



DMT10-2-2211

DMT

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Model name	Part no.
DMT10-2-2211	1028541

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



Detailed technical data

Performance

Measuring range	0,5 m ... 155 m, 90 % remission 0,5 m ... 65 m, 18 % remission 0,5 m ... 40 m, 6 % remission
Resolution	≤ 1 mm
Repeatability	7 mm ^{1) 2)} 10 mm ^{3) 2)}
Accuracy	± 10 mm ^{4) 5)}
Response time	1 ms ... 3.000 ms ⁶⁾
Cycle time	1,024 per sec.
Average depth	1/16/64/256/1,024
Output time	1 ms ... 4.000 ms ⁷⁾
Aperture delay time	≥ 1 ms ⁷⁾
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	Electronic aperture
Special characteristic	Electronic aperture

¹⁾ 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 ... 40 m, at 6 % remission from 0.5 m ... 15 m.

²⁾ Environmental conditions constant, min. warm-up time 30 min, average depth 1,024, statistical error 1 σ.

³⁾ 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.

⁴⁾ 23 °C air temperature, 977 hPa, min. warm-up time 30 min.

⁵⁾ When operating in ambient temperatures between +40 °C ... +55 °C the accuracy can decrease by factor 2.5.

⁶⁾ Dependant on average setting, average depth, timeout, baud rate, data output, output format and effective dead time of aperture.

⁷⁾ 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	PROFIBUS DP

¹⁾ Output Q short-circuit protected.

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

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)

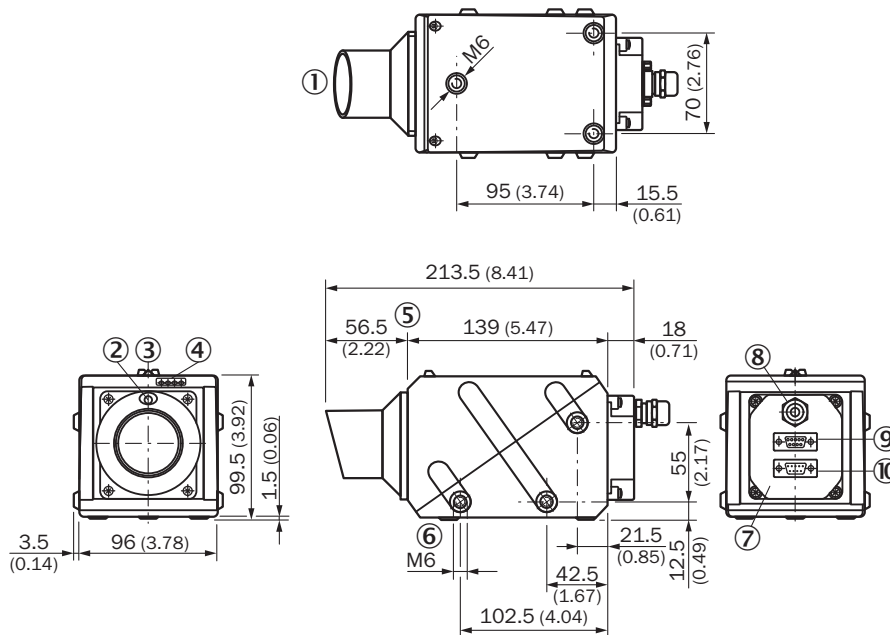
¹⁾ Reference voltage DC 50 V PELV-voltage (EN 50178)

²⁾ $-10\text{ °C} \dots 0\text{ °C}$, $+40\text{ °C} \dots +55\text{ °C}$.

³⁾ $0\text{ °C} \dots +40\text{ °C}$.

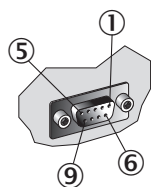
Dimensional drawing (Dimensions in mm (inch))

DMT10-2-x2xx DML40-2-x2xx



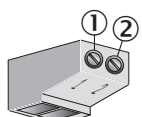
Connection type

DMTxxx-2 RS-232/PROFIBUS Socket, Sub-D, 9-pin



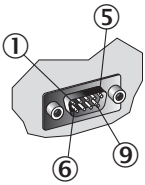
- ① NC = normally closed
- ⑤ M
- ⑥ L+
- ⑨ NC = normally closed

DMTxxx-2 RS-232/PROFIBUS PG9



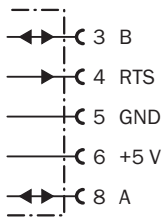
- ① Pin 1
- ② Pin 2

DMTxxx-2 RS-232/PROFIBUS Connector

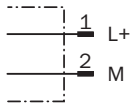


- ① NReset
- ⑤ M
- ⑥ NC = normally closed
- ⑨ NC = normally closed

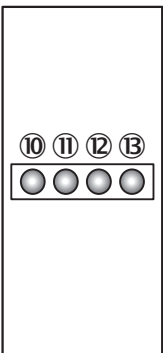
Connection diagram



DMTxxx-2 RS-232/PROFIBUS PG9



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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