



B.N.C.TOOLING Co.,Ltd.

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SCHMIDT
control instruments

Tension Meter



8 Tension ranges available
from 0 - 500 cN up to 0 - 100 daN

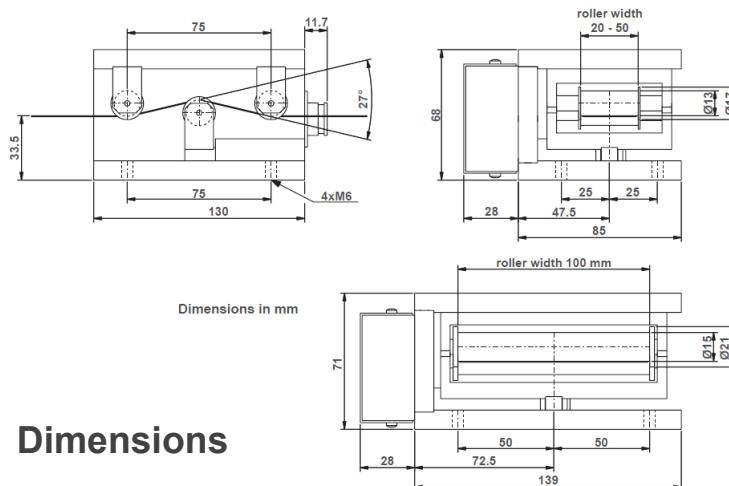
Tension Meter TSB2

Specifications

| | |
|------------------------------|--|
| Calibration: | According to SCHMIDT factory procedure |
| Accuracy: | ± 1 % full scale and ± 1 digit other calibration material: ± 3 % full scale or better |
| Overload protection: | 100 % of tension range |
| Measuring principle: | Strain gauge bridge |
| Measuring roller deflection: | Max. 0.5 mm |
| Natural frequency: | Approx. 500 Hz, depending on tension range |
| Signal processing: | Analog |
| Temperature drift: | Less than ± 0.05 % full scale/ $^{\circ}\text{C}$ |
| Output signal: | Standard: 0 – 1 V DC (analog) impedance: ≥ 5 k Ω Option: 0 – 10 V DC (analog), 4 – 20 mA (current) or mV/V (DMS) |
| Damping (fg): | Standard: 30 Hz (other values on request) |
| Temperature range: | 10 – 45 $^{\circ}\text{C}$ |
| Air humidity: | 85 % RH, max. |
| Power supply: | +15...24 V DC, 21 mA regulated Code A3: max. 50 mA regulated Code A10: max. +5 V DC, max. 20 mA regulated |
| Housing material: | Aluminium |
| Dimensions: | See dimensions |
| Weight, net (gross): | Up to model TS1-1000 approx. 250 g (approx. 400 g) models TS1-2000 up to TS1-10K approx. 280 g (approx. 430 g) models TS1-20K and TS1-50K approx. 330 g (approx. 500 g) |



Tension Sensor Model TSB2-500 / TSB2-1000



Special Features

- Tension sensor TSB2 with integrated measuring amplifier and high accuracy of 1 % FS
- Various roller widths from 15 mm up to 100 mm, according to the application are available. The roller width should correspond with the width of the material to be measured
- Various output signals are available:
 - analog: 0 – 1 V DC (standard), 0 – 10 V DC (optional)
 - current: 4 – 20 mA (optional)
 - analog DMS: mV/V (optional)
- Easy installation, even afterwards, on existing machines
- Easy calibration to customized material by operator – zero and gain calibration is required
- Measuring principle – load cell with high quality strain gauge bridge

Standard Features

- Tension sensor with cylindrical tape roller, ball-bearing mounted
- Tension sensor TSB2 with rugged aluminum housing
- Required power supply +15...24 V DC (regulated)
- 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 | Tension Range* | Roller Width |
|------------------|----------------|--------------------------------|
| TSB2-500 | 0 – 500 cN | 20, 30, 36, 41, 50, 100 mm |
| TSB2-1000 | 0 – 1000 cN | 20, 30, 36, 41, 50, 100 mm |
| TSB2-2000 | 0 – 2000 cN | 20, 30, 36, 41, 50, 100 mm |
| TSB2-5000 | 0 – 5000 cN | 20, 30, 36, 41, 50, 100 mm |
| TSB2-10K | 0 – 10 daN | 15, 20, 30, 36, 41, 50, 100 mm |
| TSB2-20K | 0 – 20 daN | 15, 20, 30, 36, 41, 50, 100 mm |
| TSB2-50K | 0 – 50 daN | 15, 20, 30, 36, 41, 50, 100 mm |
| TSB2-100K | 0 – 100 daN | 15, 20, 30, 36, 41, 50, 100 mm |