



## Long range distance sensors DME4000, PROFIBUS DP

DME4000-222



**Model Name** > [DME4000-222](#)  
**Part No.** > [1029795](#)

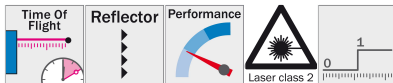


**At a glance**

- 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 ... 130 m, on reflective tape "Diamond Grade"
Resolution:	0.05 mm ... 5 mm
Repeatability <sup>1); 2)</sup> :	2 mm
Accuracy:	± 5 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

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

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

## Mechanics/electronics

Supply voltage V <sub>s</sub> :	DC 18 V ... 30 V, limit values
Ripple <sup>1)</sup> :	< 5 Vpp
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 < 1,000 mA
Connection type:	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded

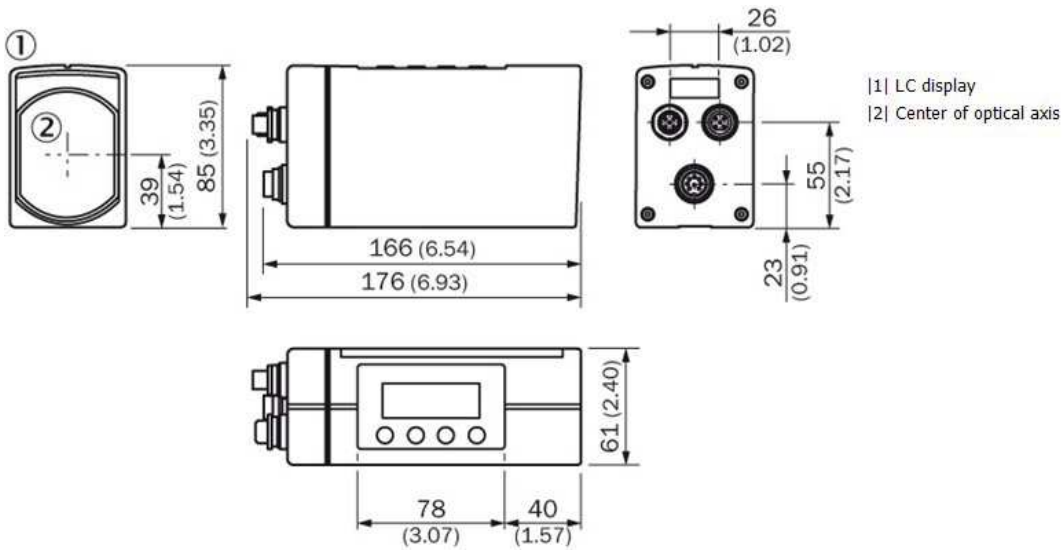
<sup>1)</sup> May not fall short of or exceed V<sub>S</sub> tolerances <sup>2)</sup> After loss of reflector < 1 s at max. speed V<sub>max</sub> < 1 m/s <sup>3)</sup> Short circuit/overload protected. Max. 100 nF/20 mH

## 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 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
Electromagnetic compatibility (EMC):	EN 61000-6-2, EN 55011: Class B

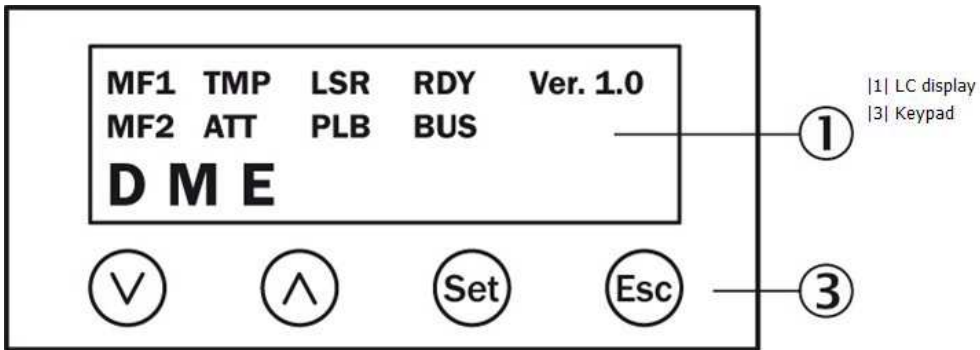
<sup>1)</sup> Reference voltage DC 32 V

## Dimensional drawing

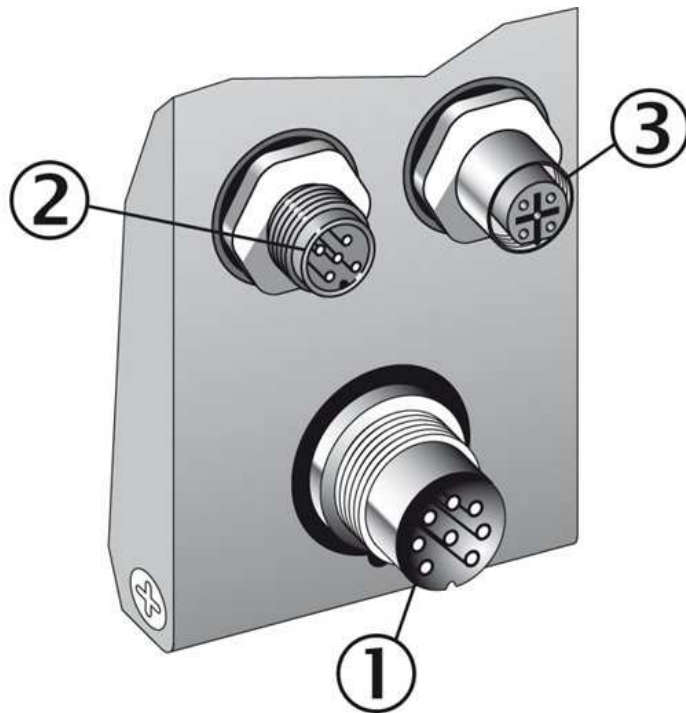


All dimensions in mm (inch)

## Adjustments

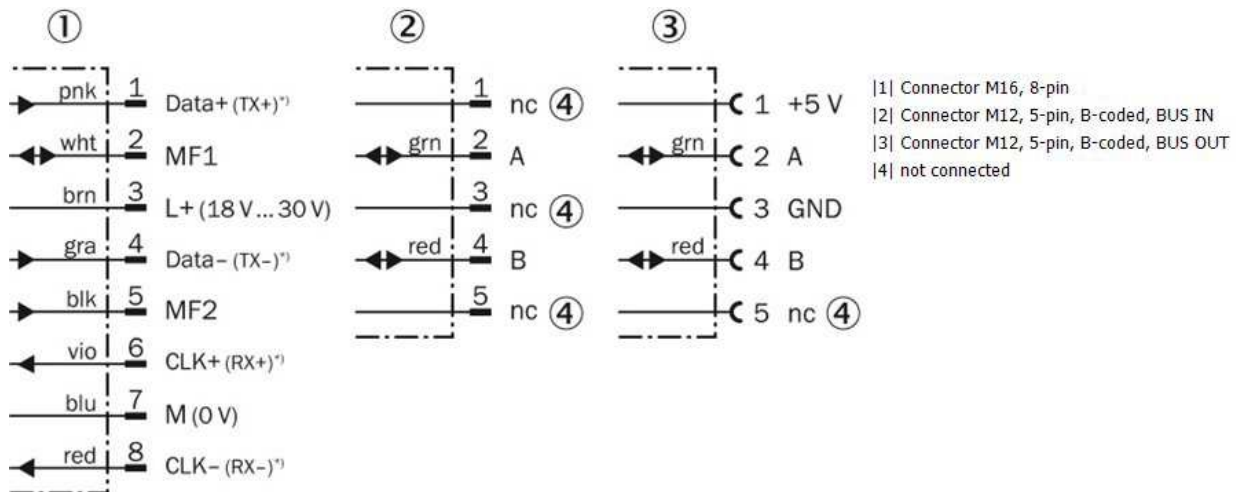


## Connection type



- |1| Connector M16, 8-pin
- |2| Connector M12, 5-pin, B-coded, BUS IN
- |3| Connector M12, 5-pin, B-coded, BUS OUT

## Connection diagram



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

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