

# Model 7600A

## HIGH SPEED STRAIN GAGE READOUT AND PEAK DETECTOR

### FEATURES

- Programmable digital filter, 1 to 500 hz cutoff.
- Shunt calibrate capability.
- All programming and calibration via 5 front panel switches.
- Tare (zero) up to 50% of span with single push button.
- Peak detect and hold with front panel or remote reset.
- 16 bit A/D converter (65000 counts).
- Optional isolated analog output.
- Optional isolated RS232 or RS485 serial interface.
- Front panel switch lockout.
- Excitation for up to four 350 ohm bridges.
- Input sensitivity 5mV to 39mV full scale.
- Selectable five or ten volt excitation.
- Easily scaled display.
- Optional two channel input.
- Four limits with isolated open collector outputs.
- Optional two relay outputs. Contact rating 2.5 Amps @ 115 VAC.
- Four or six wire configuration.
- Run out display (difference between maximum and minimum readings).
- Bridge resistance 100 to 5000 ohms.



**MODEL 7600A**

- 115VAC/230VAC power, field programmable.
- 4 pole active antialias input filter.

## MODEL 7600A

The Model 7600A is a new high speed, high resolution panel meter that has the power of a small stand alone computer. The unit can perform 1000 conversions per second with 65000 counts of accuracy. It has an optional two channel input and can check for peak, runout, or update analog output on the two channels 500 times per second. It can detect and store a peak reading or the difference between the peak and valley reading. Limits are programmable via the five front panel switches as well as the span and gain setting. Tare (zero) of up to 50% is done via a single front panel switch. The front panel switches can be disabled to prevent unauthorized access and violation of calibration of unit.

## SPECIFICATIONS

### Accuracy:

$\pm 0.1\%$  of reading  $\pm 1$  count of A/D @ 25°Celsius. Temperature coefficient 50ppm per degree Celsius.

### Display:

32768 to +32767 with programmable decimal points. .56 " Red LED

**NMRR:** 70db;

### A/D Converter:

16 bits (65,536 counts). 1,000 readings per second maximum.

### Input Analog Filter:

4 pole active antialias. 500hz cutoff on single channel unit and 250hz cutoff on dual channel unit.

**Rollover Error:**  $\pm 2$  counts of A/D at 25° C.

**Input Bias Current:**  $\pm 50$  NA maximum.  $\pm 100$  pA/C° (per input ch.)

**Input Impedance:** 1012 ohms

**Excitation:**

+10VDC  $\pm 50$ mV or +5VDV  $\pm 25$ mV. Selectable by switch on rear. Will power up to four 350 bridges. When DC power option is selected the unit will only power one 350 ohm bridge. Two sense leads for six wire hookup.

**Calibration:**

Shunt calibration capability with span programmable from front panel. No potentiometer adjustments. Calibration switches can be disabled with access code to prevent unauthorized access to calibration parameters.

**Coarse Gain Setting:**

5mV to 39.2mV full scale. Selectable by switches on rear.

**Front Panel Controls:**

Five push button switches for programming digital filter, offset, span, limits and recall of peak reading or run out from storage.

**Channels:** One channel standard with second channel optional.

**Reading Rate:** Limited to 1000 per second divided by number of chs.

**Digital Filter:**

Programmable cutoff frequency 1hz to 500hz. Display update 3 times per second.

**Peak Detect:**

Updated at rate selected by digital filter. Peak is normally stored in memory and recalled via front panel switch, over the serial interface, or by selecting peak detect display mode on rear connector. If peak display mode is selected an internal timer can be programmed to

give limit #1 output up to 100 seconds after a programmed limit is reached. This output can be used to reset the peak reading by tying limit #1 output to remote input.

**Run Out Mode:**

Updated at rate selected by digital filter. Runout is normally stored in memory and recalled via front panel switch, over the serial interface, or by selecting runout display mode on rear connector. If runout display mode is selected on internal timer can be programmed to give Limit #1 output up to 100 seconds after a programmed Limit is reached. This output can be used to reset the runout reading by tying Limit #1 output to remote input.

**Analog Output:**

0-10VDC, 0-5VDC, 4-20mA, tracks display reading. Voltage outputs will sink or source 1mA. 300V isolation between analog outputs and instrument ground.

**Convert/Hold Input:**

Normally high, if pulled low will hold display. Requires 1 millisecond positive pulse for single conversion.

**Limit Outputs:**

Four isolated open collector transistor outputs rated 30VDC maximum. Will sink up to 50mA. 300V isolation between limit outputs and system ground. Limit #1 can be programmed to be delayed from 1 to 100 seconds in one second increments. Optional: Two form relay contacts rated 2.5 Amps @ 115VAC. Isolated transistor outputs not available when relays are installed. Limit 1 and Limit 2 activate the relay contacts.

**I/O Method:**

Quick disconnect screw terminal block, RJII Jack for serial interface.

**Power:** 115/230VAC selectable by switch on rear of unit. 8 watts maximum. Optional 10-30VDC @ 600mA.

**Remote Inputs:**

Active low TTL compatible, 50 millisecond negative pulse required.

Tare.

Display peak reading.

Display run out.

Reset peak reading or run out reading.

**Operating Temperature Range:** 20° to +60° Celsius.

**Serial Interface:**

ASCII RS232 or RS485 compatible (optional). 300V isolation to system ground.

**CASE SIZE: "B"**



