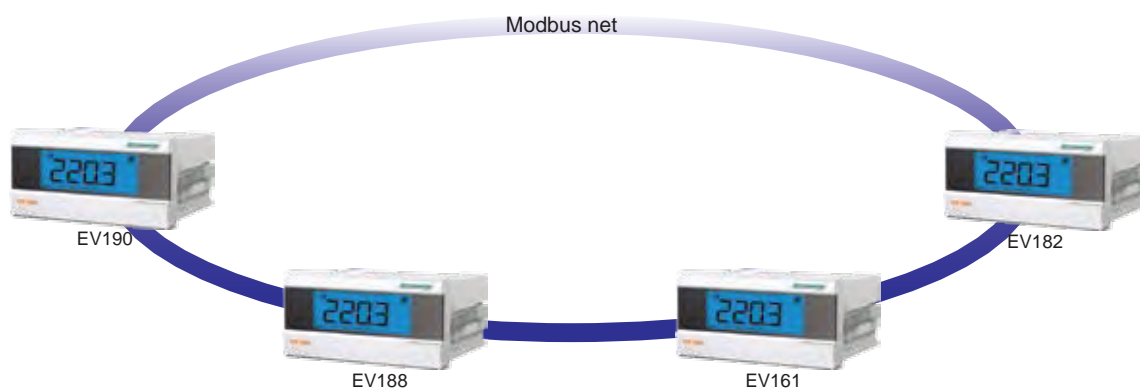


EV100 Series Single Phase Intelligent Power Meter



Power System Metering
Analog Transducer Output
True-RMS Measuring

Remote Switch Controlling
Local/Remote Data Accessing
Meter Type Selecting

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MetersUSA
Meters@MetersUSA.com
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DESCRIPTION

EV100 Series Single Phase Intelligent Power Meters are ideal choice when continuous monitoring and measuring are required. Electric parameters Voltage, Current, Power, Reactive Power, Apparent Power, Power Factor, Frequency and Energy measuring function is only in one pocket-size unit. The 2 Relay outputs are for Electric Switch controlling while the Switch status monitoring is possible by using the 4 switch inputs. Analog Output is used in DCS system or industry apparatus. EV100 series combines high accuracy measurement with intelligent multifunction and simple HMI interface.

The EV100 may be used as a data gathering device for an Intelligent Power Distribution Automation System or a Plant Automation System that integrates process, instrument and electrical requirements. All monitored values are available via RS485 communication ports running the Modbus™ protocol.

EV100 series meter is suited for AC applications where there is considerable distortion of current waveforms from nonlinear loading like VVVF Inverter, Ballastor and Switching Power Supply etc.

APPLICATIONS

Metering of distribution feeders
 Medium and low voltage systems
 Commercial, industrial, utility

FEATURES

Metering	
Voltage	V
Current	I
Power	P
Reactive Power	Q
Apparent Power	S
Frequency	Hz
Power Factor	PF
Energy	Ep

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Switch Monitoring
Switch Status

Remote Control
Two relay output can be used to remote control Electric Circuit Breaker.

Analog Output
Analog Output Assignable

Communication
RS485
Industry standard Modbus™ protocol

Display
Clear and Large character LCD Screen display with blue back light
Wide environment temperature endurable

Outline
Small Size 96x48 DIN one piece self-contained package

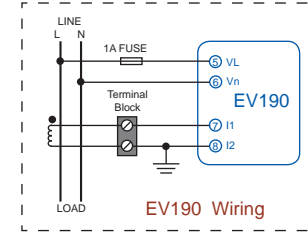
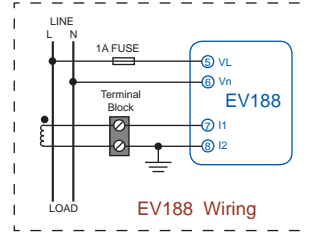
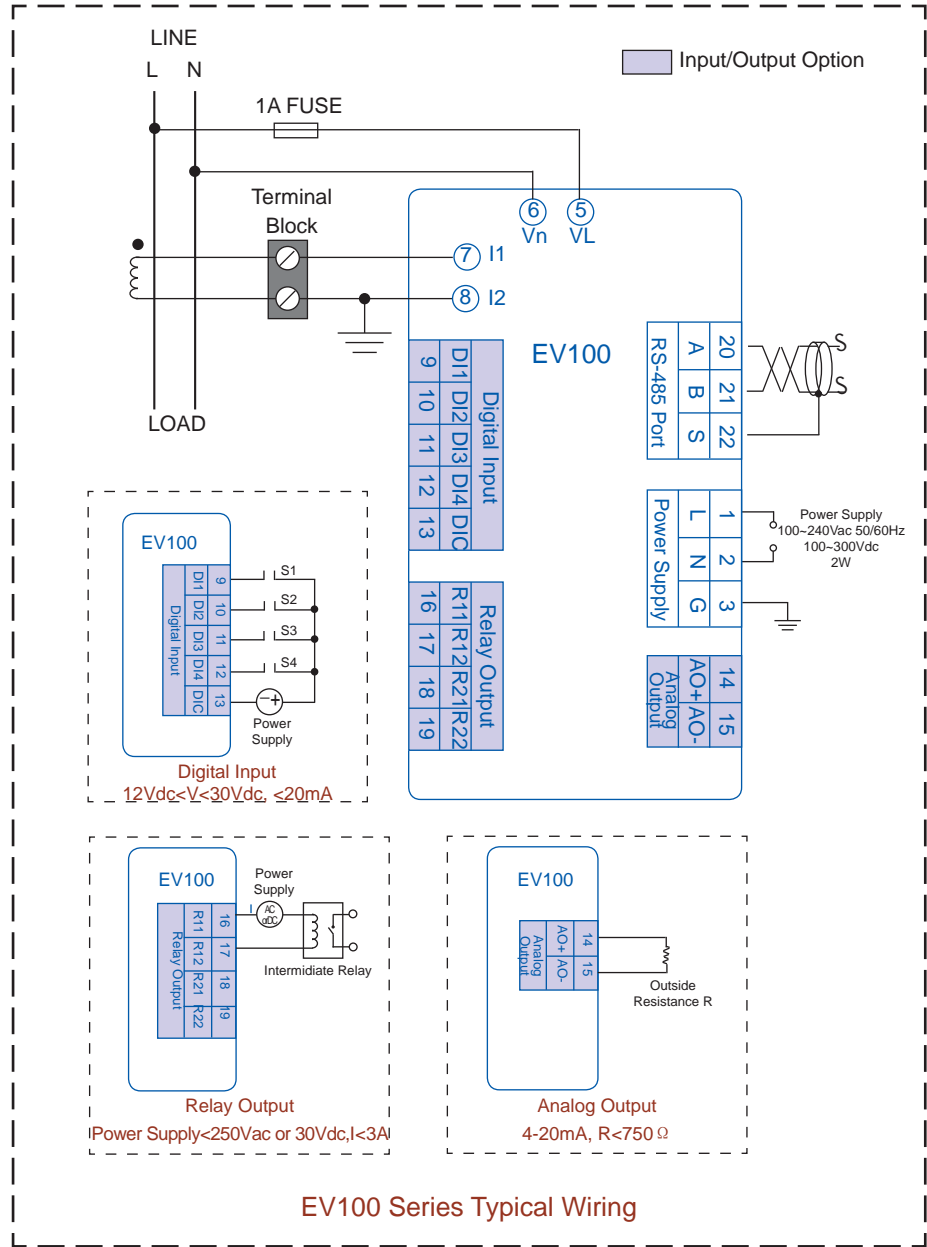
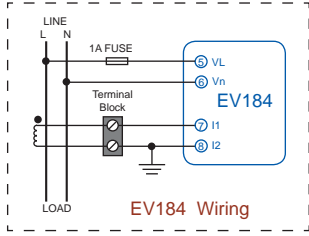
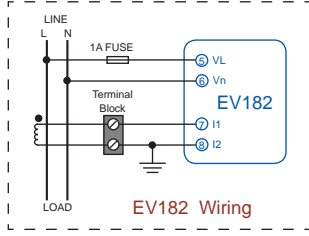
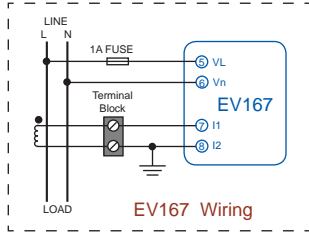
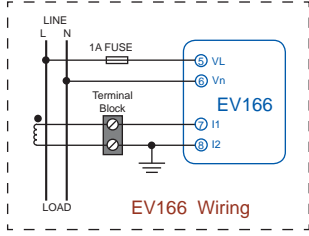
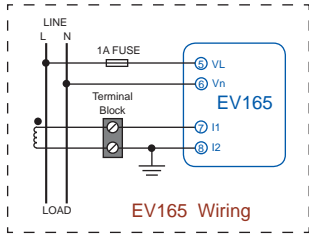
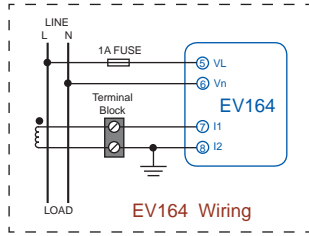
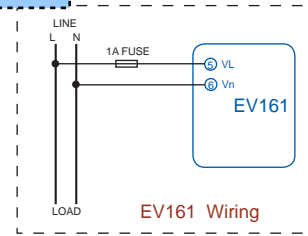
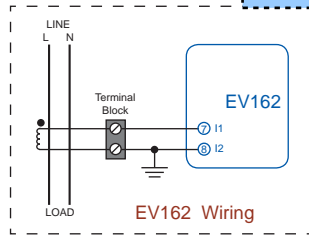
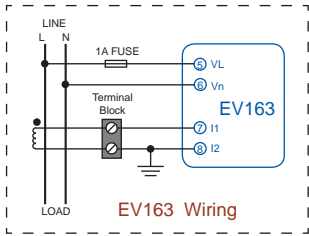
EV100 Series Single Phase Intelligent Power Meters (0.5%)

Function			EV161	EV162	EV163	EV164	EV165	EV166	EV167	EV182	EV184	EV188	EV190
Metering	Voltage	V	●							●		●	●
	Current	I		●						●		●	●
	Power	P			●						●	●	●
	Reactive Power	Q				●					●		●
	Apparent Power	S											●
	Power Factor	PF					●				●		●
	Frequency	Hz						●					●
Energy	Energy	Ep							●				●
I/O	Digital Input	DI	○	○	○	○	○	○	○	○	○	○	○
Option	Relay Output	RO	○	○	○	○	○	○	○	○	○	○	○
AO	Analog Output	AO											
Option	4-20mA or 0-1mA or 0-5V		○	○	○	○	○	○	○	○	○	○	○
Comm	RS485 Modbus Protocol		●	●	●	●	●	●	●	●	●	●	●

● Function
 ○ Option
 Blank NA

EV100 Series TYPICAL WIRING

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TECHNICAL SPECIFICATIONS

METERING			
Parameter	Accuracy (% of Full Scale)	Resolution	Range
Voltage	0.5%	0.1%	20V to 500 KV
Current	0.5%	0.02%	0~9999 A
KW	1.0%	0.1%	-9999~9999 KW
KVar	1.0%	0.1%	-9999~9999 KVar
KVA	1.0%	0.1%	0~9999 KVA
Power Factor	1.0%	0.1%	-1.0~0~1.0
Frequency	0.5%	0.01Hz	45~65 Hz
KWh	1.0%	0.1KWh	0~99999 KWh

COMMUNICATION	
Type:	RS485 2 wire, half duplex, isolated
Baud Rate:	600 to 19200 bps
Protocol:	Modbus®RTU
Function:	Read/Write setpoints Read actual values Execute commands

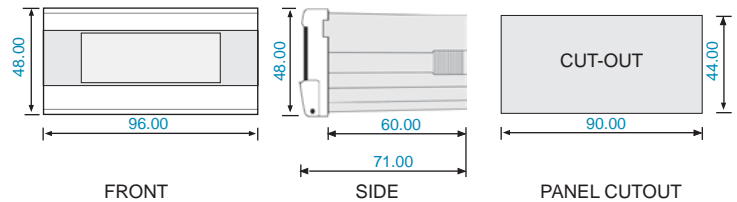
OUTPUT	
OUTPUT RELAY (RO)	
Type:	Mechanical Contact
Contact Resistance:	30m ohm@1A
Max Break Voltage:	250Vac, 100Vdc
Max Break Current:	3A
Configuration:	Form A
Contact material:	Silver Alloy
Output Mode:	Latch or Momentary (50-3000ms Configurable)
ANALOG OUTPUT (AO)	
Output Range:	4~20mA or 0~1mA or 0~5V
Resolution:	12bit
Output Capability:	4~20 mA Max Load: 500 Ω 0~1 mA Max Load: 10 KΩ 0~5 V Max Current: 20 mA

INPUT	
AC CURRENT	
CT Input:	5A Secondary (1A Secondary Option)
Burden:	0.2VA
Overload:	2xCT for Continue 20xCT for 1 Second
Full Scale:	120% of CT
Accuracy:	0.5% of Full Scale, True RMS
AC VOLTAGE	
PT Pri/Sec:	Direct or 100~500,000:100~400
Input Range:	20~400V
Burden:	<0.2VA
Accuracy:	0.5%
SWITCH STATUS (DI)	
Optical Isolated Voltage:	4000Vac RMS
Input Type:	Wet Contact
Resistance:	2K ohm (Typical)
Input Voltage:	5~30Vdc
Close Contact Voltage:	5V
Max Input Current:	20mA

ENVIRONMENTAL	
Humidity:	95% non-condensing
Temperature:	-25°C to 70°C
Packaging	
Shipping Box:	165mmx70mmx115mm
Shipping Weight:	0.4Kg

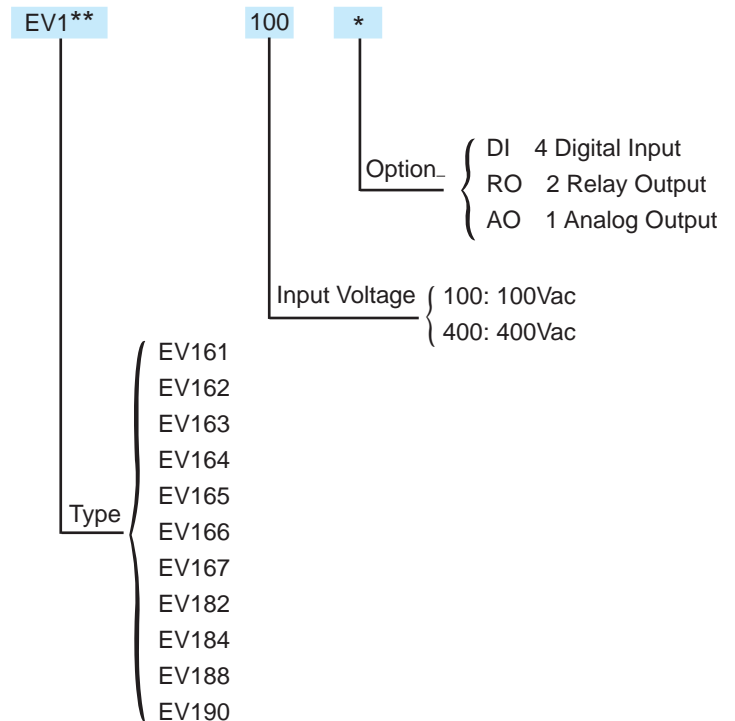
POWER SUPPLY	
Input:	100V~240Vac 50/60Hz 100V~300Vdc
Power:	2W

DIMENSIONS



Unit:mm

ORDERING



ACCUMETRY

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