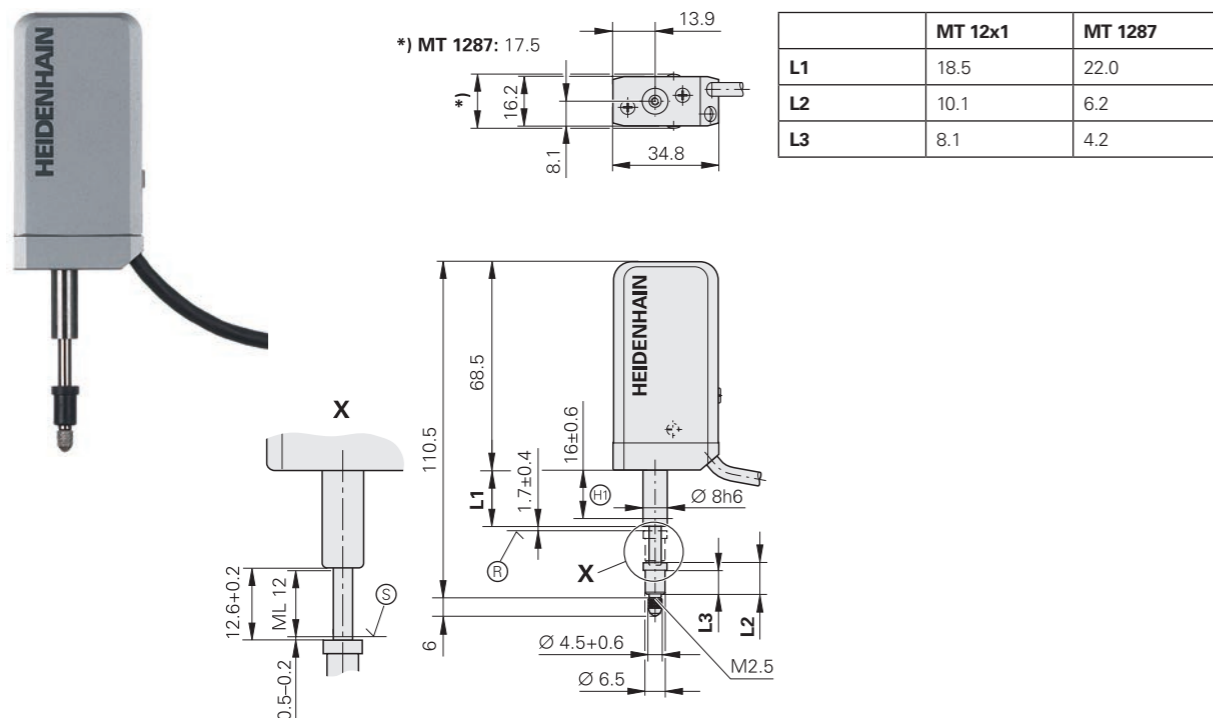


HEIDENHAIN-METRO

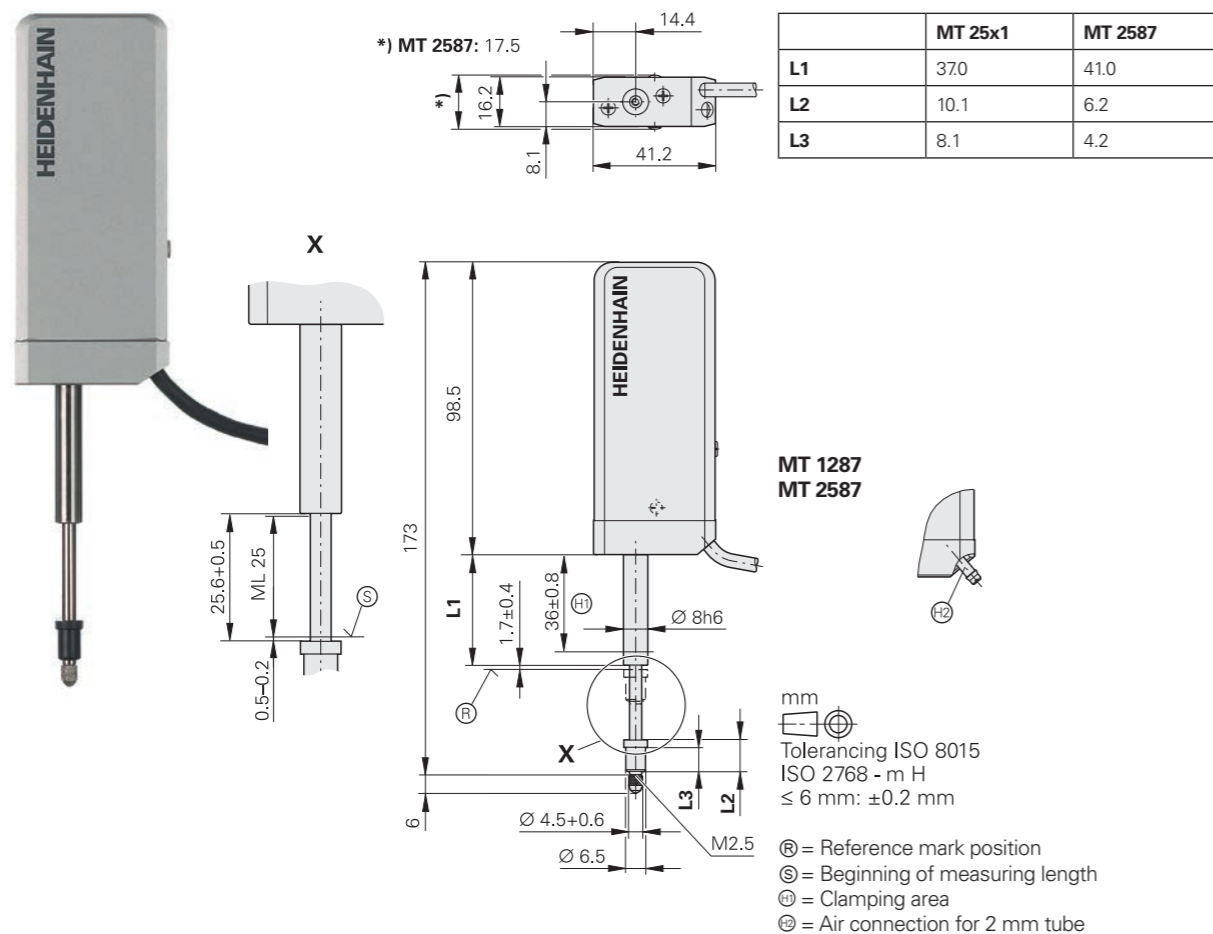
Incremental length gauges with $\pm 0.2 \mu\text{m}$ accuracy

- High repeatability
- Various gauging force variants
- Various possibilities for plunger actuation

MT 1200



MT 2500



Mechanical data	MT 1271 TTL MT 1281 $\sim 1 V_{PP}$	MT 2571 TTL MT 2581 $\sim 1 V_{PP}$	MT 1287 $\sim 1 V_{PP}$	MT 2587 $\sim 1 V_{PP}$
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	$\pm 0.2 \mu\text{m}$			
Position error per signal period	$\leq \pm 0.02 \mu\text{m}$			
Short-range accuracy typically	0.03 μm	0.04 μm	0.03 μm	0.04 μm
Reference mark	$\approx 1.7 \text{ mm}$ below upper stop			
Measuring range	12 mm	25 mm	12 mm	25 mm
Working pressure	-		0.9 bar to 1.4 bar	
Radial force	$\leq 0.8 \text{ N}$ (mechanically permissible)			
Fastening	Clamping shank $\varnothing 8\text{h6}$			
Operating orientation	Any; for version without spring and with low gauging force: vertically downward			
Vibration 55 Hz 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	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	$\sim 1 V_{PP}$
Integrated interpolation*	5-fold	10-fold
Signal period	0.4 μm	0.2 μm
Mech. permissible traversing speed	$\leq 30 \text{ m/min}$	
Edge separation a at scanning frequency*/traversing speed¹⁾	200 kHz $\leq 24 \text{ m/min}$ $\geq 0.23 \mu\text{s}$ 100 kHz $\leq 12 \text{ m/min}$ $\geq 0.48 \mu\text{s}$ 50 kHz $\leq 6 \text{ m/min}$ $\geq 0.98 \mu\text{s}$ 25 kHz $\leq 3 \text{ m/min}$ -	- $\geq 0.23 \mu\text{s}$ - $\geq 0.48 \mu\text{s}$ - $\geq 0.98 \mu\text{s}$
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	$\leq 30 \text{ m}$ with HEIDENHAIN cable	
Voltage supply	DC 5 V $\pm 0.5 \text{ V}$ / < 160 mA (without load)	DC 5 V $\pm 0.25 \text{ V}$ / < 130 mA

* Please select when ordering

¹⁾ At the corresponding cutoff or scanning frequency