APPLICATION DATA

NO. 8705TI7

TI7 TENSION INDICATOR/INTERFACE

DESCRIPTION

The TI7 intrinsically safe tension indicator is specifically designed for web tension measurement and display in areas made hazardous by the presence of volatile solvents. A pair of DFE tension transducers and an analog tension indicating meter, when connected to the TI7, can be safely located within the hazardous area. This is made possible by the use of FM, CSA and PTB approved electronic safety barriers which limit the energy applied to the transducers and meter to a level below that required to ignite the volatile atmosphere. The TI7 itself must be located outside the hazardous area. In addition to its use as a tension indicator, the TI7 is used as an intrinsically safe interface between a DFE tension controller and tension transducers. A steel divider separates the the intrinsically safe electrical connections from all others. The enclosure is industrial duty steel (and its use is required in all cases because it is an integral part of the safety features designed into the TI7). Many options are available, including an isolated voltage output for interfacing with drive systems.

BENEFITS

- Reduces risk of fire or explosion in hazardous areas.
- Displays actual web tension accurately.
- Tension can be easily controlled manually by observing effects of adjustments on the tension meter.
- Helps reduce waste and increase productivity.
- Interface with DFE controllers or controllers from other manufacturers to automatically control tension.
- Reduce web breaks.
- Reveals machine problems which affect tension.
- Low cost alternative to other explosion proofing methods.

STANDARD FEATURES

- NEMA 12, 13 steel enclosure, 8 x 10 x 6 inches. Not available without enclosure.
- Terminal strips for all external connections.
- Two ⅞" holes for access to terminal strips.
- No tension meter or other operator devices are provided. Meter must be oredered separately.
- 0-100 millivolt D.C. output proportional to tension.
- 0-10 volt D.C. output proportional to tension (non-isolated).
- Intrinsically safe connections for two tension transducers and one analog tension indicating meter provided by FM, CSA and PTB approved electronic barrier devices.
- Connections for auxiliary tension meter located outside of hazardous area.

DOVER FLEXO ELECTRONICS, INC.

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SPECIFICATIONS

Power input ..... 120 volts, 60Hz .25 amp
Outputs ..... 0-100 mVDC at 2ma 0-10 VDC at 2ma
Transducer voltage supply .....5 VDC regulated
Transducer input signal .... 500 mVDC (nominal) per pair at rated load
Zero range ..... 50% of transducer rating (min.)
Calibration range 25:1
Temperature range.....0-40° C
Hazardous areas ..... Class I, II, III Division 1, 2; Groups C, D, E, F, G
Weight ..... 16 lbs.

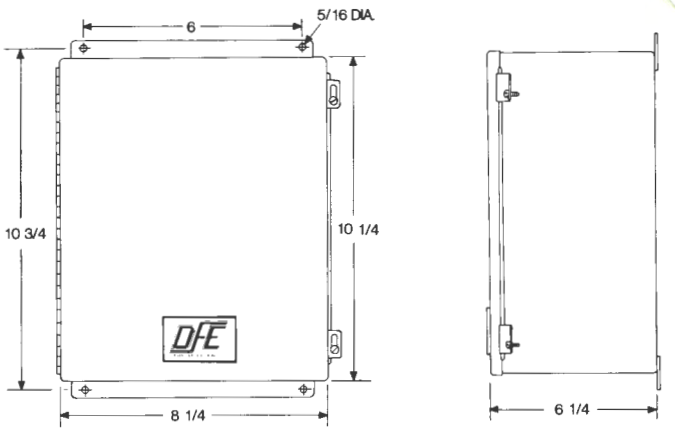
OPTIONS

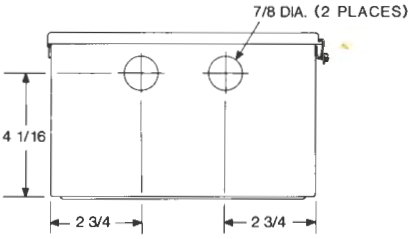
No.	Description
I7-TMO-XXX	Tension meter for remote mounting.
I7-RME	Enclosure for tension meter, with 2 pin connector.
I7-NMS	Non-standard meter scale.
I7-DM	Digital meter 3½ digit, red LED ½" high (install in non-hazardous area only).
I7-DC	Dual calibration.
I7-20M	0-20 milliamp DC output proportional to tension.
I7-220	220 volt 50Hz AC power input.
I7-ST	Single transducer operation (except NW transducer).
I7-10	0-10 volt DC isolated output proportional to tension.
SOS4-L	Low tension detector with SPDT relay output.
SOS4-H	High tension detector with SPDT relay output.
SOS4-LH1	Low and high tension detector with one SPDT relay output.
SOS4-LH2	Low and high tension detector with two separate SPDT relay outputs.
I7-SOSE	Enclosure for SOS4 card, 6 x 8 x 4 inches.
I7-ICC	Interconnection cable, TI7 to DFE controller.
I7-ICM-E	Interconnection cable, TI7 to tension meter in enclosure.
I7-ICM	Interconnection cable, TI7 to tension meter.

DIMENSIONS

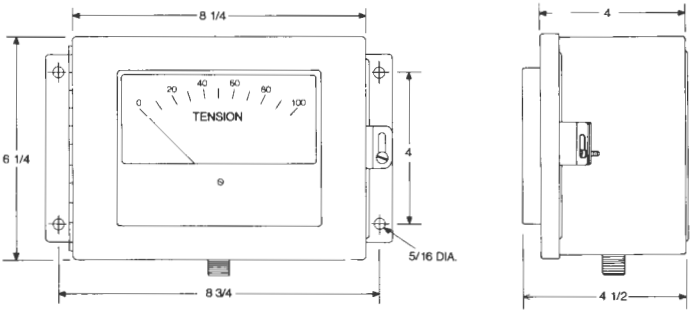
(Expressed in inches)

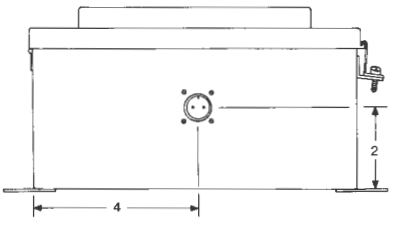
TI7 ENCLOSURE





REMOTE METER ENCLOSURE





DOVER FLEXO ELECTRONICS MANUFACTURERS: *Tension Transducers, Tension Indicators, Rewind Tension Controllers, Unwind Tension Controllers, D.C. Motor Tension Controllers, Pneumatic Tension Controllers, and Electric Tension Controllers.*

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