Data sheet

DME4000-111S05

DME4000

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
DME4000-111S05	1045159

Other models and accessories ➜ www.sick.com/DME4000

Detailed technical data

Features

Measuring range	0.15 m ... 50 m, on “diamond grade” reflective tape
Target	Reflector
Repeatability	≤ 1 mm [1) 2)]
Measurement accuracy	± 3 mm
Response time	6 ms
Output time	1 ms
Emitted beam	
Light source	Laser, red [3)]
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)
Key laser figures	
Normative reference	IEC 60825-1:2014, EN 60825-1:2014
Laser class	2 [4)]
Note	With mounting adapter for DME5000 bracket
Max. movement speed	10 m/s

[1)] On “diamond grade” reflective tape.
[2)] Statistical error 1 σ, environmental conditions constant, min. warm-up time 10 min.
[3)] Average service life of 50,000 h at T_A = +25 °C.
[4)] Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

Interfaces

SSI	✓
Digital output	
Number	2
Type	Push-pull: PNP/NPN
Maximum output current I_A	≤ 100 mA [1) 2)]
Multifunctional input (MF)	1 x MF [3) 4)]

1) Max. 100 nF/20 mH.
2) HIGH = > V_S - 3 V / LOW = < 2 V.
3) HIGH = > 12 V / LOW = < 3 V.
4) Not reverse-polarity protected.

Electronics

Supply voltage U_B	DC 18 V ... 30 V, limit values
Current consumption	At 24 V DC < 250 mA
Ripple	< 5 V_{pp} [1)]
Initialization time	1.5 s [2)]
Display	Display
Enclosure rating	IP65
Protection class	II [3)]
Connection type	
	Male connector, M16, 8-pin

1) May not fall short of or exceed V_S tolerances.
2) After loss of reflector < 1 s at max. speed V_{max} < 1 m/s.
3) Reference voltage DC 32 V.

Mechanics

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

Ambient data

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

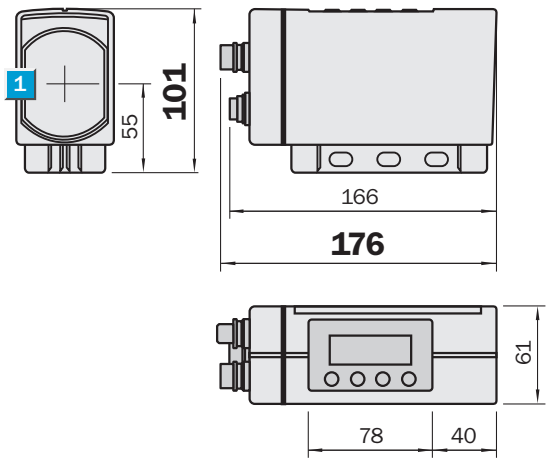
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

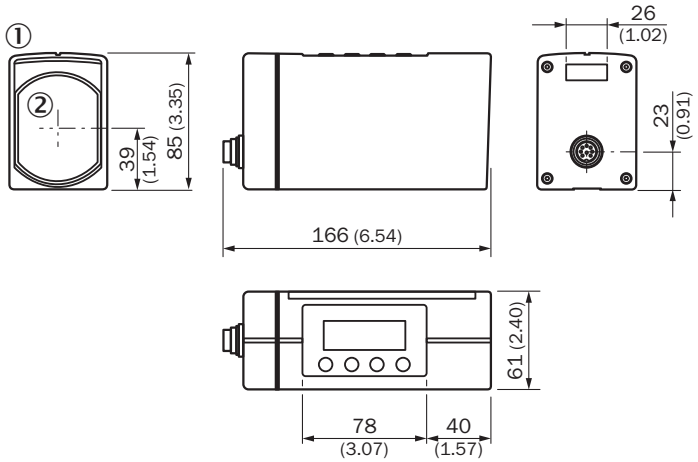
ECLASS 5.0	27270801
ECLASS 5.1.4	27270801
ECLASS 6.0	27270801
ECLASS 6.2	27270801
ECLASS 7.0	27270801
ECLASS 8.0	27270801
ECLASS 8.1	27270801
ECLASS 9.0	27270801
ECLASS 10.0	27270801
ECLASS 11.0	27270801
ECLASS 12.0	27270916
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	41111613

Dimensional drawing



Dimensions in mm (inch)
① Center of optical axis

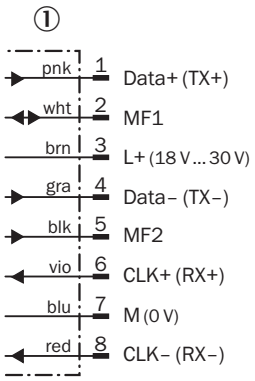
Dimensional drawing DME4000 SSI



Dimensions in mm (inch)
① LC display
② Center of optical axis

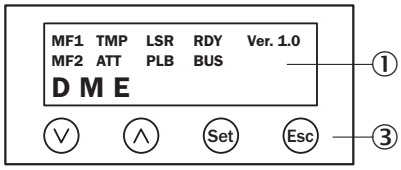
Connection type DME4/5xxx SSI/RS-422 Connector M16, 8-pin

Connection diagram



① Connector M16, 8-pin

Adjustment possible



① LC display
③ Keypad

Recommended accessories

Other models and accessories ➜ www.sick.com/DME4000

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Alignment unit • **Material:** Stainless steel • **Details:** Stainless steel	BEF-DME alignment bracket	2040695
reflectors and optics			
	• **Description:** Reflector plate, “diamond grade” reflective tape, 665 mm x 665 mm, base plate material: aluminum, screw connection • **Ambient operating temperature:** –25 °C ... +65 °C	PL560DG	1016806

	Brief description	Type	part no.
connectors and cables			
	• **Description:** PROFIBUS DP, twisted pair, shielded • **Connection type head A:** Male connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 15 m, 2-wire, PUR, halogen-free • **Application:** Zones with oils and lubricants, Drag chain operation	STL-1205-G15MQ	6036898
	• **Connection type head A:** Male connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 10 m, 2-wire, PUR, halogen-free • **Description:** PROFIBUS DP, twisted pair, shielded • **Note:** Wire shield Al-Pt film, overall shield C-screen tin-plated • **Application:** Zones with oils and lubricants, Drag chain operation	STL-1205-G10MQ	6026007
	• **Description:** PROFIBUS DP, terminal resistor • **Connection type head A:** Male connector, M12, 4-pin, straight, B-coded • **Signal type:** PROFIBUS DP	STE-END-Q	6021156
	• **Description:** PROFIBUS DP, twisted pair, shielded • **Connection type head A:** Male connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 5 m, 2-wire, PUR, halogen-free • **Note:** Wire shield Al-Pt film, overall shield C-screen tin-plated • **Application:** Zones with oils and lubricants, Drag chain operation	STL-1205-G05MQ	6026005
	• **Description:** CANopen, shielded • **Connection type head A:** Female connector, M12, 5-pin, straight • **Connection type head B:** Flying leads • **Signal type:** CANopen • **Cable:** 6 m	DOL-1205-G06MK	6028326
	• **Description:** DeviceNet™, terminal resistor, shielded, CANopen • **Connection type head A:** Female connector, 7/8", 5-pin, straight • **Signal type:** DeviceNet™, CANopen • **Permitted cross-section:** ≤ 1.5 mm² • **Note:** For field bus technology	DOS-7805-GKEND	6028329
	• **Connection type head A:** Female connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 15 m, 2-wire, PUR, halogen-free • **Description:** PROFIBUS DP, twisted pair, shielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants	DOL-1205-G15MQ	6032637
	• **Connection type head A:** Female connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 10 m, 2-wire, PUR, halogen-free • **Description:** PROFIBUS DP, twisted pair, shielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants	DOL-1205-G10MQ	6026008
	• **Connection type head A:** Female connector, M12, 5-pin, straight, B-coded • **Connection type head B:** Flying leads • **Signal type:** PROFIBUS DP • **Cable:** 5 m, 2-wire, PUR, halogen-free • **Description:** PROFIBUS DP, twisted pair, shielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants	DOL-1205-G05MQ	6026006
	• **Description:** Shielded • **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 10 m, 8-wire, PUR, halogen-free • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A68-100XXXXLEAX	6032450
	• **Description:** Shielded • **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 5 m, 8-wire, PUR, halogen-free	YF2A68-050XXXXLEAX	6032449

	Brief description	Type	part no.
	• **Application:** Drag chain operation, Zones with oils and lubricants		
	• **Description:** Shielded • **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 2 m, 8-wire, PUR, halogen-free • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants	YF2A68-020XXXXLEAX	6032448
	• **Connection type head A:** Female connector, M12, 5-pin, A-coded • **Connection type head B:** Flying leads • **Signal type:** Power, CAN • **Cable:** 5 m, 5-wire • **Description:** Power, unshielded, CAN	DOL-1205-G05M_Can	6021166
	• **Description:** Shielded • **Connection type head A:** Female connector, M16, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 10 m, PUR, halogen-free	YF2Z18-100XXXXLE-BX	2027193
	• **Description:** Shielded • **Connection type head A:** Female connector, M16, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 5 m, PUR, halogen-free	YF2Z18-050XXXXLE-BX	2026742
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 10 m, 5-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Connection systems:** Flying leads • **Note:** Shielded on pin 1	YF2A14-100C1BXLEAX	6021175

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