

HEIDENHAIN-METRO

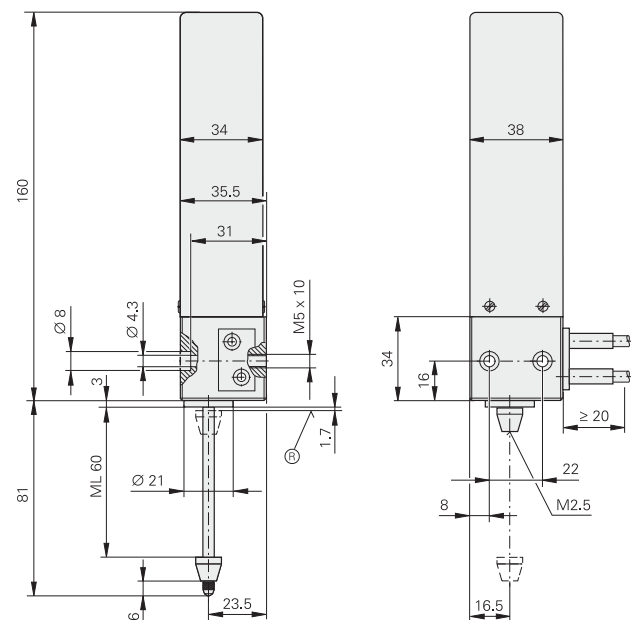
Incremental length gauges with $\pm 0.5 \mu\text{m}/\pm 1 \mu\text{m}$ accuracy

- Large measuring ranges
- For dimensional and positional measurement
- Ball-bush guided plunger

MT 60M



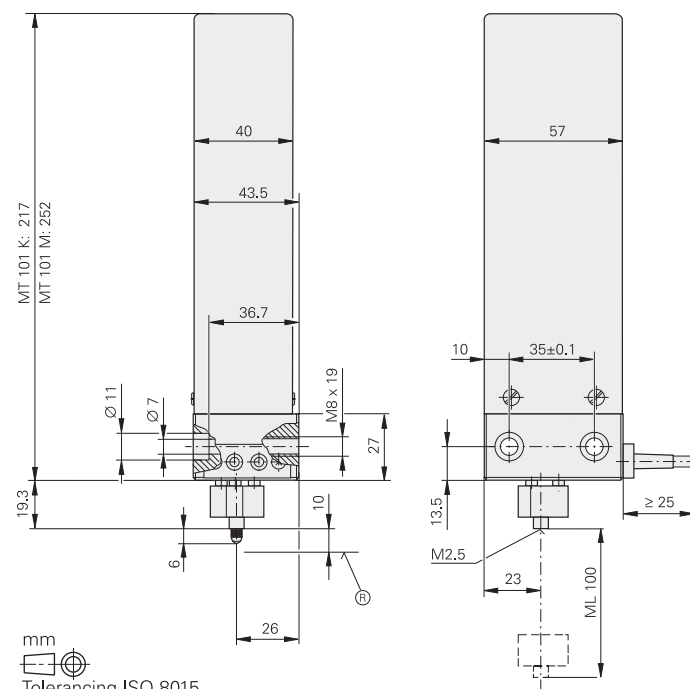
MT 60



MT 101M



MT 101



mm
 Tolerancing ISO 8015
 ISO 2768 - m H
 < 6 mm: ± 0.2 mm

⊗ = Reference mark position

Specifications	MT 60M	MT 101M	MT 60K	MT 101K
Plunger actuation	By motor		Via coupling with moving machine part	
Measuring standard	DIADUR grating on silica glass; grating period 10 μm			
System accuracy	$\pm 0.5 \mu\text{m}$	$\pm 1 \mu\text{m}$	$\pm 0.5 \mu\text{m}$	$\pm 1 \mu\text{m}$
Position error per signal period	$\leq \pm 0.1 \mu\text{m}$			
Reference mark (approx.)	1.7 mm from top	10 mm from top	1.7 mm from top	10 mm from top
Measuring range	60 mm	100 mm	60 mm	100 mm
Gauging force Vertically downward Vertically upward Horizontal	By motor 1 N/1.25 N/1.75 N - / - / 0.75 N	By motor 0.7 N with SG 101V - 0.7 N with SG 101H	Moving force ¹⁾ 0.35 N 0.1 N 0.5 N	Moving force ¹⁾ 1.7 N 2 N 0.4 N
Radial force mech. permissible	≤ 0.5 N	≤ 2 N	≤ 0.5 N	≤ 2 N
Fastening	Plane surface			
Operating attitude	Any	Vertically downward with SG 101V Horizontal with SG 101H	Any	
Vibration 55 to 2000 Hz Shock 11 ms	$\leq 100 \text{ m/s}^2$ (EN 60068-2-6) $\leq 1000 \text{ m/s}^2$ (EN 60068-2-27)			
Operating temperature	10 °C to 40 °C; reference temperature 20 °C			
Protection EN 60529	IP 50			
Weight without cable	700 g	1400 g	600 g	1200 g

Electrical Data	MT 60M	MT 101M	MT 60K	MT 101K
Interface	$\sim 11 \mu\text{A}_{\text{app}}$			
Signal period	10 μm			
Measuring velocity	≤ 18 m/min	≤ 60 m/min	≤ 18 m/min	≤ 60 m/min
Electrical connection*	Cable 1.5 m with D-sub connector (male) 15-pin or with M23 connector (male) 9-pin			
Cable length	≤ 30 m with HEIDENHAIN cable			
Power supply	5V DC ± 0.25 V			
Current consumption	< 120 mA	< 70 mA		

Required accessories*	For MT 60M	For MT 101M
Switch box	SG 60M	Vertical orientation: SG 101V Horizontal orientation: SG 101H
Power supply unit	-	Required (see Accessories)

* Please select when ordering
¹⁾ Force required to move the plunger or of its weight