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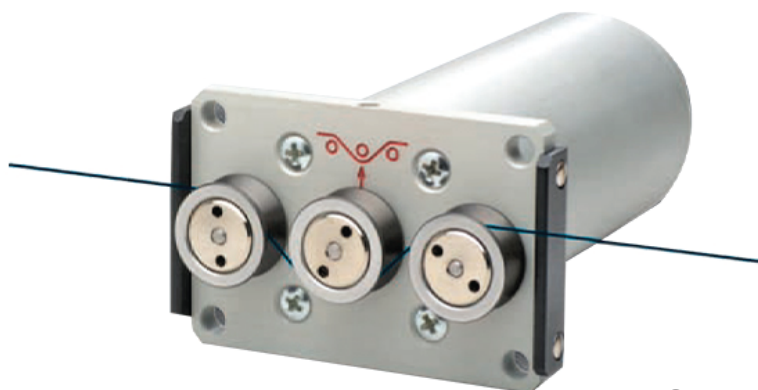
69/90 Hatairat Rd., Minburi ,Minburi Bangkok (Thailand) 10510

SCHMIDT
control instruments

Tension Meter

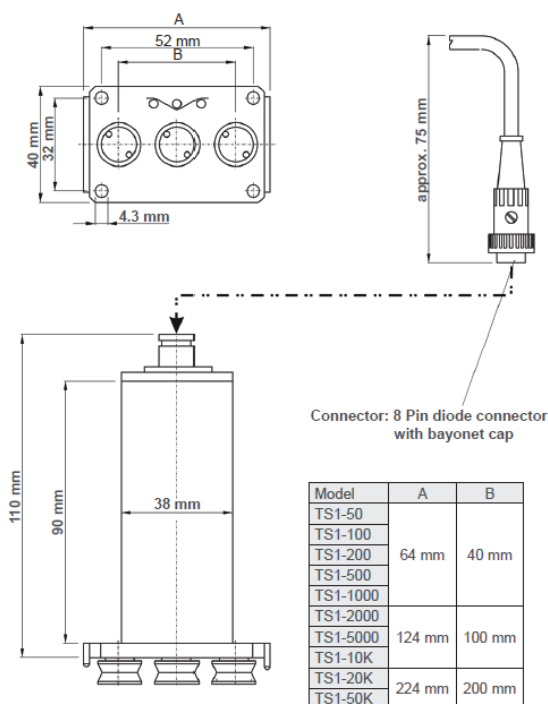
10 Tension ranges available
from 0 - 50 cN up to 0 - 50 daN

Tension Sensor TS1



Dimensions

Tension Sensor Model TS1



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/°C
Output signal:	Standard: 0 – 1 V DC (analog) impedance: ≥ 5 kΩ 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 °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)



Special Features

- Tension sensor TS1 with integrated measuring amplifier and high accuracy of 1 % FS
- Different guide rollers are available according to the application
- 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 the operator – zero and gain calibration is required
- Measuring principle – load cell with high quality strain gauge bridge
- Tension sensor with mechanical overload protection

Note: a wide range of custom designed models as well modifications are available on request. Please contact us with your demand!

Standard Features

- V-grooved guide rollers, ball-bearing mounted
- Tension sensor TS1 with rugged aluminium 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	Measuring Head Width*	SCHMIDT Calibration Material**
TS1-50	0 – 50 cN	64 mm	PA: 0.12 mm Ø
TS1-100	0 – 100 cN	64 mm	PA: 0.12 mm Ø
TS1-200	0 – 200 cN	64 mm	PA: 0.12 mm Ø
TS1-500	0 – 500 cN	64 mm	PA: 0.20 mm Ø
TS1-1000	0 – 1000 cN	64 mm	PA: 0.30 mm Ø
TS1-2000	0 – 2000 cN	124 mm	PA: 0.50 mm Ø
TS1-5000	0 – 5000 cN	124 mm	PA: 0.80 mm Ø
TS1-10K	0 – 10 daN	124 mm	PA: 1.00 mm Ø
TS1-20K	0 – 20 daN	224 mm	PA: 1.50 mm Ø
TS1-50K	0 – 50 daN	224 mm	steel rope 1.50 mm Ø