Online data sheet



DML40-2-1111S01

DML

LONG RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DML40-2-1111S01	1044053

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

Detailed technical data

Performance

Measuring range	0.5 m ... 600 m, on reflective tape "Diamond Grade" [1] 0.5 m ... 800 m, on reflector PL880FS01 [2] 0.5 m ... 1,200 m, on reflector OP60 [3]
Resolution	≤ 1 mm
Repeatability	6 mm [4] [5]
Accuracy	± 10 mm [6] [7]
Response time	1 ms ... 600 ms [8]
Cycle time	5,120 per sec.
Average depth	1/16/64/256/1,024
Output time	1 ms ... 600 ms [8]
Light source	Laser, infrared
Laser class	2 (für DML40-2-1111S01)
Typ. light spot size (distance)	20 mm (+ 5 x distance in m)
Note	Alignment laser always on
Special characteristic	Alignment laser always on

[1] On reflective tape "Diamond Grade"
[2] On reflector PL880FS01.
[3] On reflector OP60.
[4] 6 % ... 90 % remission.
[5] Environmental conditions constant, min. warm-up time 30 min, average depth 1,024, statistical error 1 σ.
[6] 23 °C air temperature, 977 hPa, min. warm-up time 30 min.
[7] When operating in ambient temperatures between +40 °C ... +55 °C the accuracy can decrease by factor 2.5.
[8] Dependent on averaging method, averaging depth, timeout, baud rate, data output, and output format.

Interfaces

Analog output	4 mA ... 20 mA, scalable [1]
Switching output	Q_1, Q_2 [1]
Data interface	RS-422, RS-232 [2]
Interface for parametrization	RS-232

[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	≤ 6 W [2]
Initialization time	6 s
Connection type	1 x terminal connection, 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 6100-6-2:1999
Ambient temperature	Operation: –10 °C ... +55 °C Operation with cooling case: –10 °C ... +75 °C Storage: –25 °C ... +70 °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)

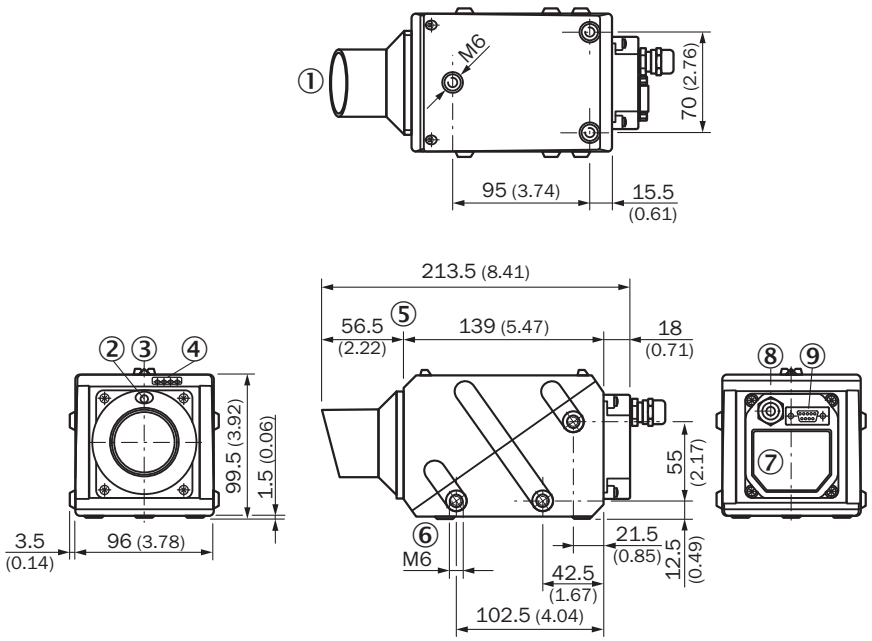
[1] Reference voltage DC 50 V PELV-voltage (EN 50178)

[2] -10° C ... 0° C, +40 °C ... +55 °C.

[3] 0 °C ... +40 °C.

Dimensional drawing (Dimensions in mm (inch))

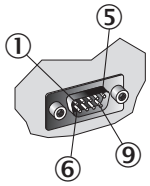
DMT10-2-x1xx DML40-2-x1xx



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

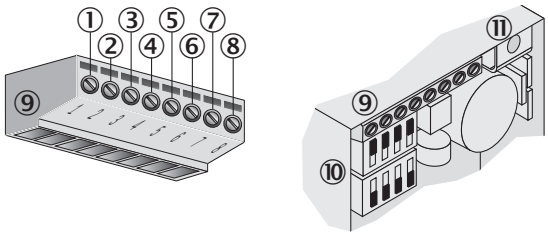
Connection type

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



① Pin 1
⑤ Pin 5
⑥ Pin 6
⑨ Pin 9

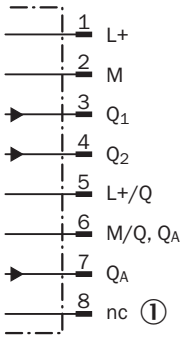
DMxxx-2 RS-232/RS-422 PG9



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

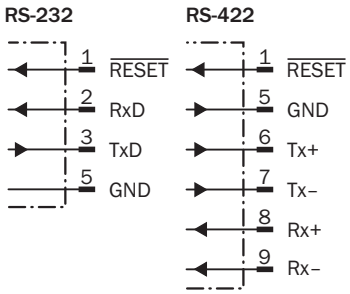
Connection diagram

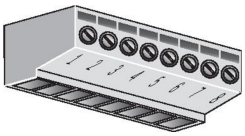
DMxxx-2 RS-232/RS-422 PG9



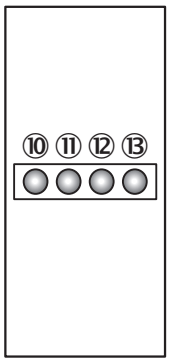
⑫ Not assigned

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/DML

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Alignment unit for DMT/DML, incl. mounting material, steel, zinc coated, mounting hardware included	BEF-GH-DME	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
Reflectors			
	Reflector plate, reflective tape "Diamond Grade", 665 mm x 665 mm, material base plate: aluminum, screw connection, Screw-on, 4 hole mounting	PL560DG	1016806

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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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