# **AcuPanel** 9104/9104X

Pre-Wired Power & Energy Panel Meter Datasheet





#### **DESCRIPTION**

The AcuPanel 9104/9104X is a convenient, pre-configured meter enclosure that delivers streamlined meter deployment in OEM or retrofit projects. It is ideal for when installation inside an electrical distribution panel is unavailable, in harsh environments to safeguard instrumentation against the elements, or to limit the time and complexity of installation. Each AcuPanel undergoes rigorous quality testing to ensure years of dependable service.

#### **FEATURES**

- + Choose from a NEMA 3 rated industrial steel enclosure or NEMA 4X rated polycarbonate enclosure suitable for both indoor and outdoor use
- + The lockable, plug-and-play housing provides protection against unwanted tampering and the elements
- + Clean, factory pre-wiring for fast, reliable installation. All necessary fuses, shorting blocks, & terminal blocks are pre-installed and labeled.

- + Self-powered panel does not require a separate power supply
- + Wires can be run through pluggable, pre-cut holes
- + Simple grounding is included inside each enclosure
- + No control transformer needed
- + Compatible with the Acuvim II Series and Acuvim L Series meters

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#### **ACUPANEL SPECIFICATIONS**

#### **AcuPanel 9104X**



#### **AcuPanel 9104**



Compatible Meters









Application	Indoor or outdoor installations that require exceptional environmental protection and weather resistance	Indoor installations that require rugged protection, but not weather resistance
Safety Certifications	UL508A, UL61010-1	UL508A, UL61010-1
NEMA Rating	NEMA 4X	NEMA 3 <sup>†</sup>
Material	Polycarbonate	Steel
Anti-Corosive	•	
Dust Proof	•	•
Suitable for Indoor Use	•	•
Suitable for Outdoor Use	•	
Pre-Wired	•	•
Pre-Configured	•	•

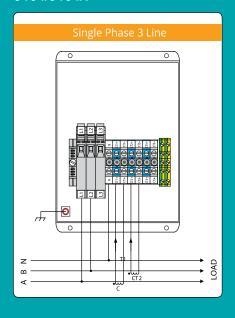
<sup>&</sup>lt;sup>†</sup> AcuPanel 9104 is NEMA 3 by default. To increase the rating to NEMA 4, add the 96-IP66 protective cover.

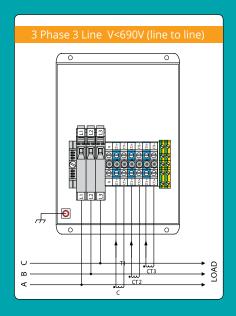
## **EACH STANDARD, PRE-WIRED ENCLOSURE INCLUDES:**

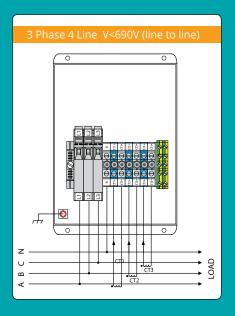
- + Terminal blocks for current transformer input
- + Shorting blocks for current transformers
- + Terminal blocks for voltage inputs
- + Three industrial-grade fuses



### **WIRING DIAGRAMS** 9104/9104X



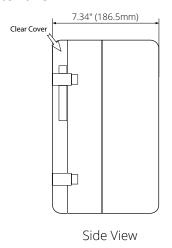


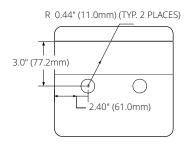


#### **DIMENSIONS**

#### AcuPanel 9104X Waterproof Polycarbonate Panel

7.88" (200.0mm) Clear Cover 0.50" (12.7mm) **ACCUENERGY** 0.80" (20.3mm) 11.81" (300.0mm) Front View

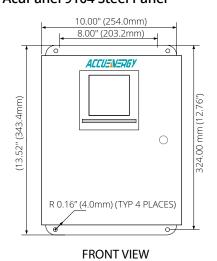


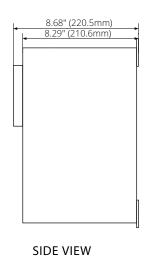


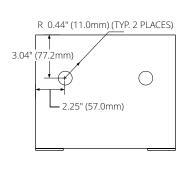
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**Bottom View** 

#### AcuPanel 9104 Steel Panel







**BOTTOM VIEW** 

#### **CUSTOM OEM SOLUTIONS**

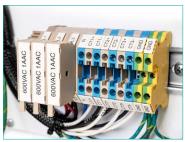
Partner with Accuenergy to design a custom, OEM panel to suit any metering application.

- + Showcase your logo with custom branding
- + Adapt the panel to your application with specialized OEM components such as gateways, cellular modems, or power supplies
- + Suit your space or equipment needs with custom panel dimensions
- + Contact our energy metering specialists to help customize a panel solution for any unique application









#### **ACCESSORIES**

#### **Protective Display Cover**

The 96-IP66 Protective Display Cover is designed for Acuvim II, Acuvim L, or other 96mm by 96mm display panel meters. Crucial in harsh environments, it increases the IP environmental rating of a meter's display to IP66 or NEMA 4X. It can be used with the AcuPanel 9104 to increase environmental rating of the enclosure from NEMA 3 to NEMA 4.



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#### **ORDERING INFORMATION**

#### **Acuvim II Pre-Wired Panel**

Dre-Wired Danel _	Meter Model -	Current Input -	Power - Supply -	Communication Module Option* -	2nd I/O Option*	3rd I/O Option*
NEMA 4 <sup>†</sup> or NEMA 3	I <b>IR:</b> Acuvim II with Data Logging	<b>5A:</b> 5A or 1A (Input Field Selectable)	<b>P1V3:</b> 100~415Vac, 50/60Hz, 100-300Vdc	0: None	<b>0:</b> None	<b>0:</b> None
NEMA 4X Indoor / Outdoor Waterproof Polycarbonate Panel		mV: 333mV Input and Rogowski Coil (Input Field Selectable)	<b>P2V3:</b> 20-60Vdc	<b>WEB2:</b> Modbus-TCP/IP, BACnet-IP, SNMP V3, DNP 3.0 V2, IEC 61850 2nd Edition, SMTP, NTP, HTTP post, HTTPs post, FTP post, SFTP server, HTTPs webserver, dual RJ45, WiFi	IO1: 6DI, 2RO, 1 DI Power Supply	IO1: 6DI, 2RO, 1 DI Power Supply
		mA: 80mA / 100mA / 200mA (Input Field Selectable)	<b>P3V3:</b> 480Vac	WEB2-D: Modbus-TCP/IP, BACnet-IP, SNMP V3, DNP 3.0 V2, IEC 61850 2nd Edition, SMTP, NTP, HTTP post, HTTPs post, FTP post, sFTP server, HTTPs webserver, dual RJ45, Ethernet Port	<b>IO2:</b> 4DI, 2AO, 2DO	<b>IO2:</b> 4DI, 2AO, 2DO
			<b>P4V3:</b> 600Vac	PROFI: PROFIBUS-DP	<b>IO3:</b> 4DI, 2RO, 2AI	<b>IO3:</b> 4DI, 2RO, 2AI
				RS485: Second RS485 Port		
				IO1: 6DI, 2RO, 1 DI Power Supply		
				<b>102:</b> 4DI, 2AO, 2DO		
				<b>103:</b> 4DI, 2RO, 2AI		

Ordering Example: AcuPanel 9104X-IIR-5A-P1V3-WEB2-IO1-IO3

#### **Acuvim L Pre-Wired Panel**

+	Pre-Wired Panel -	Meter Model	Current Input	Power Supply -	Communication Module Option* -	2nd I/O Option*	3rd I/O Option*
	AcuPanel 9104: NEMA 4 <sup>†</sup> or NEMA 3 Indoor Steel Panel	<b>CL:</b> General Meter	<b>5A:</b> 5A or 1A Nominal Current Input	<b>P1V4:</b> 100-415Vac, 50-60Hz 100-300Vdc	<b>0:</b> None	<b>0:</b> None	<b>0:</b> None
	AcuPanel 9104X: NEMA 4X Indoor / Outdoor Waterproof Polycarbonate Panel	<b>EL:</b> CL + TOU and PQ parameters	mV: 333mV Input and Rogowski Coil (Input Field Selectable)	<b>P2V4:</b> 20-60Vdc	<b>WEB2:</b> Modbus-TCP/IP, BACnet-IP, SNMP V3, DNP 3.0 V2, IEC 61850 2nd Edition, SMTP, NTP, HTTP post, HTTPs post, FTP post, sFTP server, HTTPs webserver, dual RJ45, WiFi, Dual Ethernet Port	IO1: 6DI, 2RO, 1 DI Power Supply	IO1: 6DI, 2RO, 1 DI Power Supply
				<b>P3V4:</b> 480Vac	WEB2-D: Modbus-TCP/IP, BACnet-IP, SNMP V3, DNP 3.0 V2, IEC 61850 2nd Edition, SMTP, NTP, HTTP post, HTTPs post, FTP post, sFTP server, HTTPs webserver, dual RJ45, Ethernet Port	<b>IO2:</b> 4DI, 2AO, 2DO	<b>IO2:</b> 4DI, 2AO, 2DO
				<b>P4V4:</b> 600Vac	PROFI: PROFIBUS-DP	<b>IO3:</b> 4DI, 2RO, 2AI	<b>IO3:</b> 4DI, 2RO, 2AI
					RS485: Second RS485 Port		
					IO1: 6DI, 2RO, 1 DI Power Supply		
					<b>IO2:</b> 4DI, 2AO, 2DO		
					<b>IO3:</b> 4DI, 2RO, 2AI		

#### Ordering Example: AcuPanel 9104X-EL-5A-P1V4-WEB2-IO1-IO3

\*No more than 2 of the same I/O modules may be attached to the meter (example: Two AXM-IO2). The same two I/O modules must be a different component number.

† AcuPanel 9104 is NEMA 3 by default. To increase the rating to NEMA 4, add the 96-IP66 protective cover.



Revision Date: March 2024 Version: 1.0.3 *Specs Subject To Change Without Notice.* 

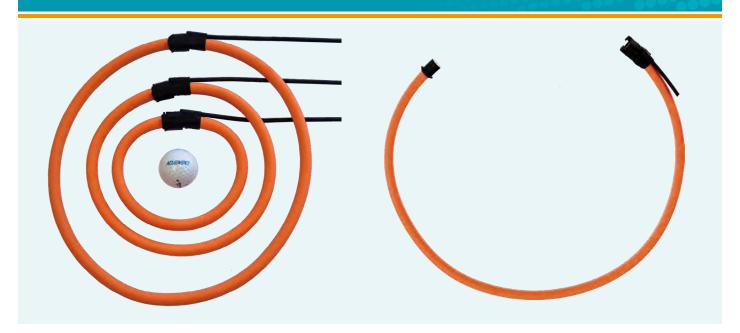


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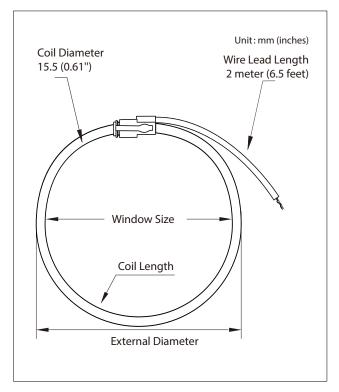
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# **ROGOWSKI COIL CT**



Accuenergy's Flexible Rogowski Coil is designed to use where regular solid or split core current transformers cannot fit, and ideal for power quality monitoring such as harmonics. Advantage including high accuracy, wide measruement and frequency range, and no additional integrator and power supply is needed.

	SPECIFICATION	
Window Size	106mm (4.17"), 178mm (7.01'),	
Length of Coil	271mm (10.67"), 369mm (14.53") 400mm (15.75"), 600mm (23.62"), 900mm (35.43"), 1200mm (47.24")	
Current Range	5A - 50,000A	
Frequency Range	20Hz - 5kHz	
Accuracy	0.5%	
Lead	White-Positive, Brown-Negative, Bare-shield; 26AWG	
Polarity	Arrow towards load (current flow direction)	
Operating Tempreture	-20°C - 70°C	
Temperature Drift	+/- 0.07%	
Material	Orange thermoplastic rubber, flame retardant UL 94 V-0 rated	
Dielectric Strength	7400Vac @ 50/60Hz for 1 minute	
Over voltage category	1000V CAT III, 600V CATIV	
Cable	1000V UL STYLE 20940; External diameter 5mm; Wires 2x 26AWG	



#### **DIMENSIONS**

Unit: mm (inches)

DIMENSIONS	RCT16	RCT24	RCT36	RCT47
Window Size	106 (4.17")	178 (7.01")	271 (10.67")	369 (14.53")
Coil Length	400 (15.75")	600 (23.62")	900 (35.43")	1200 (47.24")
External Diameter	143 (5.63")	207 (8.13")	302 (11.89")	398 (15.66")
Coil Diameter	15.5 (0.61")			



#### **STANDARD & CUSTOM OUTPUT**

Multiple options of output ratio such as 100mV/1000A, 40mV/1000A, 25mV/1000A, 10mV/1000A.

MODEL	Output/1000A @ 50Hz	Output/1000A @ 60Hz	
RCTxx-200	500mV	600mV	
RCTxx-500	200mV	240mV	
RCTxx-1000	100mV	120mV	
RCTxx-2500	40mV	48mV	
RCTxx-5000	20mV	24mV	
RCTxx-10000	10mV	12mV	
RCTxx-50000	2mV	2.4mV	
RCTxx-Custom	Output any ratio of signal per your requirement.		

<sup>\*&</sup>quot;xx" denotes length of current transformer coil

#### **APPLICATIONS**

