



# DME4000-219

## DME4000

LONG RANGE DISTANCE SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
DME4000-219	1042839

Other models and accessories → [www.sick.com/DME4000](http://www.sick.com/DME4000)



## 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 <sub>pp</sub> <sup>1)</sup>
<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, M12, 5-pin
<b>Indication</b>	Display
<b>Weight</b>	Approx. 1,650 g
<b>Current consumption</b>	At 24 V DC < 250 mA
<b>Dimensions (W x H x D)</b>	61 mm x 85 mm x 166 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.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	101 years
<b>DC<sub>avg</sub></b>	0%

### Performance

<b>Measurement range min ... max:</b>	0.15 m ... 130 m, on "diamond grade" reflective tape
<b>Target</b>	Reflector
<b>Resolution</b>	0.05 mm ... 5 mm

<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>Repeatability</b>	2 mm <sup>1) 2)</sup>
<b>Accuracy</b>	± 5 mm
<b>Response time</b>	6 ms
<b>Output time</b>	4 ms
<b>Light source</b>	Laser, red <sup>3)</sup> visible red light
<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

<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.

## Interfaces

<b>CANopen</b>	✓
<b>Digital output</b>	
Number	2
Type	Push-pull: PNP/NPN
Maximum output current $I_A$	≤ 100 mA <sup>1) 2)</sup>

<sup>1)</sup> Max. 100 nF/20 mH.

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

## Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2, EN 55011: Class B
<b>Ambient temperature, operation</b>	-10 °C ... +55 °C -10 °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>	≤ 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)

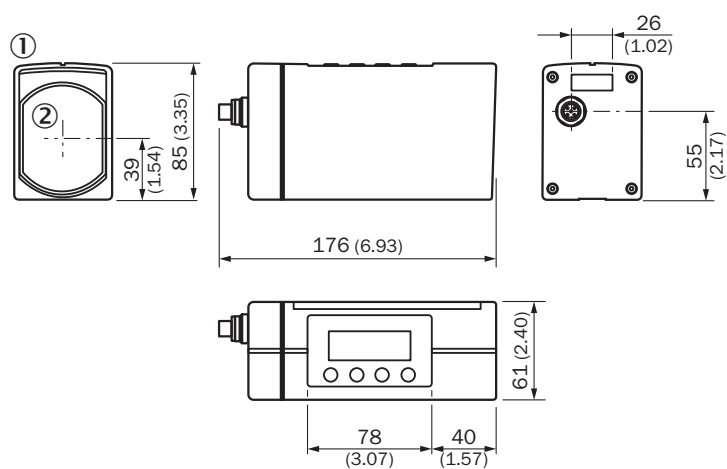
## Classifications

<b>ECLASS 5.0</b>	27270801
<b>ECLASS 5.1.4</b>	27270801
<b>ECLASS 6.0</b>	27270801
<b>ECLASS 6.2</b>	27270801
<b>ECLASS 7.0</b>	27270801
<b>ECLASS 8.0</b>	27270801
<b>ECLASS 8.1</b>	27270801
<b>ECLASS 9.0</b>	27270801

<b>ECLASS 10.0</b>	27270801
<b>ECLASS 11.0</b>	27270801
<b>ECLASS 12.0</b>	27270916
<b>ETIM 5.0</b>	EC001825
<b>ETIM 6.0</b>	EC001825
<b>ETIM 7.0</b>	EC001825
<b>ETIM 8.0</b>	EC001825
<b>UNSPSC 16.0901</b>	41111613

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

DME4000 CANopen



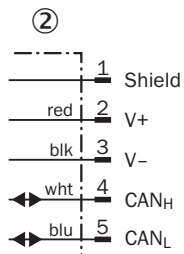
- ① LC display
- ② Center of optical axis

### Connection type

DME4000 CANopen Connector M12, 5-pin

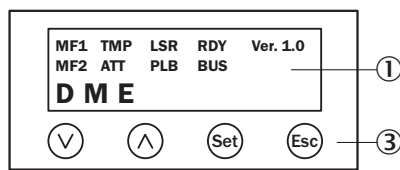


## Connection diagram



② Male connector M12, 5-pin

## Adjustment possible












- ① LC display
- ③ Keypad

## Recommended accessories

Other models and accessories → [www.sick.com/DME4000](http://www.sick.com/DME4000)

	Brief description	Type	Part no.
Plug connectors and cables			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight, B-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> PROFIBUS DP</li> <li>• <b>Cable:</b> 5 m, 2-wire, PUR, halogen-free</li> <li>• <b>Description:</b> PROFIBUS DP, twisted pair, shielded, Head A: female connector, M12, 5-pin, straight Head B: cable Cable: suitable for drag chain, PUR, halogen-free, shielded, 2 x 0.34 mm<sup>2</sup>, Ø 8.0 mm</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Application:</b> Zones with oils and lubricants</li> </ul>	DOL-1205-G05MQ	6026006
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Power, CAN</li> <li>• <b>Cable:</b> 5 m, 5-wire</li> <li>• <b>Description:</b> Power, unshielded CAN</li> </ul>	DOL-1205-G05M_Can	6021166
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> CANopen</li> <li>• <b>Cable:</b> 6 m</li> <li>• <b>Description:</b> CANopen, shielded</li> </ul>	DOL-1205-G06MK	6028326

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, B-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> PROFIBUS DP</li> <li><b>Cable:</b> 10 m, 2-wire, PUR, halogen-free</li> <li><b>Description:</b> PROFIBUS DP, twisted pair, shielded</li> <li><b>Connection systems:</b> Flying leads</li> <li><b>Application:</b> Zones with oils and lubricants</li> </ul>	DOL-1205-G10MQ	6026008
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, B-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> PROFIBUS DP</li> <li><b>Cable:</b> 15 m, 2-wire, PUR, halogen-free</li> <li><b>Description:</b> PROFIBUS DP, twisted pair, shielded</li> <li><b>Connection systems:</b> Flying leads</li> <li><b>Application:</b> Zones with oils and lubricants</li> </ul>	DOL-1205-G15MQ	6032637
	<p>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</p>	STL-1205-G05MQ	6026005
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, B-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> PROFIBUS DP</li> <li><b>Cable:</b> 10 m, 2-wire, PUR, halogen-free</li> <li><b>Description:</b> PROFIBUS DP, twisted pair, shielded</li> <li><b>Note:</b> Wire shield Al-Pt film, overall shield C-screen tin-plated</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation</li> </ul>	STL-1205-G10MQ	6026007
	<p>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</p>	STL-1205-G15MQ	6036898
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> CANopen</li> <li><b>Cable:</b> 10 m, 5-wire</li> <li><b>Description:</b> CANopen, shielded</li> <li><b>Connection systems:</b> Flying leads</li> <li><b>Note:</b> Shielded on pin 1</li> </ul>	YF2A14-100C1BXLEAX	6021175
	<p>Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 2 m</p>	YF2A68-020XXXXLEAX	6032448
	<p>Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m</p>	YF2A68-050XXXXLEAX	6032449
	<p>Head A: female connector, M12, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m</p>	YF2A68-100XXXXLEAX	6032450
	<p>Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 5 m</p>	YF2Z18-050XXXXLEBX	2026742
	<p>Head A: female connector, M16, 8-pin, straight Head B: Flying leads Cable: PUR, halogen-free, shielded, 10 m</p>	YF2Z18-100XXXXLEBX	2027193
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, 7/8", 5-pin, straight</li> <li><b>Signal type:</b> DeviceNet™, CANopen</li> <li><b>Description:</b> DeviceNet™, terminal resistor, shielded CANopen</li> <li><b>Permitted cross-section:</b> ≤ 1.5 mm<sup>2</sup></li> <li><b>Note:</b> For field bus technology</li> </ul>	DOS-7805-GKEND	6028329
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, B-coded</li> <li><b>Signal type:</b> PROFIBUS DP</li> <li><b>Description:</b> PROFIBUS DP, terminal resistor</li> </ul>	STE-END-Q	6021156

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
<b>Reflectors</b>			
	Reflector plate, "diamond grade" reflective tape, 665 mm x 665 mm, base plate material: aluminum, screw connection, Screw-on, 4 hole mounting	PL560DG	1016806
<b>Terminal and alignment brackets</b>			
	Alignment unit, stainless steel	BEF-DME alignment bracket	2040695

## SICK AT A GLANCE

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