1958

checkline ®
europe

DTSE/DTXE
Limited Access Space
Hand-Held Digital Tension Meters

4 tension ranges available up to 2000 cN / 2 Kg Capacity

Features

- 64mm x 36mm measuring head for measurements with limited access space

- Ball-bearing mounted, hardcoat anodized aluminum V-grooved rollers, for material speeds up to 900 m/min (2000 m/min with "K" option)

- Large, backlight LCD-display rotates in 90° steps for optimal viewing

- 3 different display modes: Numeric, Numeric with Bar Graph, Numeric with Tend Graph (tension vs time)

- Automatic Zero-Setting in each measuring position

- Material memory locations for custom calibrations: 4 (DTSE), 9 (DTXE)

- User-set Min and Max alarms with indication if reading is out of limits

- Hi-speed data sampling & recording of Min, Max, Hi-Peak, Lo-Peak, Average & Standard Deviation

- User-Selectable measurement units: cN, daN, g, kg, N, lb

- Rugged aluminium housing with rubberized handle provides a secure and comfortable grip

- Setup parameters can be password protected

- CE certified with 1-Year Warranty

- NIST-Traceable Calibration Certification optionally available

DTSE and DTXE tension meters feature a small measuring head with miniature rollers for applications with limited access space or where filaments run close together. They are ideal for uses on textiles (2000 tex, max) or wires up to 0.5mm diameter.

DTXE (datalogging) models include memory storage for 60,000 data points and USB output with sample rates up to 1kHz. Tension Inspect Software which displays real-time readings on a pc or allows downloading of stored data is included. WiFi for wireless communication is available as an option.

Depending on the measuring position the LCD display automatically rotates in 90° steps and locks in position.
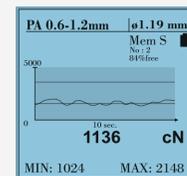
Large backlit Display with 3 user-selected display modes

PA 0.6-1.2mm ⌀1.19 mm Mem S No : 2 84%free **1136** cN	PA 0.6-1.2mm ⌀1.19 mm Mem S No : 2 84%free **1136** cN 0 5000	PA 0.6-1.2mm ⌀1.19 mm Mem S No : 2 84%free 5000 0 10 sec. **1136** cN MIN: 1024 MAX: 2148
Numeric	Numeric, Bar Graph with set point markers	Numeric and Trend Graph

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Specifications

Accuracy	
- Factory Cal Mat'l	±1% FS ±1-digit, from 5% to 100% Full scale
- Other Materials	±3% FS ±1-digit
Calibration Memory	
- DTSE	1 for factory calibration plus 4 for customized calibrations
- DTXE	1 for factory calibration plus 10 for customized calibrations
Measuring units	*Tension:* cN, daN, g, kg, N, lb *Thickness:* mm, inch
Overrange	Approx. 10% FS*, without accuracy guarantee
Overload protection	200% Full Scale
Measuring principle	Strain gauge bridge
Measuring frequency	Max.1 kHz (1000 samples/sec.)
Measuring roller	0.2mm, maximum
Sampling rate	200Hz: AVG, MIN and MAX
Display update rate	Approx. 2 times per second
LCD Display	Color-TFT 128 x 160
Display modes (3)	Large Numeric, Numeric with bar graph, Numeric with trend graph (tension vs. time)
Memory	Min, Max, Hi-Peak, Lo-Peak, Average & Standard Deviation (per measuring interval)

Damping	User-adjustable electronic damping (averaging)
Cal. adjustment	±10 steps in 1% increments
Auto power off	Approx. 3 minutes of non-use
Temperature coefficient	Gain: less than ±0.01% FS* /°C Zero point less than ±0.3% FS* /°C
Temperature range	50 to 113°F *(10 – 45 °C)*
Air humidity	85% RH, max.
Built-in battery	Lithium Polymer
- Battery Life	20 hours continuous use (approx.)
- Recharging Time	3½ hours (approx.)
- Battery Charge	100-240V AC, swappable plug adapters
- Plug Adapters	USA, Euro and UK
Housing material	Die-cast aluminium
Housing dimensions	10.45" x 3.09" x 1.82" *(265 x 78.5 x 46mm)*
Weight, net / gross	Up to DTSE-50K approx. 1.93 lbs *(875g)* / 3.42 lbs *(1550g)*

Additional specifications model DTXE

Output signal	USB
Memory	60,000 values at 255 measuring periods
Memory modes	5 memory modes with statistical evaluation

*Full scale

Tension Ranges

	Tension Range	Resolution	Measuring Head Width*	Applications Textile Industry e. g. Yarn Count	Factory Calibration Material**
200 / DTXE-200	1 - 200.0 g or cN	0.1 g or cN	36mm	max. 200 tex	0.12 mm Ø (PA)
500 / DTXE-500	1 - 500.0 g or cN	0.1 g or cN	36mm	max. 500 tex	0.20 mm Ø (PA)
1000 / DTXE-1000	10 - 1000 g or cN	1 g or cN	36mm	max. 1000 tex	0.30 mm Ø (PA)
2000 / DTXE-2000	20 - 2000 g or cN	1 g or cN	36mm	max. 2000 tex	0.50 mm Ø (PA)

bracket assembly. ** Suitable for 95 % of applications.

Roller Guides

Roller Width	Line Speeds ᵛmax…m/min	Roller Material*
Standard	900	Hard-coated aluminum
Code K	2000	Hard-coated aluminum

Complete Kit

DTSE models include tension meter in a foam-fitted carrying case, built-in rechargeable battery, AC-adapter/Charger (with US and Euro plug adapters) and operating instruction manual.

DTXE models also include USB cable and Tension Inspect software.

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