

# ACUREV 1310

## Three-Phased DIN-Rail Multifunction Meter



### FEATURES

- Revenue grade accuracy: ANSI C12.20 0.5 Class
- Measurement Canada approved
- Tamper-proof sealing design approved for revenue applications
- Wide voltage measurement range, directly measure up to 690V
- Multiple CT Input Options compatible with any Current Transformers
- Built-in Modbus and Pulse Output
- Auto-Wiring check to verify correct installation
- SunSpec compliance



ISO9001 Certified



## PRODUCT OVERVIEW

The AcuRev 1310 DIN Rail meter combines high performance with ease of integration to provide a cost-effective power and energy monitoring solution. Featuring a built-in LCD display designed to simplify setup and local reading of meter data. While the Modbus-RTU and pulse output communication allows seamless integration with data acquisition systems.

## KEY FEATURES

The AcuRev 1310 Series of three-phase multi-circuit power and energy meters offer revenue grade accuracy and a wealth of other features, including:

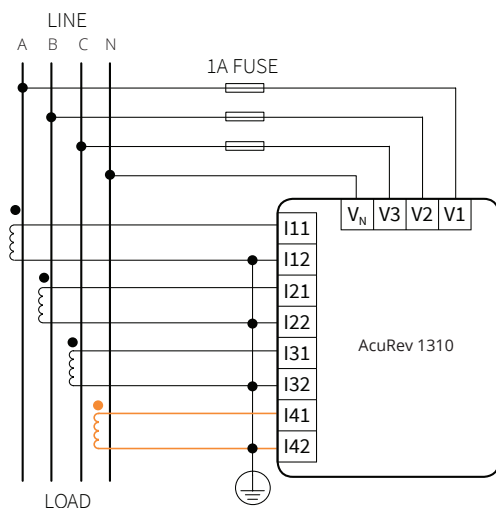
- Utility Revenue Grade Accuracy - IEC 62053-22 0.5s Class / ANSI C12.20 0.5 Class
- Multiple CT Input Options compatible with any CT: 5A/1A, 333mV, Flexible Rogowski Coil, 80/100/200mA
- 4 Channel current input including neutral current measurement
- Residual current measurement available
- 10-690Vac direct voltage input, fits all voltage rating system with one model
- RS-485 port built-in with Modbus-RTU, standard integration with most systems
- Standard Din-rail mount for ease-of-installation
- Compatible with both 50Hz and 60Hz systems
- Built-in energy pulse output and alarm output
- Optional relay output for alarm and remote control
- Tamper-proof design approved for revenue applications

## UNIVERSAL RATING

**Voltage:** Measuring from 10V to 400VL-N 690VL-L that works with most voltage ratings without a Potential Transformer. Potential transformer ratio configuration supported where PT is used.

**Frequency:** Automatically adapt to 50Hz and 60Hz system without compromising the accuracy, which simplifies design and eliminates international OEM frequency issues.

## ADDITIONAL FEATURES



### FOUR CHANNEL CT INPUT

Accurately measure neutral current with 4<sup>th</sup> CT and provide residual current measurement.

### AUTO PHASE-CHECK

Designed to automatically check most common wiring mistakes such as CT polarity, voltage and current phase alignment.

### SUPPORTS ALL ELECTRICAL SYSTEM CONFIGURATIONS

Three phase three wire (3P3W), three phase four wire (3P4W), single phase three wire (1P3W two element), single phase two wire (1P2W one element) and more.

## ACUREV 1310 FUNCTIONS COMPARISON

Feature	1311	1312	1313	1314
Bi-Directional Energy Measurement			●	●
Active Energy	●	●	●	●
Reactive Energy		●	●	●
Apparent Energy		●	●	●
Time-of-Use		●	●	●
Power Demand		●	●	●
Peak Power Demand		●	●	●
Predictive Demand (existing in AcuRev 2000)		●	●	●
Current Demand		●	●	●
Peak Current Demand		●	●	●
Voltage	●	●	●	●
Current	●	●	●	●
Neutral Current	Calculated	Calculated	Calculated	●
Residual Current				Calculated
Active Power	●	●	●	●
Reactive Power		●	●	●
Apparent Power		●	●	●
Power Factor		●	●	●
Frequency		●	●	●
Clock		●	●	●
Running Time	●	●	●	●
Energy Pulse Output	●	●	●	●
Relay Output (Alarm or Control)		●	●	●
RS485 Modbus-RTU		●	●	●
Wiring Check	●	●	●	●
Temperature (Internal)	●	●	●	●
SunSpec	●	●	●	●
Current Transformer (CT) Input	5A / 1A: Field-Configurable CT Input   333mV: CT Input   RCT: Flexible Rogowski Coil CT Input   80/100/200mA: Field-Configurable CT Input			
I/O Options:	One relay output for alarm and remote control			

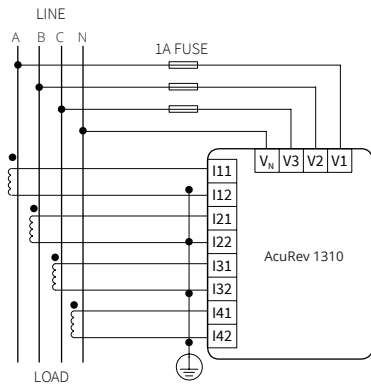
## METERING

Parameter	Accuracy	Resolution	Range
Active Energy	0.5%	1Wh	0-999999999
Reactive Energy	0.5%	1varh	0-999999999
Apparent Energy	0.5%	1VAh	0-999999999
Voltage	0.5%	0.1	10V-1000KV
Current	0.5%	0.001A	10mA-500000A
Active Power	0.5%	1W	-99-99MW
Reactive Power	0.5%	1var	-99-99Mvar
Apparent Power	0.5%	1VA	-99-99MVA
Power Factor	0.5%	0.001	-1.000-1.000
Frequency	0.2%	0.01Hz	50/60
Power Demand	0.5%	1W/var/VA	99MW/Mvar/MVA
Current Demand	0.5%	0.001A	10mA-5000A

## SPECIFICATIONS

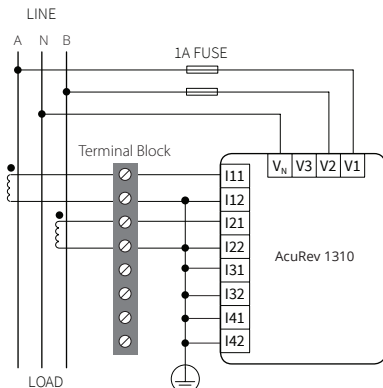
Voltage		Relay Output	
Rated Voltage	400Vac L-N 690Vac L-L	Load Voltage	250Vac 30Vdc
Input Impedance	2MΩ/Phase	Max Load Current	5A(Resistant Load)
Measurement Frequency	50/60Hz	Isolation Voltage	2000Vac(1min)
Accuracy	0.5%	Action Time	10ms
Current Input		Mechanical Life	20 million times
Stated Current (IN)	5Aac/1Aac	Electrical Life	Above 50,000 Times (5A, 250Vac, Resistant Load)
Start Current	10mA	Communication	
Accuracy	0.5%	RS485 Baud Rate	1200-34800
Pulse Output		Communication Protocol	Modbus-RTU
Isolation Voltage	2500Vac	Infrared Communication	2000Vac(1min)
Load Voltage	0-250Vac	Infrared Baud Rate	10ms
Load Current	100mA (max)	Environment	
Power Supply		Operating Temperature	-25-70°C
Working Power Supply	100-415Vac, 50/60Hz, 100-300Vdc	Storage Temperature	-40-85°C
Power Consumption	<2W or 10VA		

# Typical wiring for 5A/1A Current Input

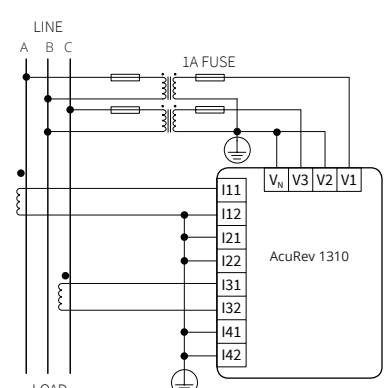


**3LN, 3CT**

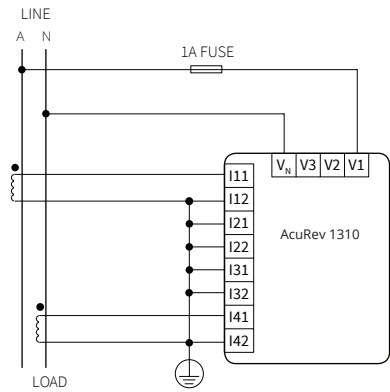
Note: Neutral CT is optional



**1LL, 2CT**

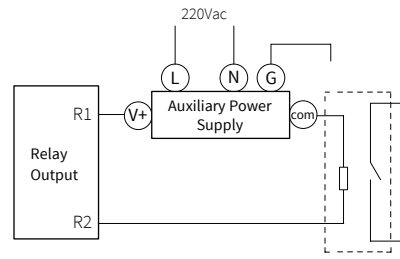


**2LL, 2CT**

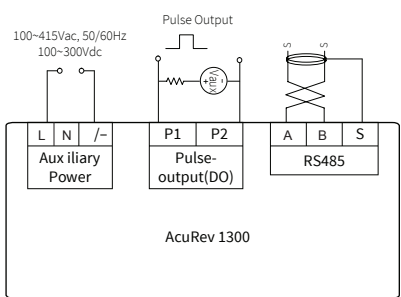


**1LN, 1CT**

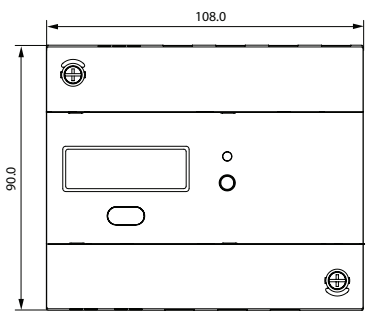
Note: Neutral CT is optional



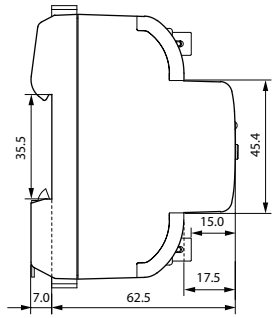
**Relay output**



**Auxiliary Power + Pulse + RS485**



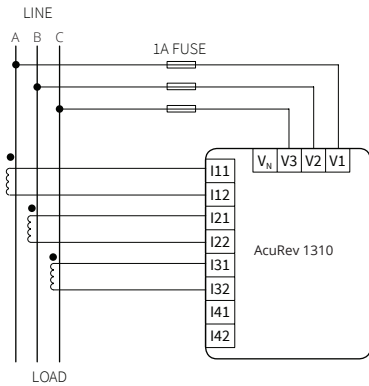
**Dimensions**



Unit: mm

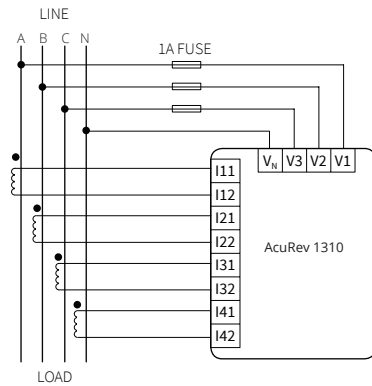
## Typical Wiring for RCT/mV/mA Current Input

Delta Connection



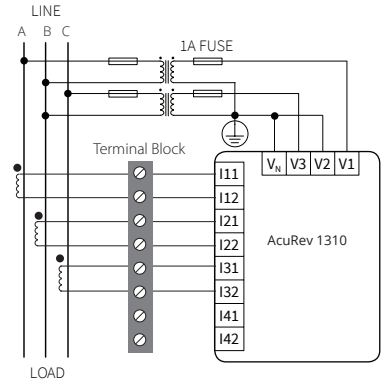
3LN, 3CT

Direct Connection, without PT's

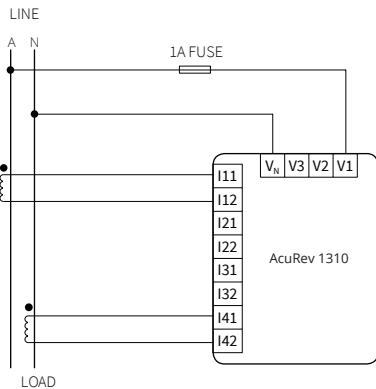


3LN, 3CT

Note: Neutral CT is optional

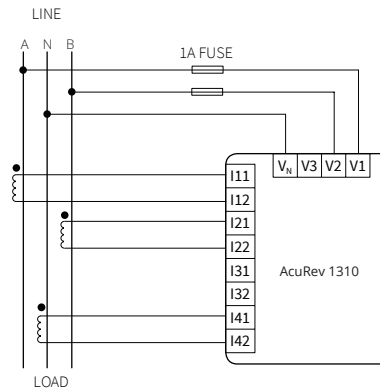


2LL, 3CT



1LN, 1CT

Note: Neutral CT is optional



1LL, 2CT

Note: Neutral CT is optional

## ORDERING INFORMATION

	Model	Current Input	I/O
ORDERING NUMBER	-	-	-
ORDERING EXAMPLE	AcuRev 1313	333	X1
	AcuRev 1311	5A: Field configurable CT	X0: No Additional I/O
	AcuRev 1312	333: 333mV Input CT	X1: 1 Relay Output
	AcuRev 1313	RCT: Rogowski Coil CT	
	AcuRev 1314	mA: 80 / 100 / 200mA Input CT	

*Please Note: AcuRev 1314 does not support Rogowski coil input for neutral current. Consult Accuenergy Engineering Support for correct configuration.*

## CURRENT TRANSFORMER OPTIONS



### 5A / 1A

Field-configurable CT input that suits any industrial and revenue-grade current transformer.



### FLEXIBLE ROGOWSKI

Directly connect to Rogowski coil without integrator or power supply, ideal for any retrofit applications.



### 333mV

Compatible with any 333mV output current transformer for low cost energy efficiency and energy management systems.



### 80mA / 100mA / 200mA

Field-configuration to work with 80mA, 100mA and 200mA output CT that are used in revenue metering application.

Learn more about our Current Transformer options on [Accuenergy.com](http://Accuenergy.com)



# NEMA4X RATED WALL MOUNT ENCLOSURE FOR ACUREV 1310 SERIES

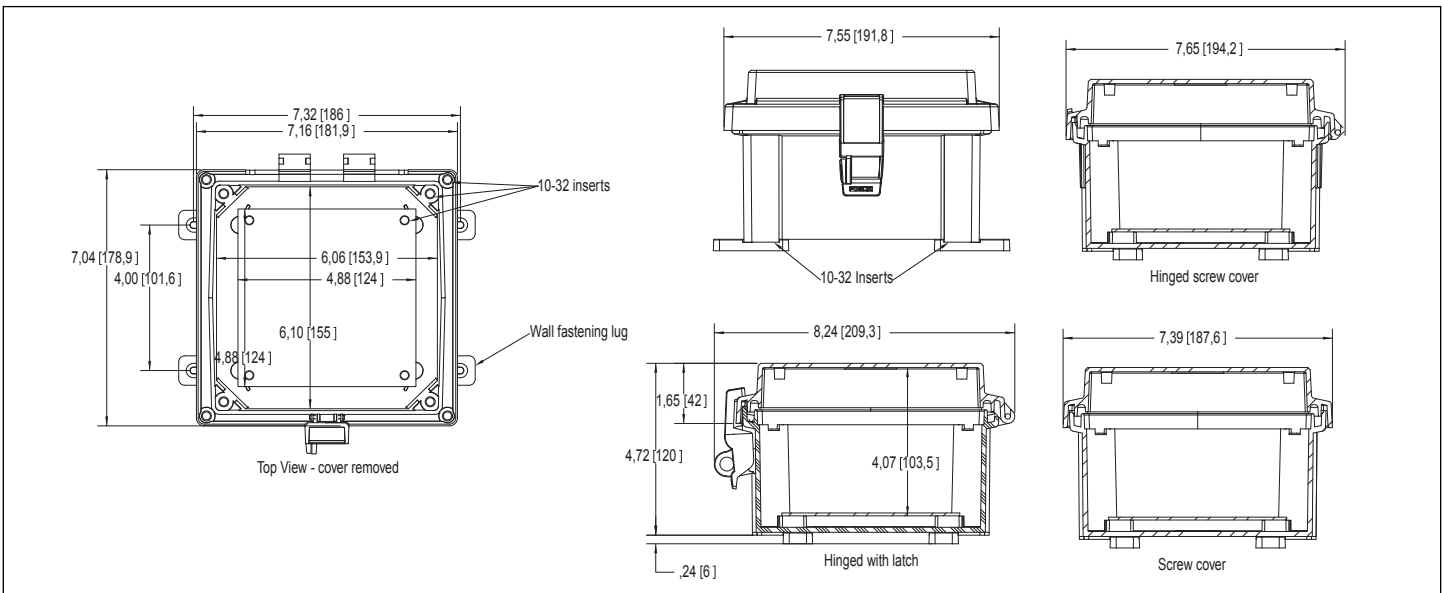
The **AcuRev1310 enclosure** offers a mounting option for AcuRev1310 Series energy meters that helps protect from tampering and the elements. The enclosure is equipped with DIN rail mounting hardware for easy installation, and a NEMA® 4X rating ensures durability. The swing panel kit and multiple locking options provide additional security from unwanted tampering.



AcuRev 1310 meter installed; AcuRev 1310 meter and AcuRev 1310-ENC are ordered separately.



## DIMENSIONS



Environmental Rating:	
Ingress Protection (EN 60529):	IP66/IP67
Electrical insulation:	Totally insulated
Halogen free (DIN/VDE 0472, Part 815):	0
UV resistance:	UL 508
Flammability Rating:	UL 508
Glow Wire Test (IEC 695-2-1) °C:	960
NEMA Class:	UL Type 4, 4X, 6, 6P, 12 and 13

Dimensions:	Length	Width	Height
mm	152	152	102
inch	6.0	6.0	4.0

ORDERING INFORMATION	
Model	AcuRev 1310-ENC