HEIDENHAIN-METRO

Length Gauges with ± 0.5 µm/± 1 µm Accuracy

- **Large measuring ranges**
- **For dimensional and positional measurement**

Large measuring ranges together with their high accuracy make the MT 60 and MT 101 HEIDENHAIN-METRO length gauges attractive for incoming inspection, production monitoring, quality control, or anywhere parts with very different dimensions are measured. But they are also easy to mount as highly accurate position encoders, for example on sliding devices or X-Y tables.

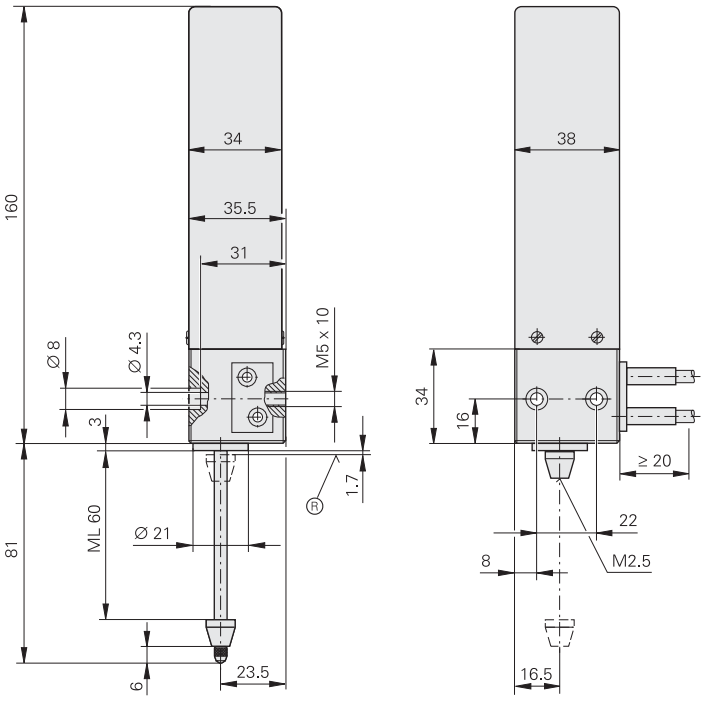
Plunger actuation
M version length gauges feature an integral motor that retracts and extends the plunger. While the MT 101 M operates at a constant gauging force, the MT 60 M allows you to select from three gauging force levels.

K version gauges have no integral plunger actuation. The plunger is freely movable. It can be connected to moving elements such as linear slides and X-Y tables by a coupling (see *Accessories*).

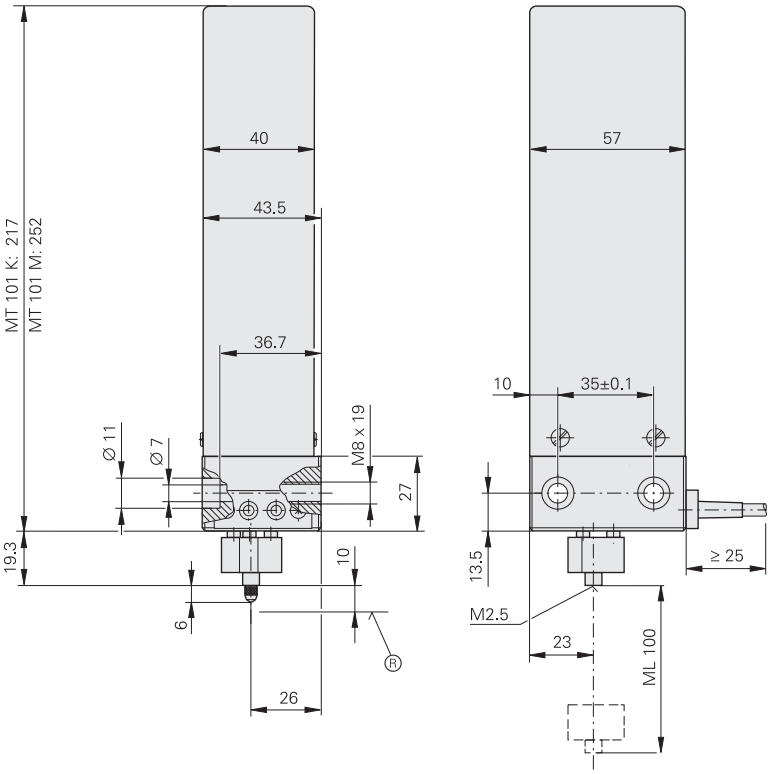
Mounting
The length gauges are mounted onto a flat surface by two screws. The M versions can also be mounted in the accessory MS 100 and MS 200 gauge stands.

Output signals
The MT 60 and MT 101 provide
~ 11 µA$_{PP}$ current signals for
HEIDENHAIN subsequent electronics.

MT 60



MT 101



Dimensions in mm

Tolerancing ISO 8015
ISO 2768 - m H
< 6 mm: ±0.2 mm
Ⓡ = Reference mark position

Specifications	MT 60M MT 60K	MT 101M MT 101K
Plunger actuation *MT xxM* *MT xxK*	By motor Plunger connected via separate coupling with moving machine part	
Measuring standard	DIADUR grating on silica glass; grating period 10 µm	
System accuracy	± 0.5 µm	± 1 µm
Recommd. meas. step	1 µm to 0.1 µm	
Reference mark	Approx. 1.7 mm from top	Approx. 10 mm from top
Measuring range	60 mm	100 mm
Gauging force Vertically downward Vertically upward Horizontal	With MT 60M 1 N/1.25 N/1.75 N – /– /0.75 N – /0.75 N/1.25 N	With MT 101M 0.7 N with SG 101V – 0.7 N with SG 101H
Required moving force with MT xxK	0.1 to 0.6 N (depending on operating attitude)	0.5 to 2 N (depending on operating attitude)
Radial force[1]	≤ 0.5 N	≤ 2 N
Operating attitude *MT xxM* *MT xxK*	Any Any	Vertically downward with SG 101V Horizontal with SG 101H Any
Vibration 55 to 2000 Hz **Shock** 11 ms	≤ 100 m/s² (EN 60068-2-6) ≤ 1000 m/s² (EN 60068-2-27)	
Protection EN 60529	IP 50	
Operating temperature	10 to 40 °C; ref. temperature 20 °C	
Fastening	Plane surface	
Weight *MT xxM* without cable *MT xxK*	700 g 600 g	1400 g 1200 g
Incremental signals	⌒ 11 μA_{PP}; signal period 10 µm	
Measuring velocity[2]	≤ 18 m/min	≤ 60 m/min
Electrical connection* Cable length	• Cable, 1.5 m, with 15-pin D-sub connector; • Cable 1.5 m with 9-pin M23 connector (male); ≤ 30 m with HEIDENHAIN cable	
Power supply *MT xxM* *MT xxK* *Switch box*	5 V ± 5 %/< 120 mA 5 V ± 5 %/< 70 mA –	5 V ± 5 %/< 70 mA 5 V ± 5 %/< 70 mA Via power adapter

Required accessories*	For MT 60M	For MT 101M
Switch box	SG 60M	Vertical position: SG 101V Horizontal position: SG 101H
Power adapter 100 V to 240 V	–	ID 648029-01

* Please indicate when ordering
[1] Mechanically permissible
[2] Depending on the subsequent electronics

MT 60M

MT 101M

Representante oficial de:

HEIDENHAIN

[Argentina – Bolivia – Chile – Colombia - Costa Rica – Ecuador - El Salvador –
Guatemala – Honduras – Nicaragua – Panamá – Paraguay – Perú -
República Dominicana – Uruguay – Venezuela.]

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