

TRUE TENSION™ INDICATOR

Models TI17B and TI18B

The TrueTension™ TI17B and TI18B indicators are versatile transducer interfaces (amplifiers) for monitoring tension in any tension zone on web or filament processing machinery. The primary function of the TI17B and TI18B indicators is to take a signal from tension transducers installed in the web path and to provide an output signal (typically 0 to 10Vdc) proportional to tension to a drive, controller or a PLC.

The only difference between the TI17B and the TI18B indicators is their power input requirements. The TI17B operates on 115Vac 60Hz (230Vac 50Hz optional) and the TI18B operates on 24Vdc, power supplied separately.

The standard configuration for either the TI17B or the TI18B is a 3" x 5.5" circuit card with no enclosure. Other configurations include the card in a semi-enclosure mounting bracket or in a complete enclosure, each with or without DIN-rail clip. These three configurations with the

BENEFITS

- Improves machine operation and productivity by making it easier to run proper tension
- Gain higher level of process control and a reduction of waste, web breaks, and other web problems
- Low-cost component for complete tension measurement or control system
- Modular package for versatile, flexible mounting and setup

OPTIONS

- **230 Volt Input (230).** 230Volt 60/50 Hz Ac power input. TI17B only.
- **4 to 20mA Output (420).** 4 to 20 mA current output
- **Cover (COV).** Cover restricts access to board and provides complete enclosure. V version only.
- **DIN Rail Clip (DRC).** To be used with 35mm DIN rail. V version only.
- **Isolated 10V Output (I10).** 0 to 10Volt output which is not connected to circuit common or to earth ground.
- **Isolated 20mA Output (I420).** 4 to 20mA output which is not connected to circuit common or to earth ground.
- **Extended Range (XRE).** 10 Vdc excitation for Extended Range transducers. Allows measurement of a much lower tension than usual. Transducers must also have the XR option.
- **Tension Limit Switch (TLS).** An open collector output actuates at a pre-set adjustable trip point. Can be used as a web break detector.

ACCESSORIES

- **Mating Circuit Card Connector.** Allows easy connection of external wiring. DFE Part# 721-1960.
- **Tension Meter.** Analog, 1 mA, 48 ohm movement. Must be installed by user. DFE Part# 722-1385. This meter also available in its own enclosure (DFE Part# 723-1453) and requires a cable (DFE Part# 721-0967).

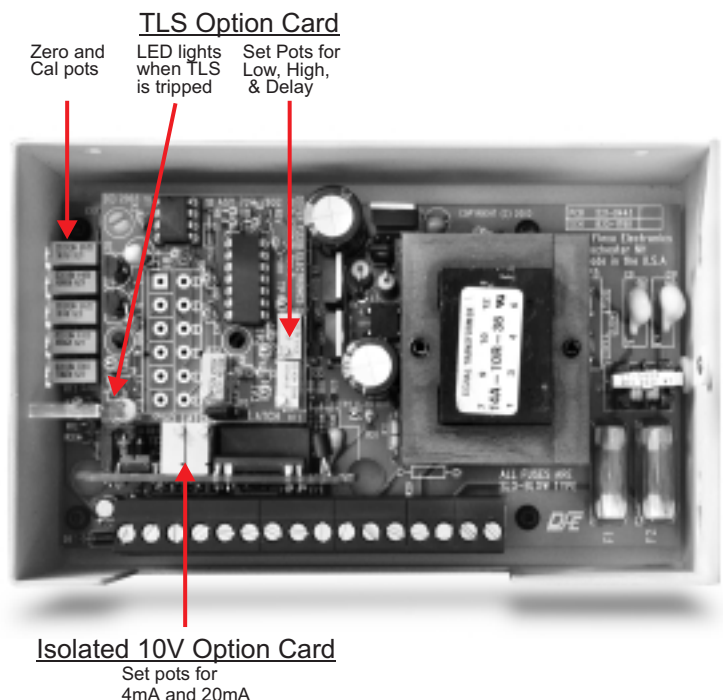
optional circuit terminal block connector for external electrical connections are pictured on the front cover. Two versions are available, the vertical (V) mount and the horizontal (H) mount. The V version includes a semi-enclosure mounting bracket. The H version (standard configuration) includes mounting hardware.

The range of package choices, mounting versatility and low-cost make the TI17B or TI18B indicator the perfect device for web tension monitoring. The TI17B and TI18B offer the standard output of 0 to 10 Vdc non-isolated, or optional choices of 4 to 20 mA non-isolated, 0 to 10 Vdc, or 4 to 20 mA isolated. Dual calibration settings for a pair of tension transducers are standard. Other standard features include 0 to 1 mA damped output for a tension meter, and adjustments for tension zeroing, calibration and meter damping. The TI17B and TI18B indicators in enclosures were designed to meet European low voltage and EMC

FEATURES

- 115V/230 Vac 50/60 Hz power input (TI17B) or 24 Vdc (TI18B)
- 0 to 10 Vdc or 4 to 20mA outputs proportional to tension. (optional 0 to 10Vdc or 4 to 20mA isolated outputs available)
- 0 to 1 mA output for a tension meter
- Meter damping adjustment. Minimizes meter fluctuation (Used with optional tension meter)
- Dual Calibration. Allows settings for two transducer calibration ranges

Shown below is an open TI17B indicator.



SPECIFICATIONS:

Power Input:

TI17B:

Voltage: 115/230 Vac, 50/60 Hz (jumper selectable)

Current: 0.125/0.063A

TI18B:

Voltage: 24 Vdc

Current: 125 mA

Tension Output:

0 to 10 Vdc @ 2 mA, OR 4 to 20 mA (optional), jumper selectable

0 to 1mA damped, for optional tension meter

Transducer Voltage Supply:

5 Vdc regulated (10Vdc for XR), jumper selectable

Transducer Input Signal:

500 mVdc at rated load (1.00 Vdc for XR)

Zero Range:

95% of transducer rating

Calibration Range:

16:1

Temperature Range:

32° F to 104° F (0° C to 40° C)

Weight:

0.5 lbs to 2.0 lbs (0.23 kg to 0.91 kg) depending on version

Mating Circuit Card Connector:

PCD#ELFT16240, 16 pin, socket clamp style

DFE P/N:721-1960.

Optional Tension Meter

Analog, 1 mA, 48 ohm (typ) (DFE P/N 722-1385)

Meter in enclosure also available (DFE P/N 723-1453), and cable (DFE P/N 721-0967)

Standard Scales for Optional Remote Tension Meter:

0 to 1, 5, 10, 25, 50, 100, 150, 250, 500, 1000

ORDERING INFORMATION

You may order the TI17B or the TI18B by description or by specifying the code below by matching each labeled digit with your choice.

Examples: TI17B - V - I10

TI18B - H - 420

TI17B or
TI18B

- X

-

OPTIONS (Separated by commas)

H = Horizontal Card only
V = Vertical Card in semi-
enclosure mounting
bracket.

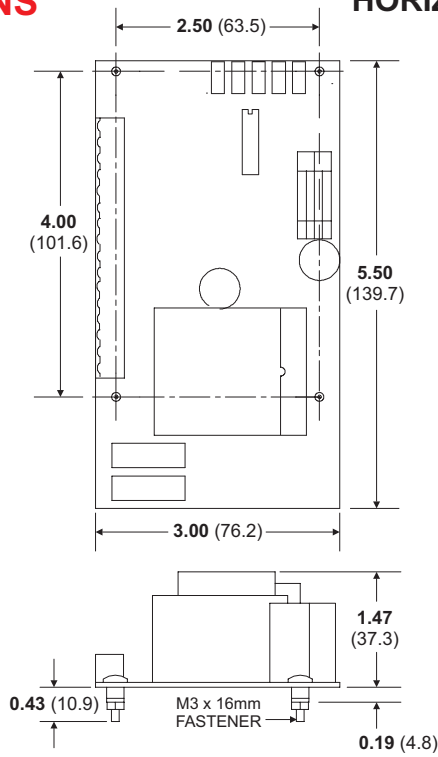
230 = 230Vac Input ¹
420 = 4 to 20mA Output
COV = Cover ^{2, 4}
DRC = Din Rail Clip ²
I10 = Isolated 10Vdc Output
I420 = Isolated 4 to 20mA Output
TLS = Tension Limit Switch
XRE = Extended Range ³
Z = Special (SPR)

NOTES:

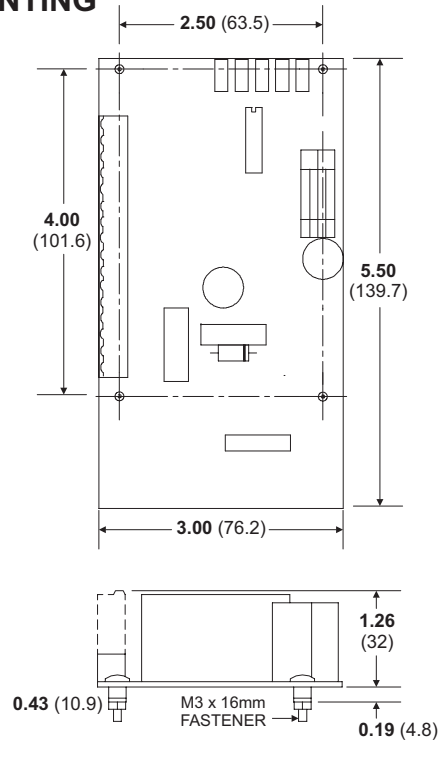
1. TI17B only.
2. V version only.
3. XRE option requires that transducers have XR option.
4. CE marked only in V version with cover.

DIMENSIONS
inches (mm)

HORIZONTAL MOUNTING

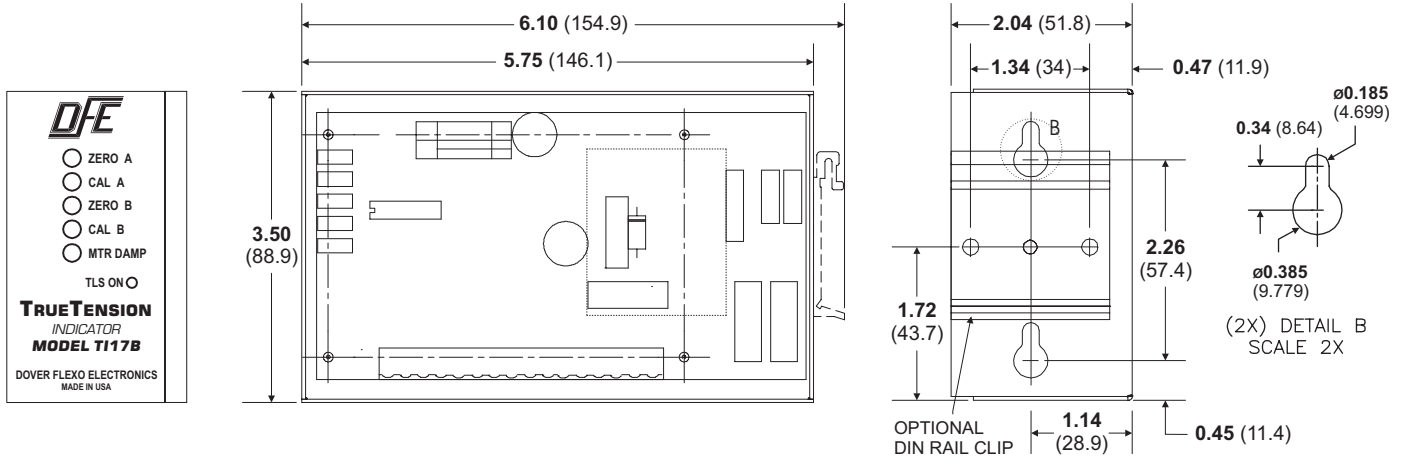


TI17B H VERSION



TI18B H VERSION

VERTICAL MOUNTING



TI17B and TI18B V VERSION (dimensions are the same for both)

OPTIONAL COVER

