



DME5000-211S08

DME5000

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|----------------|----------|
| DME5000-211S08 | 1047031 |

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



Detailed technical data

Mechanics/electronics

| | |
|--|--------------------------------|
| Supply voltage V_S | DC 18 V ... 30 V, limit values |
| Ripple | $< 5 V_{pp}^{1)}$ |
| Initialization time | 1.5 s ²⁾ |
| Housing material | Metal (zinc diecast) |
| Window material | Glass |
| Connection type | Male connector, M16, 8-pin |
| Indication | Display |
| Weight | Approx. 1,650 g |
| Current consumption | At 24 V DC < 250 mA |
| Dimensions (W x H x D) | 61 mm x 101 mm x 176 mm |
| Enclosure rating | IP65 |
| Protection class | II ³⁾ |

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⁾ Reference voltage DC 32 V.

Performance

| | |
|---------------------------------------|--|
| Measurement range min ... max: | 0.15 m ... 150 m, on "diamond grade" reflective tape ¹⁾ |
| Target | Reflector |
| Resolution | 0.05 mm ... 5 mm |
| Repeatability | 1 mm ^{1) 2)} |
| Accuracy | ± 3 mm |
| Response time | 6 ms |
| Output time | 0.2 ms |
| Light source | Laser, red ³⁾ visible red light |

¹⁾ On "diamond grade" reflective tape.

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

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

| | |
|--|--|
| Laser class | 2, complies with 21 CFR 1040.10 and 1040.11 except for the conformance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014, EN 60825-1:2014) |
| Typ. light spot size (distance) | 130 mm (at 70 m) 270 mm (at 150 m) 360 mm (at 220 m) |
| Note | With interpolation of measurement data for high output rate |
| Max. movement speed | 10 m/s |

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 $T_A = +25 \text{ }^\circ\text{C}$.

Interfaces

| | |
|-----------------------------------|--|
| SSI | ✓ |
| 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.

Ambient data

| | |
|--|--|
| Electromagnetic compatibility (EMC) | EN 61000-6-2, EN 55011 |
| Ambient temperature, operation | -10 $^\circ\text{C}$... +55 $^\circ\text{C}$ -10 $^\circ\text{C}$... +75 $^\circ\text{C}$, operation with cooling case |
| Ambient temperature, storage | -25 $^\circ\text{C}$... +75 $^\circ\text{C}$ |
| 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) |

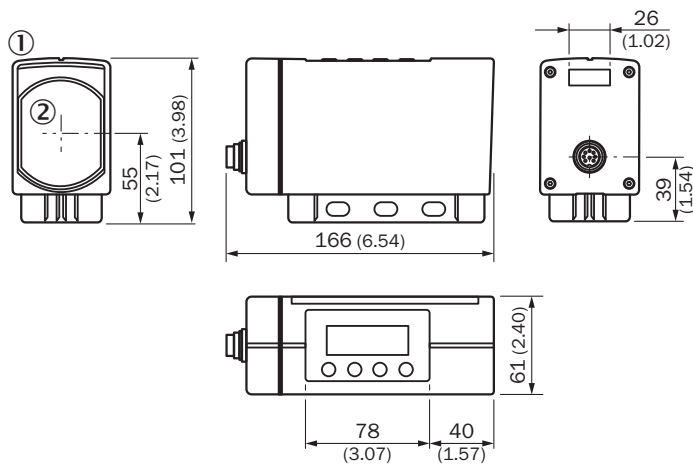
Classifications

| | |
|---------------------|----------|
| 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 (Dimensions in mm (inch))

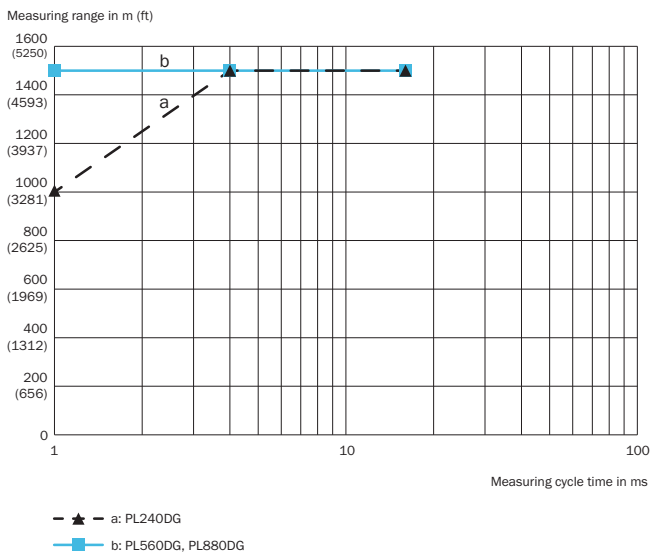
DME5000 SSI



- ① LC display
- ② Center of optical axis

Working range diagram

DL1000 measuring range based on measurement cycle time and reflector type

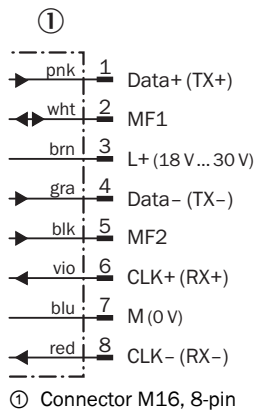


Connection type

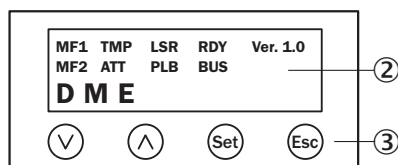
DME4/5xxx SSI/RS-422 Connector M16, 8-pin



Connection diagram






Adjustment possible








- ② LC display
- ③ Keypad

Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Plug connectors and cables | | | |
|  | <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, Head A: female connector, M12, 5-pin, straight Head B: cable Cable: suitable for drag chain, PUR, halogen-free, shielded, 2 x 0.34 mm², Ø 8.0 mm • Connection systems: Flying leads • Application: Zones with oils and lubricants | DOL-1205-G05MQ | 6026006 |
|  | <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 • Connection type head B: Flying leads • Signal type: CANopen • Cable: 6 m • Description: CANopen, shielded | DOL-1205-G06MK | 6028326 |
|  | <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: 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 |
|  | <p>Head A: male connector, M12, 5-pin, straight, B-coded</p> <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-G05MQ | 6026005 |
| | <p>Head A: male connector, M12, 5-pin, straight, B-coded</p> <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 |
|  | <p>Head A: male connector, M12, 5-pin, straight, B-coded</p> <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 5-pin, straight • Connection type head B: Flying leads • Signal type: CANopen • Cable: 10 m, 5-wire • Description: CANopen, shielded • Connection systems: Flying leads • Note: Shielded on pin 1 | STL-1205-G15MQ | 6036898 |
|  | <p>Head A: female connector, M12, 8-pin, straight</p> | YF2A14-100C1BXLEAX | 6021175 |
| | | YF2A68-020XXXLEAX | 6032448 |
| | | YF2A68-050XXXLEAX | 6032449 |
| | | YF2A68-100XXXLEAX | 6032450 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | Head A: female connector, M16, 8-pin, straight | YF2Z18-050XXXXLEBX | 2026742 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, 7/8", 5-pin, straight • Signal type: DeviceNet™, CANopen • Description: DeviceNet™, terminal resistor, shielded CANopen • Permitted cross-section: ≤ 1.5 mm² • Note: For field bus technology | DOS-7805-GKEND | 6028329 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, B-coded • Signal type: PROFIBUS DP • Description: PROFIBUS DP, terminal resistor | STE-END-Q | 6021156 |
| Reflectors | | | |
|  | Reflector plate, "diamond grade" reflective tape, 665 mm x 665 mm, base plate material: aluminum, screw connection, Screw-on, 4 hole mounting | PL560DG | 1016806 |
| Terminal and alignment brackets | | | |
|  | Alignment unit for DME5000, stainless steel (1.4541), incl. mounting material, additional base plate mounting kit required, mounting hardware included | BEF-AH-DME | 2027721 |

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