

ETM SERIES

Limited Access Digital Tension Meter

3 Tension Ranges (g or cN): 0.5–100
1–200
1–500

- User selectable units; grams or centinewtons.
- New filament guide for easy acquisition of material.
- Adjustable damping for stable readings when tension fluctuates.
- Backlit LCD Display.
- Stores AVG, MIN, MAX and PEAK tension values which can be recalled in the display.

DATALOGGING "X" MODELS ALSO FEATURE

- 0-2 VDC analog output for connection to a chart recorder or datalogger.
- RS-232 output for batch download or real-time data transfer to TensionInspect Software.
- FREE TensionInspect Software and RS-232 cable.

Check•Line® ETM Series Electronic Tension Meters accurately measure the running line tension of yarns, fibers and specialty filaments.

Three long, closely-spaced slender shafts with precision guide rollers or pins at their ends combine with the latest micro-processor technology to make this instrument top choice for all limited-access, tension measuring applications.

ETMB models feature miniature, high speed rollers for filament speeds up to 2000 m/min. ETMPB models features non-rotating, ceramic pins for speeds to 6000 m/min.

ETMX and ETMXP Datalogging Models store up to 4000 displayed tension values in memory and statistics (Last, AVG, MIN, MAX, MIN-PEAK, MAX-PEAK), which can be transmitted using the serial output port.

All models feature a reversible display for right or left-hand operation.

**DATALOGGING
MODELS ALSO
AVAILABLE**



Precision guide rollers or ceramic pins mounted on long, thin shafts permit access when space is limited

Specifications

Accuracy	±1 % full scale ±1 digit or better (typical ±0.5 % full scale)	Overload Protection	200%
Factory Calibration		Temperature Limits	40–115° F (5–45° C)
Material	0.20 mm Ø Polyamid Monofilament	Automatic Zero	± 20% of range
Minimum Access Space Required	3/4" x 1" (20 x 26mm)	Rel. Humidity Limit	95%
Guide Roller / Pin Material	Rollers, chrome-plated steel, std: 2000 m/min Ceramic pins, optional: 6000 m/min	Battery/Life	9 volt, long-life lithium (included), non-rechargeable / Approx. 80 hrs. (Note: A standard 9V alkaline battery can be used as a backup, but with greatly reduced life.)
Measuring Principle	Strain-gauge bridge	Low Battery Indicator	LO BAT, or equivalent display
Maximum Sensing-Roller Displacement	0.5mm	Weight	14 oz. (400 g)
Scanning Frequency	100 / sec., except 40/sec. in PEAK mode	Dimensions	13" x 1-3/4" x 1" (330 x 45 x 25mm)
Display Update	0.5 sec. (2 times per second)	DATALOGGING "X" MODELS FEATURE	
Thermal Drift	0.25% full scale per degree C	Output Signals (analog)	0–2 VDC, proportional to tension
Natural Frequency	250 Hz	(digital)	RS232 (9600, 8 N 1)
Over Range	10% FS, without accuracy guarantee	Memory	Last, average, MAX, MIN, MAX-PEAK, MIN-PEAK

Models Available

Model	Range*	Model With Pins	
ETMB-100	0.5–100	ETMPB-100	Basic Models
ETMB-200	1–200	ETMPB-200	
ETMB-500	1–500	ETMPB-500	
ETMX-100	0.5–100	ETMPX-100	Datalogging Models
ETMX-200	1–200	ETMPX-200	
ETMX-500	1–500	ETMPX-500	

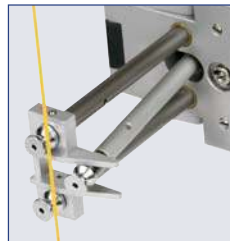
*Units are grams or cN.

Complete Kit

The ETM2 is supplied as a complete kit, including the gauge, 9 volt Lithium battery and operating manual, all in a foam-fitted carrying case.



ETMPB with non-rotating ceramic pins



Outer rollers tilt back for easy material acquisition

Data Analysis Software



Tension Inspect Data Analysis Software (optional, part no. ETM2-SV1) is an easy-to-use program designed to display, record, graph and print data transferred from the Check-Line Digital Tension Meter.

