<b>Window material</b>	Glass
<b>Connection type</b>	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded
<b>Indication</b>	Display
<b>Weight</b>	Approx. 1,650 g
<b>Current consumption</b>	At 24 V DC $< 1,000$ mA
<b>Dimensions (W x H x D)</b>	61 mm x 101 mm x 176 mm
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	II <sup>3)</sup>

<sup>1)</sup> May not fall short of or exceed  $V_s$  tolerances.

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

<sup>3)</sup> Reference voltage DC 32 V.

#### Performance

<b>Measuring range</b>	0.15 m ... 300 m, on "diamond grade" reflective tape <sup>1)</sup>
<b>Target</b>	Reflector
<b>Resolution</b>	0.05 mm ... 5 mm
<b>Repeatability</b>	2 mm <sup>1) 2)</sup>
<b>Accuracy</b>	$\pm 5$ mm
<b>Response time</b>	6 ms
<b>Output time</b>	2 ms
<b>Light source</b>	Laser, red <sup>3)</sup> visible red light

<sup>1)</sup> On "diamond grade" reflective tape.

<sup>2)</sup> Statistical error  $1 \sigma$ , environmental conditions constant, min. warm-up time 10 min.

<sup>3)</sup> Average service life of 50,000 h at  $T_A = +25$  °C.

<b>Laser class</b>	2, complies with 21 CFR 1040.10 and 1040.11 except for the conformance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Typ. light spot size (distance)</b>	130 mm (at 70 m) 270 mm (at 150 m) 360 mm (at 220 m)
<b>Max. movement speed</b>	10 m/s

1) On "diamond grade" reflective tape.

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

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

## Interfaces

<b>PROFIBUS DP</b>	✓
<b>Digital output</b>	
Number	2
Type	Push-pull: PNP/NPN
Maximum output current $I_A$	$\leq 100 \text{ mA}$ <sup>1) 2)</sup>
<b>Multifunctional input (MF)</b>	1 x MF <sup>3) 4)</sup>

1) Max. 100 nF/20 mH.

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

3) HIGH =  $> 12 \text{ V}$  / LOW =  $< 3 \text{ V}$ .

4) Not reverse-polarity protected.

## Ambient data

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

## Classifications

<b>ECl@ss 5.0</b>	27270801
<b>ECl@ss 5.1.4</b>	27270801
<b>ECl@ss 6.0</b>	27270801
<b>ECl@ss 6.2</b>	27270801
<b>ECl@ss 7.0</b>	27270801
<b>ECl@ss 8.0</b>	27270801
<b>ECl@ss 8.1</b>	27270801
<b>ECl@ss 9.0</b>	27270801
<b>ECl@ss 10.0</b>	27270801
<b>ECl@ss 11.0</b>	27270801
<b>ETIM 5.0</b>	EC001825

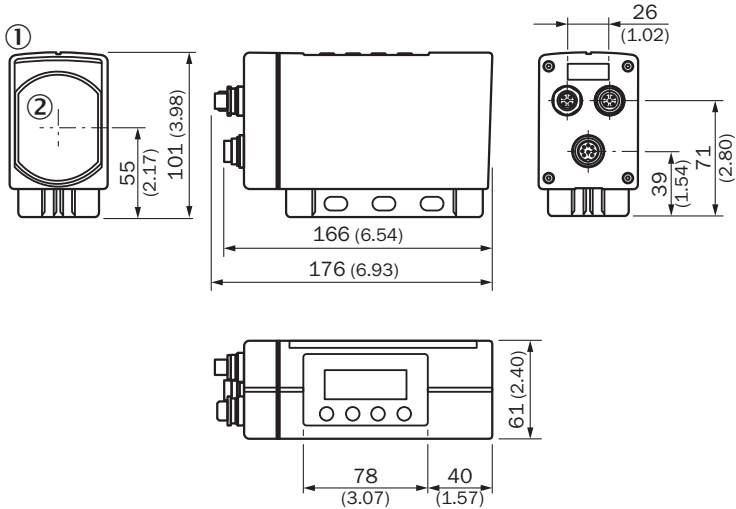
# DME5000-322 | DME5000

## LONG RANGE DISTANCE SENSORS

<b>ETIM 6.0</b>	EC001825
<b>ETIM 7.0</b>	EC001825
<b>ETIM 8.0</b>	EC001825
<b>UNSPSC 16.0901</b>	411111613

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

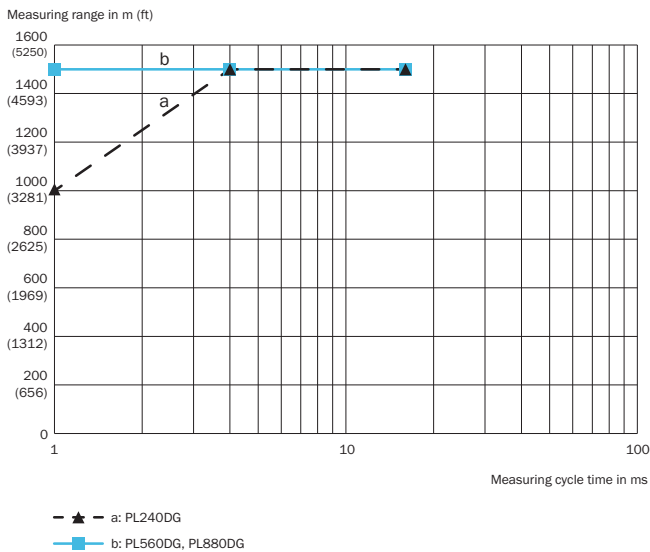
DME5000 PROFIBUS



- ① LC display
- ② Center of optical axis

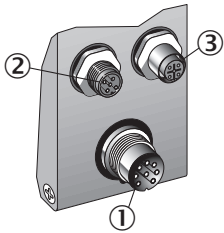
### Working range diagram

DL1000 measuring range based on measurement cycle time and reflector type



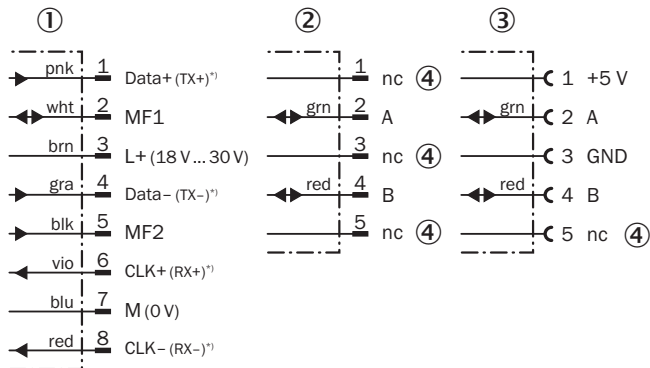
## Connection type

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

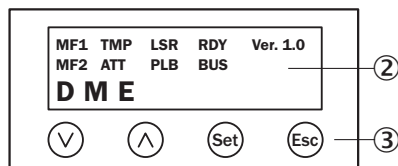
## Connection diagram



<sup>\*)</sup> 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](http://www.sick.com/DME5000)

	Brief description	Type	Part no.
<b>Plug connectors and cables</b>			
	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
	Head A: female connector, 7/8", 5-pin, straight 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

	Brief description	Type	Part no.
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
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-DME	2027721

### Recommended services

Additional services → [www.sick.com/DME5000](http://www.sick.com/DME5000)

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Identification solutions, machine vision, Distance sensors, Detection and ranging solutions</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase)</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	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.”

## WORLDWIDE PRESENCE:

Contacts and other locations – [www.sick.com](http://www.sick.com)