

# Plasser & Theurer



## DIGEM 96x24 P1 (EL-T1473) 3.5 Digit LED Meter

### ISOLATED POWER LED VOLTMETER IN COMPACT DIN 96X24MM CASE

#### DESCRIPTION

The EL-T1473 is a 3<sup>1</sup>/<sub>2</sub> digit voltmeter in a compact 96x24mm case with an internal isolated 24V DC power supply.

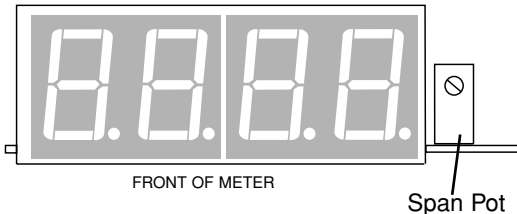
The meter is available in two ranges of 2V or 10V. The EL-T1473 may also be calibrated at the factory for specially scaled other ranges.

The display is shipped standard with red LEDs. Display Segment Test, Display Blank and Hold Reading are standard features.

#### CALIBRATION PROCEDURE

The EL-T1473 is calibrated at the factory with a precision source. Whenever the range is changed, the meter needs to be recalibrated. The Span Pot is accessible with the front cover of the meter removed for user calibration.

1. Make sure there is proper DC power and input.
2. Connect the power supply.
3. Apply a positive signal input equal to 95% of the full scale input.
4. Adjust Span Pot in the front of the meter so that the displayed reading agrees with the signal input.
5. The EL-T1473 is now calibrated and ready for use.



#### SPECIFICATIONS

<b>Measuring Range:</b>	±200mV DC ±2V DC ±10V DC ±50V DC Ranges changed by closing jumpers on PCB
<b>Numerical Range:</b>	±1999
<b>Resolution:</b>	1mV standard (100µV in 200mV range)
<b>Input Impedance:</b>	>1000MΩ in 200mV and 2V ranges 1MΩ in other ranges
<b>Measuring Input:</b>	Bipolar
<b>Reference Point:</b>	Measurement Zero electrically isolated from supply Zero
<b>Temperature Range:</b>	0°C to 50°C (working) -20°C to +70°C (storage)
<b>Linearity:</b>	± 0.05% of reading ±2 digits
<b>Display:</b>	14mm 7 segment LED display red-orange
<b>Polarity:</b>	Displays "-", assumed "+"
<b>Decimal Points:</b>	Externally selectable
<b>Overrange:</b>	For overrange, the most significant digit is displayed together with the polarity sign, and the last three digits are blanked out
<b>Power Supply:</b>	24V DC approx. 2.5 Watts

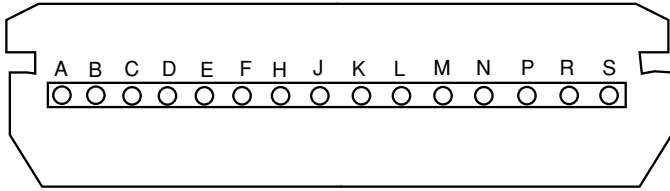
#### ORDERING INFORMATION

##### STANDARD PANEL METER:

3 <sup>1</sup> / <sub>2</sub> digit LED panel meter; 24VDC <b>ISOLATED</b> internal power supply; factory calibrated for ±2VDC full scale .....	Order Part No. EL-T1473.2V
3 <sup>1</sup> / <sub>2</sub> digit LED panel meter; 24VDC <b>ISOLATED</b> internal power supply; factory calibrated for ±10VDC full scale .....	EL-T1473.10V

## PIN-OUT DIAGRAM

The Plasser & Theurer model EL-T1473 interconnects by means of a single sided 15 pin edge connector with 0.156" pitch.



REAR OF METER WITH PCB EDGE CONNECTOR MOUNTED

A	Positive Power input	K	Hold/Test Common (Isolated Gnd)
B	No connection	L	Decimal 1XX.X
C	Negative Power input	M	Decimal 1X.XX
D	No connection	N	Decimal 1.XXX
E	No connection	P	Signal Input Low
F	Hold Reading	R	No connection
H	Decimal Common (Isolated Gnd)	S	Signal Input High
J	Display test		

## PIN-OUT DESCRIPTIONS

**Pins A - Positive Power Input:** One end of the 24V DC power is connected to this pin. The meter generates an internal  $\pm 5V$  supply that is isolated from the applied DC power.

**Pins B - No connection** is made to this pin.

**Pins C - Negative Power Input:** The other end of the 24V DC Power is connected to this pin. The meter generates an internal  $\pm 5V$  supply that is isolated from the applied DC power.

**Pin D - No connection** is made to this pin.

**Pin E - No connection** is made to this pin.

**Pin F - Hold Reading:** If this pin is left unconnected the meter will operate in a free running mode. When this pin is connected to Pin K (Hold/Test common), then the meter display will be latched. A/D conversions will continue, but the display will not be updated until Pin F is disconnected from Pin K

**Pin H - Decimal Common:** The Decimal point pins have to be connected to this pin, in order to be activated.

**Pin J - Test Display:** When this pin is connected to Pin K (Hold/Test Common), all the numeric segments of the display light up, and -1888 is displayed.

**Pin K - Hold/Test Common:** In order to activate the Hold or Test Display functions, connection must be made to this pin

**Pin L - Decimal 1XX.X:** To activate this decimal point, connect this pin to Pin H

**Pin M - Decimal 1X.XX:** To activate this decimal point, connect this pin to Pin H

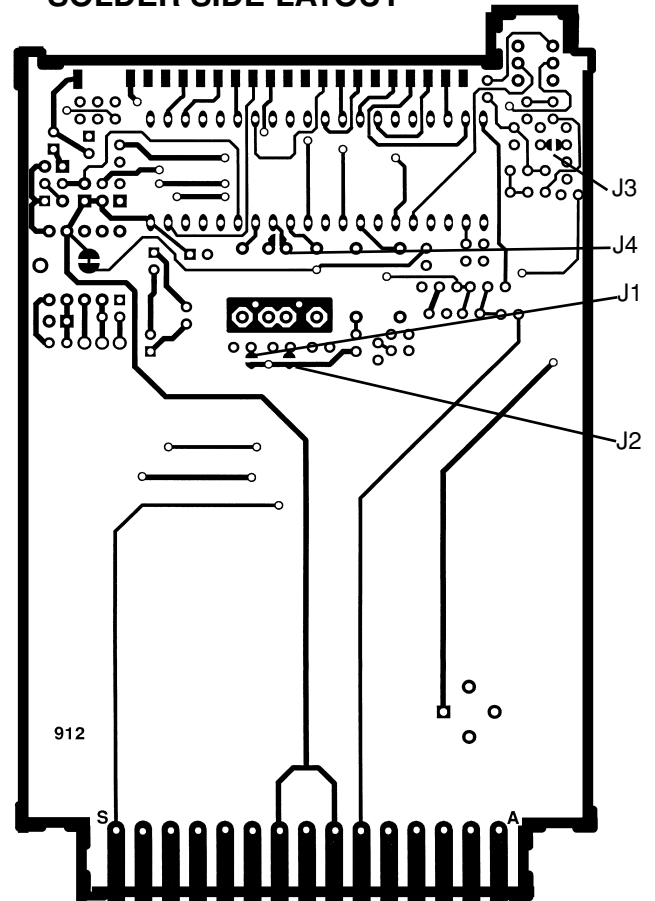
**Pin N - Decimal 1.XXX:** To activate this decimal point, connect this pin to Pin H

**Pin P - Signal Input High:** The high end of the input signal is connected to this pin. The input can range from  $\pm 200mV$  to  $\pm 50V$ . The input signal range is selected by closing solder jumpers on the board.

**Pin R - No connection** is made to this pin.

**Pin S - Signal Input Low:** The low end of the input signal is connected to this pin. The input can range from  $\pm 200mV$  to  $\pm 50V$ . The input signal range is selected by closing solder jumpers on the board.

## SOLDER SIDE LAYOUT



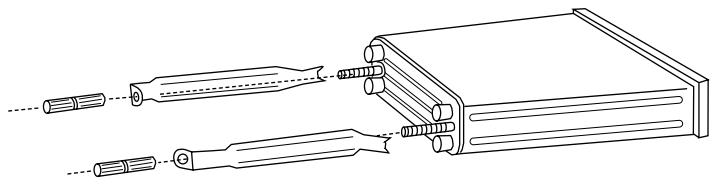
## CHANGING INPUT RANGE

The input full scale range is changed by closing or opening solder jumpers on the solder side of the printed circuit board (see above).

Input Signal	Jumper J1	Jumper J2	Jumper J3	Jumper J4
$\pm 2V$	OPEN	OPEN	OPEN	OPEN
$\pm 200mV$	OPEN	OPEN	CLOSED	CLOSED
$\pm 10V$	OPEN	CLOSED	OPEN	OPEN
$\pm 50V$	CLOSED	OPEN	OPEN	OPEN

## REMOVING THE METER FROM THE CASE

Unscrew the knurled collars, and remove the mounting clips. Snap out the rear plastic plate. The EL-T1473 printed circuit board can then be easily removed by sliding it out from the rear of the case.



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