

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.

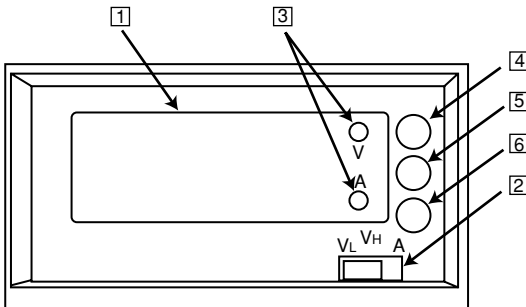
The measured value is displayed with 3-1/2 digits.

1.2 Specifications

Instrument name	Digital Voltmeter/Ammeter
Model No.	DOM-II
Full scales of voltmeter (check mark)	HIGH 19.99V LOW 1.999V HIGH 199.9V LOW 19.99V HIGH 1999V LOW 199.9V
	*The maximum allowable input voltage is 300V.
Full scale of ammeter (check mark)	1.999A 19.99A 199.9A 1999A
Accuracy	Voltmeter: $\pm 0.1\%$ of rdg ± 1 digit(20 ± 10) Ammeter: $\pm 0.5\%$ of rdg ± 1 digit(20 ± 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



- 1 Digital readout
- 2 Selector switch
VL (LOW range of voltmeter)
VH (HIGH range of voltmeter)
A (AMMETER range)
- 3 Voltmeter/ammeter indicator
V: V LED turns on to indicate operation as voltmeter.
A: A LED turns on to indicate operation as ammeter.
- 4 VL · ADJ VL range calibration potentiometer
- 5 VH · ADJ VH range calibration potentiometer
- 6 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 it 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	19.90	19.90	19.94	19.9
60				
70				
110	19.90	19.90	-	-
160	19.90	19.90	-	-
250	199.0	199.0	-	-

Table 1

Maximum rated voltage of power supply [V]	E ₃ [V]	D ₃	E ₄ [V]	D ₄
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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