

Tension Meter Cod. 1830F, 1830G, 1830H, 1830N, 1830O, 1830P

Electronic tension meter for hard to reach and limited access space applications.
Available in two models: ETB (Basic unit) and ETX (with memory and outputs)

With guide rollers up to max. 2000 m/min



Special Features Cod. 1830F, 1830G, 1830H

With ball-bearing mounted, V-grooved guide rollers for line speed **up to 2000 m/min**
Guide rollers are mounted on long shafts to reach into tightest places
Storage of AVG, MIN, MAX and PEAK tension values which can be recalled in the display
Adjustable electronic damping for better reading when tension is constantly changing
LCD display with illuminated background for better reading
Display can be reversed for right and left hand use to reach all measuring positions easily



Additional Special Features

- 2 interfaces: 1. serial interface (RS 232) for connecting to a PC
2. analog interface (0 - 2 V) for connecting to a line recorder
Memory of max. 4000 displayed tension values split up to 255 series of measurements and statistics (Last, AVG, MIN, MAX, MIN-PEAK, MAX-PEAK)
4 different memory modes can be selected by the operator:
- **Mode S:** only statistics, no values
 - **Mode L:** statistics plus 10 displayed values of each series of measurement
 - **Mode C:** statistics plus 4000 displayed values arbitrary splitted up to 255 series
 - **Mode F:** as C plus higher sampling rate of 100 Hz = values/s



1830N, 1830O, 1830P can be connected to a PC with the cable ETX-CC.
(max. 80 values/s can be transferred, depending on tension range).
With the program **SW-TI2 »Tension Inspect 2«** readings can be displayed, statistically analyzed and saved. For more information see "accessories"

Standard Features

- + »Zero Setting« using a push button for measurement in different positions
- + Changeable units cN and g

- + Display update time 0.5 seconds
- + Battery operated
- + 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	Model	Tension Range cN	Resolution	Measuring Head Width* mm	SCHMIDT Calibration** with running filament approx. 100 m/min
ETB-100 (COD.1830F)	ETX-100 (COD.1830N)	0.5 - 100.0	0.1 cN	24	PA: 0.20 mm Ø
ETB-200 (COD.1830G)	ETX-200 (COD.1830O)	1 - 200	1 cN	24	PA: 0.20 mm Ø
ETB-500 (COD.1830H)	ETX-500 (COD.1830P)	1 - 500	1 cN	24	PA: 0.20 mm Ø

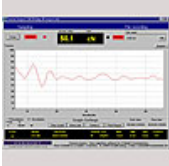
Guide Rollers

	Line Speed v_{max} ...m/min	Roller Material
Standard	2000	Aluminium hard chromed

Spare Rollers

Order-Code	Line Speed v_{max} ...m/min	Roller Material
R50017	2000	Aluminium hard chromed (<i>Standard</i>)

Standard Accessories ETX



Tension Inspect 2

For displaying and saving readings on a PC (Win 95 and higher)
Order number: SW-TI2



Connecting Cable

For serial interface RS 232, length 2 m
Order number: ETX-CC

Calibration Report (optional)



Calibration Report

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

Delivery Includes



Tension meter with carrying case, battery, even a screwdriver and flat wrench, operating instruction in german or english (as requested), Certificate of Compliance with the order 2.1 according EN 10204 free of charge.

For model 1830N, 1830O, 1830P delivery includes additionally connecting cable ETX-CC and software »Tension Inspect«

Specifications

Accuracy:	±1 % full scale ±1 digit or better typical ±0.5 % full scale
Measuring units:	cN or g, switchable
Overrange:	Approx. 10 % full scale, without accuracy guarantee
Overload protection:	200 % full scale
Measuring principle:	Strain gauge bridge
Measuring roller deflection:	0.5 mm max.
Signal processing:	Digital, 16 bit A/D converter
Damping:	Adjustable electronic damping, averaging
Sampling rate:	Internal approx. 5 kHz
Display update rate:	Approx. 2 times per second
Display:	LCD 4 digit, 11 mm high (back-lit)
Memory:	Last, average, MAX, MIN, MAX-PEAK, MIN-PEAK
Temperature coefficient:	Gain: less than ± 0.01% full scale/°C
Temperature range:	10 - 45 °C
Air humidity:	85 % RH, max.
Auto power off:	After two minutes of non-use
Power supply:	9 V E Block, e.g long-life 9 V lithium (approx. 80 hours continuous use)
Housing material:	Aluminium frame profile with plastic outer casing (PVC)
Housing dimensions:	230 x 62 x 46 mm (LxWxH)
Weight, net (gross):	Approx. 380 g (1050 g)
Additional specifications of model 1830N, 1830O, 1830P:	
Output signal analog:	0 - 2 V DC (linearized) R (load) >1 kΩ ± approx. 1 % conversion rate approx. 100 Hz
Output signal digital:	RS 232 (19200, 8, N, 1)
Memory:	max. 4000 values plus statistics
Communication frequency:	2 to max. 50 readings/s

Specifications subject to change without notice!

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