INSTRUCTION MANUAL

DIGITAL VOLTMETER/AMMETER

MODEL DOM-I

KIKUSUI ELECTRONICS CORPORATION

1. GENERAL

Model DOM-I Digital Voltmeter/Ameter is an accurate meter. It can be installed on a panel, replacing a Model TRM-50S Meter.

2. SPECIFICATIONS

2-1. Voltmeter Specifications

Full Scale

(a) When rated voltage of power supply is 16 V or lower: 19.99 (V)

(b) When rated voltage of power supply is 20 V or over, and less than 160 V: 199.9 (V)

(c) When rated voltage of power supply is 160 V or over: 1999 (V)

NOTE: The maximum measurable voltage is 300 V.

Accuracy

10 to 30 deg C (50 to 86 deg F): ±0.1% of rdg ± 1 digit

0 to 40 deg C (32 to 104 deg F): ±0.2% of rdg ± 1 digit

Range Select: Automatic select between HIGH and LOW ranges

99% - 100% of full scale

Switchover voltage: 98% - 100% of full scale when rated voltage of power supply is 16 V or lower

2-2. Ammeter Specficiations

Full Scale

(a) When rated current of power supply is 1.5 A or lower: 1.999 (A)

(b) When rated current of power supply is other than the above: 19.99 (A)

Accuracy

10 to 30 deg C (50 to 86 deg F): ±0.5% of rdg ± 1 digit

0 to 40 deg F (32 to 104 deg F): ±1% of rdg ± 1 digit

2-3. Common Specfications

Measuring System:	Integration system
Sampling rate:	3 samples/sec
Display:	7-segment red LED's
Overrange Indication:	Lower three digits go out.
Polarity Indication:	"-" alone is indicated.
Operable Temperature:	0 to 40 deg C (32 to 104 deg F)
Operable Humidity:	10 to 90% RH
Use:	Can be used in place of TRM50S Meter

3. GENERAL NOTES ON USE

(1) When the instrument is used as a voltmeter, the voltage between the +S and -S terminals is measured. When measurement is done in the remote sensing mode, therefore, the instrument indicates the voltage which is present at the terminals of the load.

(2) When the instrument is used as an ammeter, the measuring accuracy is affected by the current detecting resistor of the power supply side. Measure the current after operating the instrument for 10 minutes or more with the current to be measured.

(3) When the instrument is used as a voltmeter, load regulation in the constant-current mode is affected by the amount of the current which flows through the voltage detecting resistor of DOM-I. The higher the voltage, the larger is the amount of the current. When the DOM-I is used for the PAD160-1L, the current varies by approximately 2 mA as the output is changed from full load to shorting.

(4) When automatic switching over of ranges is unnecessary, the instrument can be fixed at the HIGH range as follows:

(For PAD-L Type-O Instrument)

Remove the cover of the main unit. To fix the instrument at the HIGH range, change the jumper plug of the PCB on the main transformer as shown in Figure 3-1.

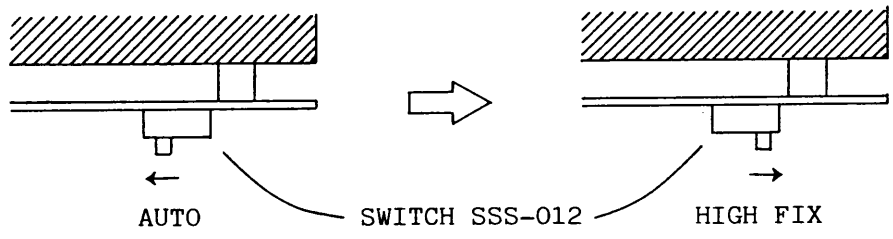

Figure 3-1

4. CABLIBRATION

Remove the acryl cover by raising it and pulling its top to your side.

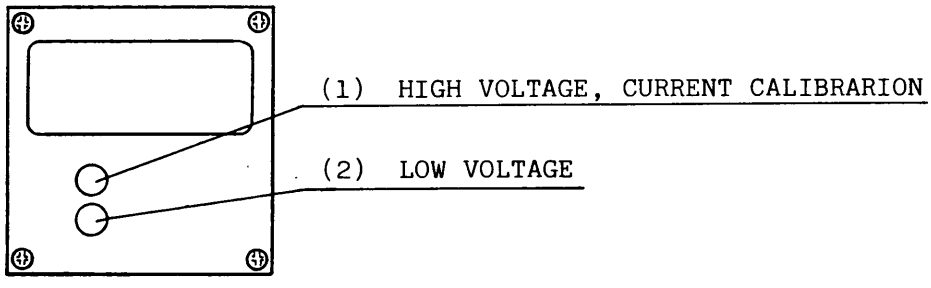

Figure 4-1. Location of controls (when acryl cover is removed)

4-1. Calibration of LOW Voltage Range

Connect a DC voltmeter (accuracy 0.01% or better) to the output terminal of the power supply. Set the output voltage of the power supply at a value slightly lower than the voltage at which switching over to the HIGH voltage range occurs. Adjust (2) LOW VOLTAGE control so that the DOM-I reads the same value with that of the DC voltmeter.

4-2. Calibration of HIGH Voltage Range

Connect a DC voltmeter (accuray 0.0% or better) to the output terminal of the power supply. Set the output voltage of the power supply at the rated voltage . Adjust (1) HIGH VOLTAGE control so that the DOM-I reads the same value with that of the DC voltmeter.

4-3. Calibration of Ammeter

Connect an ammeter in the output circuit. After feeding the rated current for about 10 minutes, adjust (1) CURRENT CALIBRATION control so that the DOM-I reads the same value with that of the ammeter.