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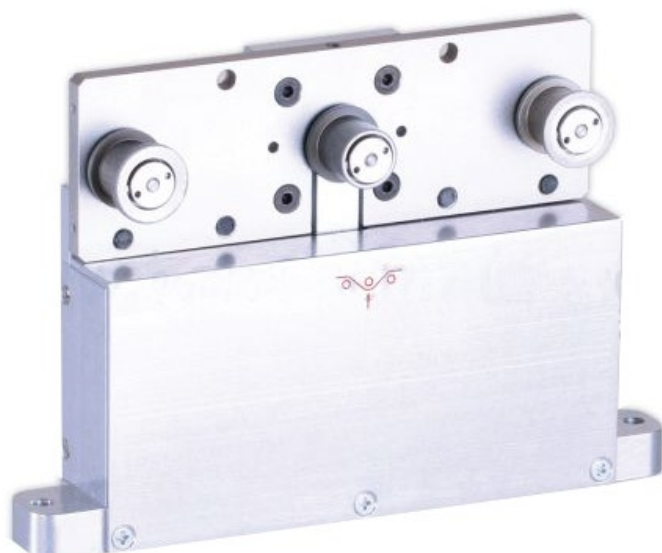
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**SCHMIDT**  
control instruments

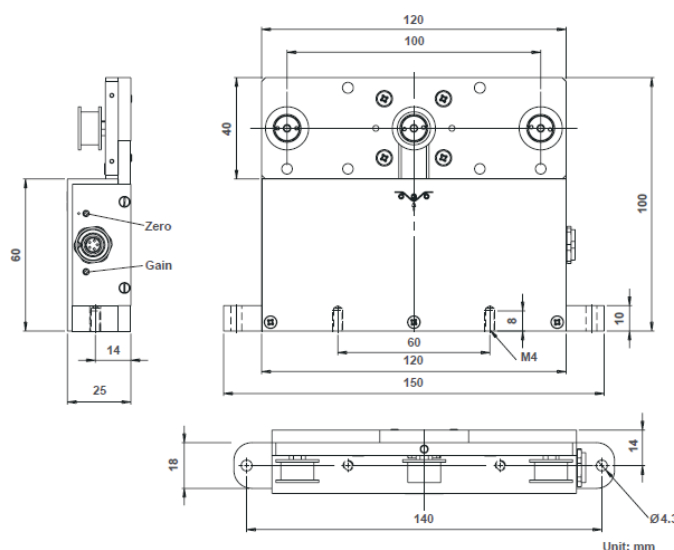
## Tension Meter

4 Tension ranges available  
from 0 - 100 cN up t 0 - 1000 cN

### ***Tension Meter MZB1***



### Dimensions



### Specifications

Calibration:	According to SCHMIDT factory procedure
Accuracy:	$\pm 1.5$ % full scale and $\pm 1$ digit % full scale or better
other calibration material	$\pm 3$ % full scale or better
Overload protection:	100 % of tension range
Measuring principle:	Strain gauge bridge
Measuring roller deflection:	Max. 0.5 mm
Natural frequency:	Approx. 500 Hz, depending on tension range
Signal processing:	Analog (Option: digital)
Temperature drift:	Less than $\pm 0.05$ % full scale/ $^{\circ}\text{C}$
Output signal:	Standard: 0 – 1 V DC (analog) impedance: $\geq 5$ k $\Omega$
	Option: 0 – 10 V DC (analog), 4 – 20 mA DC (current)
	Option digital: USB, RS-232 or RS-422
Damping (fg):	Standard: 30 Hz (other values on request)
Temperature range:	10 – 45 $^{\circ}\text{C}$
Air humidity:	85 % RH, max.
Power supply:	+15...24 V DC, max. 21 mA (standard output)
Code A3: 50 mA, Code 422: 50 mA, Code 232: 40 mA	
Housing material:	Aluminium
Dimensions:	See dimensions
Weight, net (gross):	Approx. 420 g (approx. 580 g)



### Special Features

- Small, compact housing
- Tension sensor MZ1 with integrated measuring amplifier and high accuracy of 2 % FS
- Typical material path – warping the 3 rollers
- Various roller widths from 7 mm up to 20 mm, according to the application are available. The roller width must correspond with the width of the material to be measured
- Various output signals are available:
  - analog: 0 – 1 V DC (standard), 0 – 10 V DC (optional)
  - digital (optional): USB, RS-232, RS-422 – see model MZB1-422
  - current: 4 – 20 mA (optional)
- Universal mounting possibility – easy to install, even afterwards, on existing machines:
- The sensor can be mounted using the two threads at the underside of the housing body. Alternative it can be fixed on two flanges on the side of the unit.
- Easy calibration to customized material by operator – zero and gain calibration is required
- Measuring principle – load cell with high quality strain gauge bridge

### Standard Features

- Tape rollers, ball-bearing mounted
- Tension sensor MZB1 with Aluminium housing
- Required power supply +15...24 V DC (regulated)
- Certificate of Compliance with the order 2.1 according EN 10204 is included
- Optionally available: Inspection Certificate 3.1 according EN 10204 with calibration report

### Available Models

Model	Tension Range	Measuring Head Width*	Roller Width
<b>MZB1-1000</b>	0 – 1000 cN	120 mm	7, 10, 15, 20 mm
<b>MZB1-2000</b>	0 – 2000 cN	120 mm	7, 10, 15, 20 mm
<b>MZB1-5000</b>	0 – 5000 cN	120 mm	7, 10, 15, 20 mm
<b>MZB1-10K</b>	0 – 10 daN	120 mm	7, 10, 15, 20 mm