



DT500-A211

Dx500

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|------------|----------|
| DT500-A211 | 1026516 |

Other models and accessories → www.sick.com/Dx500



Detailed technical data

Performance

| | |
|--|---|
| Measuring range | 0.2 m ... 30 m, 90 % remission ^{1) 2)} 0.8 m ... 15 m, 6 % remission ^{1) 2)} |
| Resolution | 12 bit |
| Repeatability | 1 mm ^{3) 4)} |
| Accuracy | ± 3 mm ³⁾ |
| Output time | 250 ms |
| Light source | Laser, red ⁵⁾ |
| Laser class | 2 (EN 60825/21 CFR 1.040) |
| Typ. light spot size (distance) | 10 mm (at 7 m) 45 mm (at 30 m) 100 mm (at 70 m) |
| Heating | ✓ |

¹⁾ In ambient light, max. 1 klx of constant light.

²⁾ Unique up to 150 m.

³⁾ 6 % ... 90 % remission.

⁴⁾ Statistical error 1 σ .

⁵⁾ Average service life of 50,000 h at $T_A = +25^\circ\text{C}$.

Interfaces

| | |
|-----------------------------------|--|
| Analog output | 0 mA ... 20 mA / 4 mA ... 20 mA ($V_S - 2\text{ V} / 0.0205\text{ A}$) ¹⁾ |
| Multifunctional input (MF) | > 12 V ²⁾ |
| Laser-off input | > 12 V |
| Data interface | Q _A |

¹⁾ Max. load = $U_V - 2\text{ V} / 0.0205\text{ A}$.

²⁾ Refer to function MF input.

Mechanics/electronics

| | |
|--|--|
| Supply voltage V_S | DC 10 V ... 30 V, reverse polarity protected $U_V \geq \text{DC } 24\text{ V}$ for devices with heating |
| Ripple | 5 V _{pp} ¹⁾ |

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

| | |
|----------------------------|----------------------------|
| Power consumption | Typ. 22 W |
| Initialization time | 500 ms |
| Connection type | Male connector, M12, 5-pin |
| Weight | 1,000 g |

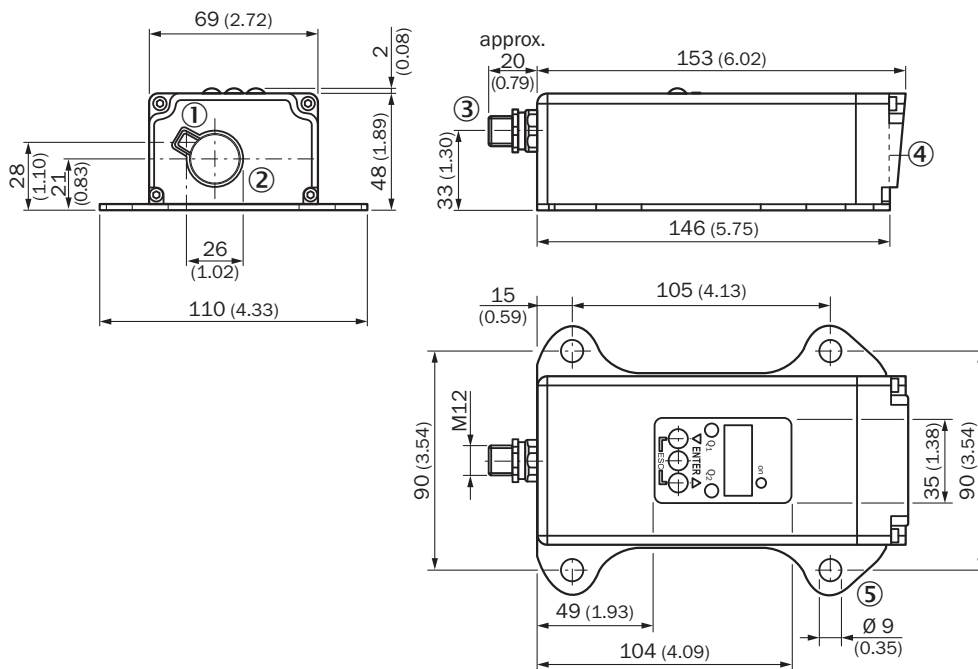
¹⁾ May not fall short of or exceed V_S tolerances.

Ambient data

| | |
|--|---|
| Enclosure rating | IP 65 |
| Protection class | II ¹⁾ |
| Electromagnetic compatibility (EMC) | EN 61000-6-2, EN 55011 EN 60947-5-7: 2003-9 |
| Ambient temperature | Operation with heating: -40 °C ... +45 °C Operation with cooling case: -40 °C ... +75 °C Storage: -25 °C ... +75 °C |
| Temperature drift | Typ. 0.05 mm/K |
| Mechanical load | Shock: EN 600 68-2-27 / -2-29 Sine: EN 600 68-2-6 Noise: EN 600 68-2-64 |

¹⁾ Reference voltage DC 32 V.

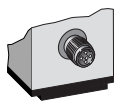
Dimensional drawing (Dimensions in mm (inch))



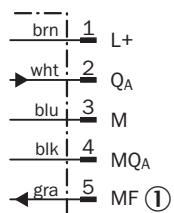
- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Male connector M12, 5-pin
- ④ Zero level
- ⑤ Fixing hole

Connection type

Male connector M12, 5-pin

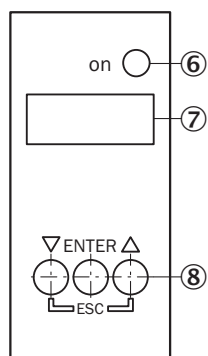


Connection diagram



① Multifunctional input (MF)

Adjustment possible



- ⑥ Operating indicator
- ⑦ Indicator panel, 7-segment display
- ⑧ Control panel

Functional principle

Additional information

Extern Teach ET via MF ①

| Teach-in | MF active | Model |
|-----------|-----------|-----------------------------------|
| 0 mA | 100 ms | Current measurement value is used |
| 4 mA | 200 ms | |
| 20 mA | 300 ms | |
| Laser off | > 450 ms | |

① Multi functional input.

Error performance or no object in measurement range

Measurement not possible

| Measurement value output display | Analog interface | CAN Bus | Serial interface |
|----------------------------------|------------------|---------|------------------|
| 0.000 | 0/3.5 mA | 00000 | 00000 CRLF |

No object in measurement range or laser off

| Measurement value output display | Analog interface | CAN Bus | Serial interface |
|----------------------------------|------------------|---------|------------------|
| 99.99 | 20.5 mA | 99999 | 99999 CRLF |

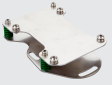

Function MF input

Function MF input

| | | |
|-----------|-------|----------------------|
| Teach in | 0 mA | 60 ms < MF < 150 ms |
| Teach in | 4 mA | 150 ms < MF < 250 ms |
| Teach in | 20 mA | 250 ms < MF < 350 ms |
| Laser off | - | 450 ms < MF < ∞ |

Recommended accessories

Other models and accessories → www.sick.com/Dx500

| | Brief description | Type | Part no. |
|---|--|---------------|----------|
| Terminal and alignment brackets | | | |
|  | Alignment unit for DS/DT500, stainless steel (1.4541), incl. mounting material, mounting hardware included | BEF-DSDT | 2031377 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 2 m | DOL-1205-G02M | 6008899 |
| | Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 5 m | DOL-1205-G05M | 6009868 |

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| | Brief description | Type | Part no. |
|--|---|---------------|-----------------|
| | Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 10 m | DOL-1205-G10M | 6010544 |

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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