



Long range distance sensors DMT, DMT10-2, PROFIBUS DP

DMT10-2-1213



Model Name > **DMT10-2-1213**
Part No. > **1027606**

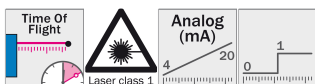


At a glance

- Measurement range from 0.5 m up to 155 m on natural targets
- Excellent accuracy thanks to 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
- Models with filter for measurement of glowing, hot metal (up to 1,400 °C)

Your benefits

- Extremely wide measurement range of up to 155 m on natural targets offers high flexibility in applications where range is key
- Supplementary 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 the roughest environmental conditions
- Non-visible, Class 1 IR laser for 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 allow flexible use for varied applications
- Integrated filter option allows for direct measurement of 1,400 °C glowing, hot targets



Performance

Measuring range ¹⁾ :	0.5 m ... 20 m
Resolution:	≤ 1 mm
Repeatability ²⁾ , ³⁾ , ⁴⁾ , ⁵⁾ :	10 mm, 7 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 ... 4,000 ms
Aperture delay time:	1 s ⁹⁾
Note:	Mechanical aperture
Response time ¹⁰⁾ :	1 ms ... 4,000 ms
Cycle time:	1,024 per sec.

Special characteristic:**Mechanical aperture****Laser class:**

1 (EN 60825-1:Nov.2001, IEC 60825-1:ÄM2:2001)

¹⁾ Max. object temperature 1,400 °C ²⁾ 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 ^{3) 5)} Environmental conditions constant, min. warm-up time 30 min, average depth 1,024, statistical error 1 σ ⁴⁾ 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 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 ¹⁰⁾ Dependant on average setting, average depth, timeout, baud rate, data output, output format and effective dead time of aperture

Interfaces

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

¹⁾ 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

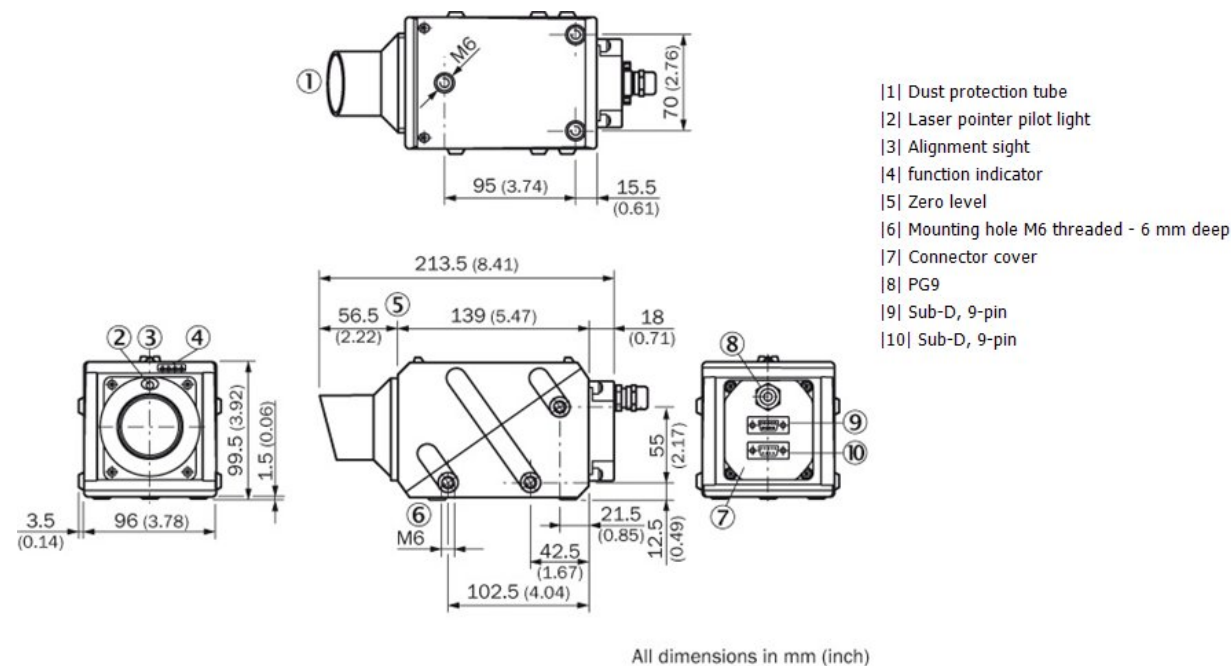
¹⁾ May not fall short of or exceed V_S tolerances ²⁾ Without load

Ambient data

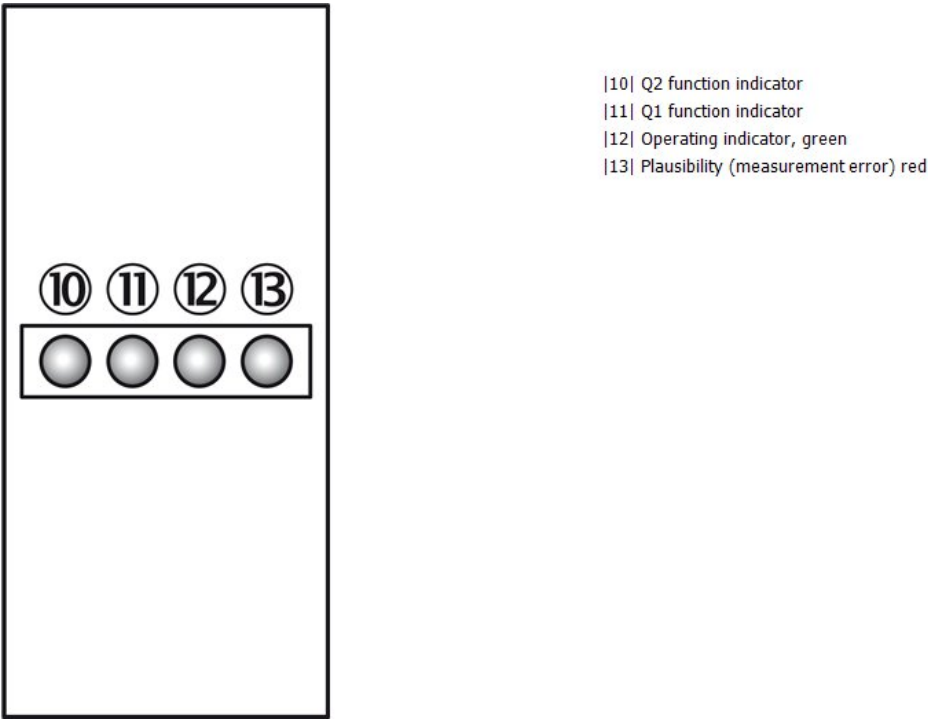
Enclosure rating:	IP 65
Protection class ¹⁾ :	III
Temperature drift ²⁾ , ³⁾ :	Typ. 0.3 mm/K Typ. 0.6 mm/K
Ambient temperature:	Operation: -10 ... 55 °C Operation with cooling case: -10 ... 75 °C Storage: -25 ... 70 °C
Mechanical load:	Shock: IEC 60068-2-27, -2-29 Sine: IEC 60068-2-6
Electromagnetic compatibility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

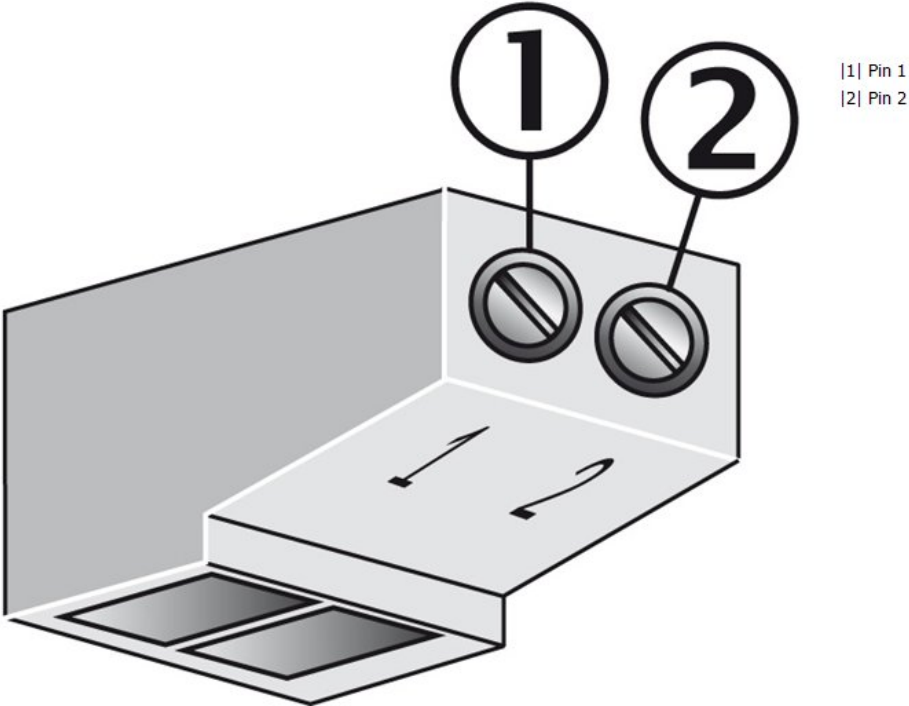
¹⁾ Reference voltage DC 50 V PELV-voltage (EN 50178) ²⁾ -10° C ... 0° C, +40 °C ... +55 °C ³⁾ 0 °C ... +40 °C

Dimensional drawing

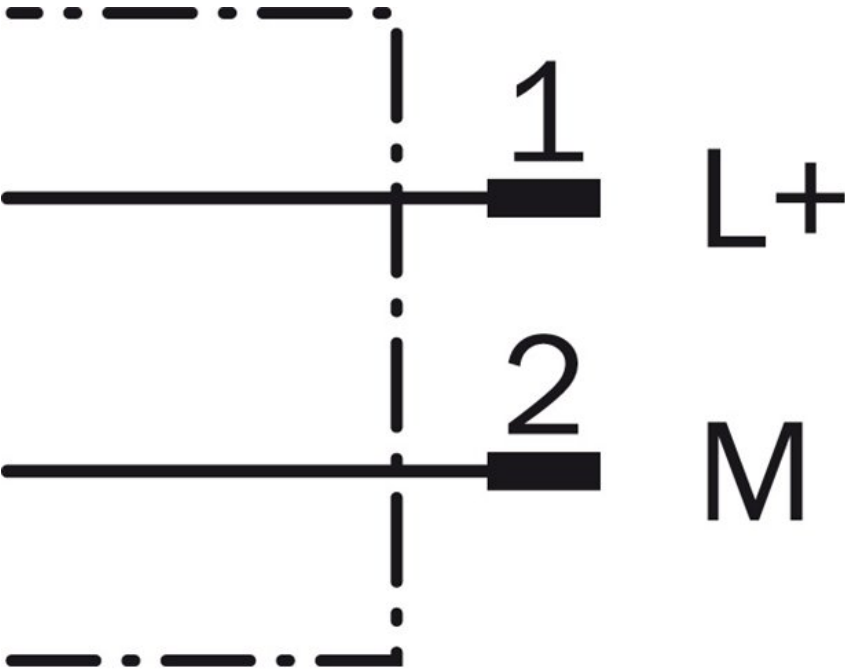


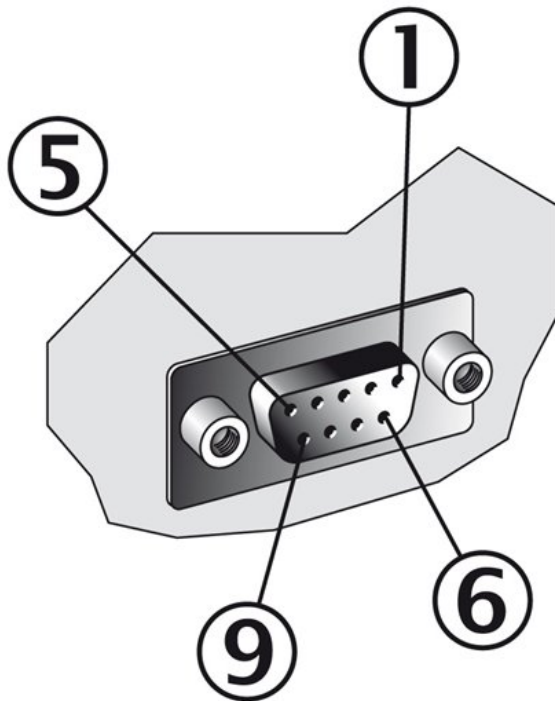
Adjustment possible



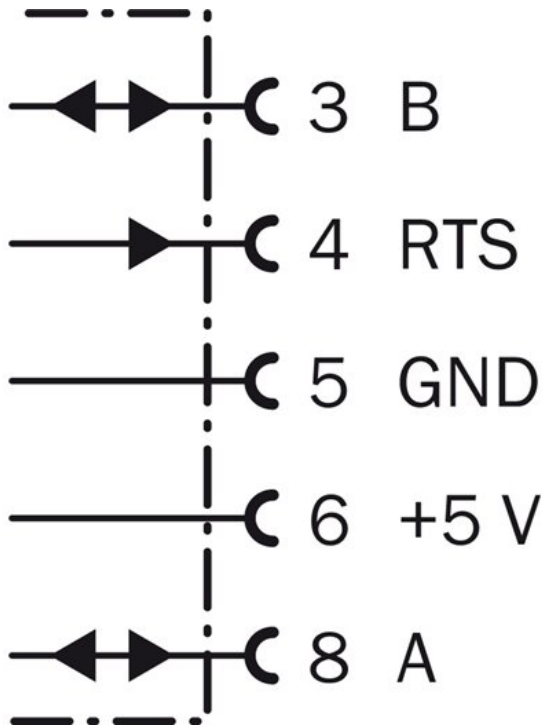


Connection type RS-232/PROFIBUS





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



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