

Technical data		DME3000-	111	111 S01	311	111P	111 P01	311P	311 P03
Measurement range	0.1...500 m ¹⁾ , dep. on reflector, s. b.								
Accuracy^{2) 3)}	± 5 mm (measurement distance > 200 mm)								
Reproducibility⁴⁾	Depending on measurement range, see below								
Light spot diameter	1 m (measurement distance 500 m)								
Resolution	0.125 mm								
Light source⁵⁾, light type	Laser diode, red light								
Laser category	2 (IEC 825-1/EN 60825-1)								
	CDRH								
Supply voltage V_S	18...30 V DC ⁶⁾								
Ripple	< 5 V _{SS} ⁷⁾								
Power consumption	≤ 6 W ⁸⁾								
Switching outputs	PNP/NPN								
Q ₁ , Q ₂ , Q _P , Q _S	HIGH = V _S - < 2 V / LOW = < 2 V								
Output current I _A max.	100 mA								
Q ₁ and Q ₂ switching outputs	Reversible Q/ \bar{Q}								
Switching limit/switching hysteresis	Adjustable								
Q _P plausibility output	HIGH: measurement correct/ LOW: measurement error								
Q _S service output	HIGH: OK / LOW: pre-failure signalling output								
Connection type	Plug								
VDE protection class⁹⁾	□								
Circuit protection¹⁰⁾	A, B, C								
Enclosure rating	IP 65								
Ambient temperature T_A	Operation - 10 °C...+ 45 °C Storage - 25 °C...+ 75 °C								
Weight	Approx. 980 g								
Interfaces	SSI: GRAY/BINARY adjust., 24 or 25 bits								
Serial interface	RS 422: 4.8/9.6/19.2/38.4 kBaud								
Profibus	Max. 12 MBaud								
Effect of air pressure	0.3 ppm/hPa								
Effect of air temperature	1 ppm/K								
Temperature drift	Typical 0.3 mm/K Typical 0.2 mm/K								
Meas. value output SSI	1 ms								
	Profibus 1.5 ms								
	RS 422, 38.4 kBaud 5 ms								
Initialisation period	4 s								
Max. running speed	10 m/s								

- 1) Relative to front edge of object
2) 23 °C air temperature, 977 hPa, min. switching period 30 min
3) Re-calibration recommended after 25,000 h


- 4) Environmental conditions constant, min. switching period 30 min.
5) Average service life 50,000 h at T_A = +25 °C
6) Limit values

- 7) May not exceed or fall short of V_S tolerances
8) Without load
9) Reference voltage 32 V DC

- 10) A = V_S connections reverse-polarity protected
B = Output Q short-circuit protected
C = Interference pulse suppression

Measurement range		
Reproducibility	0.5 mm	2 mm
Statistical error 1 σ (switching period min. 30 min, environmental conditions constant)		
Measurement range with reflector		
Reflective tape 3290	0.1 m...20 m	0.1 m...40 m
Reflective tape 7610	0.1 m...40 m	0.1 m...90 m
Reflective tape "Diamond Grade"	3.0 m...90 m	0.5 m...250 m
Multi-reflector PL240F	0.1 m...250 m	0.1 m...300 m
Multi-reflector PL560F	0.1 m...270 m	0.1 m...350 m
Multi-reflector PL880F	10 m...300 m	8.0 m...500 m

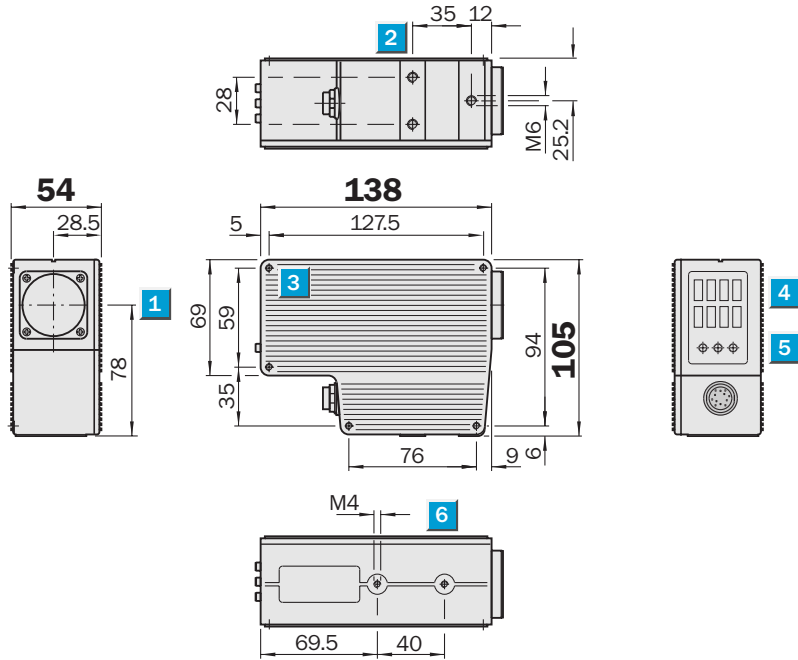
Order information	
Type	Order no.
DME3000-111	1013110
DME3000-111S01	1015921
DME3000-311	1016283
DME3000-111P	1018063
DME3000-111P01	1018575
DME3000-311P	1018542
DME3000-311P03	1019305

 **Measurement range up to 10 m**

Distance measuring device

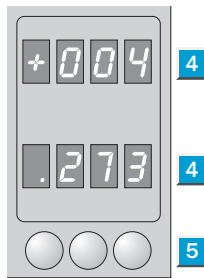
- Excellent measurement accuracy and reproducibility thanks to time-of-flight measurement
- Simple adjustment using visible red light
- Easy handling due to programmable parameters
 - 2 switching outputs
 - pre-failure signalling output
 - plausibility control
- RS 422 serial interface and SSI interface
- Profibus
- Gateway to Interbus, DeviceNet

Dimensional drawing



Adjustments possible

All types

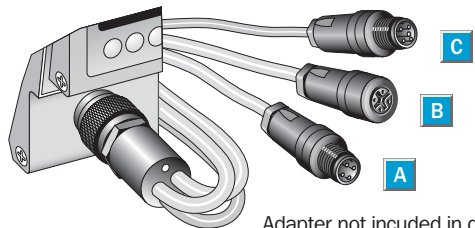
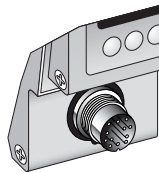


- 1 Centre of optical axis
- 2 M6 threaded mounting hole, 10 mm deep
- 3 M4 threaded mounting hole, 14 mm deep (this side only)
- 4 8-digit alphanumeric indicator
- 5 Programming switches
- 6 M4 threaded mounting hole, 6 mm deep

Connection type

DME3000-211
DME3000-212
DME3000-232

DME3000-211P DME3000-212P04
DME3000-411P DME3000-232P



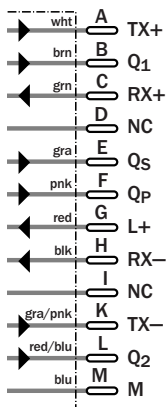
Adapter not included in delivery

12-pin, M16

4-pin, M12

5-pin, M12

5-pin, M12

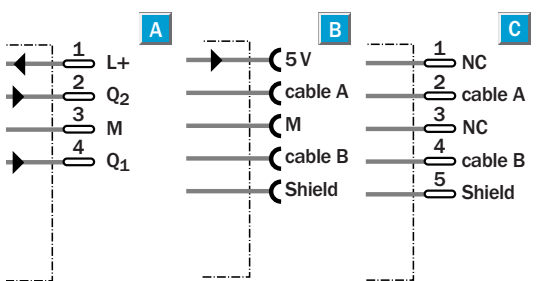


Send data (SSI: Data +)

Receive data (SSI: Clock +)

Receive data (SSI: Clock -)

Send data (SSI: Data -)



See chapter Accessories

- Cables and connectors
- Mounting systems
- Special accessories

Technical data		DME 3000-		211	212	232	211P	411P	212P04	232P			
Measurement range	100...8,000 mm												
	100...10,000 mm												
Light spot diameter	5 mm (measurement distance 8 m)												
Resolution	0.125 mm												
Light source²⁾, light type	Diode laser, red light												
Laser category	2 (IEC 825-1/EN 60825-1)												
Laser category	3 B (IEC 825-1/EN 60825-1)												
Service life (at 25 °C)	MTTF 50,000 h												
NIR blocking filter													
Supply voltage V_S	18...30 V DC ³⁾												
Ripple	< 5 V _{SS} ⁴⁾												
Power consumption	≤ 6 W ⁵⁾												
Switching outputs	PNP/NPN												
Q ₁ , Q ₂ , Q _P , Q _S	HIGH = U _V - ≤ 2 V/LOW = < 2 V												
Output current I _A max.	100 mA												
Q ₁ and Q ₂ switching outputs	Reversible Q/ \bar{Q}												
Switching limit/switching hysteresis	Adjustable												
Q _P plausibility output	HIGH: measurement correct/ LOW: measurement error												
Q _S service output	HIGH: OK/LOW: pre-failure signalling output												
Connection type	Plug												
VDE protection class⁶⁾	\square												
Circuit protection⁷⁾	A, B, C												
Enclosure rating	IP 65												
	IP 68												
Ambient temperature T_A	Operation - 10 °C...+ 45 °C												
	Storage - 25 °C...+ 75 °C												
Weight	Approx. 980 g												
Interfaces	SSI: GRIS/BINARY adjust., 24 or 25 bits												
Serial interface	RS 422: 4.8/9.6/19.2/38.4 kBaud												
Profibus	Max. 12 MBaud												
Temperature drift	typ. 0.2 mm/K												
	typ. 0.4 mm/K												
	(compensation on request)												
Measured value output													
SSI/Profibus	21 ms												
RS 422, 38.4 kBaud	21 ms												
Initialisation period	5 s												

1) Relative to front edge of object
2) Average service life 50,000 h at T_A = + 25 °C
3) Limit values

4) May not exceed or fall short of V_S tolerances
5) Without load
6) Reference voltage 50 V DC

7) A = V_S connections reverse-polarity protected
B = Output Q short-circuit protected
C = Interference pulse suppression
8) Environmental conditions constant, min. switching period 30 min.

9) 23 °C air temp, 977 hPA, min. switching period 30 min.
10) Re-calibration recommended after 25,000 h.

Reproducibility and accuracy as a function of measurement distance												
	DME3000-											
	21..	232	21..	232	21..	232	21..	232	21..	232		
Measurement distance	1 m		2 m		4 m		6 m		8 m		10 m	
Reproducibility⁸⁾												
White, 90 % remission	1 mm	0.5 mm	2 mm	1 mm	5 mm	2 mm	10 mm	5 mm	25 mm	20 mm		
Grey, 18 % remission	2 mm	1 mm	5 mm	2.5 mm	25 mm	5 mm	-	25 mm	-	-		
Black, 6 % remission	5 mm	2 mm	25 mm	8 mm	-	25 mm	-	-	-	-		
Accuracy⁹⁾10)												
White, 90 % remission	±5 mm	±5 mm	±5 mm	±5 mm	±10 mm	±5 mm	±20 mm	±5 mm	±30 mm	±20 mm		
Grey, 18 % remission	±5 mm	±5 mm	±10 mm	±5 mm	±30 mm	±10 mm	-	±25 mm	-	-		
Black, 6 % remission	±10 mm	±5 mm	±20 mm	±10 mm	-	±10 mm	-	-	-	-		

Order information	
Types	Order no.
DME3000-211	1013782
DME3000-212	1015906
DME3000-232	1015794
DME3000-211P	1018064
DME3000-411P	1019149
DME3000-212P04	1019697
DME3000-232P	1018958