



DMT10-2-1211

DMT

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
DMT10-2-1211	1027604

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



Detailed technical data

Features

Measuring range	0.5 m ... 155 m, 90% remission factor 0.5 m ... 65 m, 18% reflection factor 0.5 m ... 40 m, 6% remission factor
Target	Natural objects
Resolution	≤ 1 mm
Repeatability	7 mm ^{1) 2)} 10 mm ^{2) 3)}
Measurement accuracy	± 10 mm ^{4) 5)}
Response time	1 ms ... 4,000 ms ⁶⁾
Measurement cycle time	0.977 ms
Average depth	1/16/64/256/1,024
Output time	1 ms ... 4,000 ms ⁷⁾
Aperture delay time	1 s ⁷⁾
Light source	Laser, infrared
Laser class	1 (IEC 60825-1:2014, EN 60825-1:2014)
Typ. light spot size (distance)	20 mm (+ 5 x distance in m)
Note	Mechanical aperture
Special characteristic	Mechanical aperture

¹⁾ 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.

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

³⁾ 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.

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⁾ Dependent on averaging method, averaging depth, timeout, baud rate, data output, output format, and delay time.

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

Interfaces

PROFIBUS DP	✓
Data transmission rate	12 MBaud
Interface for parametrization	RS-232

Electronics

Supply voltage U_B	DC 18 V ... 30 V, limit values
Power consumption	$\leq 6 \text{ W}^{1)}$
Ripple	$< 5 \text{ V}_{pp}^{2)}$
Initialization time	6 s
Enclosure rating	IP65
Protection class	III ³⁾

¹⁾ Without load.

²⁾ May not fall short of or exceed V_S tolerances.

³⁾ Reference voltage DC 50 V PELV-voltage (EN 50178).

Mechanics

Dimensions (W x H x D)	61 mm x 85 mm x 166 mm
Weight	Approx. 1,200 g
Connection type	1 x terminal connection, 1 x Sub D, 9-pin

Ambient data

Ambient temperature, operation	-10 °C ... +55 °C -10 °C ... +75 °C, operation with cooling case
Ambient temperature, storage	-25 °C ... +75 °C
Temperature drift	Typ. 0.6 mm/K ¹⁾ Typ. 0.3 mm/K ²⁾
Mechanical load	Shock: (IEC 60068-2-27, -2-29) Sine: (IEC 60068-2-6)
Electromagnetic compatibility (EMC)	EN 55011:1998 Kl. B, Gr.1 EN 61000-6-2

¹⁾ -10 °C ... 0 °C, +40 °C ... +55 °C.

²⁾ 0 °C ... +40 °C.

Certificates

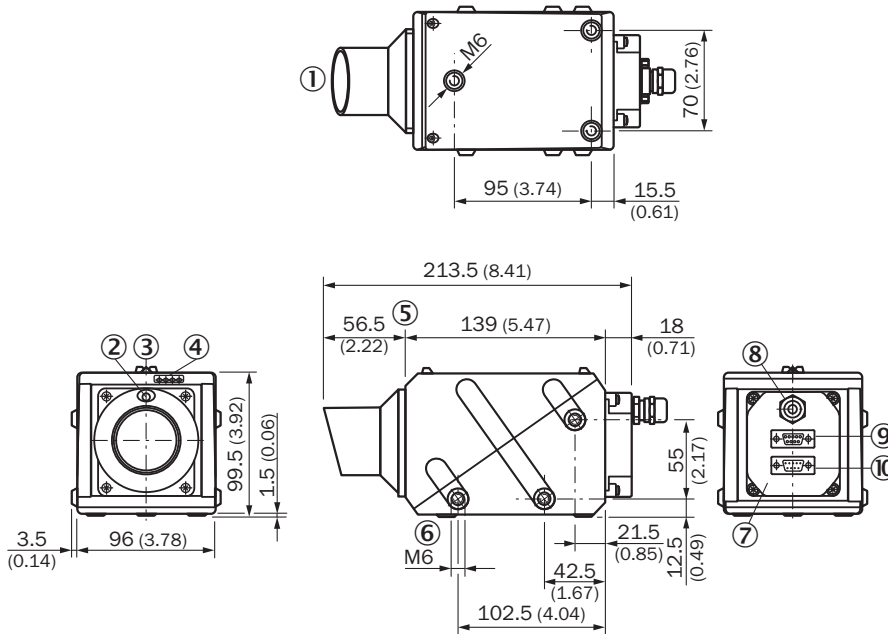
EU declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓

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	411111613

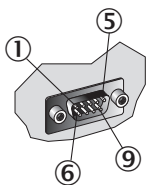
Dimensional drawing DMT10-2-x2xx DML40-2-x2xx



Dimensions in mm (inch)

- 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
- ⑩ Sub-D, 9-pin

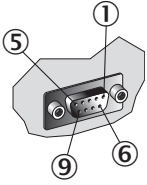
DMxxx-2 RS-232/PROFIBUS connection type, connector



- ① nReset
- ⑤ M

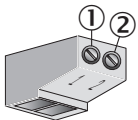
- ⑥ NC = normally closed
- ⑨ NC = normally closed

DMxxx-2 RS-232/PROFIBUS connection type, female connector



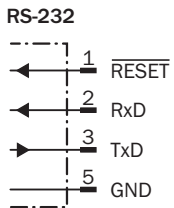
- ① NC = normally closed
- ⑤ M
- ⑥ L+
- ⑨ NC = normally closed

Connection type RS-232/PROFIBUS

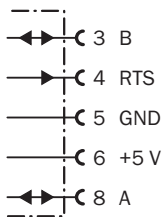


- ① Pin 1
- ② Pin 2

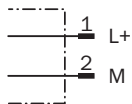
Connection diagram DMxxx-2-x21x RS-232



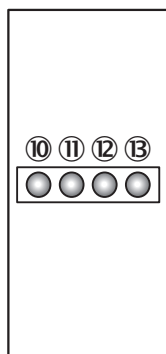
Connection type DMxxx-2 RS-232/PROFIBUS, socket



Connection type RS-232/PROFIBUS





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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> • Description: Alignment unit for DMT/DML, incl. mounting material • Material: Steel • Details: Steel, zinc coated • Items supplied: Mounting hardware included 	BEF-GH-DME	5309130
connectors and cables			
	<ul style="list-style-type: none"> • Description: Serial, unshielded • Connection type head A: Female connector, D-Sub, 9-pin, straight • Connection type head B: Flying leads • Signal type: Serial • Cable: 3 m, 3-wire 	YFDSA9-030XXXLE-BX	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:

Contacts and other locations –www.sick.com