

AD418R Ampere Demand Installation

Instructions

1. Mechanical Requirements

- Provide cut-out and attach holes per Figure 2.
- The meter has attach studs installed. Meters are shipped with nuts installed on the studs. Remove the nuts and install the meter in the cutout. Tighten nuts down to hold the meter in place. For tight mounting configurations, special extra long nuts can be ordered from the factory.

2. Wiring Requirements

- The power for operation can be either AC or DC voltage without making any changes to the meter. AC voltage can be from 90 to 288 VAC for the AD418R and DC voltage can be from 100 to 300 VDC. Other DC voltage supplies are available (contact factory before purchasing the meter). See terminal strip label for your meter's power supply range. When using DC voltage polarity is not required. Connect the input power leads to terminals 7 and 8 on the upper terminal strip. Terminal 6 is the case ground and is connected to the front panel. Connect terminal 6 to earth ground.

b. **Inputs:** The AC current inputs are on the lower terminal strip and are labeled 9 through 16. Each phase has two terminals. One side of each input pair may be connected together if one side of the C.T.'s are common. There is no polarity for the AC inputs.

c. **SCADA (analog) outputs:** The four 0-1 mA outputs are single ended, which means that a single common is used as a return for all output currents. These outputs work equally well with single ended or differential input RTU's. For differential RTU's, connect all of the minus inputs to terminal 5 on the meter, and terminals 1 through 4 to their respective positive RTU inputs. Terminals 1 through 4 provide an analog output that is proportional to the 1 second sample of instantaneous that is also displayed on the left set of displays of the meter. On all outputs, the maximum burden is 10,000 ohms for 0-1 mA and 6666 ohms for overrange conditions (up to 1.5 mA).

d. **Serial Port:** The serial port is standard on all Demico meters. The meter has a 1/4" stereo phone jack on the rear of the meter. A special cable can be

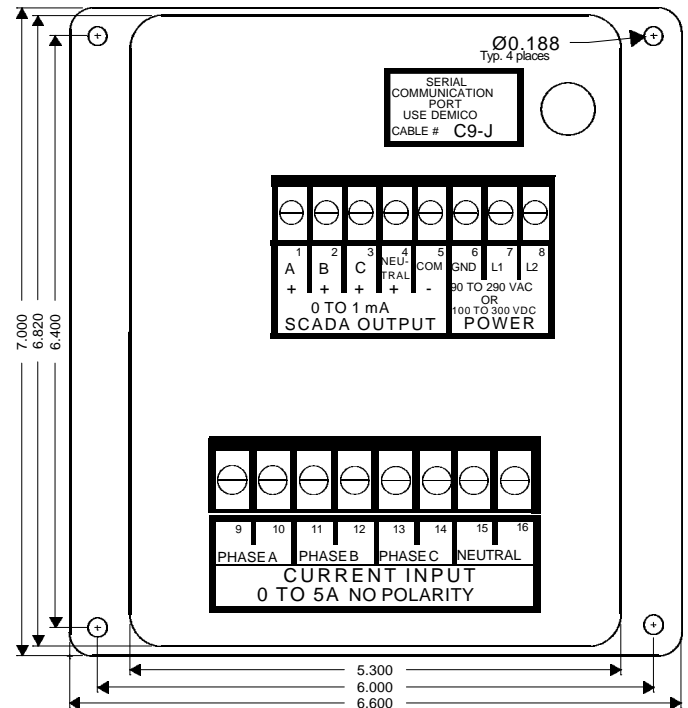
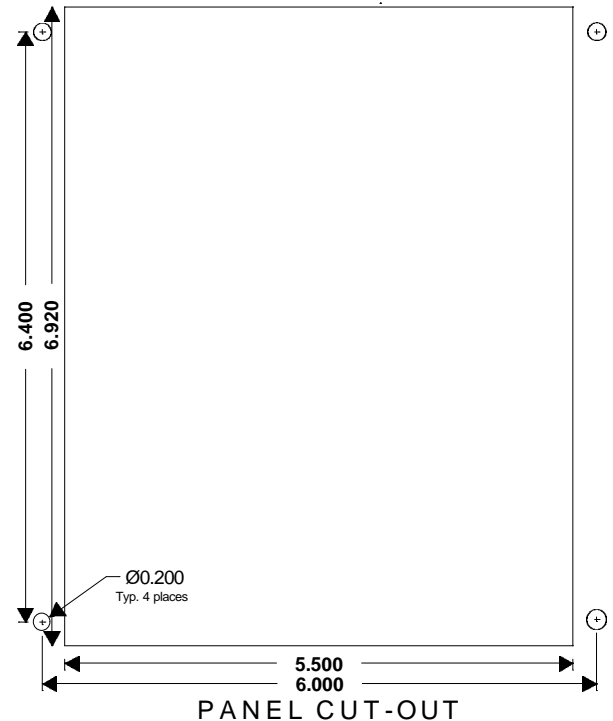


FIGURE 1



PANEL CUT-OUT

FIGURE 2

ordered from the factory (Model C9-J) which has a 1/4" stereo plug on one end and a 9 pin sub D connector on the other end which is compatible with notebook PC's. For shallow enclosures, a right angle plug is available. Also available are extensions with spring loaded jack covers to provide easy remote access to the serial port. Call the factory for more information.

3. Setup And Operating Procedures For Front Panel Operation

The AD418R can be used as a stand-alone meter operated from the front panel only, or it can be interfaced to a computer using free powerful DOS interface software available upon request. The meter can be set up and monitored by a computer on a real time basis or accessed with a portable computer to setup or download stored information when convenient.

This meter has three push-button switches on the front panel which can be used to set up the meter and read the stored data available from the front panel display. All other data can be read only by a computer.

In normal operation the left displays show the instantaneous Amperage and the right displays show the logarithmic average Amperage (Demand) based on the time constant selected. The meter will automatically return to normal operation from any mode by stepping through the remaining modes starting 60 seconds after pressing the last front panel switch. The normal operation of the meter continues to operate in the background while in any mode.

Front Panel Switch Functions

1. Press mode switch one time and left displays read "1-Pd" for Peak demand. The Peak demand value since the last reset will be shown on the right displays. Press the \uparrow once and the left displays will read "L-Pd" and the Peak Demand value before the last reset will be shown on the right displays.

2. Press the mode switch again while in mode 1 and the left displays read "2-Cd" for Coincident demand. The coincident demand value since the last reset will be shown on the right displays. Press the \uparrow once and the left displays read "L-Cd" and the coincident demand values before the last reset will be shown on the right displays.

3. Press the mode switch again while in mode 2 and the left displays read "3-rE" for rEset. The right displays will also show "3-rE". If the meter is set up through the computer software for automatic reset only, the meter cannot be reset from the front panel. When front panel reset is enabled, press the \leftarrow to reset the meter. After the meter is reset, the right display shows "donE", and both displays revert back

to normal operation. This mode has a second function that allows the "set-up parameters" to be locked so that they can be displayed but not inadvertently changed. To lock or unlock these parameters, press and hold the \uparrow and then press the mode switch. Both displays then show normal operation. This function can be reversed by repeating the operation.

4. Press the mode switch again while in mode 3 and the left display shows "4-Sc" for Scale. The scale relates to the ratio of the C.T. being used. The right display shows the present scale value. At this time the scale can be changed by pressing the \leftarrow to select the digit to change. The selection is made by pressing the \leftarrow and observe the decimal move as the switch is pressed. The right digit is selected when the decimal is to the left of the digit, the two center digits are each selected when there is a decimal on each side of a digit and the left digit is selected when the decimal is to the right of the digit. When the digit you wish to change is selected, press the \uparrow until the desired number is present. Press the mode switch to store the new scale and advance the mode.

5. Press the mode switch again while in mode 4 and the left display reads "5-Co" for time Constant. The right display shows the present time constant in seconds and can be changed in the same manner as in #4.

6. Press the mode switch again while in mode 5 and the left display reads "6-nu" for meter identification nunumber which is assigned by the owner and is used to identify the meter when accessed by a computer.

7. Press the mode switch again while in mode 6 and the left display reads "7-CL" for CLock. The right display shows the present 24 hour clock setting (hh:mm), and can be changed in the same manner as outlined in #4.

8. Press the mode switch again while in mode 7 and the left display reads "8-dA" for dAte. The right display shows the date presently set (mmdd), and can be changed in the same manner as outlined in #4.

9. Press the mode switch again while in mode 8 and the present Instantaneous and Present Demand Values (default values) appear on the display.