



Long range distance sensors DML, DML40-2, RS-422 RS-232

DML40-2-1111



Model Name > **DML40-2-1111**
Part No. > **1027607**



At a glance

- Measurement range from 0.5 m up to 1,200 m with a reflector
- Time-of-flight measurement
- Easy alignment thanks to pilot laser
- Freely programmable parameters
- RS-422, RS-232, PROFIBUS, analog and two switching outputs
- Near field blanking parameter for operation through a protection window

Your benefits

- Extremely long measurement ranges of up to 1,200 m on natural targets offer high flexibility in applications where range is key
- Special visible alignment laser allows fast and easy alignment - even over long distances, offering fast and cost-effective installation
- Tough, metal housing design for trouble-free operation in rough environmental conditions
- Class 1 IR laser for discrete and safe measurement and detection
- User-friendly software with an easy-to-follow interface ensures fast and cost-optimized setup
- Serial and analog interfaces as well as two digital switching outputs offer local over/under limit and service signals



RS-232 RS-422

Performance

Measuring range ^{1), 2), 3)} :	0.5 m ... 1,200 m, on reflector OP60 0.5 m ... 600 m, on reflective tape "Diamond Grade" 0.5 m ... 800 m, on reflector PL880FS01
Resolution:	≤ 1 mm
Repeatability ^{4), 5)} :	6 mm
Accuracy ^{6), 7)} :	± 10 mm
Light source:	Laser, infrared
Typ. light spot size (distance):	20 mm (+ 5 x distance in m)
Average depth:	1/16/64/256/1,024
Output rate ⁸⁾ :	1 ms ... 600 ms
Response time ⁹⁾ :	1 ms ... 600 ms
Cycle time:	5,120 per sec.
Laser class:	1 (EN 60825-1:Nov.2001, IEC 60825-1:ÄM2:2001)

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) 9)} Dependant on average setting, average depth, timeout, baud rate, data output and output format

Interfaces

Data interface ¹⁾ :	RS-422 RS-232
Output type ²⁾ :	Q1, Q2
Interface for parametrization:	RS-232
Analog output:	4 mA ... 20 mA, scalable ³⁾

¹⁾ Switchable ^{2) 3)} Output Q short-circuit protected

Mechanics/electronics

Supply voltage Vs:	DC 18 V ... 30 V, limit values
Ripple ¹⁾ :	5 Vpp
Initialization time:	6 s
Weight:	Ca. 1,200 g
Output current IA:	100 mA
Power consumption ²⁾ :	≤ 6 W
Connection type:	1 x cable gland, 1 x Sub-D, 9-pin

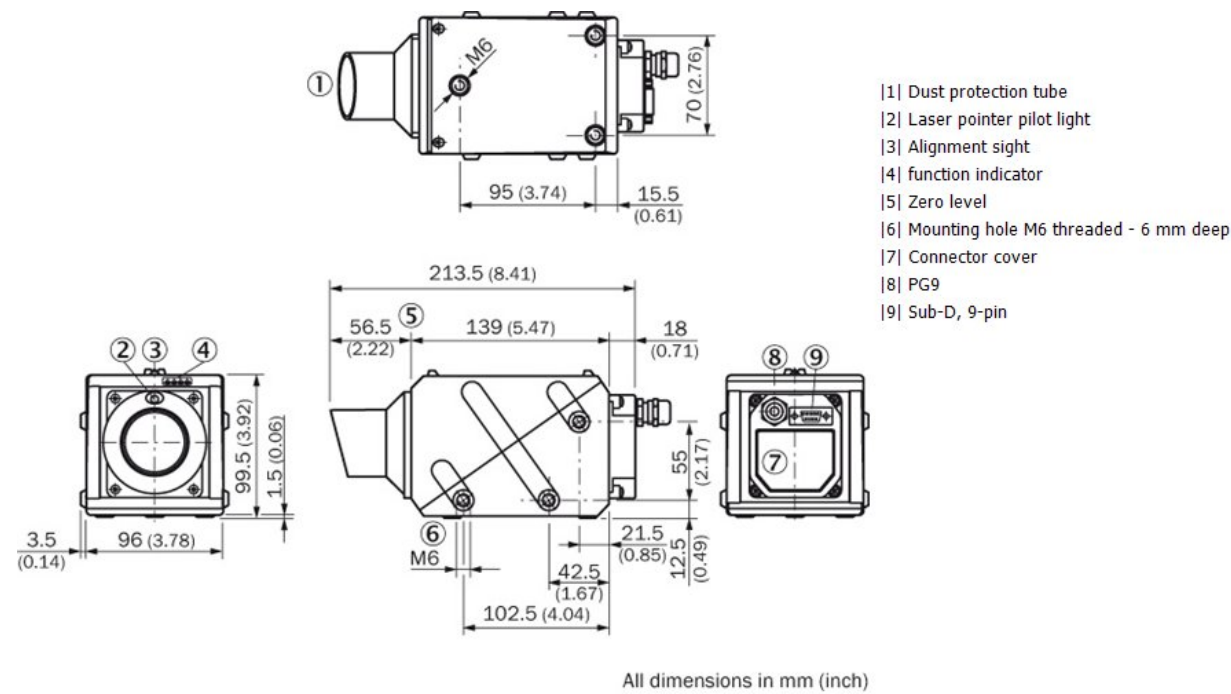
¹⁾ May not fall short of or exceed V_S tolerances ²⁾ Without load

Ambient data

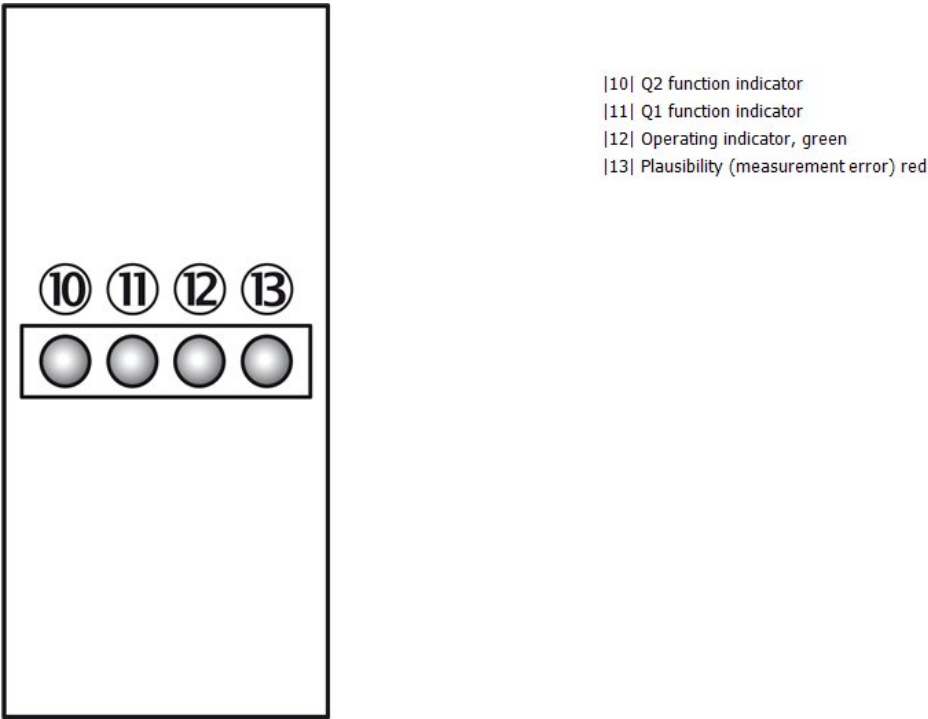
Enclosure rating:	IP 65
Protection class ¹⁾ :	III
Temperature drift ^{2) 3)} :	Typ. 0.3 mm/K Typ. 0.6 mm/K
Ambient temperature:	Operation: -10 ... 55 °C Operation with cooling case: -10 ... 75 °C Storage: -25 ... 70 °C
Mechanical load:	Shock: IEC 60068-2-27, -2-29 Sine: IEC 60068-2-6
Electromagnetic compatibility (EMC):	EN 55011:1998 Kl. B, Gr.1/EN 6100-6-2:1999

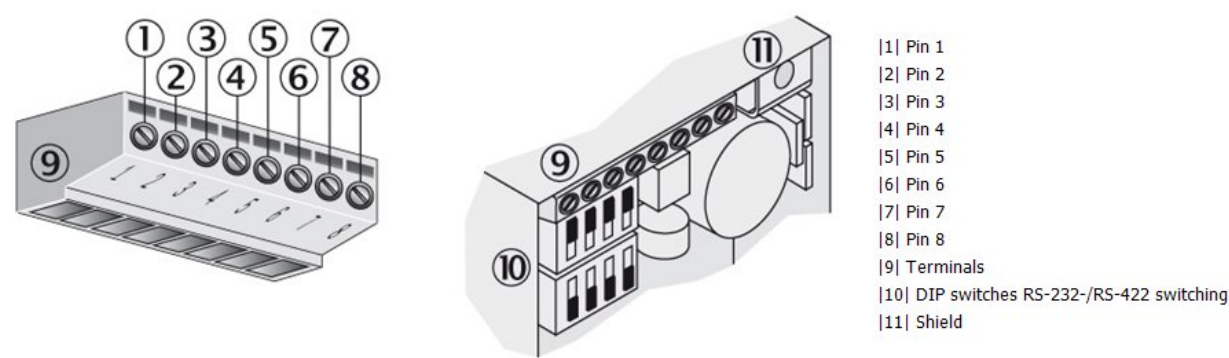
¹⁾ Reference voltage DC 50 V PELV-voltage (EN 50178) ²⁾ -10° C ... 0° C, +40 °C ... +55 °C ³⁾ 0 °C ... +40 °C

Dimensional drawing

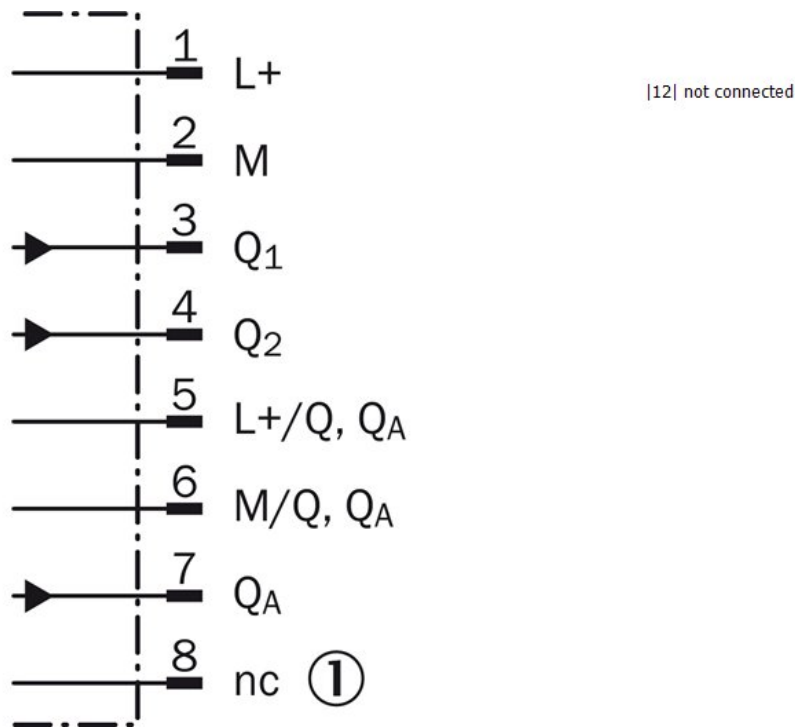


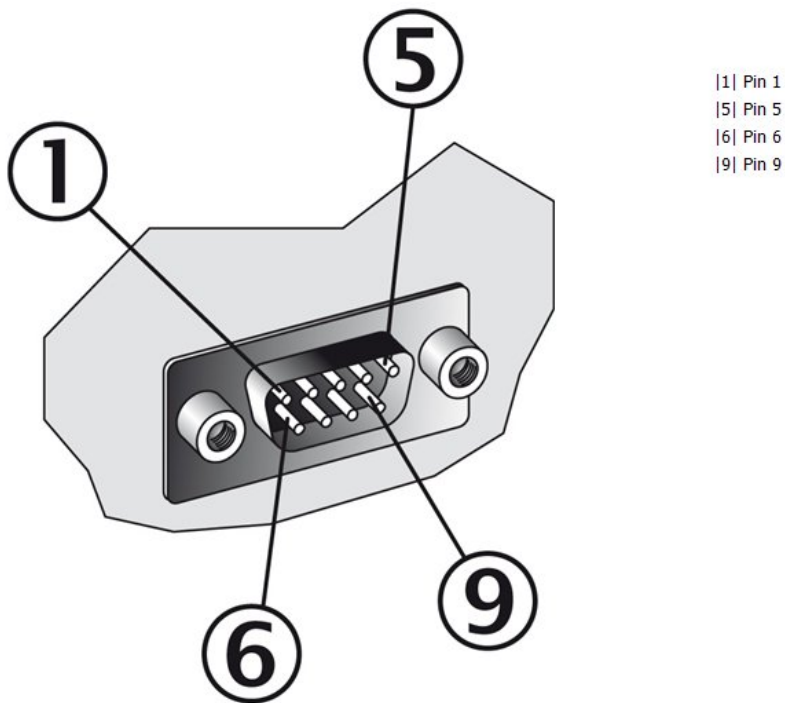
Adjustment possible



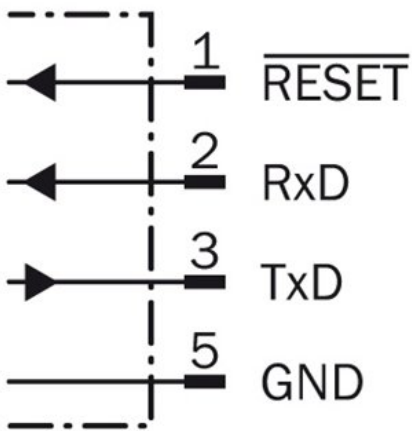


Connection diagram DMxxx-2 RS232/RS-422, PG9

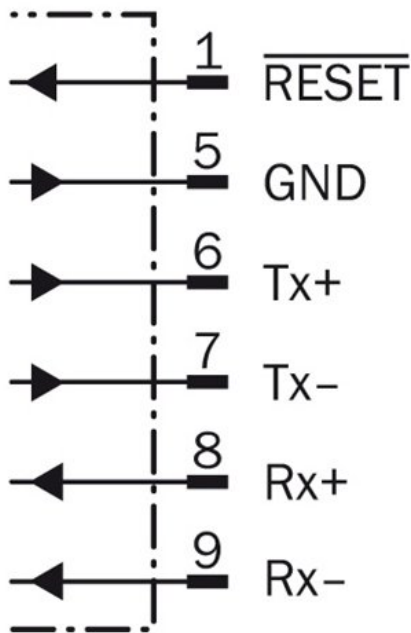




RS-232



RS-422



Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com