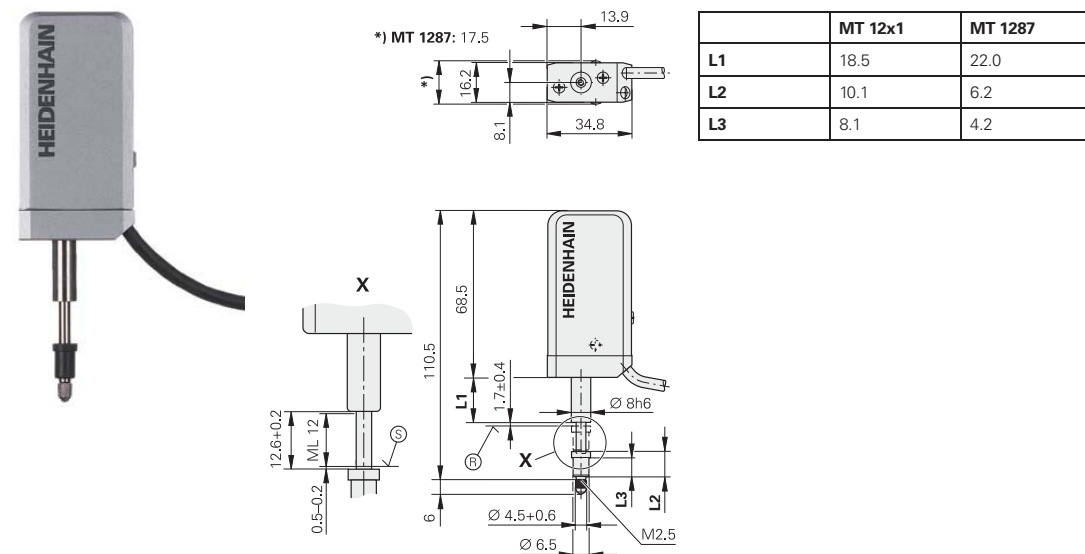


# HEIDENHAIN-METRO

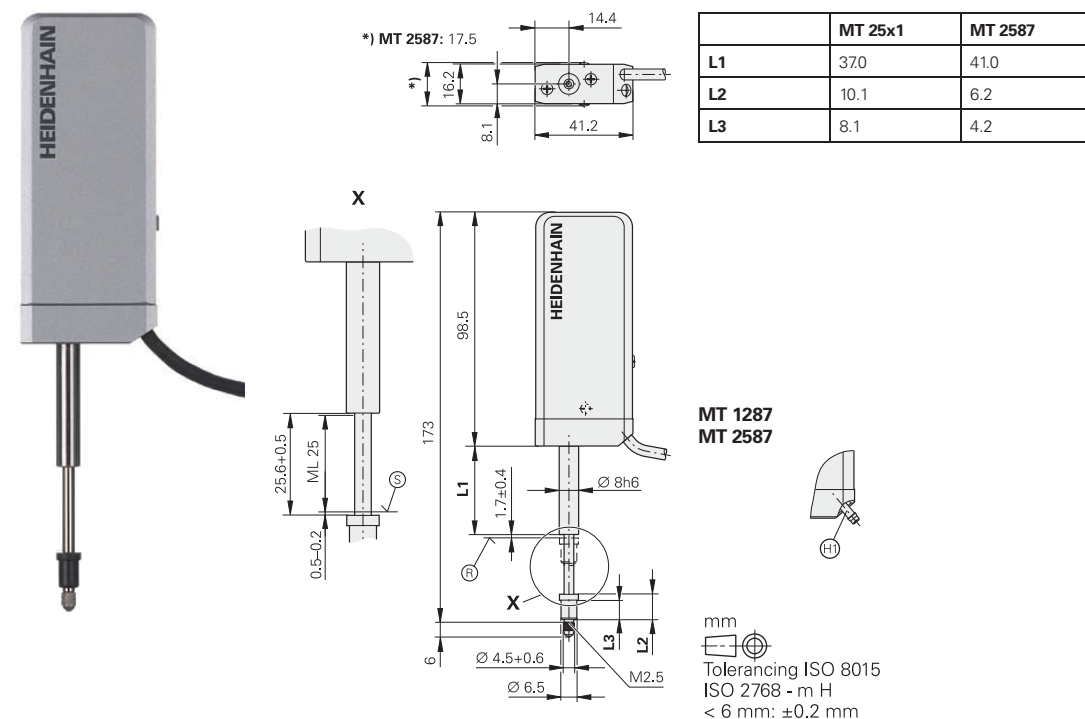
Incremental length gauges with  $\pm 0.2 \mu\text{m}$  accuracy

- High repeatability
- Plunger actuation by cable release, by the workpiece or pneumatically
- Ball-bush guided plunger

MT 1200



MT 2500



MT 1287  
MT 2587

mm  
Tolerancing ISO 8015  
ISO 2768 - m H  
< 6 mm:  $\pm 0.2$  mm

- ⊕ = Reference mark position
- ⊙ = Beginning of measuring length
- ⊕ = Air connection for 2 mm tube

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 $\sim 1 V_{PP}$
<b>Plunger actuation</b> Position of plunger at rest	By cable lifter or measured object Extended		Pneumatic Retracted	
<b>Measuring standard</b>	DIADUR phase grating on Zerodur glass ceramic; grating period $4 \mu\text{m}$			
<b>System accuracy</b>	$\pm 0.2 \mu\text{m}$			
Position error per signal period	$\leq \pm 0.02 \mu\text{m}$			
<b>Reference mark</b>	Approx. 1.7 mm below upper stop			
<b>Measuring range</b>	12 mm	25 mm	12 mm	25 mm
<b>Gauging force</b>	See Gauging force—plunger actuation			
Version "without spring" Vertically downward	0.13 N	0.17 N	-	
<b>Compressed air</b>	-		$\leq 1.4$ bar	
<b>Radial force</b>	$\leq 0.8$ N (mechanically permissible)			
<b>Fastening</b>	Clamping shank $\varnothing 8\text{h6}$			
Operating attitude	Any; for version without spring: vertically downward			
<b>Vibration</b> 55 to 2000 Hz <b>Shock</b> 11 ms	$\leq 100 \text{ m/s}^2$ (EN 60068-2-6) $\leq 1000 \text{ m/s}^2$ (EN 60068-2-27)			
<b>Operating temperature</b>	10 °C to 40 °C; reference temperature 20 °C			
<b>Protection</b> EN 60529	IP 50		IP 64 (with sealing air)	
<b>Weight</b> without cable	100 g	180 g	110 g	190 g

Electrical Data	MT 1271 MT 2571	MT 128x MT 258x
<b>Interface</b>	TTL x 5	TTL x 10 $\sim 1 V_{PP}$
Signal period	$0.4 \mu\text{m}$	$2 \mu\text{m}$
<b>Recommended measuring step</b>	$0.1 \mu\text{m}^{1)}$	$0.05 \mu\text{m}^{1)}$ $0.1 \mu\text{m}/0.05 \mu\text{m}$
<b>Mech. permissible traversing speed</b>	$\leq 30$ m/min	
<b>Edge separation a at scanning frequency*/traverse speed</b>	$\geq 0.23 \mu\text{s}$ $\geq 0.48 \mu\text{s}$ $\geq 0.98 \mu\text{s}$ -	- $\geq 0.23 \mu\text{s}$ $\geq 0.48 \mu\text{s}$ $\geq 0.98 \mu\text{s}$
<b>Electrical connection*</b> (Interface electronics integrated in connector)	Cable 1.5 m with D-sub connector (male) 15-pin	Cable 1.5 m with • D-sub connector (male), 15-pin • M23 connector (male), 12-pin
Cable length	$\leq 30$ m with HEIDENHAIN cable	
Power supply	5 V DC $\pm 0.25$ V / < 160 mA (without load)	5 V DC $\pm 0.25$ V / < 130 mA

\* Please select when ordering

<sup>1)</sup> After 4-fold evaluation