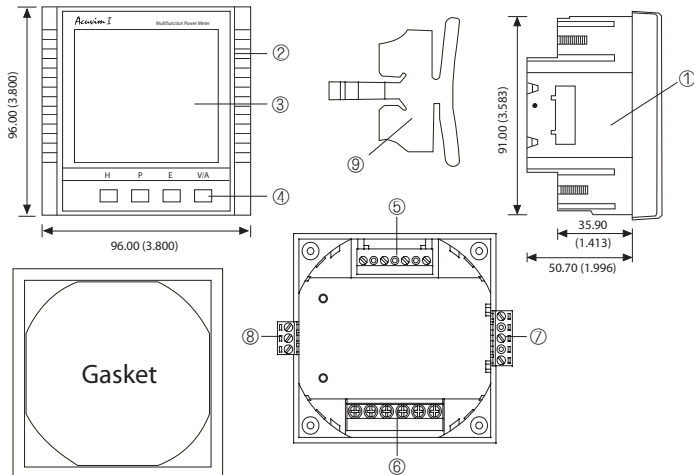


Acuvim II Series Quick Setup Guide

- **Appearance and Dimension**
- **Installation Method**
- **Terminals**
- **Wiring Diagram**
- **Settings Mode**
- **Communication**
- **I/O Options**
- **Alarming**
- **Data Logging**

Appearance and Dimension

Units: mm(inches)



Part Name	Description
① Enclosure	The Acuvim II series meter enclosures are made of high strength anti-combustible engineering plastic.
② Front Casing	After the installation, this part is before the panel.
③ LCD Display	Large bright white backlight LCD display.
④ Key	Four keys are used to select display and set.
⑤ Voltage Input Terminals	Used for voltage input.
⑥ Current Input Terminals	Used for current input.
⑦ Power Supply Terminals	Used for supply input.
⑧ Communication Terminals	Communication output.
⑨ Installation Clip	The clips are used for fixing the meter to the panel.

Installation Method

Environment

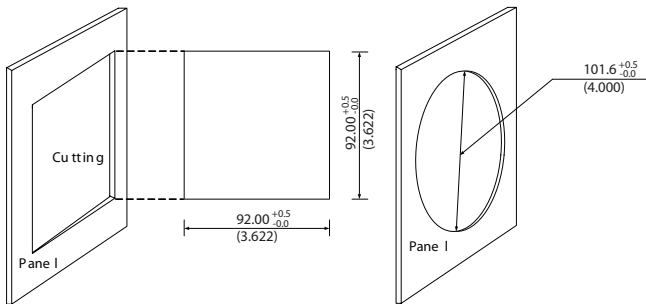
Make sure meter is installed in a dry and dust free environment. Avoid placing meter near to heat, radiation and strong electrical interference sources. Meter's working temperature range is from -25°C to 70°C.

Meter can be installed into an ANSI C39.1 (4" round) or an IEC 92mm DIN (square) form.

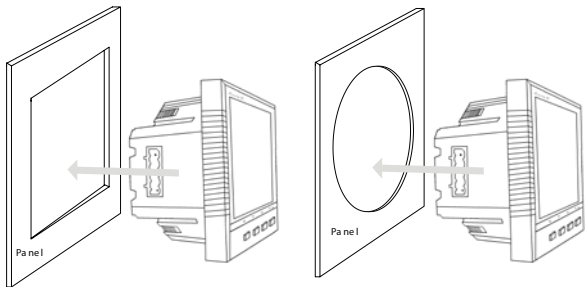
Installation Steps

1. Cut a square or a round hole on the panel.

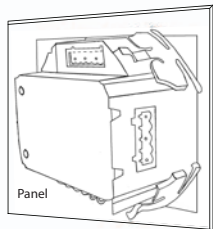
Units: mm(inches)



2. Remove installation clips from the meter and insert the meter into the square or round hole from the front side. Insert the gasket in between the meter and the cutout to cover up gaps from the round hole and to ensure the IP ratings.

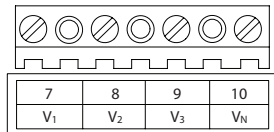


3. Install clips back to the meter from the backside and push the clip tightly so that meter is fixed on the panel.

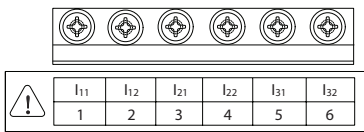


Terminals

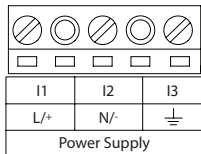
Terminal Strips



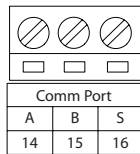
Voltage Input



Current Input



Power Supply



Communication

The meter has 2 current input options available for different applications.

1. Standard: 5Aac
2. Optional: 1Aac

Ground Terminal Connection

Before setting up the meter's wiring, please connect the meter's ground terminal and the switch gear's ground terminal together.



Auxiliary Power

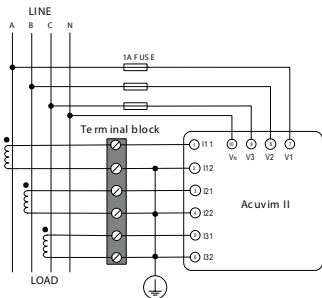
The meter has 2 auxiliary power supply options available for different applications (aux. power supply terminals are 11, 12, 13).

1. Universal (standard): 100~415Vac, 50/60Hz; 100~300Vdc
2. Low Voltage DC Power: 20~60Vdc

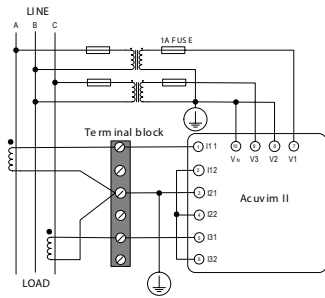
Please make sure the right type before powering up the meter.

Wiring Diagram

The following shows two typical wiring input configurations:



3 phase 4 wire (3LN, 3CT)



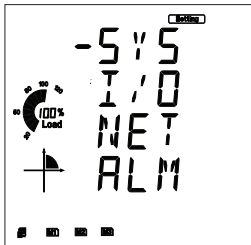
3 phase 3 wire (2LL, 3CT)

Please refer to Acuvim II user's manual section 2.3 for other wiring configuration details.

Settings Mode

Meter Settings

Press V/A and H together to enter the mode selection screen. Press P or E to move the cursor left or right respectively to "Setting" tab then press V/A. Before accessing the parameter setting mode, a four digit password is required every time. The default password is 0000.



4 options are available in the parameter selection page. "SYS" for system parameter, "I/O" for I/O module parameter, "NET" for Ethernet module parameter, "ALM" for alarm parameter. Press P or E to move the cursor down or up respectively. Press V/A to enter the selected parameter settings page.

Wiring Diagram, PT and CT Settings

Enter "SYS" page, press P or E to scroll through setting pages, press V/A to change a parameter. Scroll to page S03 for voltage wiring, S04 for current wiring, S05 for primary side PT ratio, S06 for secondary side PT ratio, S07 for primary side CT ratio, S08 for secondary side CT ratio. For PT and CT ratio settings, press P or E to increase or decrease digit by 1 respectively, press H to move cursor to next digit, press V/A to accept change.

Communication

The meter has a standard RS485 communication port and optional Ethernet or Profibus communication modules. The meter supports dual communication which means the RS485 serial communication can be used together with either Ethernet or Profibus connection.

Serial Communication Settings

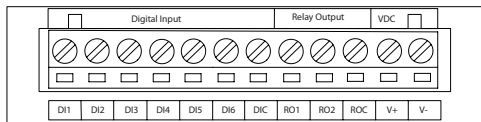
Serial communication terminals are A, B, S (14, 15, 16). A is differential signal +, B is differential signal – and S is shield. Up to 32 devices can be connected on a RS485 bus. The overall length of the bus cannot exceed 1200m (4000ft). When multiple meters are connected serially on the same RS485 bus, each meter shall have a different device address. Enter “SYS” page and scroll to page S01 to set the device address. This address can be any integer between 1 and 247.

Ethernet Communication Settings (if equipped)

Enter “NET” page, press P or E to scroll through setting pages, press V/A to change a parameter. Scroll to page N02 for IP address, N03 for subnet, N04 for gateway, N07 for Modbus port, N08 for HTTP port. To set a value, press P or E to increase or decrease digit by 1 respectively, press H to move cursor to next digit, press V/A to accept change.

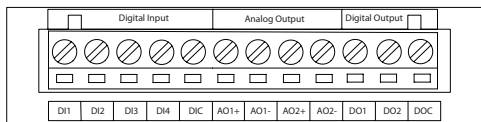
I/O Options (if equipped)

Three types of IO modules with different IO combinations are available:



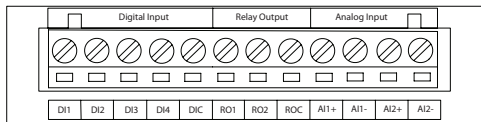
AXM-IO1

AXM-IO1:
6DI, 2RO, 1Power
Supply for DI



AXM-IO2

AXM-IO2:
4DI, 2DO, 2AO

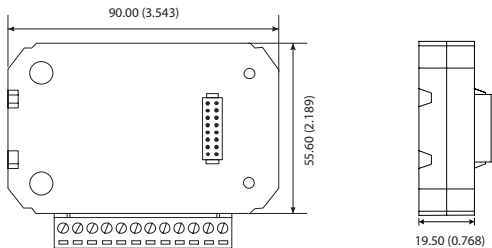


AXM-IO3

AXM-IO3:
4DI, 2RO, 2AI

Note: Maximum 3 modules for 1 meter, only 1 communication module for 1 meter and maximum of 2 same type IO module for 1 meter.

IO parameters can be set or viewed either from the meter front or through communication using utility software. Please refer to IO modules user's manual chapter 3 for operation details.



Digital Input (DI)

External power supply (16~30 Vdc) is required for the digital inputs. DI can be used as pulse counter, to monitor switch status or to monitor sequence of events.

Digital Output (DO)

Two modes available: alarm output, energy pulse output. One module only supports one mode at a time. In alarming mode, conditions can be set using the utility software. In energy pulse mode, output parameters can be set from the meter front or from the utility software.

Relay Output (RO)

Two modes available: control (latch or pulse) and alarm output (latch only). One module only supports one mode at a time. In control mode, relays can be switched on and off from the utility software. In alarming mode, conditions can be set using the utility software.

Analog Output (AI)

Each module only supports one type of input (either current option or voltage option). Tracking object and upper/lower limit can be set from the front panel control keys or from the utility software.

Analog Output (AO)

Each module only supports one type of output (either current option or voltage option). Tracking object and upper/lower limit can be set from the front panel control keys or from the utility software.

Alarming

16 alarming channels can be selected from 48 available parameters. Alarming channels and conditions can be set from the utility software. Please refer to Acuvim II user' s manual section 4.4 for details.

Data Logging (Acuvim IIR only)

Acuvim IIR has a total of 4MB of on board memory for data logging purposes, which can be allocated among 3 different logs. A maximum of 117 parameters can be assigned for each log. Logging interval can be selected between 1 min to 1440 mins (1 day). Data logging settings can be set and viewed using the utility software. Please refer to Acuvim II user' s manual section 4.7 and 5.3.6 for details.

Specifications

Voltage Input	
nominal Full Scale	400Vac L-N, 690Vac L-L
Withstand	1500Vac continuous 3250Vac, 50/60Hz for 1minute
Input Impedance	2Mohm per phase
Metering Frequency	45Hz~65Hz
Pickup Voltage	10Vac (30Vac for Acuvim IIR)
Accuracy	0.2% full scale

Current Inputs (Each Channel)	
Nominal Current	0.005 to 11A
Metering Range	0~10A ac
Withstand	20Arms continuous, 100Arms for 1second, non-recurring
Burden	0.05VA (typical) @ 5Arms
Pickup Current	0.1% of nominal
Accuracy	0.2% full scale

AC/DC Control Power	
Operating Range	100~415Vac, 50/60Hz; 100~300Vdc
Burden	5W
Withstand	3250Vac, 50/60Hz 1min
	Installation Category III (Distribution)

Low Voltage DC control Power (Optional)	
Operating Range	20~60Vdc
Burden	5W



Accuenergy corporation

Los Angeles-Toronto-Beijing

North America Toll Free: 1-877-721-8908

Web: www.accuenergy.com

Document#1040E3101

Revision Date: Sep., 2009