



# DMT10-2-1111

DMT

**LONG RANGE DISTANCE SENSORS**

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
DMT10-2-1111	1027603

Other models and accessories → [www.sick.com/DMT](http://www.sick.com/DMT)



## Detailed technical data

### Performance

<b>Measuring range</b>	0.5 m ... 155 m, 90 % remission 0.5 m ... 65 m, 18 % remission 0.5 m ... 40 m, 6 % remission
<b>Resolution</b>	≤ 1 mm
<b>Repeatability</b>	7 mm <sup>1) 2)</sup> 10 mm <sup>3) 2)</sup>
<b>Accuracy</b>	± 10 mm <sup>4) 5)</sup>
<b>Response time</b>	1 ms ... 4,000 ms <sup>6)</sup>
<b>Cycle time</b>	1,024 per sec.
<b>Average depth</b>	1/16/64/256/1,024
<b>Output time</b>	1 ms ... 4,000 ms <sup>7)</sup>
<b>Aperture delay time</b>	≥ 1 s <sup>7)</sup>
<b>Light source</b>	Laser, infrared
<b>Laser class</b>	1 (EN 60825-1:Nov.2001, IEC 60825-1:ÄM2:2001)
<b>Typ. light spot size (distance)</b>	20 mm (+ 5 x distance in m)
<b>Note</b>	Mechanical aperture
<b>Special characteristic</b>	Mechanical aperture

<sup>1)</sup> Dependent 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.

<sup>2)</sup> Environmental conditions constant, min. warm-up time 30 min, average depth 1,024, statistical error 1  $\sigma$ .

<sup>3)</sup> Dependent 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.

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

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

<sup>6)</sup> Dependent on averaging method, averaging depth, timeout, baud rate, data output, output format, and delay time.

<sup>7)</sup> Dependent on averaging method, averaging depth, timeout, baud rate, data output, and output format.

### Interfaces

<b>Analog output</b>	4 mA ... 20 mA, scalable
<b>Switching output</b>	Q <sub>1</sub> , Q <sub>2</sub> <sup>1)</sup>

<sup>1)</sup> Output Q short-circuit protected.

<sup>2)</sup> Switchable.

<b>Data interface</b>	RS-422, RS-232 <sup>2)</sup>
<b>Interface for parametrization</b>	RS-232

<sup>1)</sup> Output Q short-circuit protected.

<sup>2)</sup> Switchable.

### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	DC 18 V ... 30 V, limit values
<b>Ripple</b>	$< 5 V_{pp}$ <sup>1)</sup>
<b>Power consumption</b>	$\leq 6 W$ <sup>2)</sup>
<b>Initialization time</b>	6 s
<b>Connection type</b>	1 x terminal connection, 1 x Sub D, 9-pin
<b>Weight</b>	Approx. 1,200 g
<b>Output current <math>I_A</math></b>	100 mA

<sup>1)</sup> May not fall short of or exceed  $V_s$  tolerances.

<sup>2)</sup> Without load.

### Ambient data

<b>Enclosure rating</b>	IP 65
<b>Protection class</b>	III <sup>1)</sup>
<b>Electromagnetic compatibility (EMC)</b>	EN 55011:1998 Kl. B, Gr.1 EN 61000-6-2
<b>Ambient temperature</b>	Operation: $-10\text{ °C} \dots +55\text{ °C}$ Operation with cooling case: $-10\text{ °C} \dots +75\text{ °C}$ Storage: $-25\text{ °C} \dots +70\text{ °C}$
<b>Temperature drift</b>	Typ. 0.6 mm/K <sup>2)</sup> Typ. 0.3 mm/K <sup>3)</sup>
<b>Mechanical load</b>	Shock: (IEC 60068-2-27, -2-29) Sine: (IEC 60068-2-6)

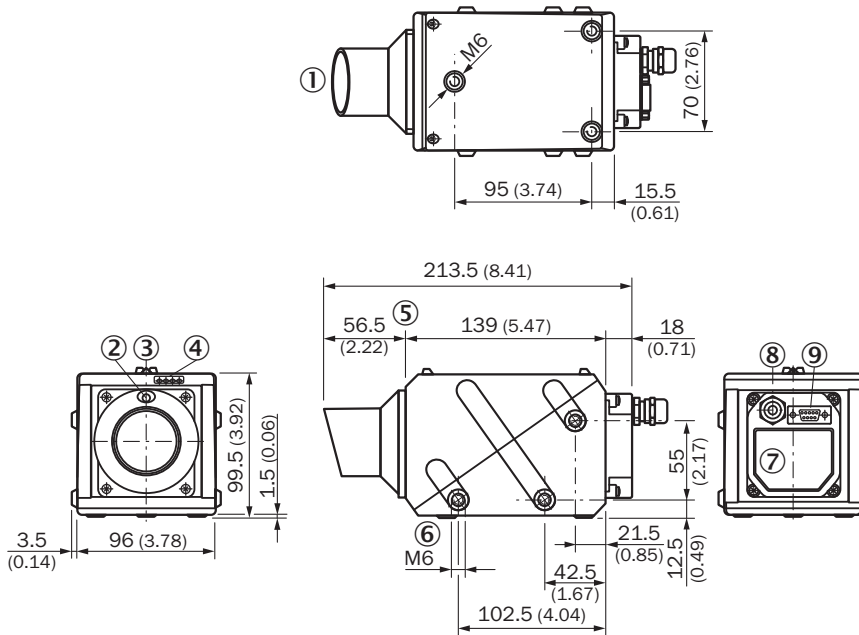
<sup>1)</sup> Reference voltage DC 50 V PELV-voltage (EN 50178)

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

<sup>3)</sup>  $0\text{ °C} \dots +40\text{ °C}$ .

### Dimensional drawing (Dimensions in mm (inch))

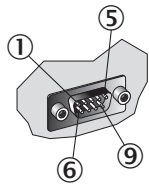
DMT10-2-x1xx DML40-2-x1xx



- 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

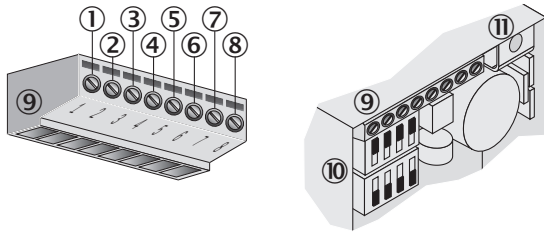
### Connection type

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



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

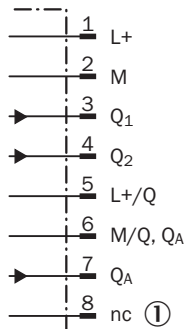
DMxxx-2 RS-232/RS-422 PG9



- 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

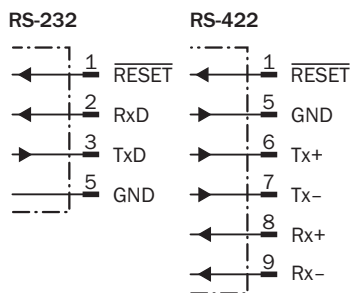
### Connection diagram

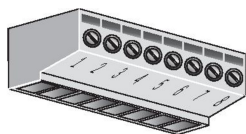
DMxxx-2 RS-232/RS-422 PG9



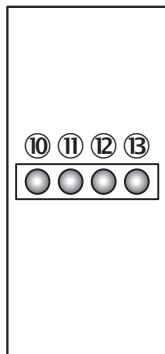
⑩ Not assigned

Connection type RS-232/RS-422







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.com/DMT](http://www.sick.com/DMT)

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

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

## WORLDWIDE PRESENCE:

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