



# DME5000-214

## DME5000

LONG RANGE DISTANCE SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
DME5000-214	1025834

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



### Detailed technical data

#### Performance

<b>Measuring range</b>	0.15 m ... 150 m, on reflective tape "Diamond Grade" <sup>1)</sup>
<b>Target</b>	Reflector
<b>Resolution</b>	0.05 mm ... 5 mm
<b>Repeatability</b>	1 mm <sup>1) 2)</sup>
<b>Accuracy</b>	± 3 mm
<b>Response time</b>	6 ms
<b>Output time</b>	2 ms
<b>Light source</b>	Laser, red <sup>3)</sup>
<b>Laser class</b>	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)
<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  $T_A = +25^\circ\text{C}$ .

#### Interfaces

<b>DeviceNet™</b>	✓
<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>

<sup>1)</sup> HIGH = >  $V_S - 3\text{ V}$  / 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
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<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  $V_{\max} < 1\text{ m/s}$ .

<sup>3)</sup> Max. 100 nF/20 mH.

<sup>4)</sup> Reference voltage DC 32 V.

<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>1)</sup>
<b>Initialization time</b>	1.5 s <sup>2)</sup>
<b>Connection type</b>	Male connector, 1 x M12, 4-pin, A-coded, 1 x M16, 8-pin
<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
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	II <sup>4)</sup>

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

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

<sup>3)</sup> Max. 100 nF/20 mH.

<sup>4)</sup> Reference voltage DC 32 V.

## Ambient data

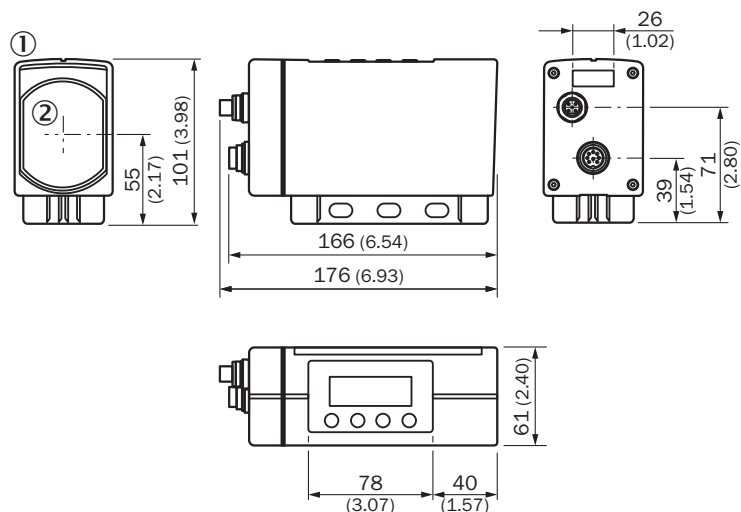
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2, EN 55011
<b>Ambient temperature operation</b>	-10 °C ... +55 °C -10 °C ... +75 °C, operation with cooling case
<b>Ambient storage temperature</b>	-25 °C ... +75 °C
<b>Effect of air pressure</b>	0.3 ppm/hPa
<b>Effect of air temperature</b>	1 ppm/K
<b>Temperature drift</b>	Typ. 0.1 mm/K
<b>Typ. Ambient light immunity</b>	≤ 40,000 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>ECI@ss 5.0</b>	27270801
<b>ECI@ss 5.1.4</b>	27270801
<b>ECI@ss 6.0</b>	27270801
<b>ECI@ss 6.2</b>	27270801
<b>ECI@ss 7.0</b>	27270801
<b>ECI@ss 8.0</b>	27270801
<b>ECI@ss 8.1</b>	27270801
<b>ECI@ss 9.0</b>	27270801
<b>ETIM 5.0</b>	EC001825
<b>ETIM 6.0</b>	EC001825
<b>UNSPSC 16.0901</b>	41111613

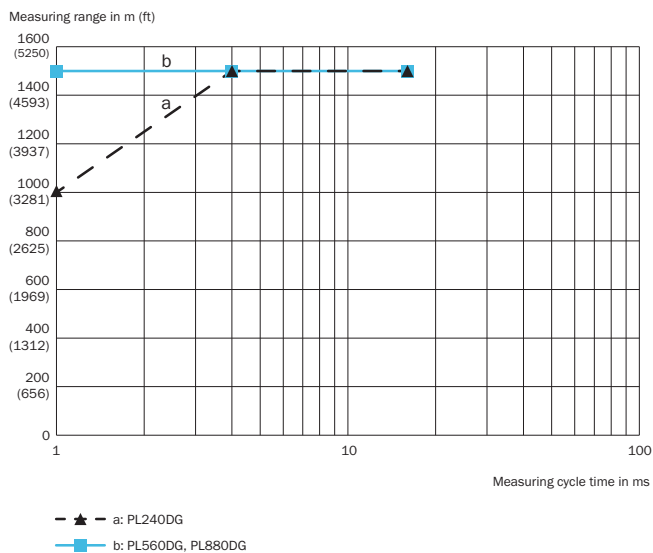
### Dimensional drawing (Dimensions in mm (inch))

DME5000-xx4 DeviceNet



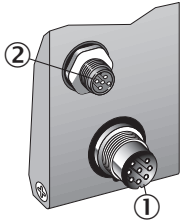
### Working range diagram

DL1000 measuring range based on measurement cycle time and reflector type



## Connection type

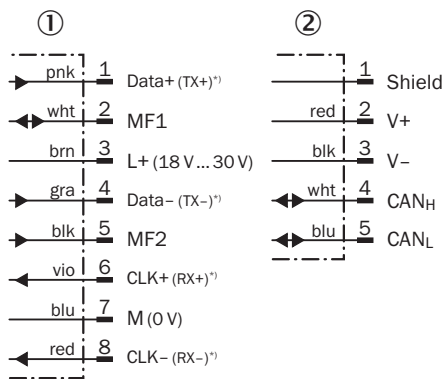
DME4/5xxx-xx4 DeviceNet Connector 1 x M12, 5-pin, A-coded 1 x M16, 8-pin



- ① Connector M16, 8-pin
- ② Connector M12, 5-pin, A-coded

## Connection diagram

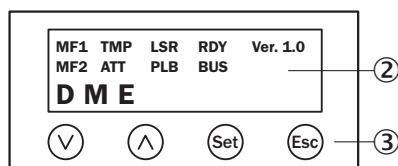
DME5000-xx4 DeviceNet



\*) For connection of interface adapter.

- ① Connector M16, 8-pin
- ② Connector M12, 5-pin, A-coded

## 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.
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

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)