



FIREGUARD™ 2 INTRINSICALLY SAFE TENSION AMPLIFIER



The FireGuard™ 2 is an intrinsically safe (energy limiting) electronic interface between transducers and a Dover controller, a drive system or a computer. When connected to approved DFE transducers and an approved DFE tension meter, the FireGuard™ 2 works as a complete tension indication system.

The FireGuard™ 2 is typically used as part of a web tension control and display system when tension transducers or tension readouts are installed in areas made hazardous by flammable gases and/or vapors. These include vapors from acetylene mixtures, butadiene, ethylene oxide, propylene oxide, hydrogen mixtures, acetone, alcohol, ammonia, benzene, benzol, butane, gasoline, lacquer, solvent vapors, natural gas, propane or similar mixtures.

The FireGuard™ 2 greatly reduces the risk of fire or explosion in manufacturing areas defined as Class I Division 1 or 2 by Article 500 of the National Electrical Code (NEC). Each FireGuard™ 2 contains a power supply for the tension transducers and is easily adjusted with its Quik-Cal™ zero and calibration circuitry.

Indicator outputs to a non-hazardous area include a 0-10 VDC undamped, isolated output, a 4-20 mA undamped, isolated output, and a 0-1 mA damped output for use with a tension meter.

Outputs to the hazardous area are energy limited connections for approved DFE transducers, and a 0-1 mA damped output for an optional DFE supplied UL rated analog tension meter.

The FireGuard™ 2's dual calibration feature allows calibration of a single pair of tension transducers for operation over two different ranges. Input voltage is 24 VDC @ 500 mA.

A removable steel cover protects and provides easy access to the terminal blocks for all electrical connections. The FireGuard™ 2 can be mounted to a machine structure or wall through flange mounting holes in the top and bottom edges of the enclosure.

FireGuard™ 2 is a UL-listed and CE-marked device.

FEATURES & BENEFITS

- 24 VDC power input.
- 0-10 VDC isolated output to the non-hazardous area, not damped.
- 4-20 mA to non-hazardous area, not damped.
- 0-1 mA damped output for tension meter in non hazardous area.
- 0-1 mA damped output to a tension meter, energy limited to hazardous area.
- 5V/10V power supply for transducers.
- 5 VDC current limited power supply for optional Digital Meter.
- Quik-Cal™ push-button zero and calibration
- Dual Calibration for 2 calibration settings. May require optional dual meter scale for meter.
- NEMA1 protective steel enclosure with cover.
- Status LED. Steady indicates unit is on, blinks during calibration, and flashes in case of error.
- An intrinsically safe tension indicator/ interface.
- Reduces risk of fire and explosion in a hazardous manufacturing environment.
- Low cost.
- Compact size.
- Easy to install & use.
- Use as a tension signal input to drive systems, computers or DFE controllers and tension indicating meter.

OPTIONS

Extended Range (XRE). 10 VDC excitation for extended range transducers. Allows measurement of a much lower tension than usual. Transducers have must the XR option. Jumper selectable (pre-set at factory).

25% Cal Weight Ratio (25CW). Select this option if the standard 10% calibration weight is too low a value for the application.

ACCESSORIES

Analog Tension Meter. 3.5", 0-1 mA, mounted in a 4" x 5" x 3" steel enclosure. May be used in hazardous areas. Customer to provide own cable or purchase separately (P/N: 723-1420).

Available Meter Scales: 0-1, 5, 10, 25, 50, 100, 150, 250, 500, 1000.

4 Digit Digital Tension Meter. 0-1 mA, mounted in a 4"x 5" x 3" steel enclosure. Customer to provide own cable or purchase separately (P/N: 723-2660).
Note: Digital Tension Meter not to be used in hazardous area.

Meter Cable. 15 ft. cable for above meter (P/N: 721-0967).

SPECIFICATIONS

Transducer Input Signal Range:

30-500 mVDC at rated load
(30-1000 mVDC for XR and LT transducers)

Zero Range:

Up to 95% of rated output

Operating Temperature Range:

32° to 122° F (0° to 50° C)

Weight:

6 lbs (2.7 kg)

Calibration Range:

50:1

Transducer Excitation:

5 VDC energy limited
(10 VDC for XR and LT transducers)

Temperature Codes:

FireGuard™ 2 T4A, Transducers (all) T3C, Meter Enclosure T3C

Input Voltage:

24 VDC @ 500 mA

Tension Output Signal:

0-10 VDC isolated, not damped (up to 2 mA load)
4-20 mA non-isolated, not damped
0-1 mA damped for non-hazard area
0-1 mA damped, energy limited

Meter Output

5 VDC for optional Digital Meter

ORDERING INFORMATION

Ti30 - OPTIONS Example: Ti30 - XRE

OPTIONS
25CW = 25% Calibration Weight XRE = Extended Range ¹

Note 1: Transducers must have XR option.

The FireGuard™ 2 does not include a tension meter. If a tension display in a hazardous area is desired, use meter in enclosure (P/N: 723-1420) to retain U/L listing. List the meter separately on the order and specify the meter scale.

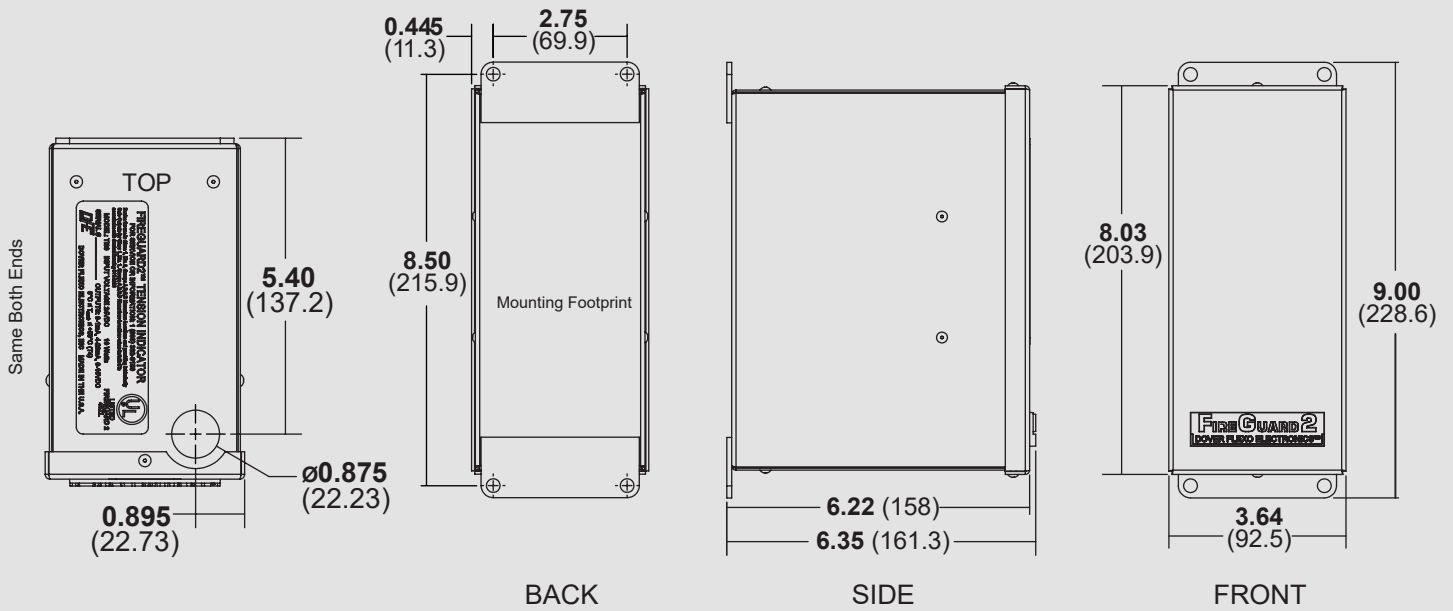
Available Meter Scales: 0 to 1, 5, 10, 25, 50, 100, 150, 250, 500, 1000.

The meter cable is also ordered separately (P/N: 721-0967).

PRODUCT DIMENSIONS ON NEXT PAGE

DIMENSIONS OF FIREGUARD™ 2 TENSION AMPLIFIER

Inches (mm)



DIMENSIONS OF OPTIONAL REMOTE TENSION METER

Inches (mm)

