



## Long range distance sensors DME4000, HIPERFACE

DME4000-117



**Model Name** > [DME4000-117](#)  
**Part No.** > [1029807](#)

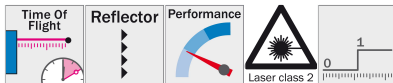


**At a glance**

- Multiple measurement and positioning options from 0.15 m to 220 m
- High-speed output rate
- Very high resolution, repeatability and accuracy
- Illuminated LC display with measured value output and setup diagnostic information
- Visible red light and bracket with springs for alignment
- Variety of interfaces: SSI, RS-422, PROFIBUS, HIPERFACE, CANopen, DeviceNet

**Your benefits**

- Fast measurement cycles offer optimized integration into control loops for increased productivity
- Red laser light as well as adjustable mounting brackets (optional accessory) enable fast and easy alignment, ensuring on-time and cost-effective installation
- Multi-point self checks provide maintenance and replacement warnings increasing overall machine availability
- A tough metal housing as well as heating and cooling accessories ensure reliability in rough ambient conditions
- User-friendly display with easy-to-use menu along with external PC/PLC programming offers fast and cost-efficient setup
- Multiple serial interfaces provide high-speed position output to the controller and high flexibility in application integration
- Integrated speed monitoring offers additional information for increased process reliability



**Performance**

Measurement range:	0.15 m ... 50 m, on reflective tape "Diamond Grade"
Resolution <sup>1)</sup> :	0.25 mm ... 4 mm
Repeatability <sup>2)</sup> , <sup>3)</sup> :	1 mm
Accuracy:	± 3 mm
Light source <sup>4)</sup> :	Laser, red
Typ. light spot size (distance):	130 mm (at 70 m) 270 mm (at 150 m) 360 mm (at 220 m)
Output rate:	2 ms
Max. movement speed:	10 m/s
Laser class:	2 (EN 60825-1/CDRH)

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  $\sigma$ , environmental conditions constant, min. warm-up time 10 min 4) Average service life of 50,000 h at  $T_A = +25^\circ\text{C}$

## Interfaces

Data interface:	HIPERFACE
Output type <sup>1)</sup> :	Push-pull: PNP/NPN (100 mA)
Multifunctional input (MF) <sup>2), 3)</sup> :	1 x MF

1) HIGH =  $> V_S - 3\text{ V}$  / LOW =  $< 2\text{ V}$  2) HIGH =  $> 12\text{ V}$  / LOW =  $< 3\text{ V}$  3) Not reverse-polarity protected

## Mechanics/electronics

Supply voltage $V_S$ :	DC 18 V ... 30 V, limit values
Ripple <sup>1)</sup> :	$< 5\text{ Vpp}$
Initialization time <sup>2)</sup> :	0.9 s
Indication:	Display
Weight:	Ca. 1,650 g
Output current $I_A$ <sup>3)</sup> :	$\leq 100\text{ mA}$
Power consumption:	At 24 V DC $< 250\text{ mA}$
Connection type:	Male connector, 1 x M12, 4-pin, 1 x M12, 8-pin

1) May not fall short of or exceed  $V_S$  tolerances 2) For HIPERFACE, after loss of reflector  $< 1\text{ s}$  at max. speed  $V_{\text{max}} < 1\text{ m/s}$  3) Short circuit/overload protected. Max.

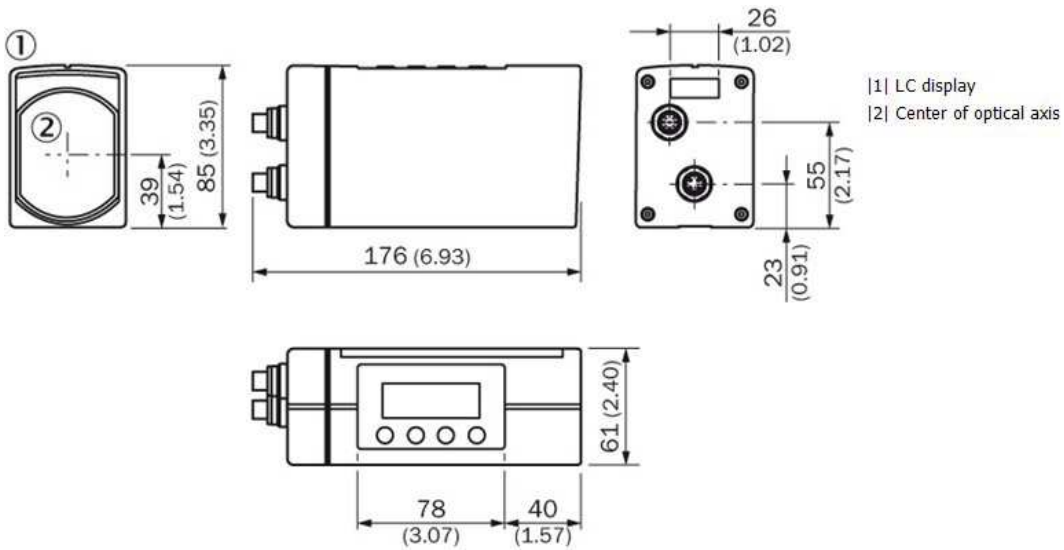
100 nF / 20 mH

## Ambient data

Enclosure rating:	IP 65
Protection class <sup>1)</sup> :	II
Effect of air pressure:	0.3 ppm/hPa
Effect of air temperature:	1 ppm/K
Temperature drift:	Typ. 0.1 mm/K
Ambient temperature:	Operation: $-10 \dots 55^\circ\text{C}$ Operation with cooling case: $-10 \dots 75^\circ\text{C}$ Storage: $-25 \dots 75^\circ\text{C}$
Mechanical load:	Noise: EN 600 68-2-64 Shock: EN 600 68-2-27/-2-29 Sine: EN 600 68-2-6
Electromagnetic compatibility (EMC):	EN 61000-6-2, EN 55011: Class B

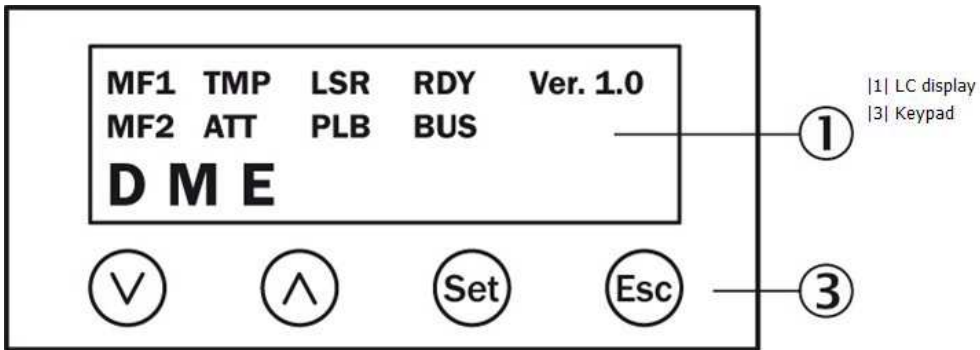
1) Reference voltage DC 32 V

## Dimensional drawing

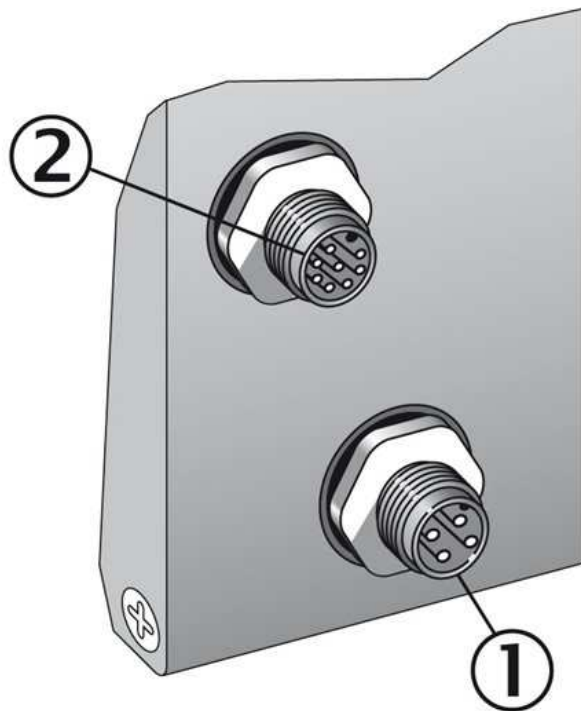


All dimensions in mm (inch)

## Adjustments

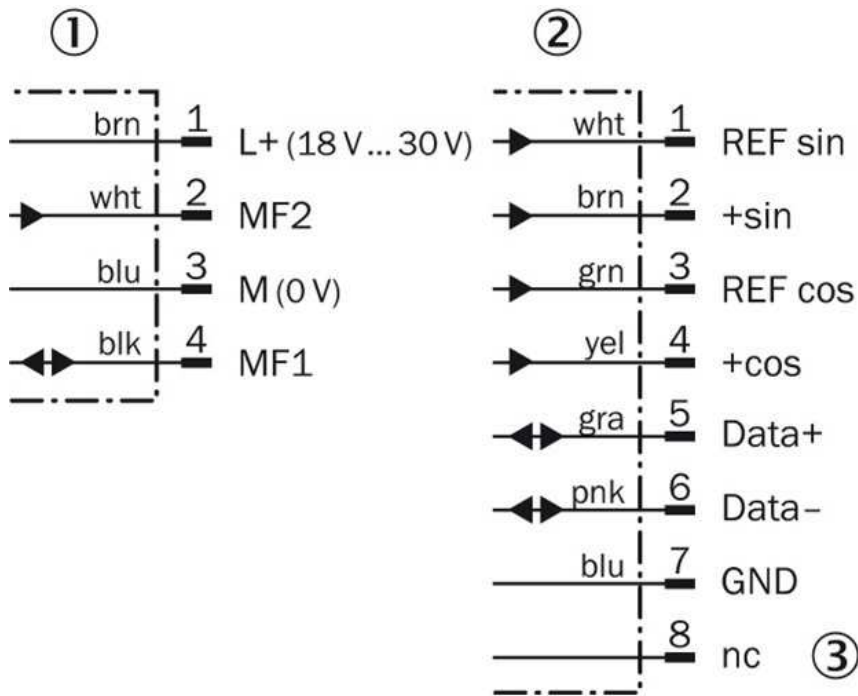


Connection type



- |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 connected

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