E34X SERIES

Add Up to 28 3-Phase Meters by Installing One Device





E34A

E34

The E34x Series Multi-Circuit Meters make it easy to add many revenue grade metering points without having to purchase, mount, wire and commission individual energy meters. Simply add a single device with common voltage inputs and communication interface that can measure the current, voltage, power and energy consumption of up to (14) 3-phase circuits with a single board or up to (28) 3-phase circuits with a 2-board configuration. Save on the cost of both equipment and installation.

To aid in commissioning, a configuration software tool, an Ethernet discovery tool (for the E34E) and a Commissioning Guide are available at

SPECIFICATIONS

VOLTAGE INPUTS						
Measurement Voltage	90 to 300 Vac line-to-neutral, 50/60 Hz					
Control Power	E34A: 90 to 277 Vac line-to-neutral, 50/60 Hz, 8 VA E34E: 100 to 277 Vac line-to-neutral, 50/60 Hz, 15 VA					
ACCURACY						
Power/Energy	IEC 62053-21 Class 0.5, ANSI C12.20 class 0.5					
Voltage	$\pm 0.5\%$ of reading 90 to 277 V line-to-neutral					
Current	$\pm 0.5\%$ of reading from 2% to 100% of full-scale					
OPERATION						
Sampling Frequency	2560 Hz					
Update Rate	2 seconds (both panels)					
Overload Capability	22 kAIC					
E34A SERIAL COMMUNICATION						
Physical Interface	DIP switch-selectable 2-wire or 4-wire, RS-485					
Protocols Supported	Modbus RTU					
Address	DIP switch-selectable address 1 to 247 (in pairs of 2)*					
Baud Rate	DIP switch-selectable 9600, 19200, 38400					
Parity	DIP switch-selectable NONE, ODD, EVEN					
E34E SERIAL COMMUNICATION						
Physical Interface	2-wire RS-485					
Protocols Supported	Modbus RTU or BACnet MSTP					
Address Range	1 to 247 for Modbus RTU; 0-127 for BACnet MS/TP					

Affordable metering points

Add many metering points with lower equipment and installation cost than traditional alternatives.

Common CTs, 1/3V outputs

Eliminates need for shorting blocks and allows long CT lead extensions without compromising accuracy. Choose from a range of CT styles & sizes.

Configure the meters you want

Choose 4, 8, 14 or 28 3-phase meters. User-configurable to any combination of 1-, 2-, 3-phase meters. Reconfigure channels as needed to monitor neutral current.

Revenue grade measurements

ANSI & IEC Class 0.5% provides the accuracy needed for tenant billing applications.

The protocol you need

Modbus RTU standard on all models. E34E models add BACnet MS/TP and Modbus TCP, BACnet IP (with BBMD support) and SNMP via Ethernet.

APPLICATIONS

- Commercial and residential sub-tenant billing
- Load-based cost allocation
- Load balancing

- Demand/response
- · Overload protection
- · Energy management

Baud Rate	9600, 19200, 38400
Parity	Modbus RTU: NONE, ODD, EVEN BACnet MS/TP: NONE (fixed)

E34E ETHERNET COMMUNICATION

Physical Interface	RJ45 connector with 10/100 Mbit Ethernet
Protocols Supported	Modbus TCP, BACnet IP, SNMP V2c

TERMINAL BLOCK TORQUE

Removable Connectors 4.4 to 5.3 in-lb (0.5 to 0.6 N-m)

OPERATING CONDITIONS

Operating Temp. Range	0 to 60 °C (32 to 140 °F) (<95% RH non-condensing)*
Storage Temp. Range	-40 to 70 °C (-40 to 158 °F)
Altitude of Operation	3000 m
Mounting Location	Indoor use, dry location

WARRANTY

Limited Warranty 5 year

COMPLIANCE INFORMATION

Agency Approvals
UL508 open type device, IEC/EN61010-1
Installation Category
Cat III, pollution degree 2







*The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.



MEASUREMENTS

Current phase angle per branch Real power (kW): multi-phase total and per phase Apparent power (kVA): multi-phase total and per phase Power factor: multi-phase average and per phase Current present demand: multi-phase average and per phase Real power (kW) present demand: multi-phase average and per phase Historic Maximums Maximum instantaneous current: multi-phase average and per phase Maximum current demand: multi-phase average and per phase Maximum real power demand: multi-phase total and per phase Accumulated Energy Energy (kWh): multi-phase total and per phase MODBUS ALARMS Voltage over/under	Real Time Measurements	Current: multi-phase average and per phase			
Apparent power (kVA): multi-phase total and per phase Power factor: multi-phase average and per phase Demand Measurements Real power (kW) present demand: multi-phase average and per phase Historic Maximums Maximum instantaneous current: multi-phase average and per phase Maximum current demand: multi-phase average and per phase Maximum real power demand: multi-phase total and per phase Accumulated Energy Energy (kWh): multi-phase total and per phase Energy Snapshots Energy (kWh): multi-phase total and per phase MODBUS ALARMS		Current phase angle per branch			
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Energy Snapshots Energy (kWh): multi-phase total and per phase MODBUS ALARMS		·			
MODBUS ALARMS	Accumulated Energy	Energy (kWh): multi-phase total and per phase			
	Energy Snapshots	Energy (kWh): multi-phase total and per phase			
Alarms Voltage over/under	MODBUS ALARMS				
	Alarms	Voltage over/under			

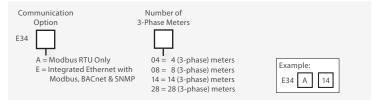
NUMBER OF METERS SUPPORTED

E34A	E34E INTEGRATED ETHERNET	NUMBER OF METERS			
MODBUS RTU ONLY		3-PHASE WITHOUT NEUTRAL	3-PHASE WITH NEUTRAL	2-PHASE	1-PHASE
E34A04	E34E04	4	3	6	12
E34A08	E34E08	8	6	12	24
E34A14	E34E14	14	10	21	42
E34A28	E34E28	28	21	42	84

Branch current over/under

Mains current over/under

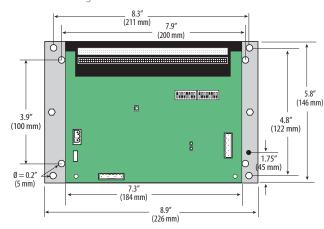
ORDERING INFORMATION



Note: CTs must be ordered separately. Use 0 to 0.333 V CTs rated for use with Class 1 voltage inputs.

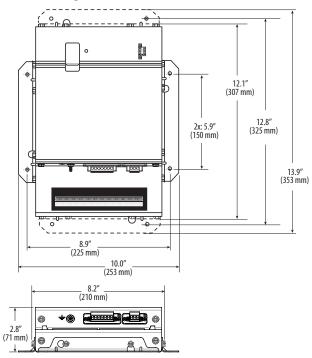
E34A BASE BOARD

Dimensional Drawing



E34E MAIN UNIT

Dimensional Drawing



28-METER CT ADAPTER ASSEMBLY

Dimensional Drawing

