

MODEL TI-11 Rack Mount Dual Tension Indicator

The TI-11 Dual Tension Indicator is an electronic interface device that takes an input voltage signal from either one or two pair of DFE tension transducers. The TI-11 amplifies the signal, and puts out a signal proportional to tension for accurate display of tension measurements. Web tension is displayed on an analog or digital meter for reference by the machine operator. TI-11 includes both voltage and current outputs that are proportional to tension. These can be connected to tension recorders, variable speed drive systems, computers, and other devices for tension control or display. Two independent tension indicator circuits are included on one card. Each circuit has its own calibration adjustments and outputs. The card is an IEC/ANSI/IEEE type 2 plug-in unit for installation in a standard size 3U 19 inch rack.

STANDARD FEATURES

- **Meter Damping.** Minimizes vibration of the optional analog tension meter needle.
- **Power Voltage Selection.** Can operate on 115 Volts 60/50 Hz, or 230 Volts 60/50 Hz (option) switch selectable.
- **Status Lights.** Shows status of power supplies.
- **Diagnostic Connector.** Permits inputs and outputs to be checked easily.

TENSION OUTPUTS

- **0 to +10 Volt -OR-**
- **0 to -10 Volt dc Tension Output. (N10 - Option)** Proportional to web tension
- **4-20mA Tension Output.** Used as an input to control systems, computers, or data collection devices.

ACCESSORIES

- **Plug-in Adapter.** TI-11 can be plugged into this adapter instead of rack for hard wiring, or for mounting in your own enclosure. (DFE#143-000)
- **Analog Tension Meter .** 1mA, 49 ohm movement. Must be remotely installed. Separate meter required for each circuit. (DFE# 722-1385) This meter also available in an enclosure (DFE#723-1453)

CE MARKING

This product has been evaluated and tested to the following standards: EN 61010-1:1993, EN 55011:1989, EN50082-1:1992, IEC 1000-4-2:1995, IEC 1000-4-3:1994, IEC 1000-4-4:1995.

When configured with a grounded, shielded enclosure and shielded cables, the unit has been found to meet the EU's Low Voltage Directive 73/23/EEC, and the EMC Directive 89/336/EEC, and can bear the CE mark in this configuration.

BENEFITS

- Two tension indicators on one card. Saves space and money.
- Rack-mounted for fast, easy installation and access. Designed to fit standard 19" racks.
- Simple to adjust, calibrate and operate.
- Multiple outputs proportional to tension
- Diagnostic connector on front panel allows easy troubleshooting and additional access to outputs.

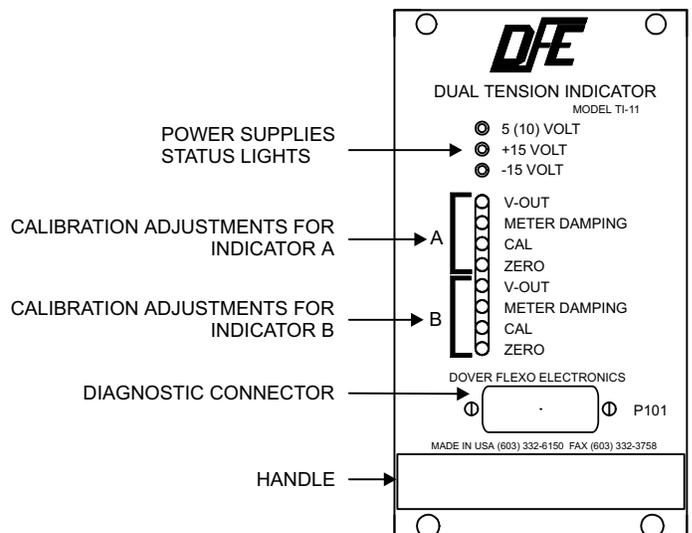
METER OUTPUTS

- **0-1 mA Tension Output.** Used for an input to a tension readout meter **-OR-**
- **0-100mV Output (100MV - Option).** Replaces the standard 0-1 mA current output **-OR-**
- **0 to 10V dc Tension Output (10V - Option).** Used for an input to tension readout meter. Replaces the standard 0-1mA current output.
Note: A tension meter is not included. See Accessories below.

OPTIONS

- **230 Volt Power (230).** 230 Volt 50/60 Hz power input, switch selectable.
- **Extended Range (XRE).** 10VDC excitation for transducers. Allows measurement of much lower tension than usual. Note: Transducers for both circuits of TI-11 must have XR.
- **Isolated From Earth Ground (IFEG)** No connection between circuit common and earth ground.

FRONT PANEL



SPECIFICATIONS

POWER INPUT	115 Volts 60/50Hz single phase @ 1 Amp (230 Volts 60/50Hz single phase @ 1/2 Amp - OPTION)
EARTH GROUND CONNECTION	Circuit-common connected to earth ground by the ac power ground connection.
TENSION SIGNAL OUTPUTS	0 to +10 Volts dc @ 2mA, OR 4-20mA (0 to -10 Volts dc @ 2mA - OPTION)
TENSION SIGNAL OUTPUTS FOR METER	0 to 1mA (0 to 100mV @ 10mA, or 0 to 10Vdc @ 2mA - OPTIONS)
WEIGHT	1.15 lbs. (0,5 kg)
TRANSDUCER SIGNAL IN	500 mVdc at rated load
TRANSDUCER EXCITATION	5 Volts dc (10 Volts dc with XR option)
MATING CIRCUIT CARD CONNECTOR	VERO #17-2873H or equivalent
MATING DIAGNOSTIC CONNECTOR	Male DB15. AMP #745494-6 or equivalent
ZERO (TARE) RANGE	95% of transducer rating, minimum
CALIBRATION RANGE	25:1
TEMPERATURE RANGE	32° F to 104° F (0-40° C)
SYSTEM ACCURACY	1 - 3% typical
TENSION METER (optional)	Analog, 2%, 1mA
STANDARD TENSION METER SCALES (tension meter is optional)	0 - 1,5,10,25,50,100,150,250,500,1000

PRODUCT CODE

You may order by description or by specifying a code as in the example below by matching each labeled position with your choice.

TI11 - OPTIONS (separated by commas)

|
 X = No Options
 10V = 0 to 10Vdc Meter Output
 100MV = 0 to 100mV Meter Output
 230 = 230V Power Input
 IFEG = Isolated from Earth Ground ²
 N10 = -0 to 10Vdc Output
 XRE = Extended Range ^{2, 5}
 Z = Special (SPR)

Example: **TI-11-A10V, B100MV,XRE**

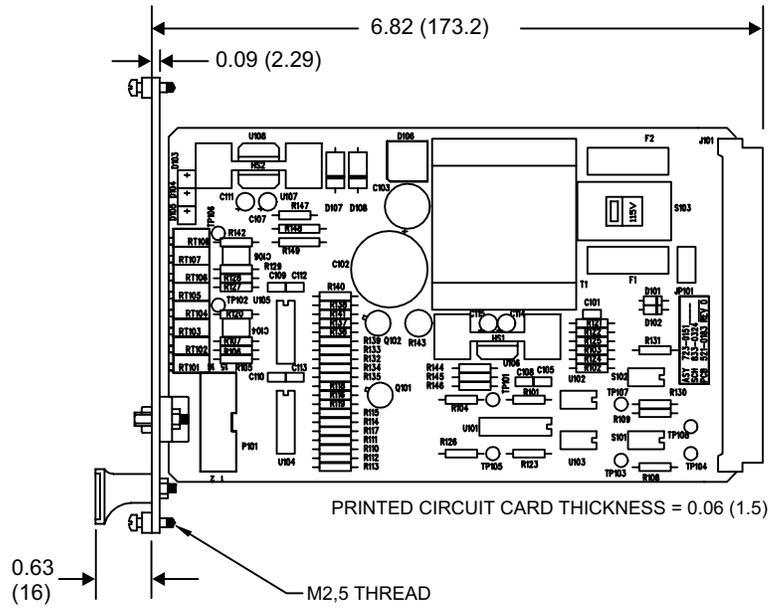
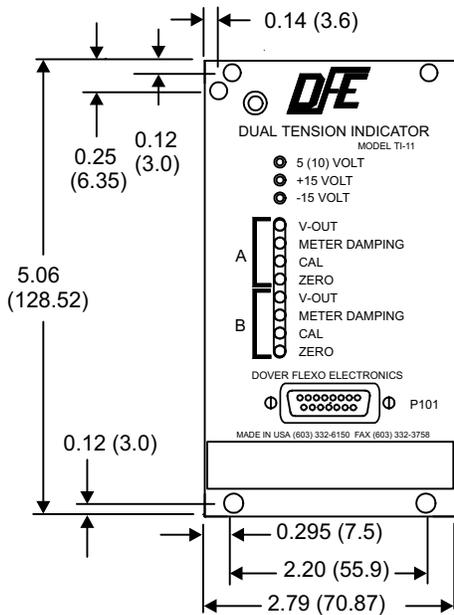
OUTPUT	STANDARD	OPTION
Tension	10Vdc or 4-20mAdc	N10
Meter	1mAdc	100mV or 10V

NOTES:

- Specify which indicator the option applies to by prefixing the option code with A or B.
- The XRE and IFEG options must apply to both indicator circuits.
- An analog tension meter is available separately. Part no. 722-1385, or 723-1453 for meter in enclosure. Specify scale.
- A plug-in adapter is available separately. Part no. 143-0000.
- Transducers must have XR option.

DIMENSIONS

inches (mm)



OPTIONAL PLUG-IN ADAPTER

inches (mm)

