

10 Specifications

Specifications RS 232/RS 422	DMT10-2-1111	DMT10-2-1113	DMT10-2-2111	DML40-2-1111
Measurement range				
	0.5 ... 155 m			
	0.5 ... 600 m on Diamond Grade ⁸⁾			
	0.5 ... 800 m on reflector PL 880 FS01			
	0.5 ... 1200 m on reflector OP 55			
	0.5 ... 20 m, max. object temp. 1200 °C			
Light spot diameter	25 mm/1 m, 70 mm/10 m, 520 mm/100 m			
Resolution	1 mm			
Light source, Light type	Laser diode, infrared			
Laser protection class	1 (EN 60825-1: Nov. 2001; IEC 60825-1:CM2:2001))			
Supply voltage U_V	18 ... 30 V DC ¹⁾			
Residual ripple	< 5 V _{SS} ²⁾			
Power consumption	≤ 6 W ³⁾			
Switching outputs Q₁ and Q₂				
Input L+/Q ⁴⁾⁵⁾	+5 V DC.. +30 V DC, supply Q ₁ /Q ₂			
Output current I _A max.	100 mA			
Analog output	4 ... 20 mA, programmable			
Response time	500 ms			
Serial interface	RS 422/RS 232 selectable			
Measurement value output				
Averaging	16/64/256/1024 values			
Output rate (min)	16 ms, 64 ms, 256 ms, 1024 ms			
(min)	3.2 ms, 12.8 ms, 50 ms, 200 ms			
Temperature drift	°C...+40°C Typical 0.3 mm/K			
	-10°C...0°C;+40°C...+55°C Typical 0.6 mm/K			
	-10°C...+55°C Typical 3.0 mm/K			
Initialization period	6 s			
VDE protection class ⁴⁾	III			
Circuit protection ⁵⁾	A, B			
Enclosure rate	IP 65			
Ambient temperature	Operation - 10 °C ... + 55 °C			
	Storage - 25 °C ... + 70 °C			
Weight	Approx. 1200 g			

¹⁾ Limit values

²⁾ May not exceed or fall short of U_V tolerances

³⁾ Without load

⁴⁾ Rated voltage DC 50 V

PELV voltage (EN 50178)

⁵⁾ A = U_V Reverse polarity protected

B = Output Q short-circuit protected

⁶⁾ Surrounding conditions constant, minimum switched on period 30 min.

⁷⁾ 23 °C air temperature, 977 hPa, minimum switched on period 30 min.

⁸⁾ On Diamond Grade

⁹⁾ To PL 880 FS01

¹⁰⁾ To OP 55

Reproducibility and accuracy depending on the measurement distance ^{6) 7)11)}					
	DMT-				
	10-2	10-2	10-2	10-2	10-2
Measurement range	1 m	15 m	40 m	65 m	155 m
Reproducibility ⁶⁾					
White, 90 % remission	7 mm	7 mm	7 mm	7 mm	10 mm
Gray, 18 % remission	7 mm	7 mm	7 mm	10 mm	-
Black, 6 % remission	7 mm	7 mm	10 mm	-	-
Accuracy ⁷⁾					
White, 90 % remission	± 10 mm	± 10 mm	± 10 mm	± 10 mm	± 10 mm
Gray, 18 % remission	± 10 mm	± 10 mm	± 10 mm	± 10 mm	-
Black, 6 % remission	± 10 mm	± 10 mm	± 10 mm	-	-
	DML40-2				
Measurement range	0.5 ... 600 m ⁸⁾ / 0.5 ... 800 m ⁹⁾ / 0.5 ... 1200 m ¹⁰⁾				
Reproducibility ⁶⁾	6 mm				
Accuracy ⁷⁾	± 10 mm				

¹¹⁾ Accuracy may be reduced by a factor of 2.5 when operated between +40°C and +50°C.

Accuracy of the DMT10-2-2111, compared to the DMT10-2-1111, may be reduced by a factor of 4. Reproducibility of the DMT10-2111 is 10mm.

Order information RS232/RS422

Type	Order no.
DMT10-2-1111	1027603
DMT10-2-1113	1027605
DMT10-2-2111	1028540
DML40-2-1111	1027607

Specifications Profibus		DMT10-2-1211	DMT10-2-1213	DMT10-2-2211	DML40-1211
Measurement range	0.5 ... 155 m				
	0.5 ... 600 m on Diamond Grade				
	0.5 ... 800 m to reflector PL 880 FS01				
	0.5 ... 1200 m to reflector OP 55				
	0.5 ... 20 m, max. object temp. 1200 °C				
Light spot diameter	25 mm/1 m, 70 mm/10 m, 520 mm/100 m				
Resolution	1 mm				
Light source, Light type	Laserdiode, Infrarot				
Laser protection class	1 (EN 60825-1: Nov. 2001; IEC 60825-1:ÄM2:2001))				
Supply voltage U_V	18 ... 30 V DC ¹⁾				
Residual ripple	< 5 V _{SS} ²⁾				
Power consumption	≤ 6 W ³⁾				
Serial interface	Profibus DP				
Parameterization interface	RS 232				
Measurement value output					
Averaging	16/64/256/1024 values				
Output rate (min)	16 ms, 64 ms, 256 ms, 1024 ms				
Response time (min)	3.2 ms, 12.8 ms, 50 ms, 200 ms				
Temperature drift 0°C...+40°C	Typical 0.3 mm/K				
-10°C...0°C; +40°C...+55°C	Typical 0.6 mm/K				
-10°C...+55°C	Typical 3.0 mm/K				
Initialization period	6 s				
VDE protection class ⁴⁾	III				
Circuit protection ⁵⁾	A, B				
Enclosure rate	IP 65				
Ambient temperature	Operation - 10 °C ... + 55 °C Storage - 25 °C ... + 70 °C				
Weight	Approx. 1200 g				

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⁴⁾ Rated voltage DC 50 V

PELV voltage (EN 50178)

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B = Output Q short-circuit protected

⁶⁾ Surrounding conditions constant, minimum switched on period 30 min.

⁷⁾ 23 °C air temperature, 977 hPa, minimum switched on period 30 min.

⁸⁾ On Diamond Grade

⁹⁾ To PL 880 FS01

¹⁰⁾ To OP 55

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	DMT-				
	10-2	10-2	10-2	10-2	10-2
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Accuracy ⁷⁾					
White, 90 % remission	± 10 mm	± 10 mm	± 10 mm	± 10 mm	± 10 mm
Gray, 18 % remission	± 10 mm	± 10 mm	± 10 mm	± 10 mm	-
Black, 6 % remission	± 10 mm	± 10 mm	± 10 mm	-	-
DML40-2					
Measurement range	0.5 ... 600 m ⁸⁾ / 0.5 ... 800 m ⁹⁾ / 0.5 ... 1200 m ¹⁰⁾				
Reproducibility ⁶⁾	6 mm				
Accuracy ⁷⁾	± 10 mm				

¹¹⁾ Accuracy may be reduced by a factor of 2.5 when operated between +40°C and +50°C.
Accuracy of the DMT10-2-2211, compared to the DMT10-2-1211, may be reduced by a factor of 4.
Reproducibility of the DMT10-2-1211 is 10mm.

Order information Profibus	
Type	Order no.
DMT10-2-1211	1027604
DMT10-2-1213	1027606
DMT10-2-2211	1028541
DML40-2-1211	1027608