



Long range distance sensors DME4000, HIPERFACE

DME4000-227



Model Name > [DME4000-227](#)
Part No. > [1029804](#)

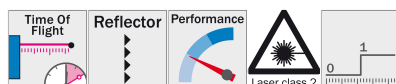


At a glance

- 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

Measuring range:	0.15 m ... 130 m, on Diamond Grade
Resolution ¹⁾ :	0.25 mm ... 4 mm
Repeatability ²⁾ , ³⁾ :	2 mm
Accuracy:	± 5 mm
Light source ⁴⁾ :	Laser, red
Laser protection 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)
Output rate:	2 ms
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 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 $T_A = +25^\circ\text{C}$

Interfaces

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

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

Mechanics/electronics

Supply voltage V_S :	DC 18 V ... 30 V, limit values
Ripple ¹⁾ :	< 5 Vpp
Initialization time ²⁾ :	0.9 s
Indication:	Display
Weight:	Ca. 1,650 g
Output current I_A ³⁾ :	$\leq 100 \text{ mA}$
Power consumption:	At 24 V DC < 1,000 mA
Connection type:	Connector 1 x M12, 4-pin, 1 x M12, 8-pin

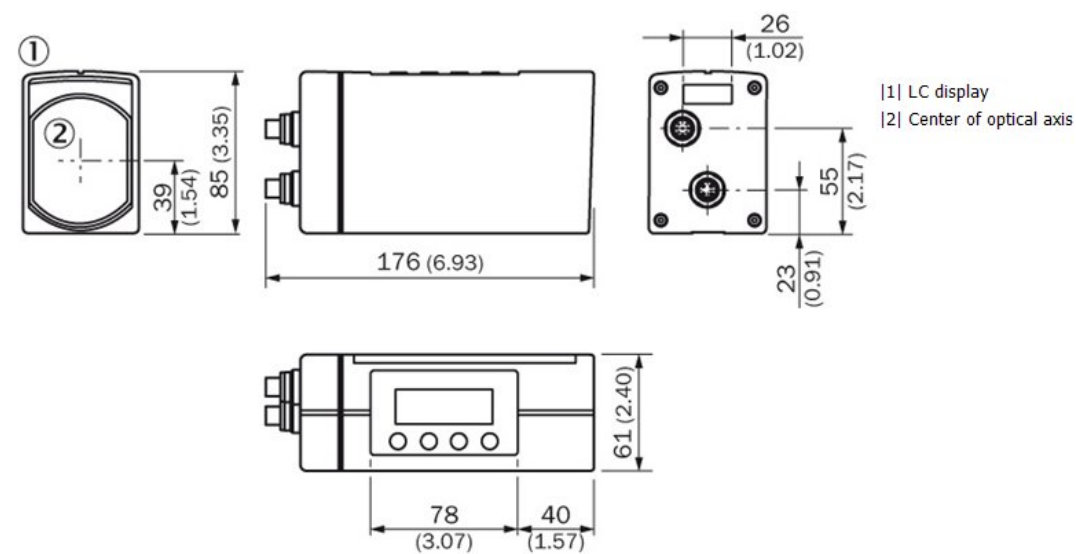
¹⁾ May not fall short of or exceed V_S tolerances ²⁾ For HIPERFACE, after loss of reflector < 1 s at max. speed $V_{\text{max}} < 1 \text{ m/s}$ ³⁾ Short circuit/overload protected. Max. 100 nF/20 mH

Ambient data

Enclosure rating:	IP 65
Protection class ¹⁾ :	II
EMC:	EN 61000-6-2, EN 55011: Class B
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 with heating: -40 ... 55 °C Operation with cooling case: -40 ... 75 °C Storage: -25 ... 75 °C
Mechanical load:	Noise: EN 600 68-2-64 Shock: EN 600 68-2-27/-2-29 Sine: EN 600 68-2-6

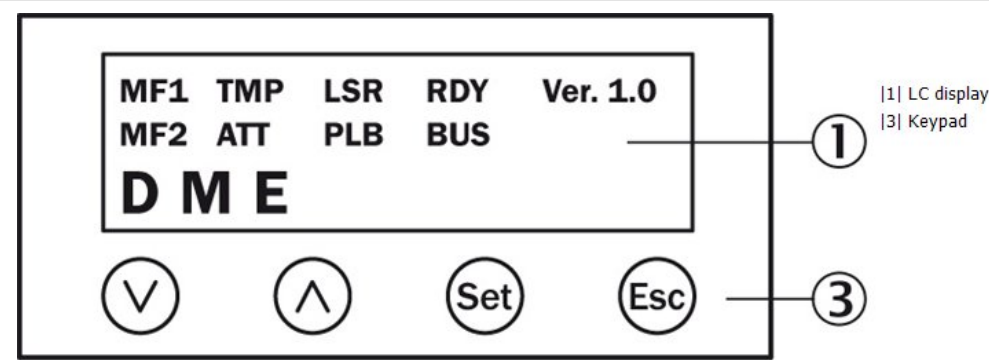
¹⁾ Reference voltage DC 32 V

Dimensional drawing

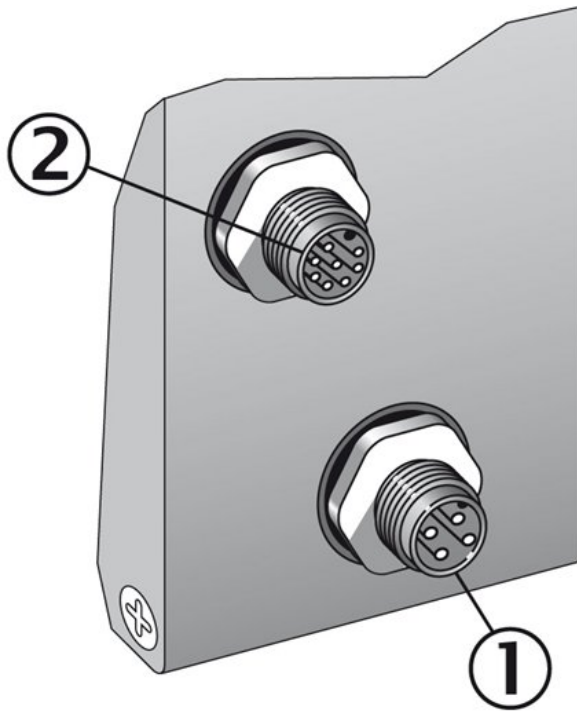


All dimensions in mm (inch)

Adjustments

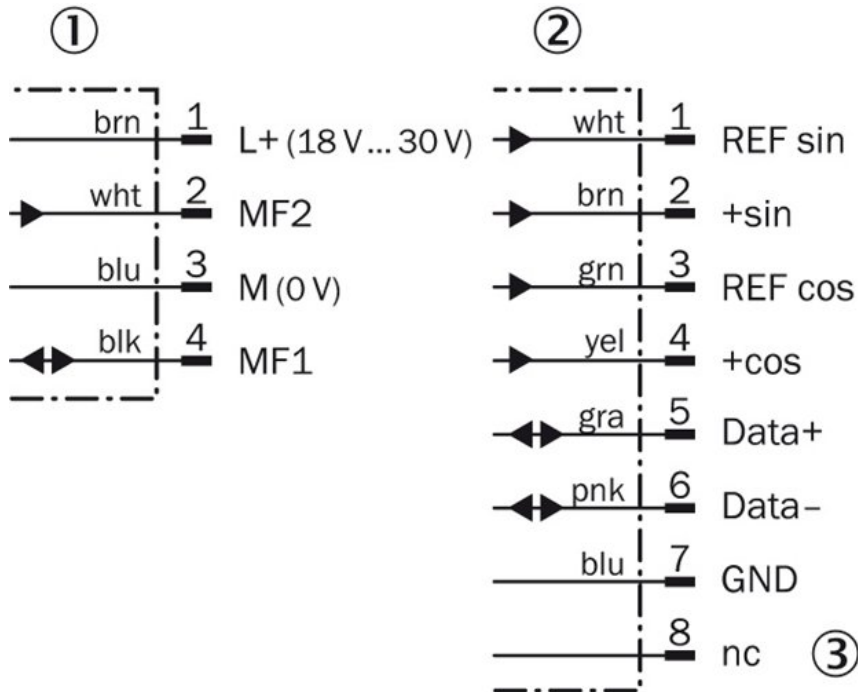


Connection type



- |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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