TENSIONMETER

** code 1837 **

2 tension ranges from 1 - 200 cN up to 1 - 500 cN. Cost-efficient electronic tension meter for measuring low tensions of fibers, threads and fine wires. Tension meter with large guide rollers.

- Automatic »Zero Setting« independent to measuring position.
- Adjustable electronic damping for better reading when tension is constantly changing.
- Easy to read LCD display.
- Filament guide and roller shifting mechanism ensure easy acquisition of the running material.
- · Easy operation.
- Light weight hand-held unit.
- Tension meter for battery operation (LiPo accumulator with long runtime and short charging time).

Standard Features

- Everything in operator's view:
 - the guide rollers.
 - the measuring material.
 - the readings.
- Ball-bearing mounted, V-grooved guide rollers.
- Tension meter with high-strength plastic housing.
- 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.



MESDAN	Model	Tension Range	Resolution	Measuring Head Width*	Calibration Material**
Code		cN	cN	mm	
	ZED-200	1 - 200	1 cN	63	PA: 0.20 mm Ø
1837	ZED-500	1 - 500	1 cN	63	PA: 0.20 mm Ø

Other units of measure are available, such as g. * Width of filament guide, ** Suitable for 95 % of applications - PA = Polyamide Monofilament



On / Off

Damping







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Calibration to customized material:

If process material differs significantly from the calibration material in diameter, rigidity or shape, special calibration using customer supplied samples is recommended. For this purpose a material sample of about 5 m should be supplied.

	Line speed Vmax m/min	Roller material
Standard	2000	Hardcoated aluminium (R10003)
Code K	3500	Hardcoated aluminium
Code H	5000	Plasma-coated aluminium
Code T	450	Plastic (POM) black
Code W	450	Nickel-plated steel



Mains adapter

With 3 adapters (EU/USA/UK) for worldwide use, 100 - 240 V AC



Calibration report

Inspection Certificate 3.1 according DIN EN 10204 including a calibration report is optional available



Delivery includes

Tension meter with carrying case, mains adapter with 3 country adapters (EU/USA/UK), operating instruction in german or english (as requested), Certificate of Compliance with the order 2.1 according EN 10204 free of charge

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Specifications

Calibration:	According factory procedure			
Accuracy:	±1 % full scale ±1 digit or better typical ±0.5 % full scale			
Overrange:	Approx. 10 % full scale, without accuracy guarantee			
Overload protection:	100 % full scale			
Measuring principle:	Strain gauge bridge			
Measuring roller deflection:	Max. 0.5 mm			
Damping:	Adjustable electronic damping (15 value), averaging			
A/D converter:	12 bit			
Signal processing:	Digital			
Display:	LCD 3 digit, 11 mm high			
Display update rate:	2 times per second			
Self-frequency:	250 Hz			
Auto power off	After 3 minutes of non-use			
Temperature range:	10 - 45 °C			
Air humidity:	85 % RH, max.			
Power supply:	LiPo accumulator (approx. 80 H continous use, charging time approx. 3.5 h) and AC adapter 100240 V AC with adapters (EU/USA/UK)			
Housing material:	Plastic (POM)			
Housing dimension:	157 x 85 x 32 mm (LxWxH)			
Weight, net (gross):	Approx. 200 g (approx. 600 g)			
Autozero:	±20 % full scale			
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Specifications subject to change without notice!

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