



DME5000-115

DME5000

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|-------------|----------|
| DME5000-115 | 1025833 |

Other models and accessories → www.sick.com/DME5000



Detailed technical data

Features

| | |
|----------------------------------|---|
| Measuring range | 0.15 m ... 70 m, on "diamond grade" reflective tape ¹⁾ |
| Target | Reflector |
| Resolution | 50 µm ... 5,000 µm |
| Repeatability | 0.5 mm ^{1) 2)} |
| Measurement accuracy | ± 2 mm |
| Response time | 6 ms |
| Output time | 2 ms |
| Emitted beam | |
| Light source | Laser, red ³⁾ |
| Type of light | Visible red light |
| Typ. light spot size (distance) | 130 mm (at 70 m) |
| | 270 mm (at 150 m) |
| | 360 mm (at 220 m) |
| Key laser figures | |
| Normative reference | IEC 60825-1:2014, EN 60825-1:2014 |
| Laser class | 2 |
| Max. movement speed | 10 m/s |
| Safety-related parameters | |
| MTTF _D | 101 years |
| DC _{avg} | 0% |

¹⁾ On "diamond grade" reflective tape.

²⁾ Statistical error 1 σ, environmental conditions constant, min. warm-up time 10 min.

³⁾ Average service life of 50,000 h at T_A = +25 °C.

Interfaces

| | |
|-----------------------------------|--|
| DeviceNet™ | ✓ |
| Digital output | |
| Number | 2 |
| Type | Push-pull: PNP/NPN |
| Maximum output current I_A | $\leq 100 \text{ mA}$ ^{1) 2)} |
| Multifunctional input (MF) | 1 x MF ^{3) 4)} |

¹⁾ Max. 100 nF/20 mH.

²⁾ HIGH = $> V_S - 3 \text{ V}$ / LOW = $< 2 \text{ V}$.

³⁾ HIGH = $> 12 \text{ V}$ / LOW = $< 3 \text{ V}$.

⁴⁾ Not reverse-polarity protected.

Electronics

| | |
|--|------------------------------------|
| Supply voltage U_B | DC 18 V ... 30 V, limit values |
| Current consumption | At 24 V DC $< 250 \text{ mA}$ |
| Ripple | $< 5 \text{ V}_{pp}$ ¹⁾ |
| Initialization time | 1.5 s ²⁾ |
| Display | Display |
| Enclosure rating | IP65 |
| Protection class | II ³⁾ |
| Connection type | Male connector |

¹⁾ May not fall short of or exceed V_S tolerances.

²⁾ After loss of reflector $< 1 \text{ s}$ at max. speed $V_{max} < 1 \text{ m/s}$.

³⁾ Reference voltage DC 32 V.

Mechanics

| | |
|-------------------------------|-------------------------|
| Dimensions (W x H x D) | 61 mm x 101 mm x 176 mm |
| Housing material | Metal (zinc diecast) |
| Window material | Glass |
| Weight | Approx. 1,650 g |

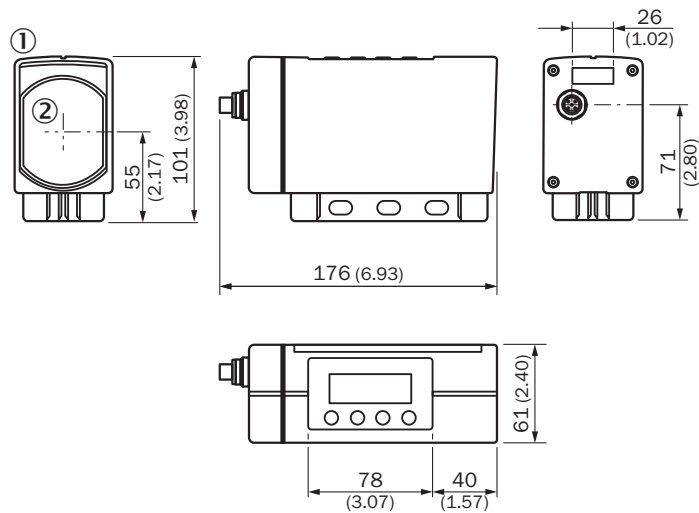
Ambient data

| | |
|--|---|
| Ambient temperature, operation | -10 °C ... +55 °C -10 °C ... +75 °C, operation with cooling case |
| Ambient temperature, storage | -25 °C ... +75 °C |
| Effect of air pressure | 0.3 ppm/hPa |
| Effect of air temperature | 1 ppm/K |
| Temperature drift | Typ. 0.1 mm/K |
| Typ. Ambient light immunity | $\leq 40,000 \text{ lx}$ |
| Mechanical load | Shock: (EN 600 68-2-27 / -2-29) Sine: (EN 600 68-2-6) Noise: (EN 600 68-2-64) |
| Electromagnetic compatibility (EMC) | EN 61000-6-2, EN 55011 |

Classifications

| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270801 |
| ECLASS 5.1.4 | 27270801 |
| ECLASS 6.0 | 27270801 |
| ECLASS 6.2 | 27270801 |
| ECLASS 7.0 | 27270801 |
| ECLASS 8.0 | 27270801 |
| ECLASS 8.1 | 27270801 |
| ECLASS 9.0 | 27270801 |
| ECLASS 10.0 | 27270801 |
| ECLASS 11.0 | 27270801 |
| ECLASS 12.0 | 27270916 |
| ETIM 5.0 | EC001825 |
| ETIM 6.0 | EC001825 |
| ETIM 7.0 | EC001825 |
| ETIM 8.0 | EC001825 |
| UNSPSC 16.0901 | 41111613 |

Dimensional drawing DME5000-xx5 DeviceNet

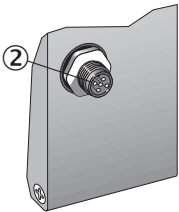


Dimensions in mm (inch)

① LC display

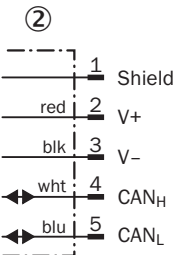
② Center of optical axis

Connection type DME4/5xxx-xx5 DeviceNet Connector M12, 5-pin, A-coded



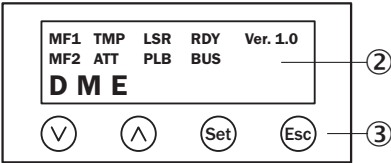
② Connector M12, 5-pin, A-coded

Connection diagram DMExxx-xx5 DeviceNet



② Connector M12, 5-pin, A-coded

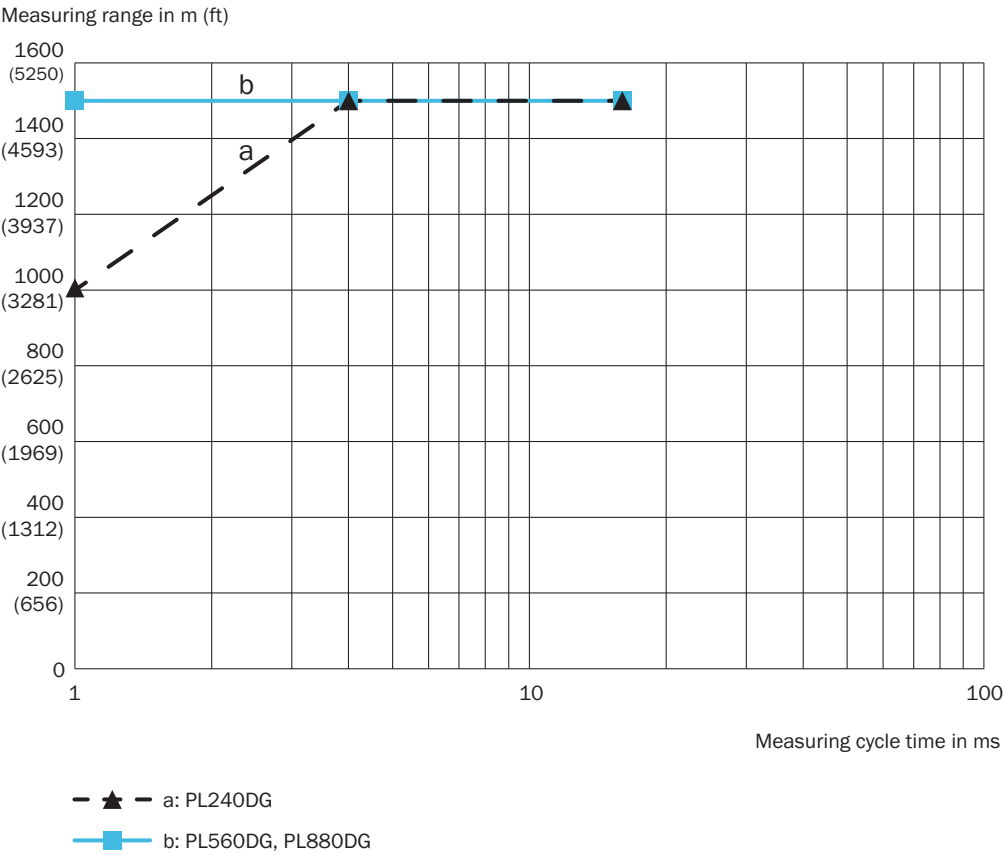
Adjustment possible



② LC display


③ Keypad

Working range diagram DL1000 measuring range based on measurement cycle time and reflector type



Recommended accessories

Other models and accessories → www.sick.com/DME5000

| | Brief description | Type | part no. |
|---|--|------------|------------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none">Description: Alignment unit for DME5000, stainless steel (1.4541), incl. mounting material, additional base plate mounting kit requiredItems supplied: Mounting hardware included | BEF-AH-DME | 2027721 |
| reflectors and optics | | | |
| | Strich | | On request |

| | Brief description | Type | part no. |
|---|---|--------------------|------------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, A-coded • Connection type head B: Flying leads • Signal type: Power, CAN • Cable: 5 m, 5-wire • Description: Power, unshielded, CAN | DOL-1205-G05M_Can | 6021166 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Fieldbus, CANopen, DeviceNet™ • Cable: 10 m, 5-wire, PUR, halogen-free • Description: Fieldbus, shielded, CANopen, DeviceNet™ • Connection systems: Flying leads • Note: Shielded on pin 1 | YF2A14-100C1BXLEAX | 6021175 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, straight • Connection type head B: Flying leads • Cable: 2 m, 8-wire, PUR, halogen-free • Description: Shielded • Connection systems: Flying leads | YF2A68-020XXXXLEAX | 6032448 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, straight • Connection type head B: Flying leads • Cable: 5 m, 8-wire, PUR, halogen-free • Description: Shielded | YF2A68-050XXXXLEAX | 6032449 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, straight • Connection type head B: Flying leads • Cable: 10 m, 8-wire, PUR, halogen-free • Description: Shielded | YF2A68-100XXXXLEAX | 6032450 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 10 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Connection systems: Flying leads • Application: Zones with oils and lubricants | DOL-1205-G10MQ | 6026008 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 5 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Connection systems: Flying leads • Application: Zones with oils and lubricants | DOL-1205-G05MQ | 6026006 |
| | Strich | | On request |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 15 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Connection systems: Flying leads • Application: Zones with oils and lubricants | DOL-1205-G15MQ | 6032637 |
| | Strich | | On request |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 5-pin, straight, B-coded • Connection type head B: Flying leads • Signal type: PROFIBUS DP • Cable: 10 m, 2-wire, PUR, halogen-free • Description: PROFIBUS DP, twisted pair, shielded • Note: Wire shield Al-Pt film, overall shield C-screen tin-plated • Application: Zones with oils and lubricants, Drag chain operation | STL-1205-G10MQ | 6026007 |
| | Strich | | On request |
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