

Eltex Tension Monitor

Sewing Machine Model



General Description

The Eltex Electronic Tension Monitor (ETM) is an on-line device for sewing machines and similar applications. The device monitors the thread tension and acts as a thread break detector. *It enables the operator to keep the thread tension within the desired tension range for best operation and quality of the seam.*

The ETM indicates, with LED's, if the thread tension is outside the selected *Indication Limits*. If the thread tension goes outside the selected *Stop Limits*, the ETM will generate a stop signal to the machine.

Features

- Monitors thread tension according to selected Indication Limits.
- Generates stop pulse when thread tension is outside the selected Stop Limits.
- Separate sensor head and electronics enables fitting in tight areas.
- Easy setting and clear readings through standard code switches.
- LED indication at Synchronization input.
- Open collector stop output allows different power sources for stop relay.
- Factory calibrated – no manual reset.
- ESD protected inputs and outputs.
- Standard 9-pole D-sub connector.

Advantages

- Improves sewing quality.
- Allows you to operate with the correct yarn tension.
- Acts as a thread stop motion / thread break detector.
- Protects against overtension.
- Alerts the operator to dirt and dust in the thread tensioners.
- Makes it easier for the operator to set the correct bobbin tension.
- Gives you a possibility to equalize the bobbin thread consumption (multineedle machines).

Characteristics

for The Eltex Tension Monitor, Sewing machine model

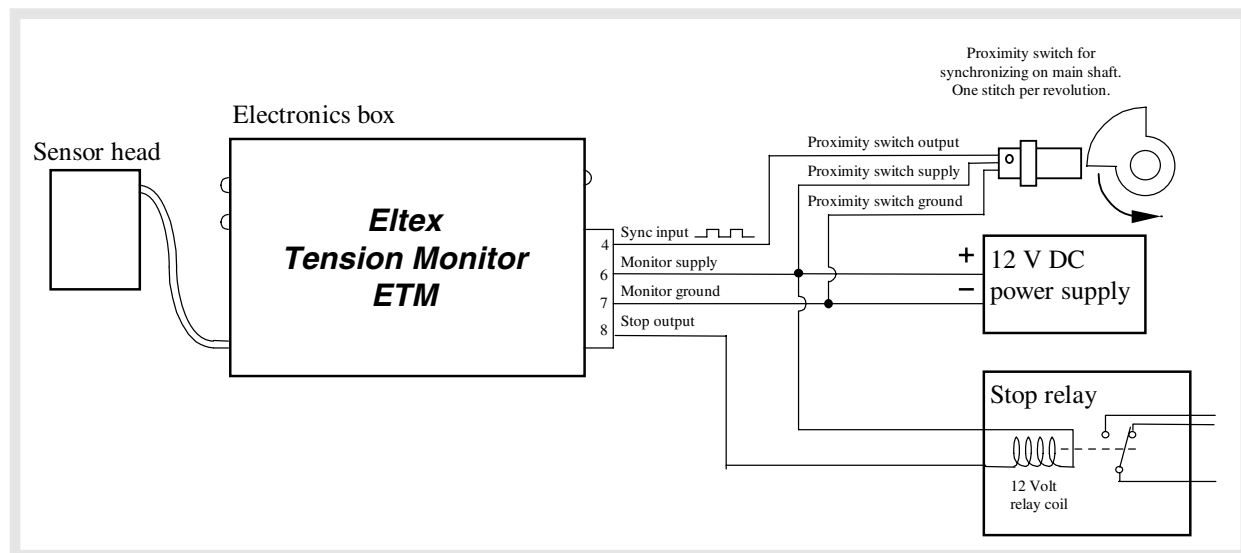
Supply voltage	9–14 V DC
Maximum current consumption	50 mA (typical value 32 mA)
Maximum current, stop output	300 mA (NPN open collector)
Maximum voltage at stop output (relay coil)	30 V DC
Speed range	80–10 000 RPM
Maximum voltage at Synchronization input	30 V DC. $V_{in\ low}$: 0–1.2 V $V_{in\ high}$: 6.0–30 V
Working ambient temperature range	15–45°C (60–110°F)
Stop pulse length	2 seconds
Cable length between sensor head end electronics box	100 mm (50–500 mm on request)
Electronic box dimensions (width x height x depth)	115 x 61 x 25 mm
Sensor head dimensions (width x height x depth)	25 x 42 x 29 mm

Models

I4600	Calibrated for 0–1000 cN
I4604	Calibrated for 0–400 cN
I4606	Calibrated for 0–600 cN

Other tension ranges on request.

Typical application



GW-0111-01



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