DME4000-127

DME4000

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.

DME4000-127 | DME4000

TIME-OF-FLIGHT SENSORS

Ordering information

Type	part no.
DME4000-127	1029812

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
Resolution	250 µm … 4,000 µm [1]
Repeatability	1 mm [2] [3]
Measurement accuracy	± 3 mm
Response time	6 ms
Output time	2 ms
Emitted beam	
Light source	Laser, red [4]
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 [5]
Max. movement speed	10 m/s
Safety-related parameters	
$MTTF_D$	101 years

[1] For HIPERFACE® data interface 1/32 mm … 1/2 mm, for sin/cos 0.25 mm … 4 mm.

[2] On "diamond grade" reflective tape.

[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.

[5] Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

DC$_{avg}$	0%

[1] For HIPERFACE® data interface 1/32 mm … 1/2 mm, for sin/cos 0.25 mm … 4 mm.

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Interfaces

HIPERFACE®	✓
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 < 1,000 mA
Ripple	< 5 V$_{pp}$ [1]
Initialization time	0.9 s [2]
Display	Display
Enclosure rating	IP65
Protection class	II [3]
Connection type	
	Male connector

[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] 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	–40 °C … +55 °C, operation with heating –40 °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

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

Certificates

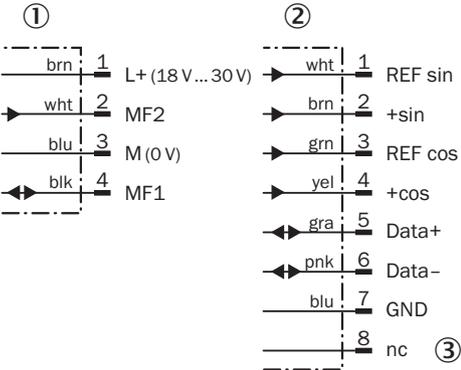|	
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Dimensional drawing DME4000 HIPERFACE
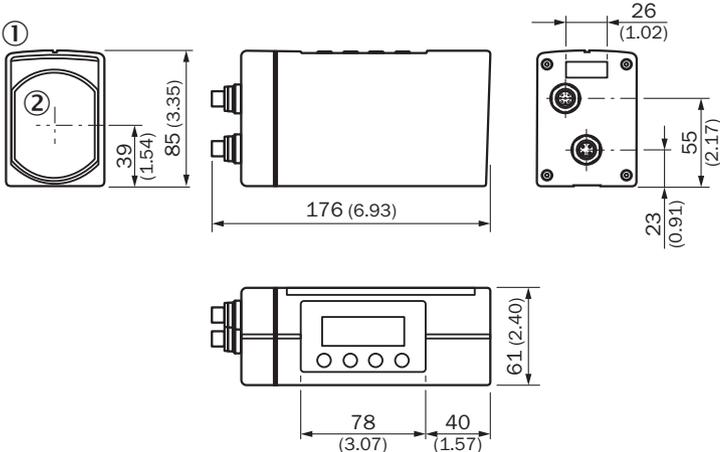
Dimensions in mm (inch)
① LC display
② Center of optical axis

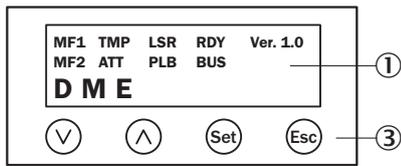## Connection type DME4000 HIPERFACE Connector 1 x M12, 4-pin 1 x M12, 8-pin
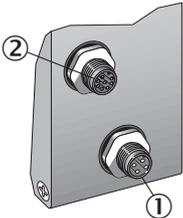
① Supply voltage M12, 4-pin
② HIPERFACE connection M12, 8-pin

Connection diagram

①
brn	1	L+ (18 V … 30 V)
wht	2	MF2
blu	3	M (0 V)
blk	4	MF1

②
wht	1	REF sin
brn	2	+sin
grn	3	REF cos
yel	4	+cos
gra	5	Data+
pnk	6	Data−
blu	7	GND
	8	nc ③

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

Adjustment possible

```
┌─────────────────────────────┐
│  MF1  TMP  LSR  RDY  Ver. 1.0 │──① 
│  MF2  ATT  PLB  BUS           │
│  D M E                        │
│  (∨)   (∧)   (Set)  (Esc)     │──③
└─────────────────────────────┘
```
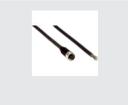
① LC display
③ Keypad

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			
	• **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 • **Description:** PROFIBUS DP, twisted pair, shielded • **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
	• **Connection type head A:** Male connector, M12, 4-pin, straight, B-coded • **Signal type:** PROFIBUS DP • **Description:** PROFIBUS DP, terminal resistor	STE-END-Q	6021156
	• **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 • **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-G05MQ	6026005
	• **Connection type head A:** Female connector, M12, 5-pin, straight • **Connection type head B:** Flying leads • **Signal type:** CANopen • **Cable:** 6 m • **Description:** CANopen, shielded	DOL-1205-G06MK	6028326
	• **Connection type head A:** Female connector, 7/8", 5-pin, straight • **Signal type:** DeviceNet™, CANopen • **Description:** DeviceNet™, terminal resistor, shielded, 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
	• **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 10 m, 8-wire, PUR, halogen-free • **Description:** Shielded • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A68-100XXXXLEAX	6032450
	• **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 5 m, 8-wire, PUR, halogen-free • **Description:** Shielded	YF2A68-050XXXXLEAX	6032449

	Brief description	Type	part no.
	• **Application:** Drag chain operation, Zones with oils and lubricants • **Connection type head A:** Female connector, M12, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 2 m, 8-wire, PUR, halogen-free • **Description:** Shielded • **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
	• **Connection type head A:** Female connector, M16, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 10 m, PUR, halogen-free • **Description:** Shielded	YF2Z18-100XXXXLE-BX	2027193
	• **Connection type head A:** Female connector, M16, 8-pin, straight • **Connection type head B:** Flying leads • **Cable:** 5 m, PUR, halogen-free • **Description:** Shielded	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

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."

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