SCHMIDT
control instruments

Tension Meter DTXB

Electronic Tension Meter DTXB
for measuring low tensions of textile ribbons, films, foils, fibre bunches etc.

Tension Meter DTX
with measuring he

10 Tension ranges available
from 5.0 - 500 cN up to 2.5 - 50 daN

Stationary electronic tension sensor for measuring tensions of textile ribbons, films, foils, fibre bunches etc.

made
in
Germany

Cylindrical tape rollers with up to max. 41 mm width, one-sided mounting

Tension meter with various helpful functions for detailed data recording and analyse - Professional Instrument !

CE

Special Features

Additional functions in comparison to <u>basic instrument DTSB</u>

- Memory for 60.000 readings
- USB interface
- 4 different memory modes:

  Mode S: statistics only

  Mode H: storage of the X-Y-diagram for reviewing after finishing a series of measurement (e.g. short time spooling)

  Mode C: continuous logging over a user set time and different series of measurement (2 Hz)

  Mode F: fast, continuous logging over a user set time and different series of measurement (1000 Hz)

  Mode D: storage of single readings and statistic
- Standard, factory side calibration of tension meter DTXB with only one material
- 10 Material memory locations for customer made calibrations
- Software Tension Inspect 3 for displaying real-time readings on a PC and to store them into a file
- Wi-Fi module for wireless communication with a PC (optional)

Function of <u>basic instrument DTSB</u>

- Dual-flanged outer guide rollers with various widths, from 7 mm to 41 mm (single-flanged rollers optional, recommendable if the material being measured is wider than the tape roller)
- Tension meter DTXB with large, backlight LCD-display
- 3 different display modes:

  – numeric

  – numeric with bargraph

  – numeric with graph (Time-Tension)
- The display rotates in 90° steps for better reading
- New, unique, force reduced material catching system
- The tension meter has no material thickness compensator
- Automatic „Zero-Setting" in each measuring position using a special sensor technique
- 4 Material memory locations for customer made calibrations
- Calibration adjustment for fine tuning of the calibration if material differs from the used calibration material
- Programmable MIN- and MAX alarms: indication in the display, if reading is out of limits
- High speed data sampling (internal 8 kHz) and recording of MIN-, MAX-, last reading, PEAKS, average and standard deviation
- Selectable units of measurement: cN, daN, g, kg, N, lb
- Menu set-up in English or German language
- Flexible menu set-up to meet operators demand
- Some functions can be password protected

Standard Features

- Everything in operator's view:
   - – the guide rollers
   - – the measured material
   - – the readings
- Roller shifting mechanism ensure easy acquisition of the running material
- Ball-bearing mounted, tape rollers
- Rubberized handle provides a secure hold in the operators' hand
- Tension meter DTXB with rugged aluminium housing
- LiPo accumulator (approx. 40 hours continuous operation) with AC adapter
- CE certified, interference resistant against static electrifications
- 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

Gefördert durch:

Bundesministerium
für Wirtschaft
und Energie

aufgrund eines Beschlusses
des Deutschen Bundestages

Available Models

Model	Measuring Range **	Resolution	Measuring Head Width**	Roller Width
DTXB-500	5.0 – 500.0 cN	0.1 cN	55 mm	7, 10, 15, 20
DTXB-1000	50 – 1000 cN	1 cN	55 mm	7, 10, 15, 20, 30, 41
DTXB-2000	100 – 2000 cN	1 cN	55 mm	7, 10, 15, 20, 30, 41
DTXB-2500	150 – 2500 cN	1 cN	117 mm	7, 10, 15, 20, 30, 41
DTXB-4000	200 – 4000 cN	1 cN	55 mm	7, 10, 15, 20, 30, 41

DTXB-5000	250 – 5000 cN	1 cN	117 mm	7, 10, 15, 20, 30, 41
DTXB-10K	0.5 – 10.00 daN	0.01 daN	117 mm	7, 10, 15, 20, 30
DTXB-20K	1 – 20.00 daN	0.01 daN	167 mm	7, 10, 15, 20, 30
DTXB-30K	1.5 – 30.00 daN	0.01 daN	217 mm	7, 10, 15
DTXB-50K	2.5 – 50.00 daN	0.01 daN	217 mm	7, 10

* SCHMIDT calibration material textile ribbon or film, depending on tension range and roller width
** Outer distance between outside guide rollers

When selecting the instrument for your specific application, please keep in mind that:

1. Rollers of different widths are not interchangeable by the user.
2. The roller width should correspond with the width of the material to be measured.
Otherwise incorrect measuring results may occur and the instrument may be damaged.

SCHMIDT has the solution to any tension measuring problem! Please contact us to discuss your application requirements.

To assist you in selecting the right tension meter for your specific application, please furnish:
– Kind and dimensions of the material to be measured
– Expected tension range
– Material sample of about 5 m

Tension Meter DTXB can be reconverted for special applications.

Find further information at special design

Specifications

Calibration:	According SCHMIDT factory procedure
Accuracy:	From 5 % up to 100 % FS*: ± 0.5 % FS* ± 1 digit remaining tension range and other calibration materials: ±3 % full scale and ±1 digit

Memory for material curves:	1 for SCHMIDT calibration plus 10 for customized calibrations
Measuring units:	Force (switchable): cN, daN, g, kg, N, lb Thickness (switchable): mm, inch
Overrange:	Approx. 10 % FS*, full scale, without accuracy guarantee
Overload protection:	100 % full scale
Measuring principle:	Strain gauge bridge
Signal processing:	Digital, 16 bit A/D converter
Measuring frequency:	Max. 1 kHz (1000 measurings/sec.), intern 8 kHz
Measuring roller deflection:	Max. 0.2 mm
Display:	Graph LCD
3 different displays:	Numeric Numeric with graph (time-tension) X-Y-diagramm
Display update rate:	Approx. 2 times per second
Memory:	MIN, MAX, PEAK, AVG and LAST
Output signal:	USB
Memory:	60.000 values split up to 255 measuring positions
Memory modes:	5 memory modes with statistical evaluation
Damping:	Adjustable electronic damping (averaging)
Cal. Adjustment:	± 10 steps in 1 % increment
Thickness compensation:	Max. 2.5 mm (not available for all models)
Auto power off:	Approx. 3 minutes of non-use
Temperature coefficient:	Gain: less than ± 0.01 % FS* /°C
Zero point:	Less than ± 0.03 % FS* /°C
Temperature range:	10 – 45 °C
Air humidity:	85 % RH, max.

Power supply:	LiPo accumulator (approx. 40 h continuous use), charging time approx. 3 1/2 h, USB AC adapter 100 – 240 V AC with 4 adapters (EU/USA/UK/AUS-NZ)
Housing material:	Die-cast aluminium
Housing dimensions:	See <u>Dimensions</u>
Weight, net (gross):	Approx. 875 g / 1550 g

Specifications subject to change without notice!

Guide Rollers

Roller Width	Line Speed $v_{max.}$ ... m/min	Roller Material*
7 mm	1000	Hard-coated aluminium
10 mm	1000	Hard-coated aluminium
15 mm	1000	Hard-coated aluminium
20 mm	1000	Hard-coated aluminium
30 mm	1000	Hard-coated aluminium
41 mm	1000	Hard-coated aluminium

*Other roller materials (nickel-plated steel or plastic), as well as special coatings (Code CF – for carbon fibre, NAV optimized, Code KE – ceramic,
Code AH – anti adhesive) are available on request.
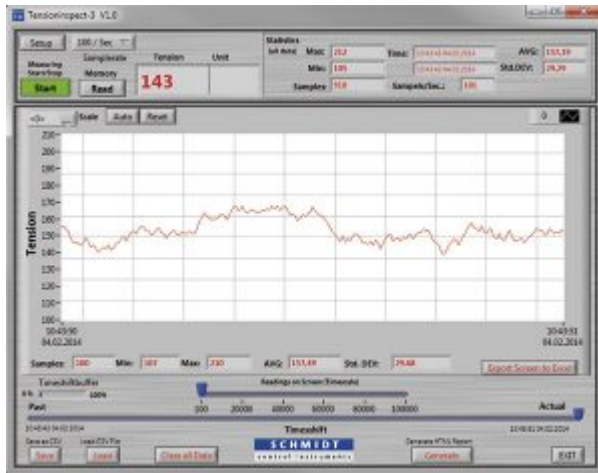
Standard Accessories

❯   SW-TI3 - Software Tension Inspect 3   +

Tension Inspect 3 Infos (PDF)

Software to display and save readings on a PC (Win 7 and higher; 32 bit and 64 bit)

Features:
– Real-time reading
– The readings are also shown in a X-Y- diagram (time/date-tension)

– For data analysing the buffered diagram can be zoomed and scaled
– Recording of the buffered readings as CSV-file (on user request)
– Download of values to Excel
Order number: SW-TI3

> ### K50202 - USB AC Adapter ＋

USB AC adapter with 4 adapters (EU/USA/UK/AUS-NZ) for 100 – 240 V AC and USB cable for loading the accumulator and data transfer to a PC.
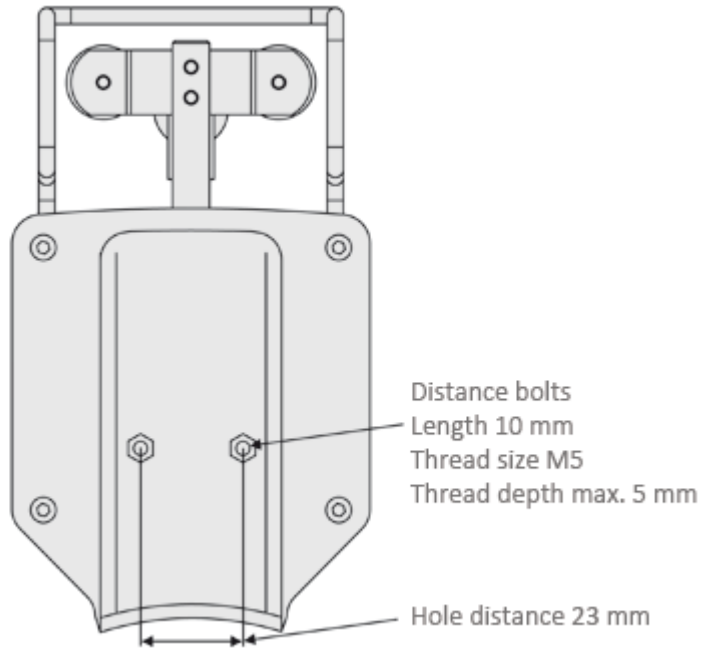**Order number: K50202**

Optional Accessories

> ### Online Mounting Code MH ＋

To mount the gauge for online use, the housing can be equipped with mounting threads. There are to bolts with M5 female thread on the rear side. This feature cannot be installed afterwords.

Distance bolts
Length 10 mm
Thread size M5
Thread depth max. 5 mm

Hole distance 23 mm

> Wi-Fi Signal Code WL   +

The instrument can be equipped with a Wi-Fi Modul for WLAN data transfer. This feature cannot be installed afterwards.

The Wi-Fi module is not licensed for all countries. Please contact us for further information!
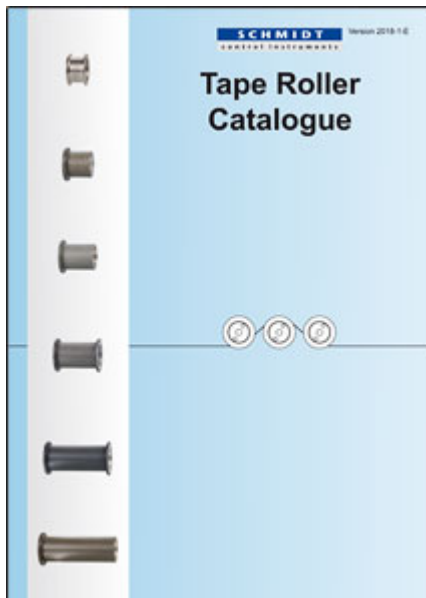
Calibration Report

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

Inspection Certificate 3.1 (PDF)

Spare Rollers

Download an overview for the tape rollers:

Tape Roller Catalogue (PDF)

Memory Content

Detailed information about the memory modes and a printout of the memory

Memory Content (PDF)

Dimensions

Dimensions of tension meter DTXB for download:

Drawing (PDF)

Delivery Includes

Tension meter DTXB with carrying case, accumulator and USB AC adapter with country adapters (EU/USA/UK/AUS-NZ), USB cable, Software Tension Inspect 3, Certificate of compliance with the order 2.1 according EN 10204 free of charge, operating instruction in German or English (as requested)

How To Order

To order tension meter DTXB:

Please indicate the complete order number e. g.:

Model with tension range		Roller width in mm		Code attachment		Complete Order No.
DTXB-10K	+	10	+	MH	=	DTXB-10K-10-MH

Instruction Manual

Download the instruction manual of tension meter DTXB and software Tension Inspect 3:

Instruction Manual DTXB (PDF)

Instruction Manual TI3 (PDF)

If you want to get a quote or want to place an order please contact us.

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✉ Contact us