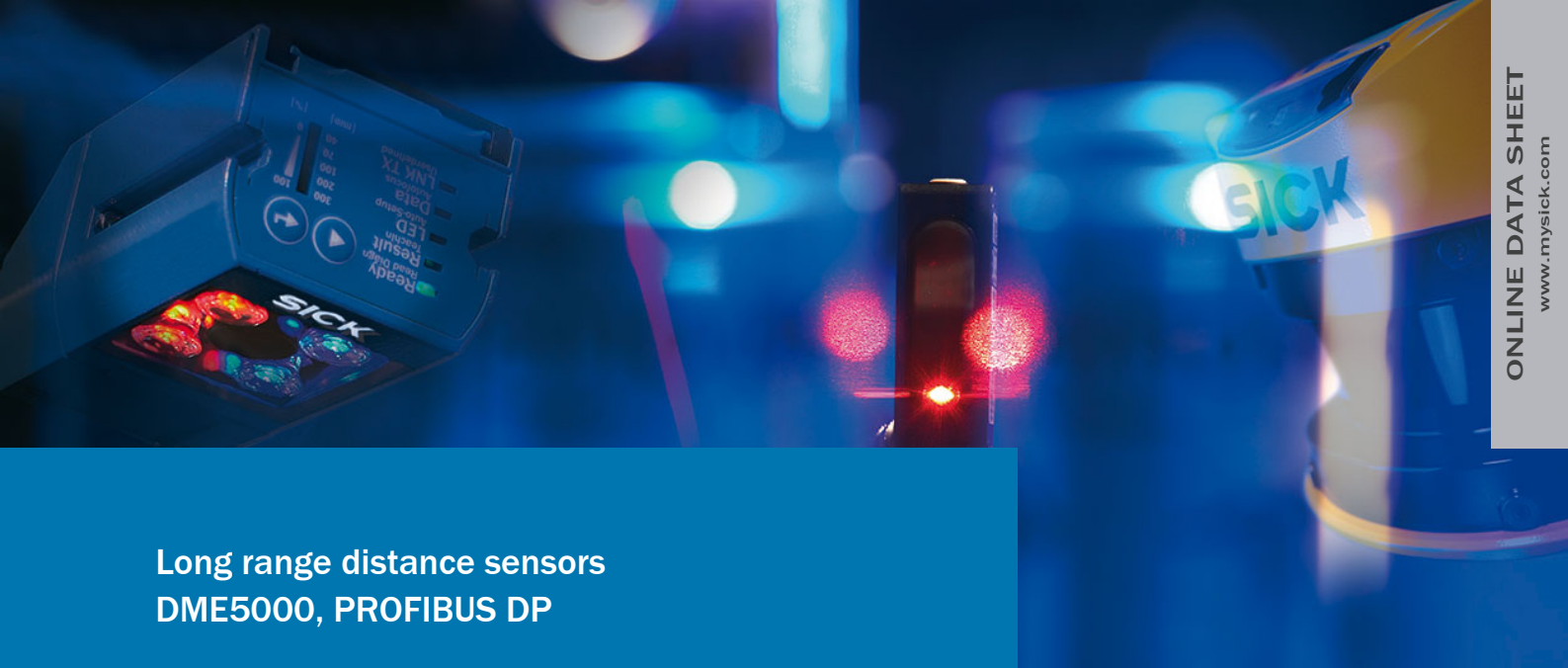




Long range distance sensors DME5000, PROFIBUS DP

DME5000-312



Model Name > [DME5000-312](#)
Part No. > [1025245](#)

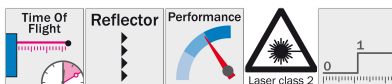


At a glance

- Measurement range from 0.15 m to 300 m
- Very fast measurement cycles
- Highest accuracy, repeatability and system availability
- Illuminated LC display with diagnostic information
- Visible red light and bracket with springs for alignment
- Variety of interfaces: SSI, RS-422, PROFIBUS, HIPERFACE, DeviceNet

Your benefits

- Fastest measurement rate offers 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
- Highest degree of accuracy and repeatability ensures high machine availability



Performance

Measuring range ¹⁾ :	0.15 m ... 300 m, on reflective tape "Diamond Grade"
Resolution:	0.05 mm ... 5 mm
Repeatability ²⁾ , ³⁾ :	2 mm
Accuracy:	± 5 mm
Light source ⁴⁾ :	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) 2) On reflective tape "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 °C

Interfaces

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

¹⁾ HIGH = > V_S - 3 V / LOW = < 2 V ²⁾ HIGH = > 12 V / LOW = < 3 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⁾: 1.5 s
 Indication: Display
 Weight: Ca. 1,650 g
 Output current I_A ³⁾: ≤ 100 mA
 Power consumption: At 24 V DC < 250 mA
 Connection type: Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded

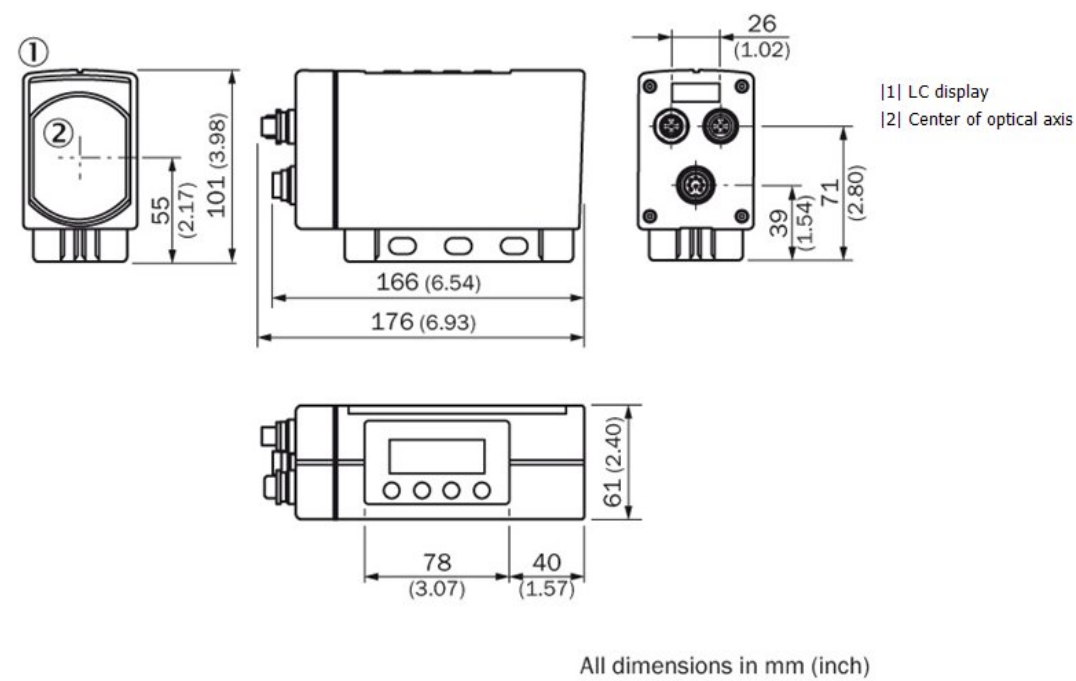
¹⁾ May not fall short of or exceed V_S tolerances ²⁾ After loss of reflector < 1 s at max. speed V_{max} < 1 m/s ³⁾ Short circuit/overload protected. Max. 100 nF/20 mH

Ambient data

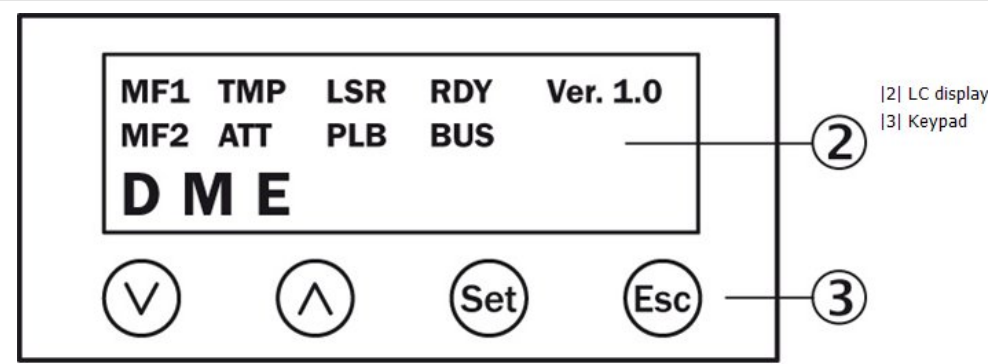
Enclosure rating: IP 65
 Protection class ¹⁾: II
 Effect of air pressure: 0.3 ppm/hPa
 Effect of air temperature: 1 ppm/K
 Temperature drift: Typ. 0.1 mm/K
 Ambient temperature: Operation: -10 ... 55 °C
 Operation with cooling case: -10 ... 75 °C
 Storage: -25 ... 75 °C
 Mechanical load: Noise: EN 600 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

¹⁾ Reference voltage DC 32 V

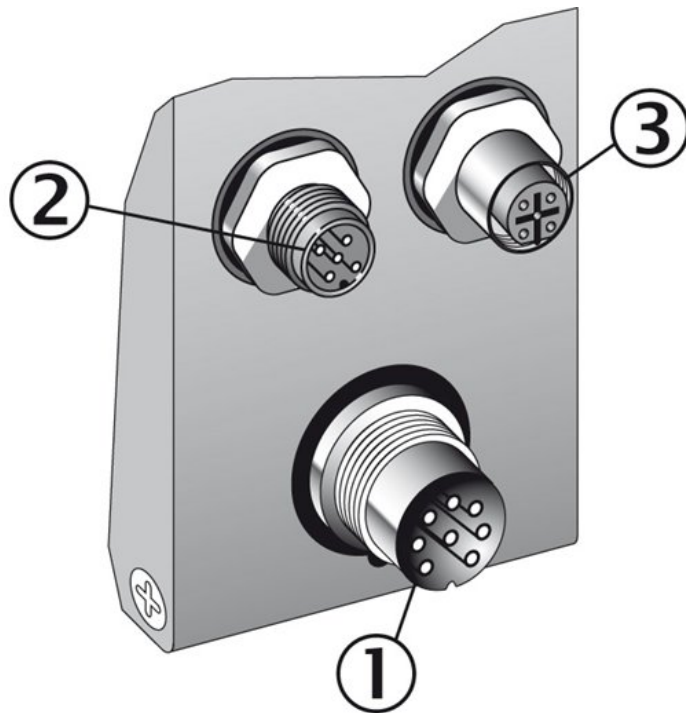
Dimensional drawing



Adjustments

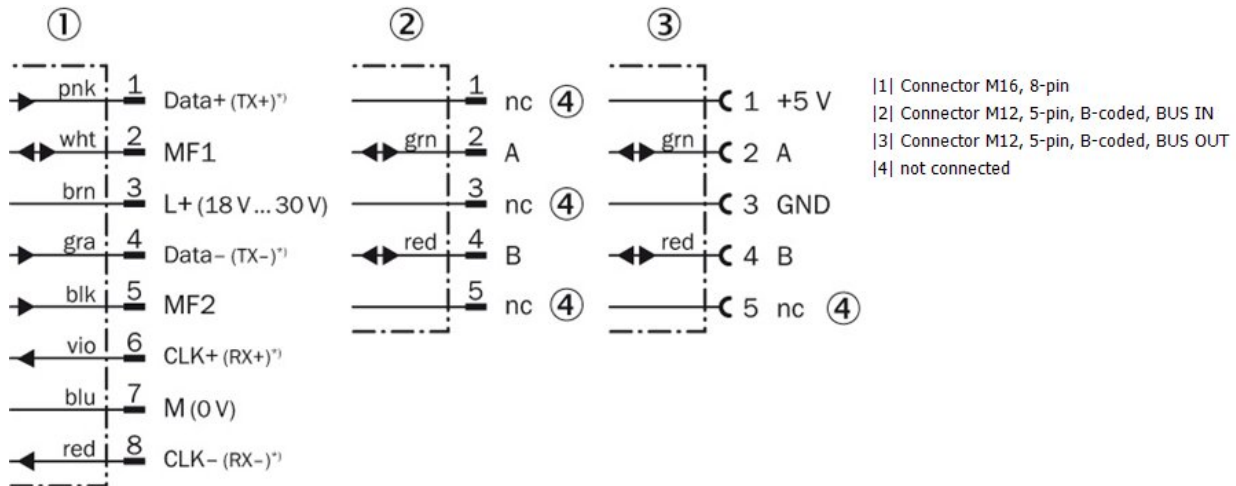


Connection type



- |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



^{*)} For connection of interface adapter.

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