

# DIGITAL VOLTMETER/AMMETER

## DOM-II

## OPERATION MANUAL

### 1. GENERAL

#### 1.1 Description

The DOM Digital voltmeter/Ammeter has two voltage ranges and one current range, which can be selected with a selector switch.

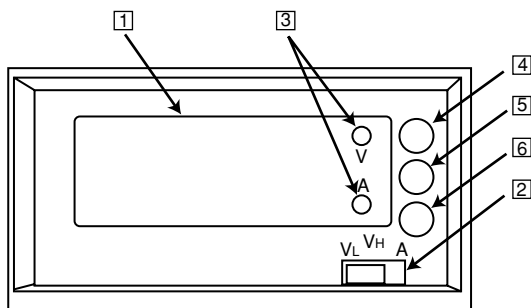
The measured value is displayed with 3-1/2 digits.

#### 1.2 Specifications

Instrument name	Digital Voltmeter/Ammeter			
Model No.	DOM-II			
Full scales of	HIGH	19.99V	LOW	1.999V
voltmeter	HIGH	199.9V	LOW	19.99V
(check mark)	HIGH	1999V	LOW	199.9V
	*The maximum allowable input voltage is 300V.			
Full scale of	1.999A			
ammeter	19.99A			
(check mark)	199.9A			
	1999A			
Accuracy	Voltmeter: $\pm 0.1\%$ of rdg $\pm 1$ digit( 20 $\pm 10$ )			
	Ammeter: $\pm 0.5\%$ of rdg $\pm 1$ digit( 20 $\pm 10$ )			
Measuring system	Integrating measuring system			
Sampling rate	3 samples/sec			
Display	7-segment red LED's			
Range selection	Manual. Unit of <u>A</u> or <u>V</u> indicated with LED's			
Overrange indication	Lower 3 digits goes off			
Polarity indication	"- " alone is indicated			
Ambient temperature	0 to 40			
Ambient humidity	10 to 90% RH			
Others	Compatible with Type KI-6A Meter			

## 2. OPERATION METHOD

### 2.1 Panel Switches and Controls



- |          |                             |  |
|----------|-----------------------------|--|
| <b>1</b> | Digital readout             |  |
| <b>2</b> | Selector switch             | VL (LOW range of voltmeter)<br>VH (HIGH range of voltmeter)<br>A (AMMETER range)   |
| <b>3</b> | Voltmeter/ammeter indicator | V: <u>V</u> LED turns on to indicate operation as voltmeter.<br>A: <u>A</u> LED turns on to indicate operation as ammeter. |
| <b>4</b> | VL • ADJ                    | VL range calibration potentiometer   |
| <b>5</b> | VH • ADJ                    | VH range calibration potentiometer   |
| <b>6</b> | A • ADJ                     | A range calibration potentiometer  |

### 2.2 Notes

When voltage to be measured is not predictable, set the instrument in the VH range before turning on its power. If the voltage is lower than the maximum measurable value of the VL range, the lower three digits will go off (to indicate the overrange state).

In such case, change the range to the VH range.

### 3. CALIBRATION

#### 3.1 Calibration of VL Range

Connect to the output terminal of a power supply a DC voltmeter of an accuracy of 0.01% or better, set the output voltage at E1 (see Table 1), and adjust the VL ADJ potentiometer so that the digital display reads the value of D1.

#### 3.2 Calibration of VH Range

##### 3.2.1 In case of maximum rated output voltage is higher than 20V or lower than 70V.

Adjust the VH ADJ potentiometer as follows:

When set at E2 (Table 1) in range VL, reading is D2 with VH

When set at E3 (Table 2) in range VL, reading is D3 with VH

##### 3.2.2 In case of maximum rated output voltage is higher than 110V or lower than 16V.

Connect to the output terminal of the power supply a DC voltmeter of an accuracy of 0.01% or better, set the output voltage at E4, and adjust the VH ADJ potentiometer so that the digital display reads the value of D4.

Maximum rated voltage of power supply [V]	E1 [V]	D1	E2 [V]	D2
8	1.990	1.990	-	-
16	1.990	1.990	-	-
20 35 40 60 70	19.90	19.90	19.94	19.9
110	19.90	19.90	-	-
160	19.90	19.90	-	-
250	199.0	199.0	-	-

Table 1

Maximum rated voltage of power supply [V]	E3 [V]	D3	E4 [V]	D4
8	-	-	8.00	8.00
16	-	-	16.00	16.00
20 35 40 60 70	19.95	20.0	-	-
110	-	-	110.0	110.0
160	-	-	160.0	160.0
250	-	-	250.0	250

Table 2

### 3.3 Calibration of A (Ammeter) Range

Connect to the output terminal an ammeter of an accuracy of 0.2% or better, feed the maximum rated current of the power supply, and calibrate the indication (displayed value) with the A ADJ potentiometer.

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