Plasser & Theurer

DIGEM 96x24 P3 (EL-T 790) 3.5 Digit LED Meter

CE **5 VDC-POWERED LED VOLTMETER IN COMPACT DIN 96X24 MM CASE**

DESCRIPTION

The EL-T 790 is a $3\frac{1}{2}$ digit voltmeter in a compact 96x24 mm case, powered by a 5 VDC supply.

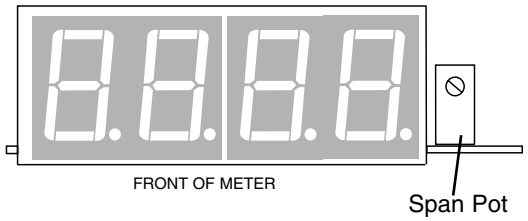
The meter is available in four ranges of 200 mV DC, 2 V (standard), 20 V, and 50 V. The EL-T 790 may also be calibrated at the factory for other specially scaled ranges.

The display is shipped standard with red LEDs. Display Segment Test is a standard feature.

CALIBRATION PROCEDURE

The EL-T 790 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-T 790 is now calibrated and ready for use.



SPECIFICATIONS

Measuring Range:	±200 mV DC ±2 V DC (standard) ±20 V DC ±50 V DC Ranges changed by closing jumpers on PCB
Numerical Range:	±1999
Resolution:	1 mV standard (100 µV in 200 mV range)
Input Impedance:	>1000 MΩ in 200 mV and 2 V ranges 1 MΩ in other ranges
Measuring Input:	Bipolar
Temperature Range:	0 ˚C to 50 ˚C (working) –20 ˚C to +70 ˚C (storage)
Linearity:	± 0.05 % of reading ±1 digits
Display:	14 mm 7-segment LED display, red-orange
Polarity:	Displays "–", assumed "+"
Decimal Points:	Externally selectable
Overrange:	For overrange, the most significant digit is displayed together with the polarity sign
Power Supply:	5 VDC approx. 1.25 watts

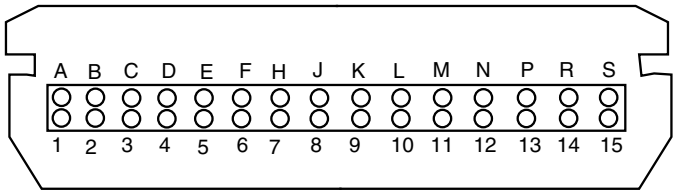
ORDERING INFORMATION

Order Part No.

STANDARD PANEL METER:
$3\frac{1}{2}$ digit LED panel meter; powered from a 5 VDC supply;
factory-calibrated for ±2 VDC full scale.....EL-T 790

PIN-OUT DIAGRAM

The Plasser & Theurer model EL-T 790 interconnects by means of a double-sided 30-pin edge connector with 0.156" pitch.



REAR OF METER WITH PCB EDGE CONNECTOR MOUNTED

A	No connection	1	No connection
B	No connection	2	No connection
C	No connection	**3**	**DECIMAL 1X.XX**
D	No connection	4	No connection
E	No connection	5	No connection
F	No connection	**6**	**+5 VDC**
H	No connection	7	No connection
J	**DECIMAL 1.XXX**	8	No connection
K	**DECIMAL 1XX.X**	**9**	**POWER GROUND**
L	No connection	10	No connection
M	**SIGNAL HIGH INPUT**	**11**	**ANALOG GROUND**
N	No connection	12	No connection
P	**DISPLAY TEST**	**13**	**SIGNAL INPUT LOW**
R	No connection	14	No connection
S	No connection	15	No connection

PIN-OUT DESCRIPTIONS

Pin 3 – **Decimal 1X.XX**: To activate this decimal point, connect this pin to Pin 6 (+5 VDC).

Pin 6 – **Positive Power Input:** One end of the 5 VDC power is connected to this pin.

Pin 9 – **Negative Power Input:** The other end of the 5 VDC Power is connected to this pin.

Pin 13 – **Signal Input Low**: The low end of the input signal is connected to this pin. The input can range from ±200 mV to ±50 V. The input signal range is selected by closing solder jumpers on the board.

Pin J – **Decimal 1.XXX**: To activate this decimal point, connect this pin to Pin 9 (Power Ground).

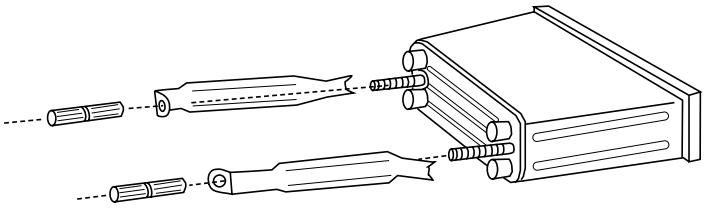
Pin K – **Decimal 1XX.X**: To activate this decimal point, connect this pin to Pin 6 (+5 V DC).

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

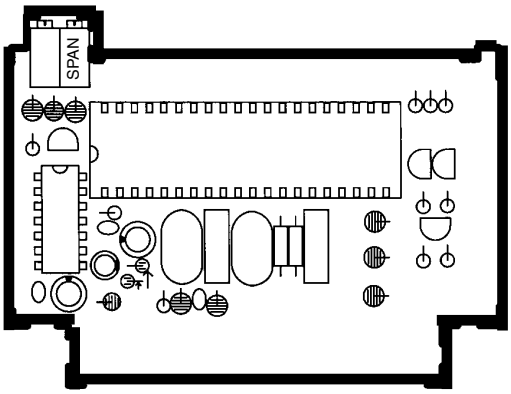
Pin P – **Display Test:** When this pin is connected to Pin 9, all the numeric segments of the display light up and –1888 is displayed.

REMOVING THE METER FROM THE CASE

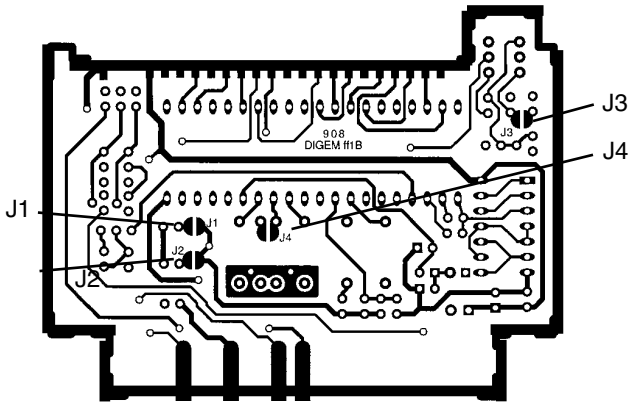
Unscrew the knurled collars and remove the mounting clips. Snap out the rear plastic plate. The EL-T 790 printed circuit board can then be easily removed by sliding it out from the rear of the case .



COMPONENT SIDE LAYOUT



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
± 2 V	OPEN	OPEN	OPEN	OPEN
± 200 mV	OPEN	OPEN	CLOSED	CLOSED
± 20 V	CLOSED	OPEN	OPEN	OPEN
± 50 V	OPEN	CLOSED	OPEN	OPEN

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