TX-1 - DIGITAL TENSION METER

The TX digital tension meter is designed to measure tension in many different types of materials, including: wire (EDM machines), yarns and fibers, tapes and belts. Model TX-1-1000, has resolutions adjustable to 1 gram, and the model TX-1-5000 has resolutions adjustable to 5 grams. The speed of material can be displayed in feet per minute or meters per minute, or show length of part run in feet or meters. There is a minimum and maximum reading for both tension and speed. Menu selectable calibrations provide maximum accuracy for material whether filaments, AWG, or custom calibrations. Since variation in materials and diameters affect tension reading, simply select the correct material and size from the calibration menu. Calibration certificates traceable to NIST are included.

- **DISPLAYS IN GRAMS, NEWTONS OR POUNDS**
- **MEASURE TENSION IN WIRES, FIBERS, TAPES AND BELTS**
- **LARGE, EASY-TO-READ COLOR DISPLAY**
- **COMES WITH STANDARD V-GROOVE ROLLER; OTHERS ROLLER CONFIGURATIONS AVAILABLE**
- **5 AAA NIMH RECHARGEABLE CELLS**
- **±1% ACCURACY**
- **USER DEFINABLE COLOR TENSION RANGE INDICATORS**
- **DATA LOGGING FOR LATER REVIEW OR SERIAL EXPORTING**
- **STORES UP TO FIVE SEPARATE READINGS PER DATA SET, PLUS THEIR AVERAGE**
- **MEMORY RETAINS MULTIPLE DATA SETS**
- **10-POINT CALIBRATION**
- **EDM WIRE-SPECIFIC MODEL AVAILABLE**

SPECIFICATIONS

TX-1-125	0 to 125 g
TX-1-1000	10 to 1000 g
TX-1-5000	50 to 5000 g
ACCURACY:	±1% F.S.
MATERIAL:	Aluminum w/ plastic covers
TEMPERATURE RANGE:	35° to 120° F
POWER:	5 AAA NIMH Rechargeable cells. 9 hrs operation
TENSION RANGE:	Define Acceptable Tension Range Amber (Low), Green (Desirable), or Red (High) Bar Graph indicates current tension
MEMORY:	Store up to 5 separate readings plus their average. Retain multiple sets of data
DATA LOGGING:	Standard Feature. Numerous entries can be stored for later viewing data can be serially exported with optional serial communication feature
MIN/MAX	Standard - Tension & Speed
ANALOG OUTPUT:	Optional - Output for both speed and tension, 0-5 VDC or 4-20 mA
RS-232:	Optional
DISPLAY:	999.9 Max measurement length (in N, g, lbs)
SPEED & LENGTH:	Optional - 9,999 FPM or 9,999 MPM
CUSTOM ROLLERS:	Optional - Choose numerous sizes of cylindrical, flanged or U-shaped rollers
RESOLUTION:	
TX-1-125	1 g adjustable to .1 g
TX-1-1000	5 g standard; adjustable to 1 g
TX-1-5000	10 g standard; adjustable to 5 g
SAFE OVERLOAD:	200% F.S.
SPECIAL FEATURES:	Min and max update rates for speed or tension are adjustable. User-selectable dampening rate speeds up or slows down DRO updates. Numerous materials and AWG may be imputed into the TX-1 and calibration is automatically adjusted.
SIZE:	7.1" (180 mm) X 2.31" (59 mm) X 3.17" (80 mm)

TX-1

Battery Charge Level

Selectable Tension in Grams, Lb or Newtons

Select Material and Size. Instrument Automatically Adjusts Calibration

Min and Max Values

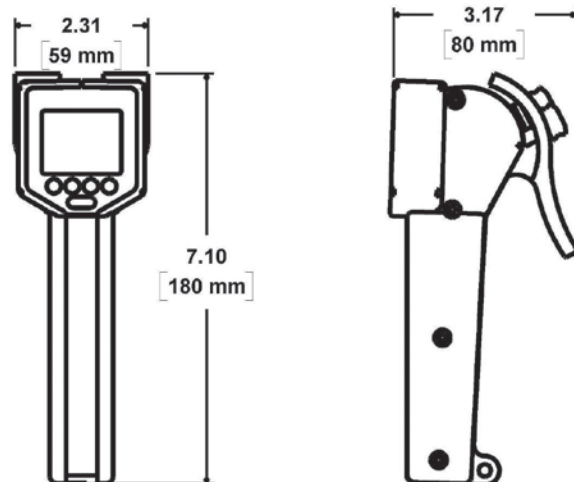| MODEL	RANGE	RESOLUTION	TENSION VALUES DISPLAY AS
TX-125*	0 – 125g	1g adjustable to .1g	cN, g, lbs
TX-1000	10 – 1000g	5g adjustable to 1g	N, g, lbs
TX-5000	50 – 5000g	10g adjustable to 5g	N, g, lbs

TX-1-EDM model (50 – 5000 grams) is available with pre-programmed EDM wire calibrations.

Two versions of each Model range are available. Please specify "Standard" or "Metric" when ordering. Standard version displays wire selections in AWG sizes; filament and custom Calibrations display in inches. Metric version displays wire selection, filament and custom calibrations in mm.

OPTIONS

- -R   Choose from numerous sizes of cylindrical, flanged and U-shaped rollers.
- -S   Indicate real-time speed in FPM, or MPM. Maximum measurable speed is 9,999 FPM or 9,999 meters per minute, however line speeds in excess of 2,000 FPM are generally unsafe for hand-held applications. Read length of part run in feet or meters. Maximum length measuring up to 9,999 meters or feet.
- -A   Analog output option for both speed and tension. Output is 0-5 VDC, or 4-20 mA. Cable included.
- -E   RS-232 serial output option; cable included.

* Add option-designator letter to the end of the Model Number to specify the option.

2.31 [59 mm]   3.17 [80 mm]   7.10 [180 mm]

STANDARD CONTACT ELEMENTS

V-Grooved Pulley   Scooped   Cylindrical   Flanged