

**iAMP2™**  
**INLINE TENSION**  
**AMPLIFIER**  
with Quik-Cal™



**5 YEAR WARRANTY**

# iAMP2™ Inline Tension Amplifier

The iAMP2 is a compact amplifier/interface module, about the size of a deck of cards, that boosts the millivolt level tension signal input from a DFE tension transducer (or pair of transducers) to output an isolated 0-to-10 Vdc signal. It also supplies a 0 to 1mA meter output signal proportional to tension.

The iAMP2 is powered by 24 Vdc and supplies a 5V excitation signal to the connected tension transducers.

Using an iAMP2 module is a simple alternative to mounting a larger, less flexible electronics device – usually a transducer-interface circuit card or complete indication package – on a press or machine frame for tension monitoring. Because it is easily hidden, the iAMP2 is an ideal tension amplifier for OEMs and systems integrators.

The iAMP2 connects in one of two ways to the trans-

ducer(s) and to your PLC, drive or other control or display device. Connections from tension transducers to the iAMP2 can be made “inline” on transducer connector cables with industrial connectors. The second way to connect is via cable with wires going into terminal blocks at the input and output of the iAMP2 (T configuration).

With the *Quik-Cal™* feature front-panel push buttons are used instead of potentiometers for zero and calibration settings. This saves valuable setup time since no tension display is needed, no screwdriver is needed, and no second person is needed to assist. The Zero and Cal settings are stored digitally.

## BENEFITS/FEATURES

- Exceptional output stability.
- *Quik-Cal™* Zero and Calibration push-buttons.
- 0-10Vdc isolated tension signal output.
- 0-1 mA isolated meter output proportional to tension.
- 50:1 Calibration Range.
- 10% Calibration Weight Ratio.
- Used with all DFE transducers with standard excitation except Model LT. No extended range.
- Versatile mounting. Can be stowed in cable tray, mounted to DIN rail, or mounted on machine frame with hook-and-loop option.
- Green LED indicates status of calibration, zero and power.
- Short Circuit Protection. Unit automatically protects transducer excitation and tension output from short circuits or excessive loading.
- Self Resetting Fuse. Product protects itself and connected equipment from more serious faults or fire hazard. Unit has integrated fusing that automatically resets from tripped when unit is powered down.
- CE-marked. iAMP2 conforms to the stringent EN 61010-1:2001 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use.

## OPTIONS

- **DIN-rail mounting clip (DRC).** Fits 35mm DIN rail. Available on both cable and terminal block versions.
- **IP65 Enclosure Rating (IP65).** Ingress protection rating of IP65 for enclosure for version C. Must use cables for wet environment to retain the IP65 rating.
- **Hook and Loop Mounting (HL).** Alternative to DRC mounting.
- **25% Calibration Ratio (25CW).** Calibration ratio of 25%.

## ACCESSORIES

- **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. Standard scales available are: 0-1, 5, 10, 25, 50, 100, 150, 250, 500, and 1000.
- **Nonstandard Meter Scale.** Any meter scale not shown above.
- **Cables.** Your DFE Applications Engineer will help select the proper cables for your iAMP2 and transducer combination. See example configurations to the right.
- **Adapter Cable.** Part number 723-0900, 12” long, Used to connect with two transducers having 3-pin connectors such as Models “C” ,“RS” or “UPB”.

## ORDERING INFORMATION

You may order from the list of two configurations below. Please refer to Configuration Selection on the following page to choose the right iAMP2 for your transducer.

Examples: **T122-C, T122-T-DRC T122 - X - OPTION**

ELECTRICAL CONNECTIONS	OPTIONS
C = Cables T = Terminal Strips	25CW = 25% Calibration Ratio DRC = Din Rail Clip IP65 = Ingress Protection rating of enclosure <sup>(1)</sup> HL = Hook and Loop Mounting

Note: 1. IP65 not available on T version

## CONFIGURATION SELECTION

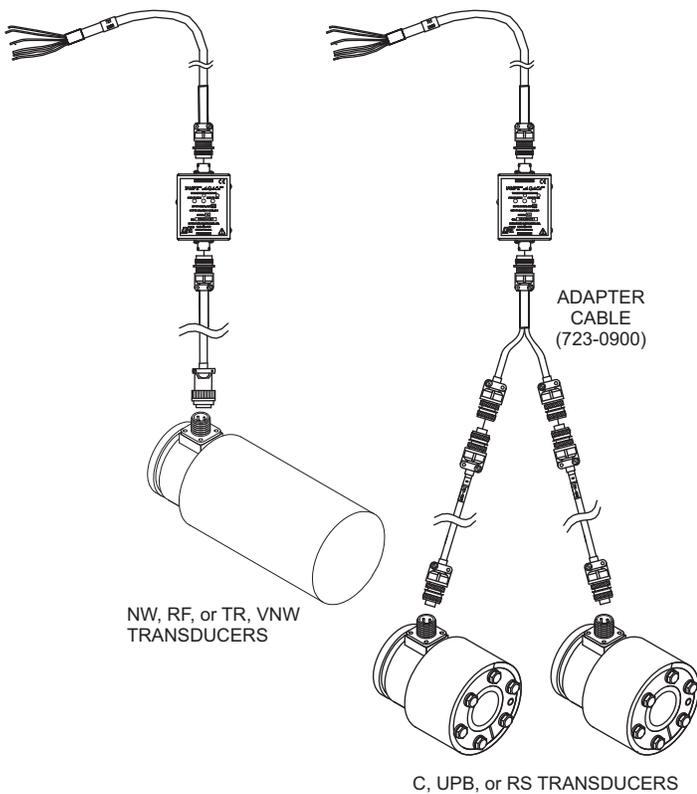
As shown below and in the Ordering Information section, you may choose industrial cable connectors (C) and DFE supplied cables or terminal blocks (T) with your own wire to make the iAmp2's input/ output connections.

The iAmp2 is an upgraded version of the original iAmp amplifier. Two configurations are available instead of the original four, but these two versions fill all requirements of the four. See chart below.

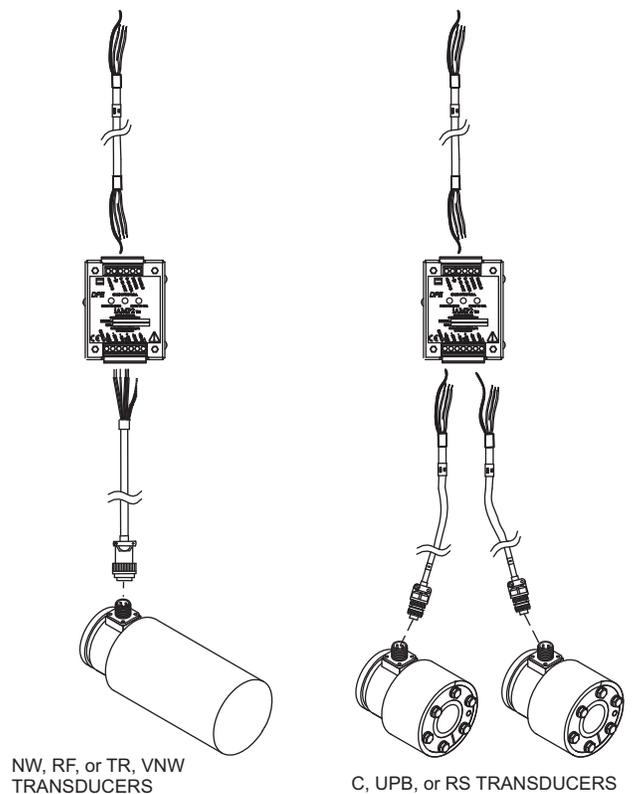
ORIGINAL iAMP	SUPERSEDED BY iAMP2
F2C	T122C with 723-0900 adapter cable.
F1C	T122C
F1L	T122C with interconnection cable 721-1841 (specify length)
F1S	T122C with interconnection cable 721-0356 (specify length)



VERSION C CABLE CONFIGURATIONS



VERSION T CABLE CONFIGURATIONS



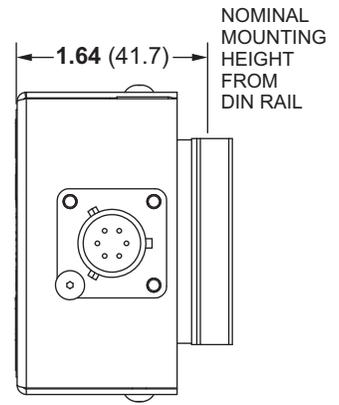
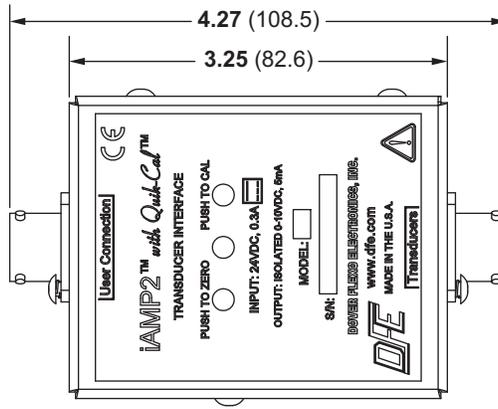
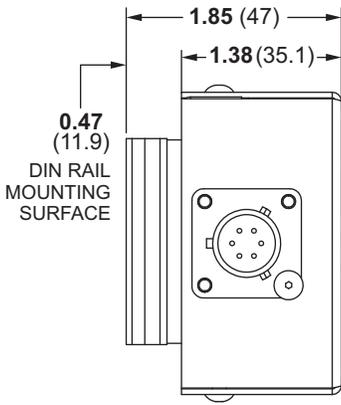
## SPECIFICATIONS

- Power Input:**  
 Voltage = 24 Vdc +/- 10%,  
 Current = 0.1A dc typical. 0.3A dc internal fusing
- Outputs:** +10V tension signal output (isolated), 5mA max. from +10V output. 0-1mA tension meter output
- Ambient Temperature Range:** 32°F to 113°F (0°C to 45°C)
- Enclosure:** Steel
- Weight:** 0.6 lbs. (0.27 kg)
- Accuracy:** Max error of 1% over temperature range, 0.1% typical.
- Zero (Tare) Range:** Minimum 95% of transducer rating
- Calibration Range:** Minimum 50 : 1.

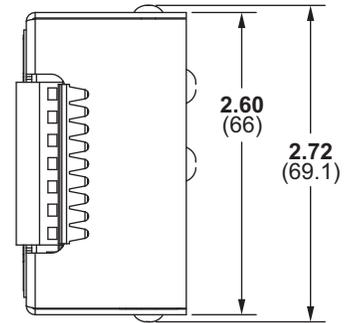
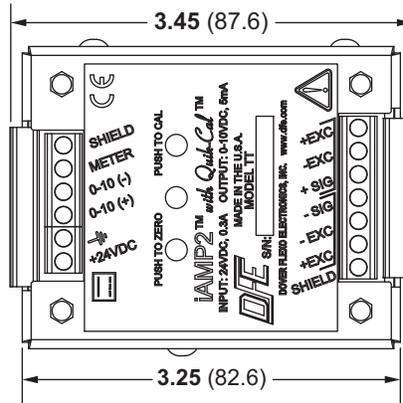
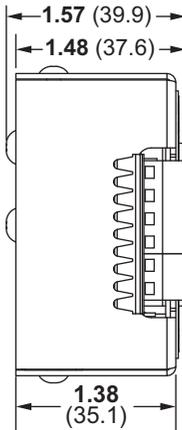
**DIMENSIONS** Inches (mm)

**VERSION C**

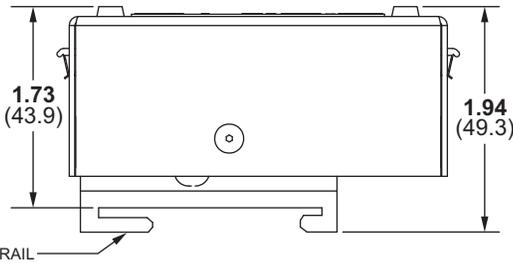
(shown with DIN Rail Clip option)



**VERSION T**



NOMINAL MOUNTING HEIGHT FROM DIN RAIL ON VERSION T



**SCREW MOUNT FOR ALL UNITS**

