



Long range distance sensors  
DME4000, DeviceNet

DME4000-114



**Model Name** > [DME4000-114](#)  
**Part No.** > [1029800](#)

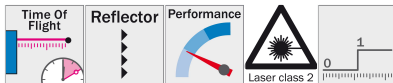


**At a glance**

- 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:	0.05 mm ... 5 mm
Repeatability <sup>1); 2)</sup> :	1 mm
Accuracy:	± 3 mm
Light source <sup>3)</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) On reflective tape "Diamond Grade" 2) Statistical error 1  $\sigma$ , environmental conditions constant, min. warm-up time 10 min 3) Average service life of 50,000 h at T<sub>A</sub> = +25 °C

## Interfaces

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

1) HIGH = > V<sub>S</sub> - 3 V / LOW = < 2 V 2) HIGH = > 12 V / LOW = < 3 V 3) Not reverse-polarity protected

## Mechanics/electronics

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Supply voltage V<sub>s</sub>: DC 18 V ... 30 V, limit values  
Ripple<sup>1)</sup>: < 5 V<sub>pp</sub>  
Initialization time<sup>2)</sup>: 1.5 s  
Indication: Display  
Weight: Ca. 1,650 g  
Output current I<sub>A</sub><sup>3)</sup>: ≤ 100 mA  
Power consumption: At 24 V DC < 250 mA  
Connection type: Male connector, 1 x M12, 4-pin, 1 x M16, 8-pin

1) May not fall short of or exceed V<sub>S</sub> tolerances 2) After loss of reflector < 1 s at max. speed V<sub>max</sub> < 1 m/s 3) Short circuit/overload protected. Max. 100 nF/20 mH

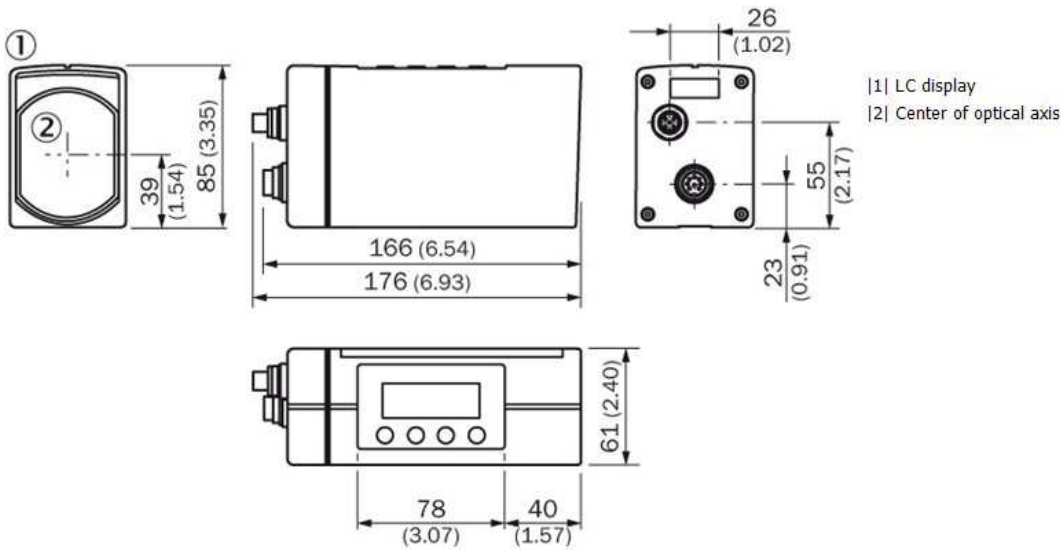
## Ambient data

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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 ... 55 °C  
Operation with cooling case: -10 ... 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  
Electromagnetic compatibility (EMC): EN 61000-6-2, EN 55011: Class B

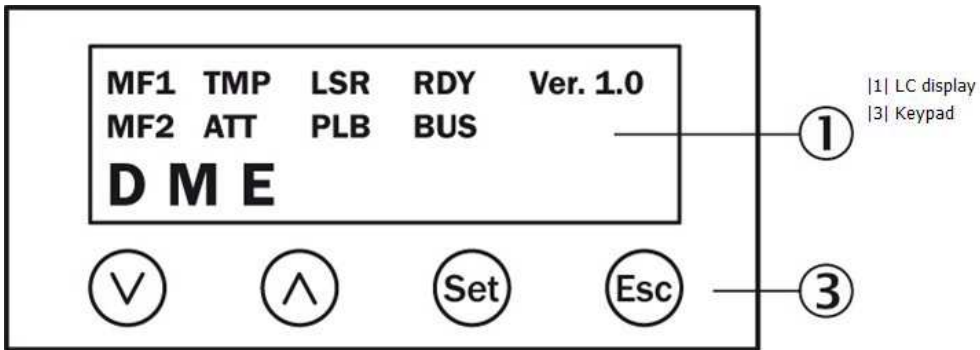
1) Reference voltage DC 32 V

## Dimensional drawing

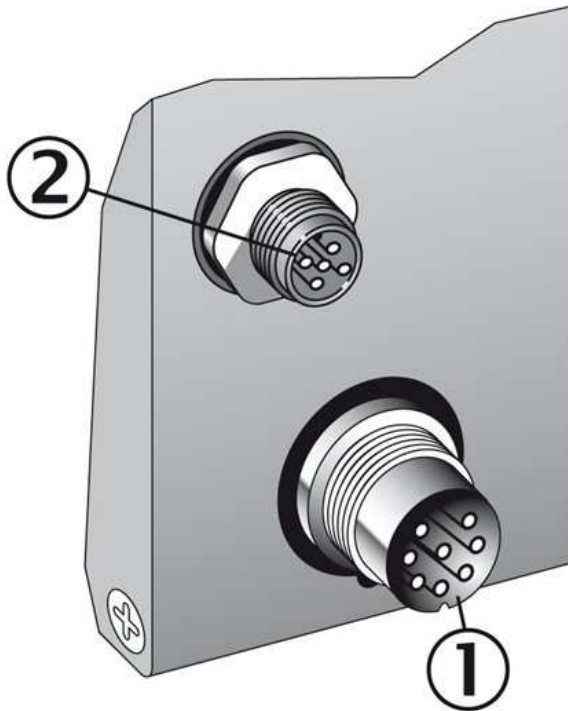


All dimensions in mm (inch)

## Adjustments

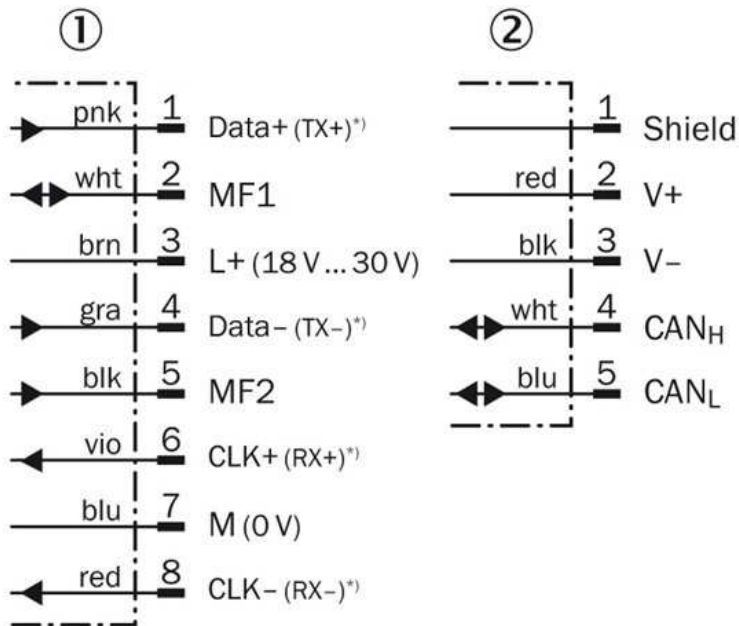


## Connection type



- |1| Connector M16, 8-pin
- |2| Connector M12, 5-pin, A-coded

## Connection diagram



- |1| Connector M16, 8-pin
- |2| Connector M12, 5-pin, A-coded

<sup>\*)</sup> Internal interface, for production use only.

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