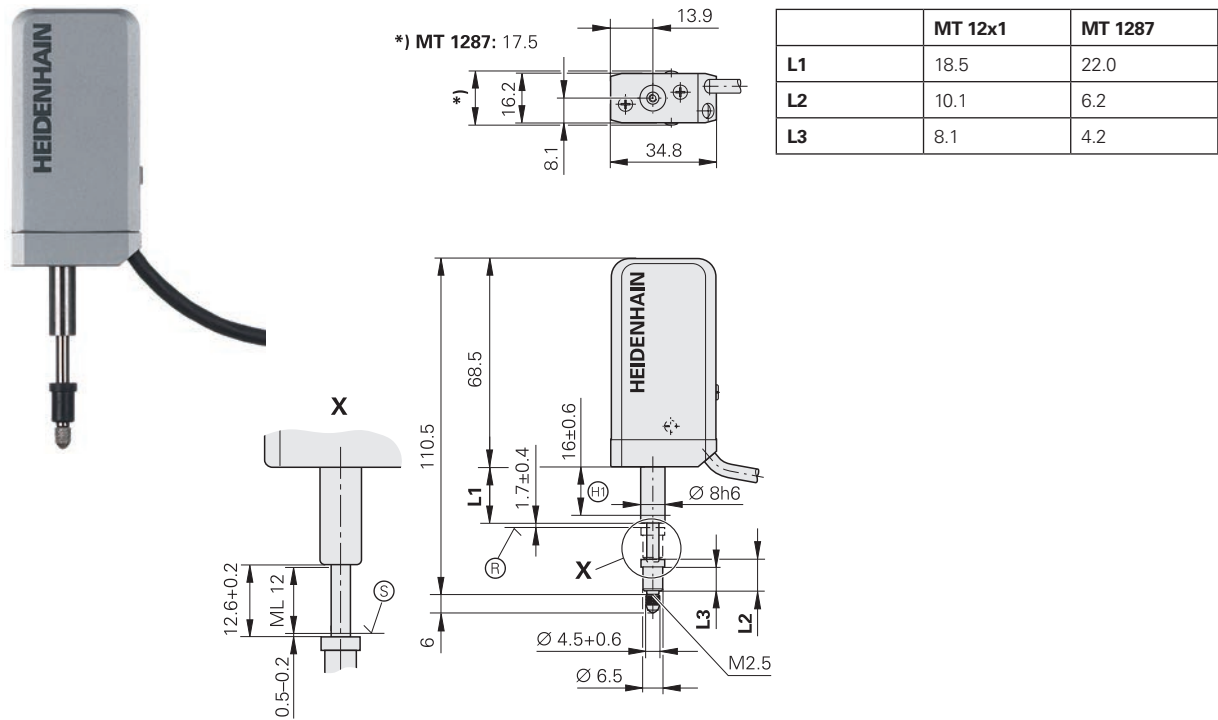


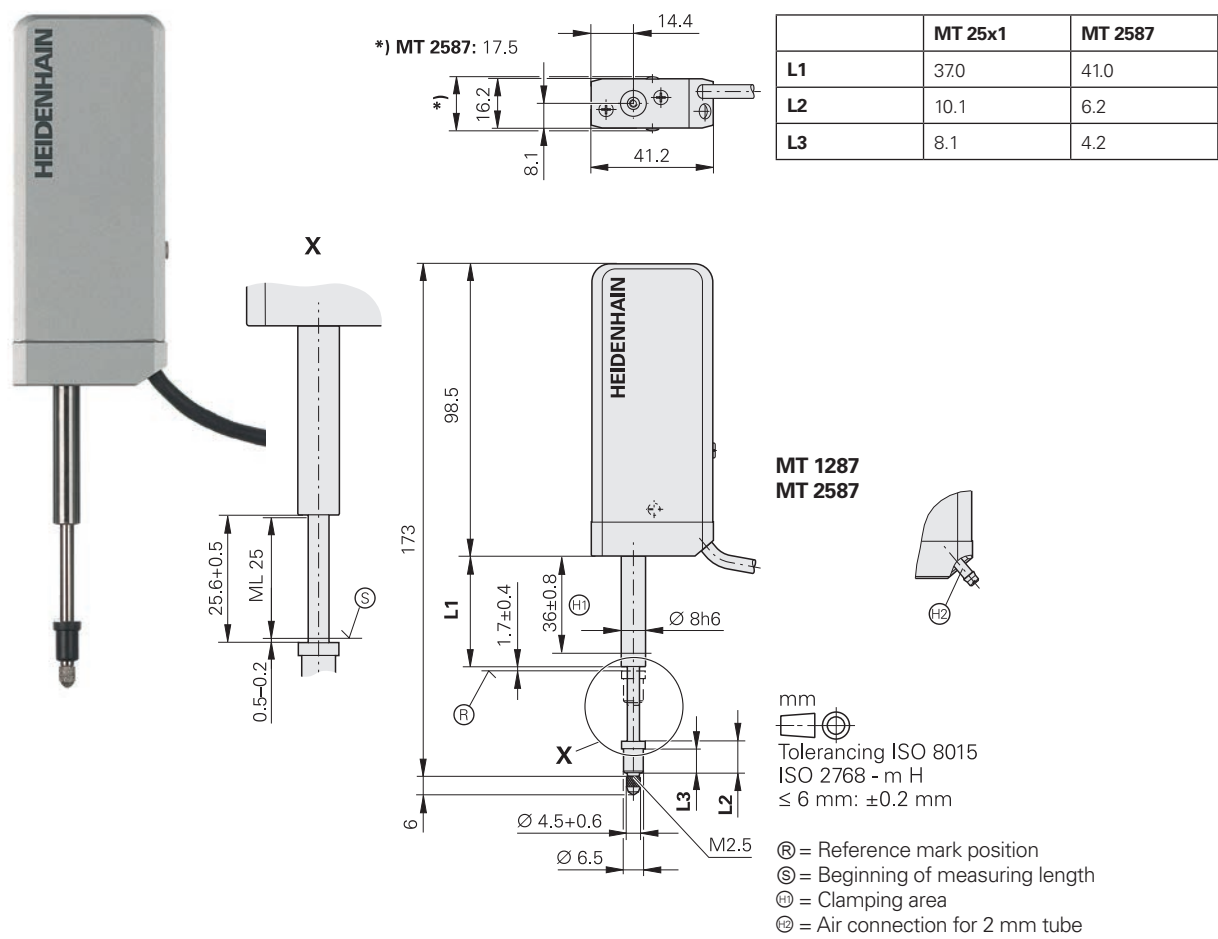
HEIDENHAIN-METRO

- Incremental length gauges with ±0.2 µm accuracy
- High repeatability
 - Various gauging force variants
 - Various possibilities for plunger actuation

MT 1200



MT 2500



Mechanical data	MT 1271  TTL MT 1281  1 V _{PP}	MT 2571  TTL MT 2581  1 V _{PP}	MT 1287  1 V _{PP}	MT 2587  1 V _{PP}
Plunger actuation Position of plunger at rest	Via cable or measured object Extended		Pneumatic Retracted	
Measuring standard	DIADUR phase grating on Zerodur glass ceramic; grating period: 4 µm			
System accuracy	±0.2 µm			
Position error per signal period	≤ ±0.02 µm			
Short-range accuracy typically	0.03 µm	0.04 µm	0.03 µm	0.04 µm
Reference mark	≈ 1.7 mm below upper stop			
Measuring range	12 mm	25 mm	12 mm	25 mm
Working pressure	–		0.9 bar to 1.4 bar	
Radial force	≤ 0.8 N (mechanically permissible)			
Fastening	Clamping shank Ø 8h6			
Operating orientation	Any; for version without spring and with low gauging force: vertically downward			
Vibration 55 Hz to 2000 Hz Shock 11 ms	≤ 100 m/s ² (EN 60068-2-6) ≤ 1000 m/s ² (EN 60068-2-27)			
Operating temperature	10 °C to 40 °C; reference temperature: 20 °C			
Protection EN 60529	IP50		IP67 (with sealing air)	
Mass without cable	100 g	180 g	110 g	190 g

Electrical data	MT 1271 MT 2571	MT 128x MT 258x
Interface	TTL	1 VPP
Integrated interpolation*	5-fold	10-fold
Signal period	0.4 µm	0.2 µm
Mech. permissible traversing speed	≤ 30 m/min	
Edge separation a at scanning frequency*/traversing speed ¹⁾	200 kHz ≤ 24 m/min 100 kHz ≤ 12 m/min 50 kHz ≤ 6 m/min 25 kHz ≤ 3 m/min	– ≥ 0.23 µs ≥ 0.48 µs ≥ 0.98 µs –
Electrical connection* (interface electronics integrated in connector)	Cable 1.5 m with 15-pin D-sub connector (male)	Cable 1.5 m with • 15-pin D-sub connector (male) • 12-pin M23 connector (male)
Cable length	≤ 30 m with HEIDENHAIN cable	
Voltage supply	DC 5 V ±0.5 V/< 160 mA (without load)	

* Please select when ordering ¹⁾ At the corresponding cutoff or scanning frequency

HEIDENHAIN-METRO

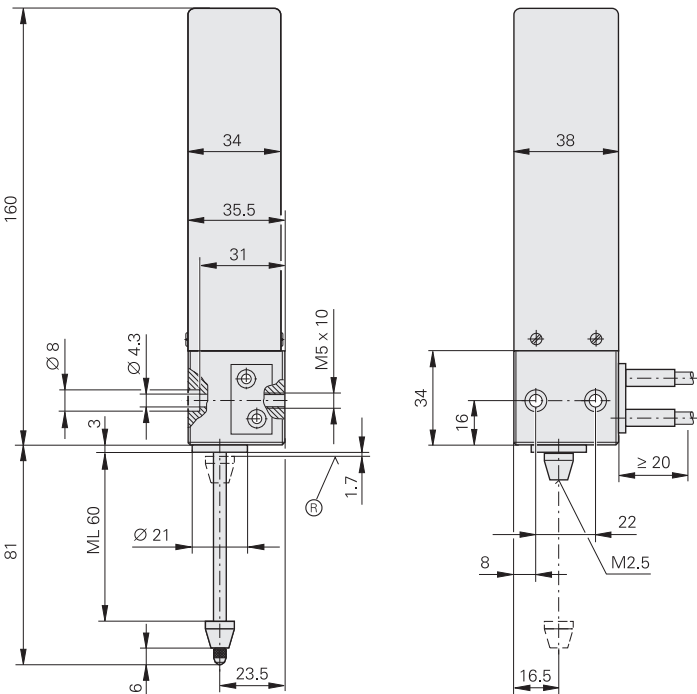
Incremental length gauges with ±0.5 µm/±1 µm accuracy

- Large measuring ranges
- Plunger actuation by motor or coupling
- Ball-bush guided plunger

MT 60M



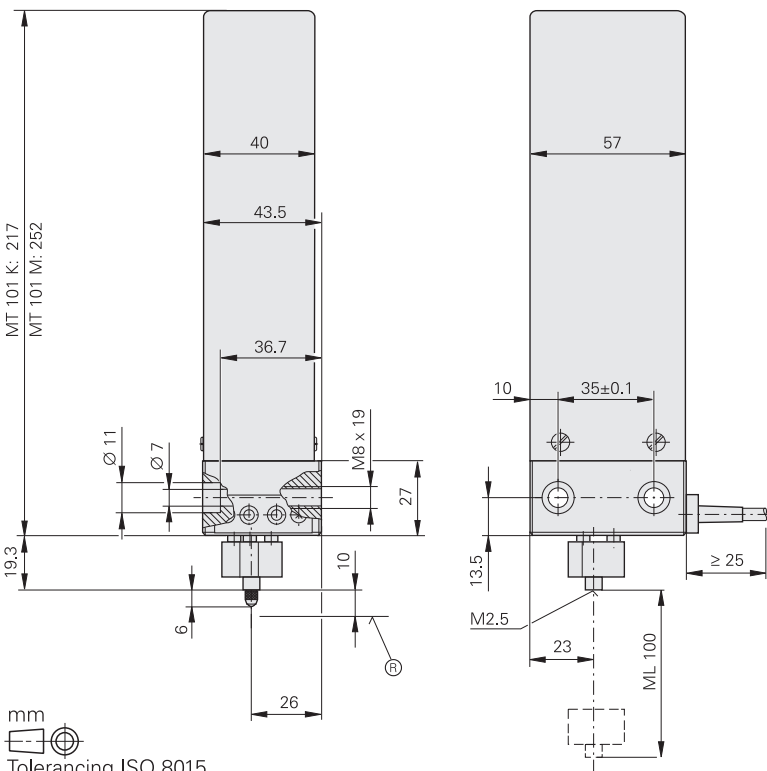
MT 60



MT 101M



MT 101



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

Ⓜ = Reference mark position

Mechanical data	MT 60M	MT 101M	MT 60K	MT 101K
Plunger actuation	Via motor		Via coupling with moving machine part	
Measuring standard	DIADUR grating on silica glass; grating period: 10 µm			
System accuracy	±0.5 µm	±1 µm	±0.5 µm	±1 µm
Position error per signal period	≤ ±0.1 µm			
Reference mark	≈ 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
Radial force mechanically permissible	≤ 0.5 N	≤ 2 N	≤ 0.5 N	≤ 2 N
Fastening	Plane surface			
Operating orientation	Any	Vertically downward with SG 101V Horizontal with SG 101H	Any	
Vibration 55 Hz to 2000 Hz Shock 11 ms	≤ 100 m/s ² (EN 60068-2-6) ≤ 1000 m/s ² (EN 60068-2-27)			
Operating temperature	10 °C to 40 °C; reference temperature: 20 °C			
Protection EN 60529	IP50			
Mass without cable	700 g	1400 g	600 g	1200 g

Electrical data	MT 60M	MT 101M	MT 60K	MT 101K
Interface	~ 11 µApp			
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 15-pin D-sub connector (male) or with 9-pin M23 connector (male)			
Cable length	≤ 30 m with HEIDENHAIN cable			
Supply voltage	DC 5 V ±0.25 V			
Current consumption	< 120 mA	< 70 mA		

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

* Please select when ordering