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Tension Meter ZEF

3 tension ranges from 0.5 - 50 cN to 1 - 200 cN

Cost-efficient electronic tension meter for measuring low tensions of fibres, threads and fine wires
Hand-held device with slim filament guide and small guide rollers for limited access space

Handy, light weight tension meter



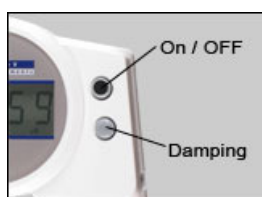
Tension meter ZEF 



Model ZEF-100-T
with smooth running plastic rollers Code T
for measuring spandex (Lycra) filaments

Special Features

- Automatic »Zero Setting« independent to measuring position
- Adjustable electronic damping for better reading when tension is constantly changing



- Slim filament guide with small guide rollers - ideal for limited access space
- Tension meter with 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

Available Models

Model	Tension Range cN	Resolution	Measuring Head Width* mm	SCHMIDT Calibration Material **
ZEF-50	0.5 - 50.0	0.1 cN	43	PA: 0.12 mm Ø
ZEF-100	0.5 - 100.0	0.1 cN	43	PA: 0.12 mm Ø
ZEF-200	1 - 200	1 cN	43	PA: 0.12 mm Ø

Other units of measure are available, such as g.

* Width of filament guide

**Suitable for 95 % of applications - PA = Polyamide Monofilament

Calibration to customized material:

If process material differs significantly from the SCHMIDT 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.

Guide Rollers

Order-Code	Line Speed		Roller Material
	v_{max}	...m/min	
Standard	900		Hardcoated aluminium
Code K	2000		Hardcoated aluminium
Code T	450		Plastic (POM) black
Code W	450		Nickel-plated steel

Click the order-code, to get picture and drawing of the guide rollers

Spare Rollers

Click picture to get an overview for the guide rollers

Spare Parts

Mains Adapter

with 3 adapters (EU/USA/UK) for worldwide use,
100 - 240 V AC
Order number: K50205

[Click picture](#) for more information

Calibration Report (optional)

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

[Click picture](#) for more information

Ordering Example

To place an order	Model with tension range		Code for guide rollers (if not standard)		Complete Order No.
Please indicate the complete order number, e. g.:	ZEF-200	+	K	=	ZEF-200-K

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

Dimensions

For PDF-file please
[click picture](#)

Specifications

Calibration:	According to SCHMIDT 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 values), averaging
A/D converter:	12 bit

Signal processing:	Digital
Display:	LCD 3 digit, 11 mm high, ZEF-100 3 ½ digit
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 continuous use, charging time approx. 3.5 h) and AC adapter 100...240 V AC with adapters (EU/USA/UK)
Housing material:	Plastic (POM)
Dimensions:	See dimensions above
Weight, net (gross):	Approx. 200 g (approx. 600 g)

Specifications subject to change without notice!

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