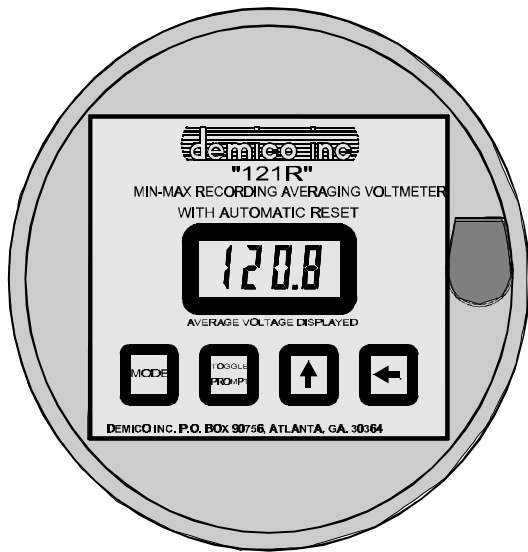


## AVERAGING (MIN-MAX) VOLTMETER



- ◆ FRONT PANEL OPERATION
- ◆ MANUAL OR AUTOMATIC RESET
- ◆ EVENTS TIME-STAMPED TO 1 MIN.
- ◆ STORES 13 MONTHS DATA
- ◆ TIME-STAMPS UP TO 120 OUTAGES
- ◆ STORES TIME OUTSIDE OF SETPOINTS
- ◆ CLOCK RUNS THROUGH OUTAGES
- ◆ OPERATES ON 120 OR 240 Vac
- ◆ ACCURATE, STABLE, TRUE RMS
- ◆ 1/10 OR 1V RESOLUTION (SELECTABLE)
- ◆ FREE FAST INTERFACE PROGRAM
- ◆ REA LISTED

The single phase AV121R is designed to emulate the "Lincoln" thermal Voltmeter that has been used since about 1919. The digital logarithmic averaging produces the same thermal response as the original meter, but with vast improvements in accuracy, stability and features. It can be set up and operated from the front panel or with a computer. The REA listed AV121R-912 Min-Max Recording Voltmeter can automatically collect and store monthly voltage data to help maintain good customer service. It is ideal for monitoring substation and end of distribution line voltage. Customer complaints can be verified accurately with the internal real time clock's one minute resolution time-stamping. Instantaneous and average minimums, maximums, and power outages are recorded. Minutes above a high setpoint, and below a low setpoint are counted and can be used to further identify problem areas in a distribution system. Setpoints are user selected. Monthly data is stored in the meter at the end of each month and retained for thirteen months before being overwritten. The previous month's data can be

compared to the same month the year before as recorded in the meter. The meter can be reset manually from the front panel, or consistent monthly data will be recorded using the automatic reset feature. Monthly average minimum, maximum, and number of outages can be read from the front panel. A free, powerful MS-DOSE computer interface program allows easy setup and data retrieval. The meter is housed in a rugged high impact polycarbonate case that is ultraviolet light resistant. The state of the art electronics are temperature stable over a wide temperature range and computerized calibration gives high accuracy true rms readings. An optional heater extends operation to - 40°. The 90 to 290 Vac input range allows the same meter to be used for 120 or 240 Vac. The real time clock is powered by a capacitor during power outages for up to 30 days and can correct itself for daylight savings time. The minimum, maximum, and power outage data is stored in a nonvolatile memory that requires no power to retain the data.

### Front Panel Control

The front panel of the meter has a 4 digit 1/2" high liquid crystal display for high visibility in outdoor applications. Four sealed pushbuttons are used to manually control the display and reset the meter.

The setup parameters that can be changed from the front panel are:

1. The integration time constant
2. The meter address number
3. The date and time of day

A front panel security feature, when used, makes parameters tamper resistant.

The data available from the front panel is:

1. Average Voltage (default reading)
2. Instantaneous Voltage
3. Minimum Average
4. Min. Average during period before last reset
5. Maximum Average Voltage
6. Max. Average during period before last reset
7. Number of Power Outages
8. Number of Power Outages during period before last reset.

### Computer Interface Features

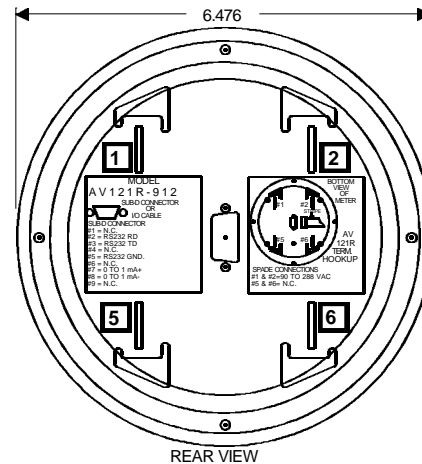
The computer setup and operation requires a standard null modem cable and the Demico MSDOSE interface program. An optional front panel communication port has a spring loaded, gasketed cover. A special cable, (C9-J) interfaces your Laptop's RS232Serial port to the meter. The free software allows easy setup and retrieval of all the data available from the front panel plus:

1. 13 months of time-stamped Minimum, Maximum, and Power Outage data
3. Minutes the Average Voltage was below a user selected low setpoint
4. Time-stamp of the beginning and ending of up to 120 Power outages per year
5. Choice of either 1 or 1/10 Volt Resolution for front panel display
6. Choice of either Front Panel or Automatic Reset. The automatic reset feature, when used, will maintain an accurate, consistent record of Voltage data.
7. A programable recording delay allows set up in the office and installation in the field without recording an outage.

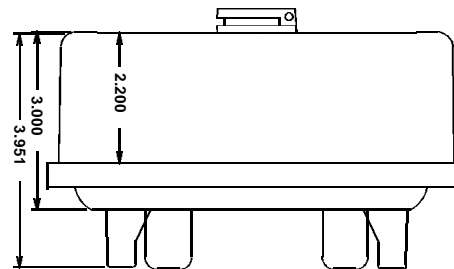
The 13 months of data can be retrieved from the meter, saved to disk and imported into spreadsheets for reports, graphs and further evaluation.

### Specifications

<b>REA Listing</b>	<b>ga-6</b>
<b>Baud Rates</b>	<b>1200, 2400, 9600, 19200</b>
<b>Communications</b>	<b>RS232,</b>
<b>Enclosure</b>	<b>High Impact Plastic</b>
<b>Time Constant</b>	<b>10 to 9999 Seconds</b>
<b>Calibration</b>	<b>Not Required</b>
<b>Clock Accuracy</b>	<b>± 1 Minute per Month</b>
<b>Accuracy</b>	<b>± 1 Volt True RMS</b>
<b>Temperature Range</b>	<b>-30 to 70° C</b>
<b>Display</b>	<b>4 Digit 1/2" LCD</b>
<b>Surge Withstand</b>	<b>ANSI C37 90.1 - 1989</b>
<b>Power Supply</b>	<b>90 to 290 Vac, 2Va</b>



REAR VIEW



SIDE VIEW

### ORDERING INFORMATION

**AV 1 2 1 R - 9 1 2**

**Power Supply = 90 to 290 VAC**

**Options, None**

**Monitoring Range, 90 to 290 VAC**

**H = Heater if needed**

**J = Front Panel Jack**