

ACUVIM-IIR-M-5A-P1V3-WEB2D-PIXII

Advanced Power & Energy
Meter Datasheet



DESCRIPTION

The ACUVIM-IIR-M-5A-P1V3-WEB2D-PIXII is an Accuenergy meter specially designed for seamless integration with Pixii Home and other Pixii BESS products competing in frequency markets.

FEATURES

- + Revenue Grade: ANSI C12.20 class 0.1 & IEC 62053-22 class 0.1s
- + 4th CT input - Measure neutral current
- + High Speed update rate
Fast Read mode offered in 100ms via Modbus RTU and TCP/IP, Fast Log offered at 100ms intervals
- + High Resolution Frequency Measurements utilizes a custom moving average filter with 0.001Hz and 10mHz accuracy. Window size ranges 1 - 50 cycles, and update rate varies 1 - 2 cycles
- + Data Logging available in 16MB, and 8GB with WEB2 module

KEY FEATURES

Fast Response

- + 512 samples per cycle for measurement, 100ms and 20ms Modbus refresh rate, and 100ms and 50ms options for Fast Logging for real time parameters including Frequency and Active Power.

Data Logging

- + Fast Log available to assign and record historical readings at 100ms interval
- + 8GB data logging for multi-year capacity
- + SNTP assignable clock for time stamp

Web Accessible

- + Ethernet Communication Channels (Modbus TCP)
- + Dual RJ45 ports with RSTP daisy-chain and two individually configurable Ethernet ports
- + Built-in web server for configuration and real time data view without software. Modbus TCP/IP supported

FUNCTION LIST

REAL TIME MEASURING	Parameters
Phase Voltage	V1, V2, V3, Vlnavg
Line Voltage	V12, V23, V31, Vllavg
Current	I1, I2, I3, In, Iavg
Power	P1, P2, P3, Psum
Reactive Power	Q1, Q2, Q3, Qsum
Apparent Power	S1, S2, S3, Ssum
Power Factor	PF1, PF2, PF3, PF
Frequency	F

SPECIFICATIONS

Metering				
PARAMETERS		ACCURACY	RESOLUTION	RANGE
Voltage		0.1%	0.1V	10V~1000kV
Current		0.1%	0.1mA	5mA~50000A
Power		0.1%	1W	-9999MW~9999MW
Reactive Power		0.1%	1var	-9999Mvar~9999Mvar
Apparent Power		0.1%	1VA	0~9999MVA
Power Demand		0.1%	1W	-9999MW~9999MW
Reactive Power Demand		0.1%	1var	-9999Mvar~9999Mvar
Apparent Power Demand		0.1%	1VA	0~9999MVA
Power Factor		0.1%	0.001	-1.000~1.000
Frequency		0.001%	0.001Hz	45.00~65.00Hz
Energy	Primary 0.1	0.1%	0.1kWh	0-99999999.9kWh
	Primary 0.001	0.1%	0.001kWh	0-999999.999kWh
	Secondary	0.1%	0.001kWh	0-999999.999kWh
Reactive Energy	Primary 0.1	0.1%	0.1kvarh	0-99999999.9kvarh
	Primary 0.001	0.1%	0.001kvarh	0-999999.999kvarh
	Secondary	0.1%	0.001kvarh	0-999999.999kvarh
Apparent Energy	Primary 0.1	0.1%	0.1kVAh	0-99999999.9kVAh
	Primary 0.001	0.1%	0.001kVAh	0-999999.999kVAh
	Secondary	0.1%	0.001kVAh	0-999999.999kVAh

SPECIFICATIONS

Input

CURRENT INPUTS (EACH CHANNEL)

Nominal Current Options	① 5A, ② 1A
Metering Range	① 0-10A, ② 0-2A
Pickup Current	① 5mA, ② 1mA, ③ 0.25mV, ④ 0.25mV, ⑤ 0.15mA
Withstand	20Arms Continuous, 0.1% of Nominal 100Arms for 1 second, Non-Recurring
Burden	0.05VA (Typical) @ 5A RMS
Accuracy	0.1% at Reading

VOLTAGE INPUTS (EACH CHANNEL)

Nominal Full Scale	400Vac L-N, 690Vac L-L (+20%)
Withstand	1500Vac Continuous 2500Vac, 50/60Hz for 1 Minute
Input Impedance	2MΩ per Phase
Metering Frequency	45Hz~65Hz
Pickup Voltage	10Vac
Accuracy	0.1% at Reading

ENERGY ACCURACY

Active	Class 0.1s (According to IEC 62053-22) Class 0.1 (According to ANSI C12.20)
Reactive	Class 0.5s (According to IEC 62053-24)

Communication

Serial Communication

Modbus-RTU
2-Wire Shielded Twisted Pair Cable
Connection
2400~115200 bps

Ethernet Communication

Modbus-TCP/IP
LAN Dual RJ45 10/100M Ethernet
Secure TLS1.2/SSL compliant
115200 bps

Operating Environment

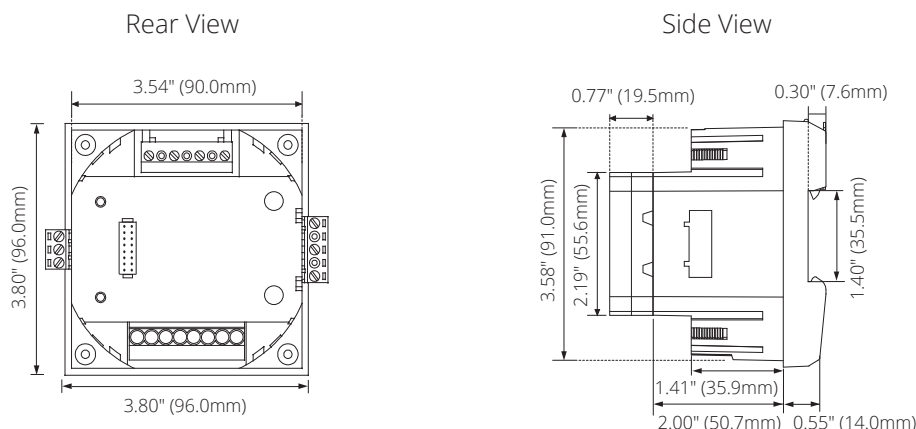
Operating Temperature	-25°C to 70°C -13°F to 158°F
Storage Temperature	-40°C to 85°C -40°F to 176°F
Relative Humidity	5% to 95% Non-Condensing

Standard Compliance & Certifications

Measurement Standard	IEC 62053-22; ANSI C12.20; IEC61557-12
Environmental Standard	IEC 60068-2, CE, RoHS
Safety Standard	IEC 61010-1, UL 61010-1
EMC Standard	IEC 61000-4/-2-3-4-5-6-8-11, CISPR 22, IEC 61000-3-2, IEC 61000-6-2/4, EN55011
Outlines Standard	DIN 43700, ANSI C39.1
Protocol Conformance	IEC 61850 2nd Edition BTL Listed for B-SA

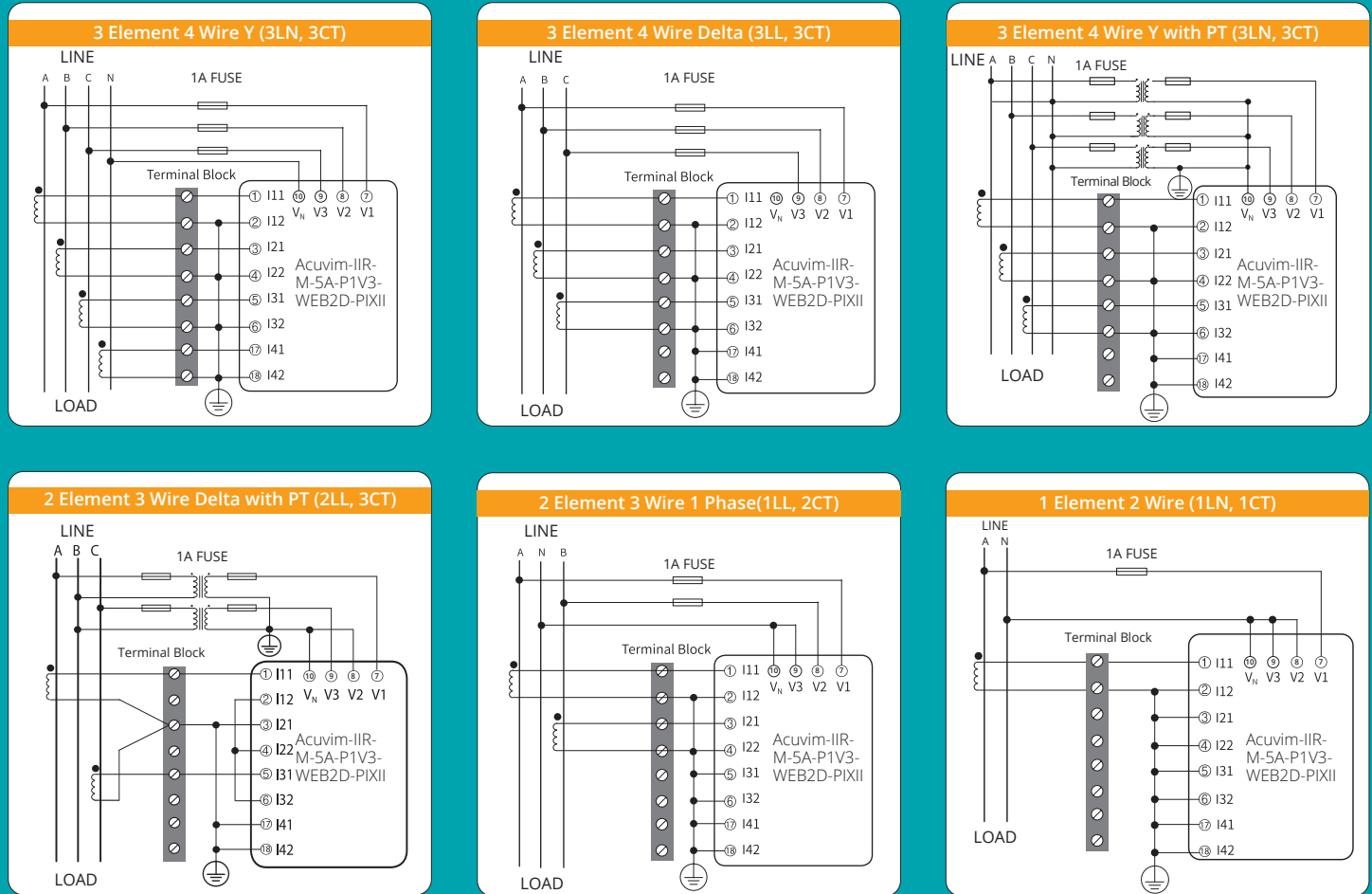
DIMENSIONS

DIN Mount Meter Dimensions



WIRING DIAGRAMS

Typical Wiring With 5A/1A CTs



*Note: 2CT configuration is optional only in 3 Phase 3 Wire system.

ORDERING INFORMATION

+ Meter Model	- Mounting Option	- Current Input	- Power Supply
Acuvim-IIR-M-5A-P1V3-WEB2D-PIXII: Data logging, TOU	M: DIN-Rail Mount Transducer without Display (Optional Remote Display Available)	5A: 5A/1A (Input Field Selectable)	P1V3: 100~415Vac, 50/60Hz, 100~300Vdc
Ordering Example:	Acuvim-IIR-M-5A-P1V3-WEB2D-PIXII		

+ Accessories (Optional)	- Rated Inputs	: Rated Output
AcuCT-125R	100A	1A
Ordering Example:	AcuCT-125R-100A:1A	



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Specs Subject To Change Without Notice.



ISO9001 Certified