



# 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](http://www.sick.com/DME5000)



## Detailed technical data

### Performance

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

<sup>1)</sup> On reflective tape "Diamond Grade"

<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.

### Interfaces

<b>Switching output</b>	Push-pull: PNP/NPN (100 mA) <sup>1)</sup>
<b>Multifunctional input (MF)</b>	1 x MF <sup>2) 3)</sup>
<b>Data interface</b>	PROFIBUS DP

<sup>1)</sup> HIGH = >  $V_S - 3$  V / LOW = < 2 V.

<sup>2)</sup> HIGH = > 12 V / LOW = < 3 V.

<sup>3)</sup> Not reverse-polarity protected.

### Mechanics/electronics

<b>Supply voltage <math>V_S</math></b>	DC 18 V ... 30 V, limit values
<b>Ripple</b>	< 5 $V_{pp}$ <sup>1)</sup>
<b>Initialization time</b>	1.5 s <sup>2)</sup>
<b>Connection type</b>	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded

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

<b>Indication</b>	Display
<b>Weight</b>	Approx. 1,650 g
<b>Output current I<sub>A</sub></b>	≤ 100 mA <sup>3)</sup>
<b>Current consumption</b>	At 24 V DC < 250 mA

1) May not fall short of or exceed V<sub>G</sub> tolerances.

2) After loss of reflector < 1 s at max. speed V<sub>max</sub> < 1 m/s.

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

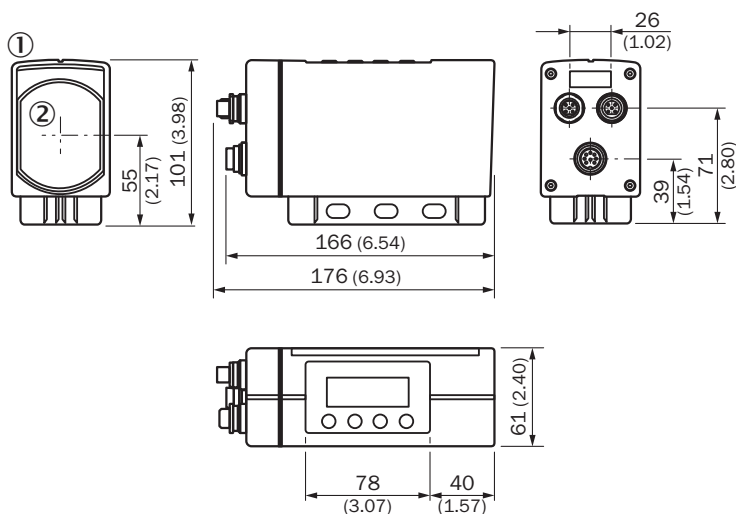
### Ambient data

<b>Enclosure rating</b>	IP 65
<b>Protection class</b>	II <sup>1)</sup>
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2, EN 55011
<b>Ambient temperature</b>	Operation: -10 °C ... +55 °C Operation with cooling case: -10 °C ... +75 °C Storage: -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>Mechanical load</b>	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

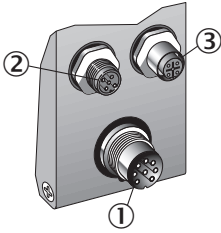


① LC display

② Center of optical axis

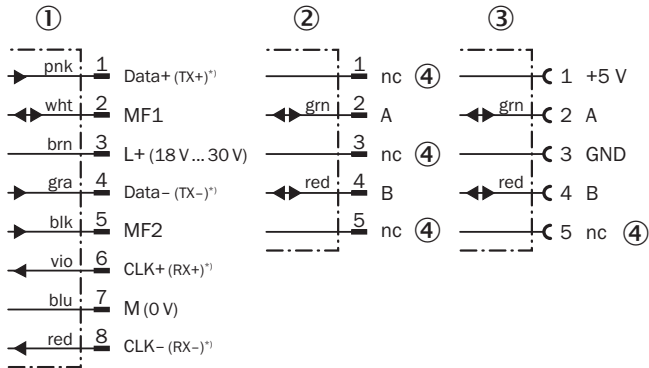
### Connection type

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

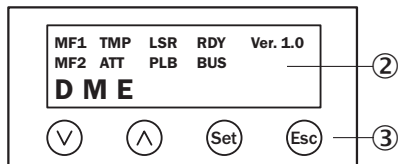
### Connection diagram



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

	Brief description	Type	Part no.
<b>Terminal and alignment brackets</b>			
	Alignment unit for DME5000, stainless steel (1.4541), incl. mounting material, additional base plate mounting kit required, mounting hardware included	BEF-AH-DME5	2027721
<b>Plug connectors and cables</b>			
	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
<b>Reflectors</b>			
	Reflector plate, reflective tape "Diamond Grade", 665 mm x 665 mm, material base plate: aluminum, screw connection, Screw-on, 4 hole mounting	PL560DG	1016806

## 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)