



# DME4000-311S01

## DME4000

TIME-OF-FLIGHT SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
DME4000-311S01	1042733

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



### Detailed technical data

#### Features

<b>Measuring range</b>	0.15 m ... 220 m, on "diamond grade" reflective tape
<b>Target</b>	Reflector
<b>Repeatability</b>	≤ 3 mm <sup>1) 2)</sup>
<b>Measurement accuracy</b>	± 6 mm
<b>Response time</b>	6 ms
<b>Output time</b>	1 ms
<b>Emitted beam</b>	
Light source	Laser, red <sup>3)</sup>
Type of light	Visible red light
Typ. light spot size (distance)	130 mm (at 70 m)
	270 mm (at 150 m)
	360 mm (at 220 m)
<b>Key laser figures</b>	
Normative reference	IEC 60825-1:2014, EN 60825-1:2014
Laser class	2
<b>Note</b>	With mounting adapter for DME5000 bracket
<b>Max. movement speed</b>	10 m/s

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

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

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

## Interfaces

<b>SSI</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>

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

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

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

<sup>4)</sup> Not reverse-polarity protected.

## Electronics

<b>Supply voltage <math>U_B</math></b>	DC 18 V ... 30 V, limit values
<b>Current consumption</b>	At 24 V DC < 1,000 mA
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>1)</sup>
<b>Display</b>	Display
<b>Enclosure rating</b>	IP65
<b>Protection class</b>	II <sup>2)</sup>
<b>Connection type</b>	
	Male connector

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

<sup>2)</sup> Reference voltage DC 32 V.

## Mechanics

<b>Dimensions (W x H x D)</b>	61 mm x 85 mm x 166 mm
<b>Housing material</b>	Metal (zinc diecast)
<b>Window material</b>	Glass
<b>Weight</b>	Approx. 1,650 g

## Ambient data

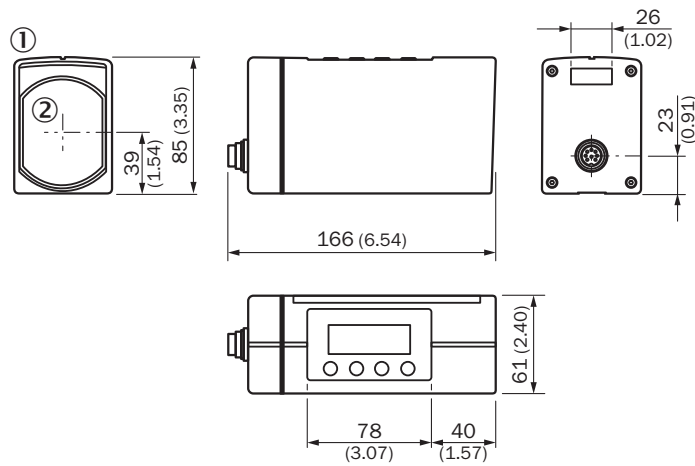
<b>Ambient temperature, operation</b>	-10 °C ... +55 °C -10 °C ... +75 °C, operation with cooling case
<b>Ambient temperature, storage</b>	-25 °C ... +75 °C
<b>Effect of air pressure</b>	0.3 ppm/hPa
<b>Effect of air temperature</b>	1 ppm/K
<b>Temperature drift</b>	Typ. 0.1 mm/K
<b>Typ. Ambient light immunity</b>	$\leq 40,000 \text{ lx}$
<b>Mechanical load</b>	Shock: (EN 600 68-2-27 / -2-29) Sine: (EN 600 68-2-6) Noise: (EN 600 68-2-64)
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2, EN 55011: Class B

## Classifications

<b>ECLASS 5.0</b>	27270801
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<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 DME4000 SSI



Dimensions in mm (inch)

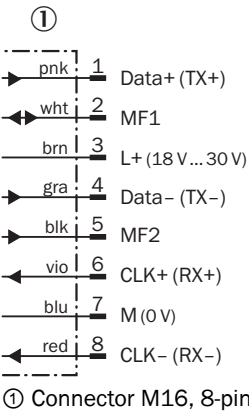
① LC display

② Center of optical axis

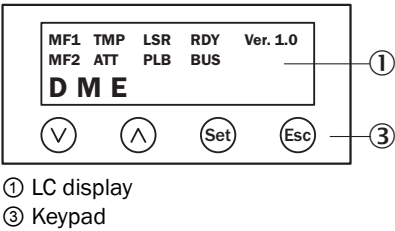
### Connection type DME4/5xxx SSI/RS-422 Connector M16, 8-pin



Connection diagram




Adjustment possible



Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li>• <b>Description:</b> Alignment unit</li><li>• <b>Material:</b> Stainless steel</li><li>• <b>Details:</b> Stainless steel</li></ul>	BEF-DME align- ment bracket	2040695
reflectors and optics			
	Strich		On request

	Brief description	Type	part no.
connectors and cables			
	Strich		On request
	<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
	Strich		On request
	Strich		On request
	Strich		On request
	Strich		On request
	<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
	<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> 5 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-G05MQ	6026006
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 10 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Shielded</li> </ul>	YF2A68-100XXXXLEAX	6032450
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 5 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Shielded</li> </ul>	YF2A68-050XXXXLEAX	6032449
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 8-pin, straight</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Cable:</b> 2 m, 8-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Shielded</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>	YF2A68-020XXXXLEAX	6032448
	<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
	Strich		On request
	Strich		On request
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li>• <b>Cable:</b> 10 m, 5-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li>• <b>Connection systems:</b> Flying leads</li> <li>• <b>Note:</b> Shielded on pin 1</li> </ul>	YF2A14-100C1BXLEAX	6021175

## 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:

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