



## Long range distance sensors DME4000, PROFIBUS DP

DME4000-122



**Model Name** > [DME4000-122](#)  
**Part No.** > [1029793](#)

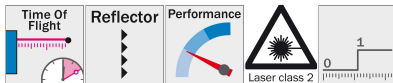


**At a glance**

- 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: PROFIBUS DP  
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 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

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

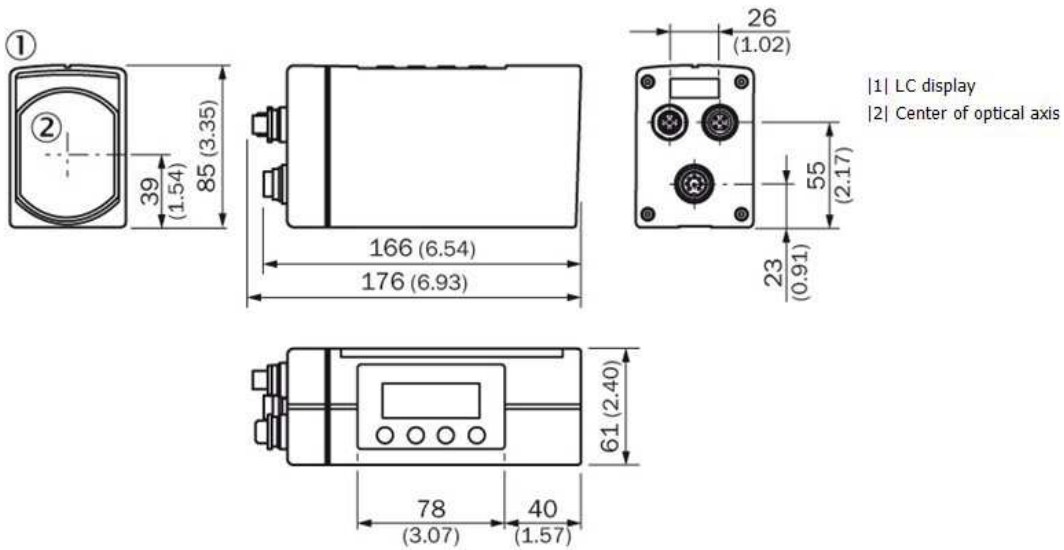
## Ambient data

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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 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

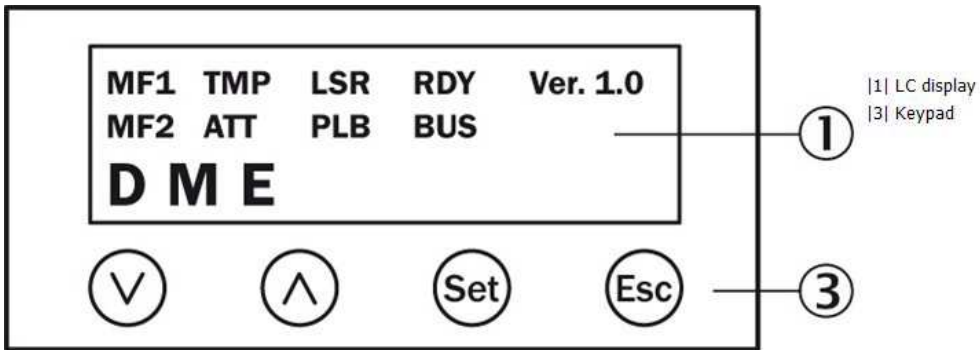
1) Reference voltage DC 32 V

## Dimensional drawing

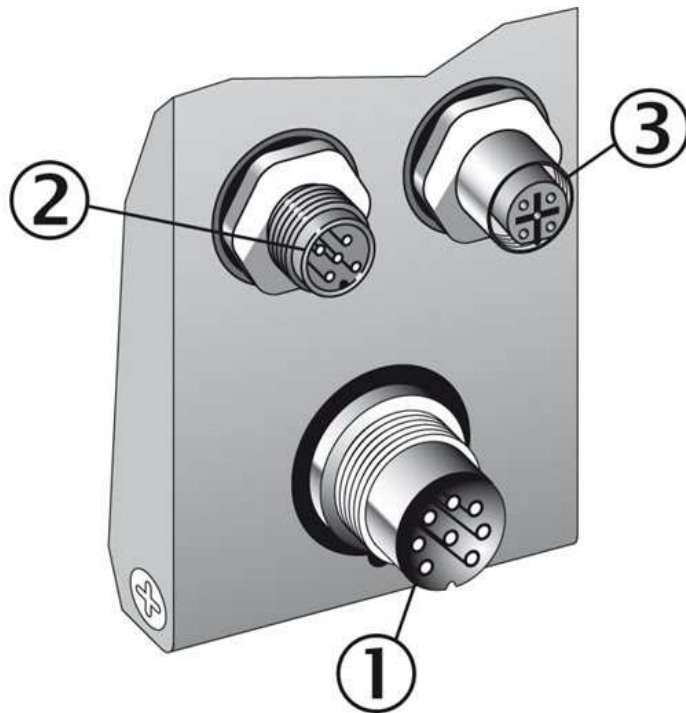


All dimensions in mm (inch)

## Adjustments

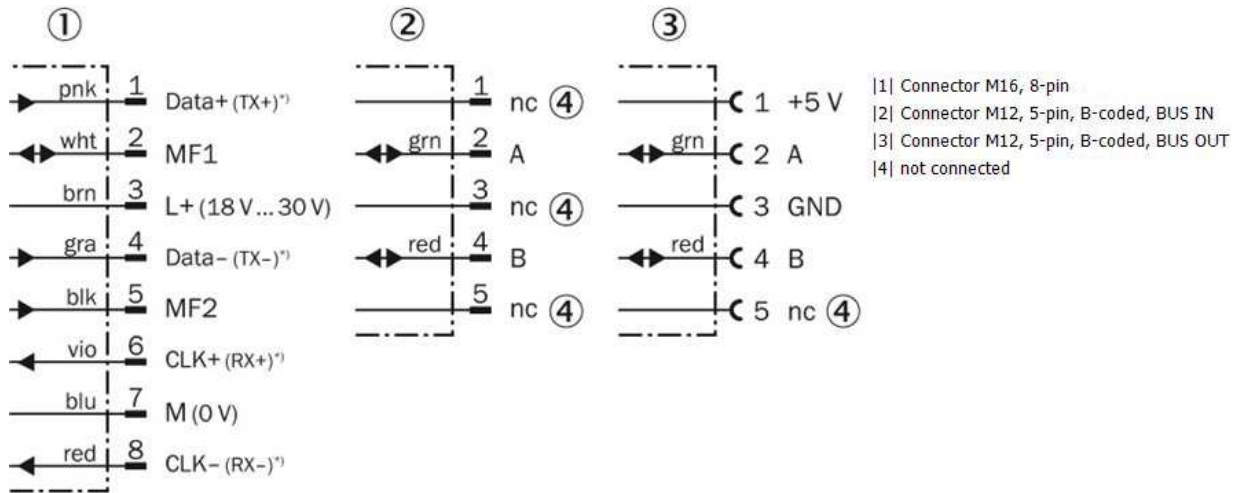


## Connection type



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

## Connection diagram



<sup>1)</sup> Internal interface, for production use only.

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)