

## MAC MULTIAMPLIFIER CARD for TENSION INDICATION

The **MAC MultiAmplifier Card** is an eight-channel amplifier/interface consisting of eight independent tension amplifiers on a single circuit card.

The MAC provides excitation voltage to connected tension transducer pairs, and puts out a 0-to-10Vdc signal proportional to tension for each pair of transducer signal inputs. The 0-to-10V outputs can be used as inputs to drives, PLC's or other tension monitoring or closed-loop tension control devices. Damped 0 - 1mA outputs are also available to drive tension meters. The 5.5" x 7" MAC Card installs flat in the machine's control panel. All external connections are by terminal strips.

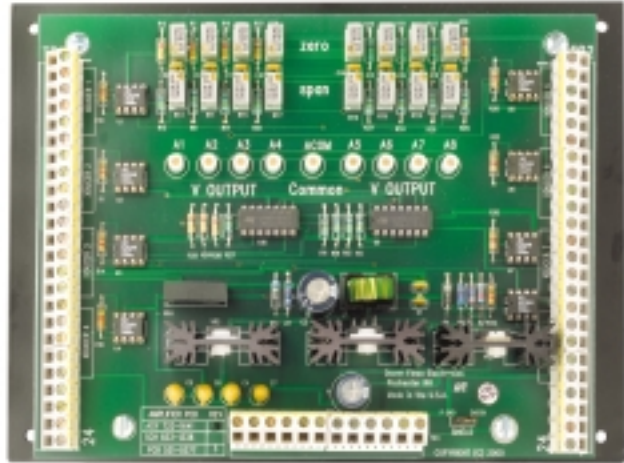
Designed initially for the printing industry to help reduce and eliminate the incidence of web breaks on running presses, the MAC also performs well in any application where process web tension needs to be monitored from multiple locations. The TLS (tension limit switch) option allows high and low alarm trip points to be set that warn the press operator if running tension in a particular zone moves outside set operating limits.

### FEATURES:

- 24 Vdc power input
- 0 to 10Vdc output (proportional to tension) from each channel
- 0 to 1mA dc damped meter output proportional to tension from each channel.
- 5 Vdc transducer excitation
- Single calibration range
- For use with any DFE tension transducers
- Damping for tension meter output

### ACCESSORIES:

- **IMUX Multiplexer.** An enclosed tension signal display device with a meter and switch for selecting between multiple (up to 32) MAC tension inputs or 0 to 10Vdc inputs from other DFE tension indicator devices. Requires 115V, 60Hz, and 24Vdc power input.
- **Tension Meter (#722-1385).** 3.5", 0-1mA dc. For each amplifier. Also available in own enclosure (#722-1453).
- **Tension Meter in enclosure (#723-1762)** with 8 position switch to select any output.



The advantages of the MAC MultiAmplifier Card when compared to single channel amplifier/ interface cards are: 1) the ability to read out tension from sensor points along an entire production line from one location, either remotely or at the machine; and, 2) the lower cost of installation versus a single, dedicated tension interface/amplifier for each sensor point.

### OPTIONS:

- **Enclosure (ENCL).** Optional enclosure can hold one MAC and one TLS card and a power supply (PS), or two MAC's and a power supply.
- **Extended Range (XRE).** Allows extra sensitivity at low tension. Applies to all eight amplifiers. Transducers must have XR option also.
- **Mounting Plate (MP).** Steel plate with standoffs for mounting of board.
- **Power Supply (PS).** 115/230 Vac 50/60 Hz, 24Vdc output power supply. Can be mounted separately or in enclosure with amplifier and TLS cards.
- **Tension Limit Switch (TLS).** Activates an output when tension reaches an adjustable set point. There are eight separate TLS circuits on one card. Used for web break detection, and for preventing web breaks.

### ORDERING INSTRUCTIONS:

Order the MAC using the code below. Use the codes listed above with the options.

**MAC - OPTIONS** (separated by commas)

Examples: MAC - ENCL, PS, TLS  
MAC - MP, XRE

# SPECIFICATIONS

## Standard Version - Eight Channel Tension Amplifier PCB

Each channel:

- Transducer Input:** 30 to 500mV, typical
- Output:** 0 to 10Vdc, proportional to tension
- Output for Meter:** 0 to 1 mA, proportional to tension
- Zero range:** 95% of sensor rating
- Calibration Range:** 16:1

**Input Voltage:** 24Vdc

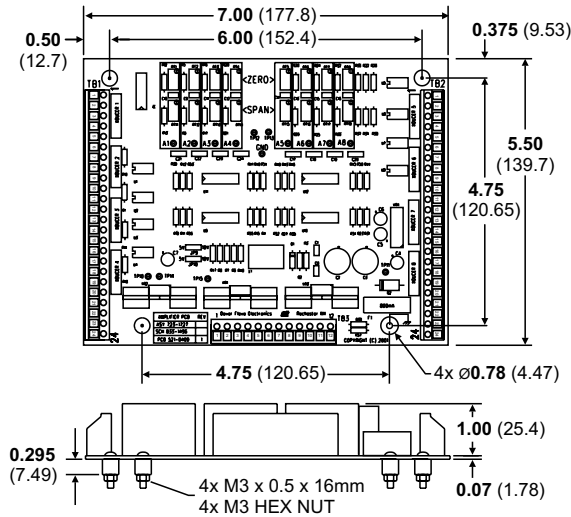
**Transducer Excitation:** +5Vdc (+10Vdc with XRE option)

**Temperature Range:** 32°F to 104°F (0°C to 40°C)

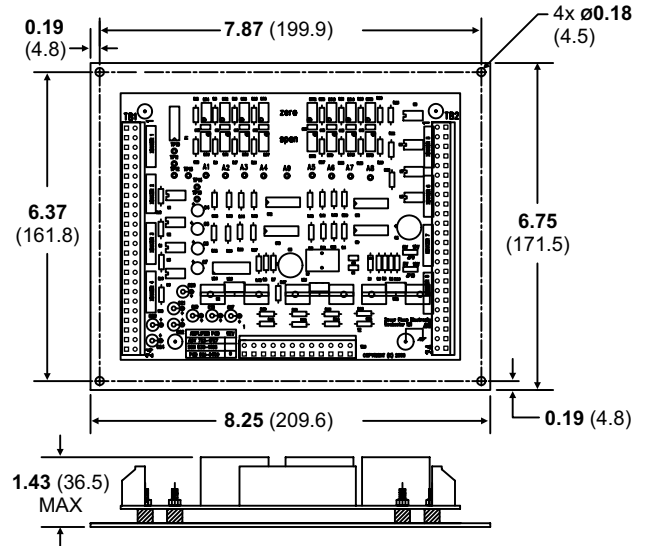
**Weight:** 0.62 lbs. (0.28 kg)

# DIMENSIONS

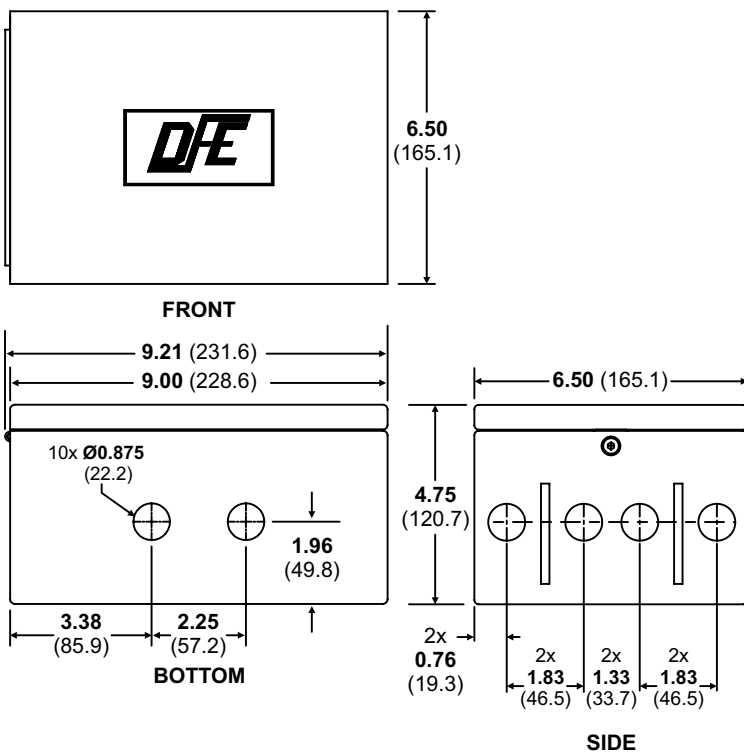
inches (mm)



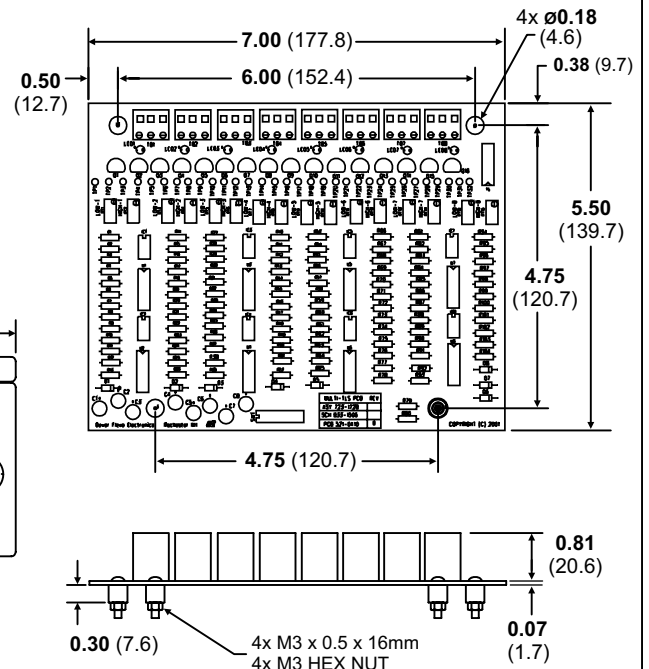
**MAC CARD**



**MAC CARD ON OPTIONAL MOUNTING PLATE**



**OPTIONAL ENCLOSURE**



**TLS OPTION CARD**