



DMT10-2-1113

DMT

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Model name	Part no.
DMT10-2-1113	1027605

Other models and accessories → www.sick.de/DMT



Detailed technical data

Performance

Measuring range	0,5 m ... 20 m ¹⁾
Resolution	≤ 1 mm
Repeatability	7 mm ^{2) 3)} 10 mm ^{4) 3)}
Accuracy	± 10 mm ^{5) 6)}
Response time	1 ms ... 4.000 ms ⁷⁾
Cycle time	1,024 per sec.
Average depth	1/16/64/256/1,024
Output time	1 ms ... 4.000 ms ⁸⁾
Aperture delay time	≥ 1 s ⁸⁾
Light source	Laser, infrared
Laser class	1 (EN 60825-1:Nov.2001, IEC 60825-1:ÄM2:2001)
Typ. light spot size (distance)	20 mm (+ 5 x distance in m)
Note	Mechanical aperture
Special characteristic	Mechanical aperture

¹⁾ Max. object temperature 1,400 °C.

²⁾ Dependant on distance and remission, 7 mm, at 6 % ... 90 % remission from 0.5 m ... 65 m, at 6 % ... 18 % remission from 0.5 m ... 15 m.

³⁾ Environmental conditions constant, min. warm-up time 30 min, average depth 1,024, statistical error 1 σ.

⁴⁾ Dependant on distance and remission, 10 mm, at 6 % ... 90 % remission from 60 m ... 155 m, at 6 % ... 18 % remission from 40 m ... 65 m, at 6 % remission from 15 m ... 40 m.

⁵⁾ 23 °C air temperature, 977 hPa, min. warm-up time 30 min.

⁶⁾ When operating in ambient temperatures between +40 °C ... +55 °C the accuracy can decrease by factor 2.5.

⁷⁾ Dependant on average setting, average depth, timeout, baud rate, data output, output format and effective dead time of aperture.

⁸⁾ Dependant on average setting, average depth, timeout, baud rate, data output and output format.

Interfaces

Analog output	4 mA ... 20 mA, scalable
Switching output	Q ₁ , Q ₂ ¹⁾
Data interface	RS-422, RS-232 ²⁾

¹⁾ Output Q short-circuit protected.

²⁾ Switchable.

Interface for parametrization	RS-232
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- 1) Output Q short-circuit protected.
2) Switchable.

Mechanics/electronics

Supply voltage V_s	DC 18 V ... 30 V, limit values
Ripple	$< 5 V_{pp}^{1)}$
Power consumption	$\leq 6 W^{2)}$
Initialization time	6 s
Connection type	1 x cable gland, 1 x Sub-D, 9-pin
Weight	Approx. 1.200 g
Output current I_A	100 mA

- 1) May not fall short of or exceed V_s tolerances.
2) Without load.

Ambient data

Enclosure rating	IP 65
Protection class	III ¹⁾
Electromagnetic compatibility (EMC)	EN 55011:1998 Kl. B, Gr.1 EN 61000-6-2
Ambient temperature	Operation: $-10\text{ °C} \dots +55\text{ °C}$ Operation with cooling case: $-10\text{ °C} \dots +75\text{ °C}$ Storage: $-25\text{ °C} \dots +70\text{ °C}$
Temperature drift	Typ. 0,6 mm/K ²⁾ Typ. 0,3 mm/K ³⁾
Mechanical load	Shock: (IEC 60068-2-27, -2-29) Sine: (IEC 60068-2-6)

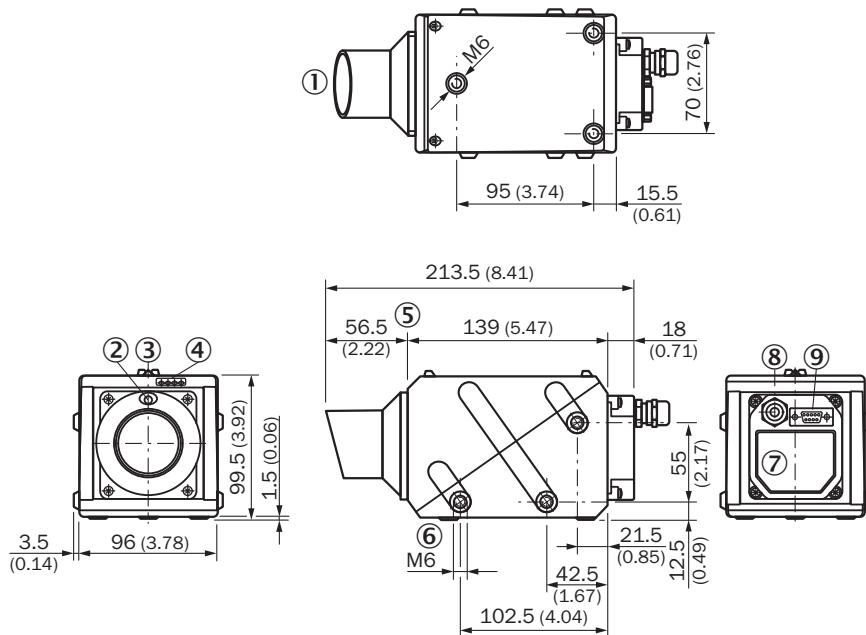
- 1) Reference voltage DC 50 V PELV-voltage (EN 50178)
2) $-10\text{ °C} \dots 0\text{ °C}$, $+40\text{ °C} \dots +55\text{ °C}$.
3) $0\text{ °C} \dots +40\text{ °C}$.

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Dimensional drawing (Dimensions in mm (inch))

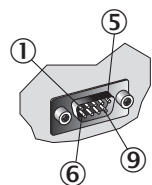
DMT10-2-x1xx DML40-2-x1xx



- ① Dust protection tube
- ② Laser pointer pilot light
- ③ Alignment sight
- ④ Function indicator
- ⑤ Zero level
- ⑥ Mounting hole M6 threaded - 6 mm deep
- ⑦ Connector cover
- ⑧ PG9
- ⑨ Sub-D, 9-pin

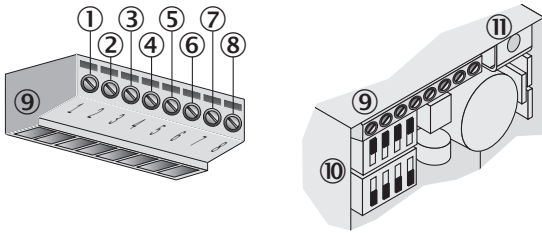
Connection type

DMxxx-2 RS-232/RS-422 Connector Sub-D, 9-pin



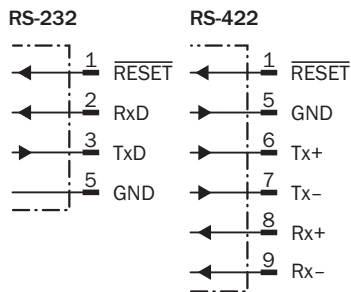
- ① Pin 1
- ⑤ Pin 5
- ⑥ Pin 6
- ⑨ Pin 9

DMxxx-2 RS-232/RS-422 PG9

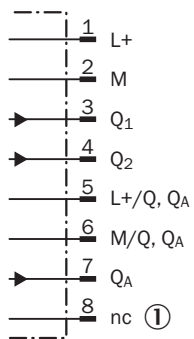


- ① Pin 1
- ② Pin 2
- ③ Pin 3
- ④ Pin 4
- ⑤ Pin 5
- ⑥ Pin 6
- ⑦ Pin 7
- ⑧ Pin 8
- ⑨ Terminals
- ⑩ DIP switches RS-232-/RS-422 switching
- ⑪ Shield

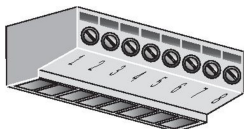
Connection diagram



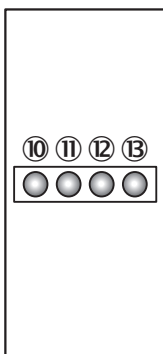
DMxxx-2 RS-232/RS-422 PG9



① Not connected





Adjustment possible



- ⑩ Q2 function indicator
- ⑪ Q1 function indicator
- ⑫ Operating indicator, green
- ⑬ Plausibility (measurement error) red

Recommended accessories

Other models and accessories → www.sick.de/DMT

	Brief description	Model name	Part no.
Terminal and alignment brackets			
	Alignment unit for DMT/DML, incl. mounting material, steel, zinc coated, mounting hardware included	BEF-GH-DMT	5309130
Plug connectors and cables			
	Head A: female connector, D-Sub, 9-pin, straight Head B: Cable Cable: serial, unshielded, 3 m	Connecting cable (female connector-open)	2020319

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