Technical Data TD150024EN

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Power Xpert Meter 350 (PXM350) three-phased DIN-rail multifunction meter

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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 690 V
- Multiple current sensor input options compatible with any CT
- Built-in Modbus RTU, BACnet MSTP, and pulse output
- Auto-wiring check to verify correct installation
- SunSpec support

Powering Business Worldwide

Product overview

The PXM350 DIN rail meter combines high performance with ease of integration to provide a cost-effective power and energy monitoring solution. Featuring a built-in liquid crystal display (LCD) designed to simplify setup and local reading of meter data. While the Modbus-RTU, BACnet MSTP, and pulse output communication allows seamless integration with data acquisition systems.

Key features

The PXM350 series of three-phase multi-circuit power and energy meters offer revenue grade accuracy and a wealth of other features, including:

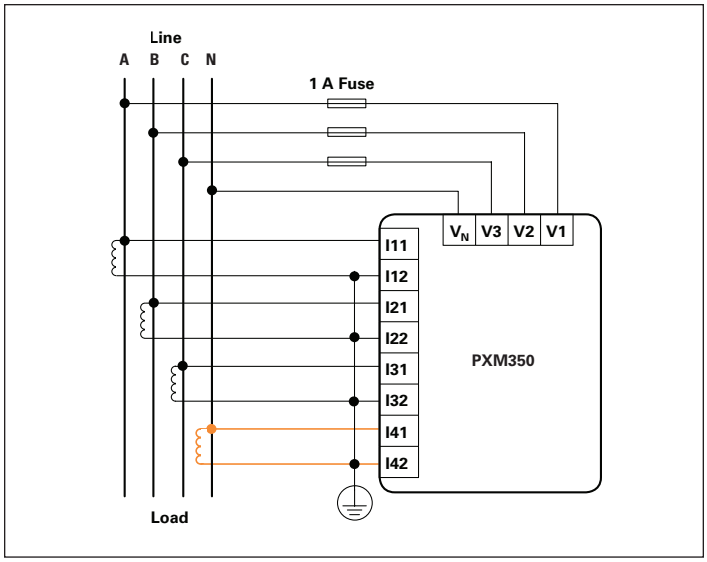
- Utility Revenue Grade Accuracy - IEC 62053-22 0.5s Class / ANSI C12.20 0.5 Class;
- Multiple CT input options compatible with any CT: 5 A/1 A, 333 mV, flexible Rogowski coil, 80/100/200 mA;
- Four-channel current input including neutral current measurement;
- Residual current measurement available;
- 10-690 Vac direct voltage input, one model for most low voltage circuits;
- RS-485 port built-in with Modbus-RTU or BACnet MSTP provides standard integration with most systems;
- Standard Din-rail mount for ease-of-installation;
- Compatible with both 50 Hz and 60 Hz systems;
- Built-in energy pulse output and alarm output;
- Optional relay output for alarm and remote control; and
- Tamper-proof design approved for revenue applications.

Wide voltage range

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

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

Additional features



Four channel CT input

Accurately measure neutral current with 4th 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 standard 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.

Ordering information

PXM 350 MA 6 3 2 1

Current input	Model type	Relay output
3 = 333 mV **5** = 5 A/1 A configurable **R** = Rogowski coil* * *Bidirectional energy only. No 4th CT input.*	**2** = Pulse output, Modbus, BACnet MSTP, TOU **4** = Pulse output, Modbus, BACnet MSTP, TOU, Bidirectional energy, 4th current input	**1** = 1 relay output

PXM350 functions comparison

Feature	PXM350 MA 6x2x	PXM350 MA 6x4x
Bi-directional energy measurement		•
Active energy	•	•
Reactive energy	•	•
Apparent energy	•	•
Time-of-use	•	•
Power demand	•	•
Peak power demand	•	•
Predictive demand	•	•
Current demand	•	•
Peak current demand	•	•
Voltage	•	•
Current	•	•
Neutral current	Calculated	•
Residual current		Calculated
Active power	•	•
Reactive power	•	•
Apparent power	•	•
Power factor	•	•
Frequency	•	•
Clock	•	•
Running time	•	•
Energy pulse output	•	•
Relay output (alarm or control)	•	•
RS-485 Modbus-RTU or BACnet MSTP	•	•
Wiring check	•	•
Temperature (internal)	•	•
SunSpec	•	•
Current transformer (CT) input	5 A/1 A: Field-configurable CT input | 333 mV: CT Input | flexible Rogowski coil CT Input | 80/100/200 mA: field-configurable CT input	
I/O	One relay output for alarm and remote control	

Metering

Parameter	Accuracy	Resolution	Range
Active energy	0.5%	1 Wh	0-999999999
Reactive energy	0.5%	1 varh	0-999999999
Apparent energy	0.5%	1 VAh	0-999999999
Voltage	0.5%	0.1	10 V-1000 kV
Current	0.5%	0.001 A	10 mA-500000 A
Active power	0.5%	1 W	-99-99 MW
Reactive power	0.5%	1 var	-99-99 Mvar
Apparent power	0.5%	1 VA	-99-99 MVA
Power factor	0.5%	0.001	-0.001 to 1.000 to +0.001
Frequency	0.2%	0.01 Hz	50/60
Power demand	0.5%	1 W/var/VA	99 MW/Mvar/MVA
Current demand	0.5%	0.001 A	10 mA-5000 A

Specifications

Voltage	
Rated voltage	400 Vac L-N 690 Vac L-L
Input impedance	2 MΩ/phase
Measurement frequency	50/60 Hz
Accuracy	0.5%

Current input	
Stated current (IN)	5 Aac/1 Aac
Start current	10 mA
Accuracy	0.5%

Pulse output	
Isolation voltage	2500 Vac
Load voltage	0~250 Vac
Load current	100 mA (max)

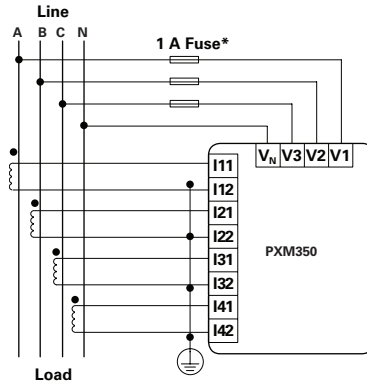
Power supply	
Working power supply	100~415 Vac, 50/60 Hz, 100~300 Vdc
Power consumption	<2 W or 10 VA

Relay output	
Load voltage	250 Vac 30 Vdc
Max. load current	5 A (resistant load)
Isolation voltage	2000 Vac (1 min.)
Action time	10 ms
Mechanical life	20 million times
Electrical life	Above 50,000 times (5 A, 250 Vac, resistant load)

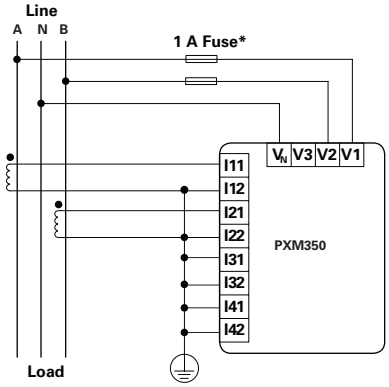
Communication	
RS-485 baud rate	1200~34800
Communication protocol	Modbus-RTU or BACnet MSTP

Environment	
Operating temperature	-25~70°C (-13~158°F)
Storage temperature	-40~85°C (-40~185°F)

Typical wiring for 5 A/1 A current input



Select 3LN, 3CT configuration option.



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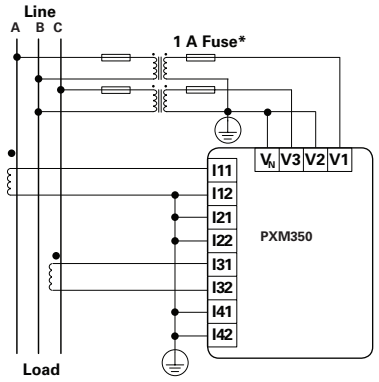

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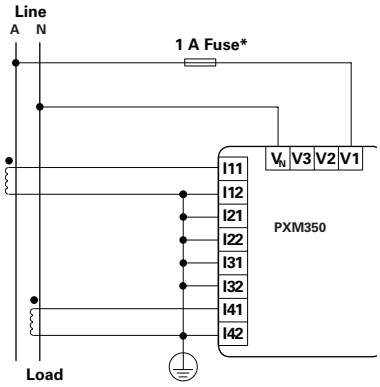
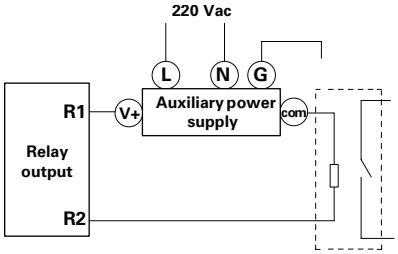


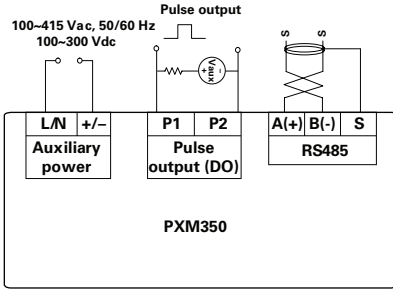
Select 1LN, 1CT configuration option.



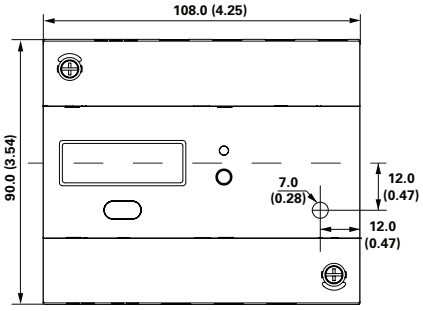
Relay output

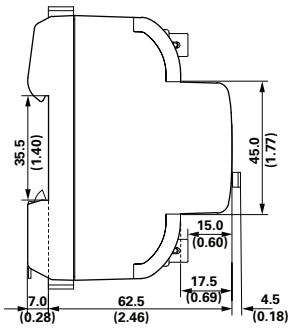
Note: Optional interposing relay, not included with meter.

Units: mm (in)



Auxiliary power + pulse + RS485



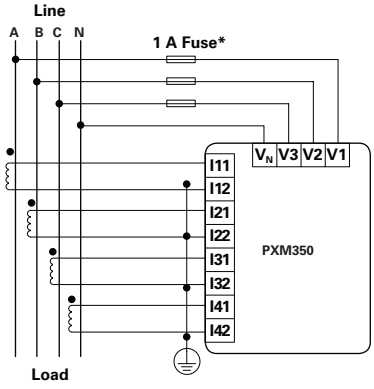


Dimensions

* Fuse rating should be selected to protect the secondary instrumentation wiring.

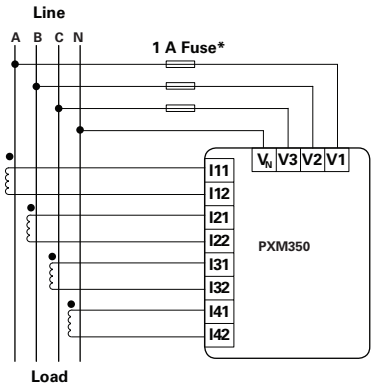
Note: CT shorting terminal blocks are required but not shown in the diagrams.

Typical wiring for RCT/mV/mA current input



Select 3LN, 3CT configuration option.

Direct connection, without PT's



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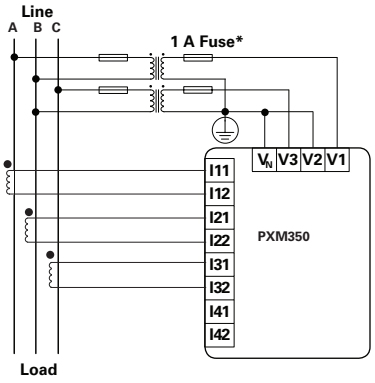

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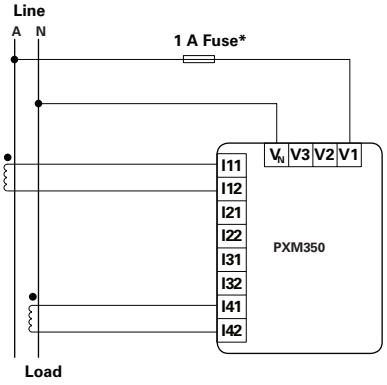
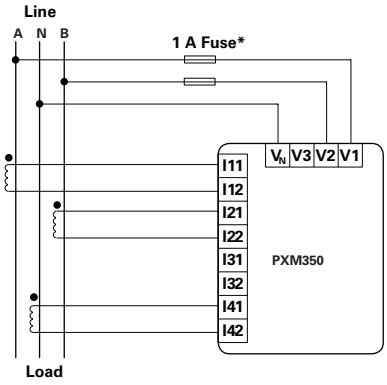


Select 1LN, 1CT configuration option.



Select 1LL, 2CT configuration option.

* Fuse rating should be selected to protect the secondary instrumentation wiring.

Note: CT shorting terminal blocks are required when using mA output current sensors, but are not shown in the diagrams.

Notes:

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