Online data sheet



DME4000-217

DME4000

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DME4000-217	1029806

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

Detailed technical data

Performance

Measuring range	0.15 m ... 130 m, on reflective tape "Diamond Grade"
Resolution	0.25 mm ... 4 mm [1]
Repeatability	2 mm [2] [3]
Accuracy	± 5 mm
Output time	2 ms
Light source	Laser, red [4]
Laser class	2 (EN 60825-1 / CDRH)
Typ. light spot size (distance)	130 mm (at 70 m) 270 mm (at 150 m) 360 mm (at 220 m)
Max. movement speed	10 m/s

[1] For HIPERFACE® data interface 1/32 mm ... 1/2 mm, for sin/cos 0.25 mm ... 4 mm.
[2] On reflective tape "Diamond Grade"
[3] Statistical error 1 σ, environmental conditions constant, min. warm-up time 10 min.
[4] Average service life of 50,000 h at T_A = +25 °C.

Interfaces

Switching output	Push-pull: PNP/NPN (100 mA) [1]
Multifunctional input (MF)	1 x MF [2] [3]
Data interface	HIPERFACE

[1] HIGH = > V_S - 3 V / LOW = < 2 V.
[2] HIGH = > 12 V / LOW = < 3 V.
[3] Not reverse-polarity protected.

Mechanics/electronics

Supply voltage V_s	DC 18 V ... 30 V, limit values

[1] May not fall short of or exceed V_S tolerances.
[2] For HIPERFACE®, after loss of reflector < 1 s at Vmax < 1 m/s.
[3] Short-circuit protected, overload-protected. Max. 100 nF / 20 mH.

Ripple	< 5 V_{pp} [1]
Initialization time	0.9 s [2]
Connection type	Male connector, 1 x M12, 4-pin, 1 x M12, 8-pin
Indication	Display
Weight	Approx. 1,650 g
Output current I_A	≤ 100 mA [3]
Current consumption	At 24 V DC < 250 mA

[1] May not fall short of or exceed V_S tolerances.

[2] For HIPERFACE®, after loss of reflector < 1 s at Vmax < 1 m/s.

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

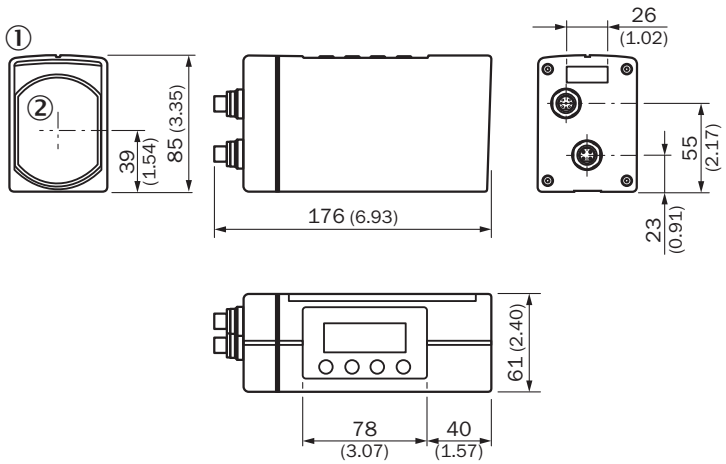
Ambient data

Enclosure rating	IP 65
Protection class	II [1]
Electromagnetic compatibility (EMC)	EN 61000-6-2, EN 55011: Class B
Ambient temperature	Operation: –10 °C ... +55 °C Operation with cooling case: –10 °C ... +75 °C 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
Mechanical load	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))

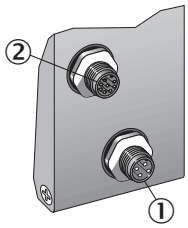
DME4000 HIPERFACE



① LC display
② Center of optical axis

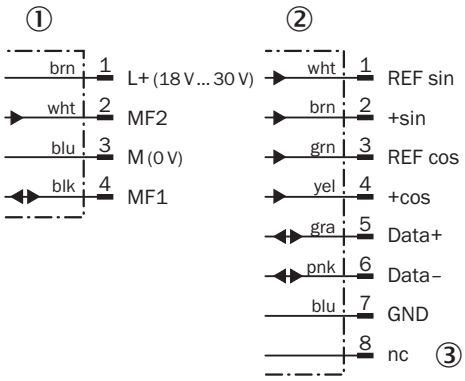
Connection type

DME4000 HIPERFACE Connector 1 x M12, 4-pin 1 x M12, 8-pin



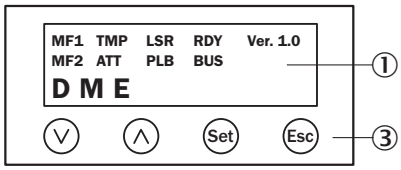
① Supply voltage M12, 4-pin
② HIPERFACE connection M12, 8-pin

Connection diagram



① Supply voltage M12, 4-pin
② HIPERFACE connection M12, 8-pin
③ Not assigned

Adjustment possible



① LC display
③ Keypad

Recommended accessories

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

	Brief description	Type	Part no.
Terminal and alignment brackets			

	Brief description	Type	Part no.
	Alignment unit, Stainless steel	BEF-DME align-ment bracket	2040695
Plug connectors and cables			
	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
	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

	Brief description	Type	Part no.
	Head A: male connector, M12, 4-pin, straight, B-coded Cable: PROFIBUS DP, terminal resistor	STE-END-Q	6021156
Reflectors			
	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