

POWER MONITORING & PROTECTION

E50 SERIES POWER METER E50 SERIES

DESCRIPTION

The Veris E50 Series power meter provides a solution for measuring energy data with a single device. Inputs include Control Power, CT, and 3-phase voltage. The E50 supports multiple output options, including solid state relay contacts, BACnet, Modbus RTU (with or without data logging), and pulse. The LCD screen on the faceplate allows instant output viewing. The meter is housed in a plastic enclosure suitable for installation on T35 DIN rail according to EN50022. The E50 can be mounted with any orientation over the entire ambient temperature range, either on a DIN rail or in a panel. The meter is not sensitive to CT orientation to reduce installation errors.

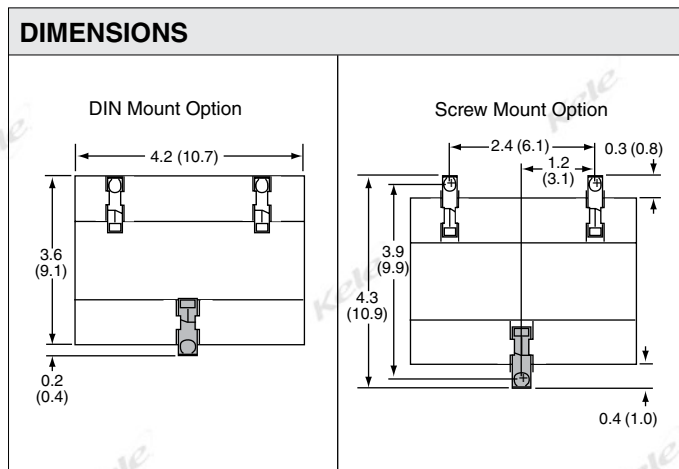


E50



FEATURES

- Monitors 1, 2, or 3 phase services
- Monitors services up to 600 VAC directly and 32,000 VAC with use of a potential transformer
- Accepts .333 VAC or 1V Current Transformer's (sold separately)
- DIN mounting for easy installation
- ANSI 12.20 0.5% accuracy
- BACnet, Modbus RTU or pulse output
- 90-600 VAC for application versatility
- Bright backlit LCD with easy visibility
- Pulse and phase loss alarms standard
- User-enabled password protection
- Approved for California Solar applications



SPECIFICATIONS

Supply Voltage	UL	90 VAC (L-N) to 600 VAC (L-L), 50/60Hz	Accuracy	Real power and energy 0.2% (ANSI C12.20, IEC 62053-22 Class 0.2S)
	CE	90 VAC (L-N) to 300 VAC (L-L), 50/60Hz		Operating Temperature
Monitored Voltage	Line to Line with potential transformer	601 to 32000 VAC	Meter Display	
		Line to Line: 90 to 600 VAC		Operating Humidity
Monitored Current	5 to 32,000 Amps	Enclosure Rating	NEMA 1	
Available CT's	0 to 0.333 V or 0 to 1 V		Mounting Dimensions	DIN Rail or 3-point screw mount
Input Signal	2 (E50H5 only) Pulse Solid-State or mechanical contacts (current less than 1 mA) Minimum Pulse Width 20 msec	Weight		2.3" x 4.2" x 3.6"
Outputs	E50B1		Reactive energy pulse 30 VAC/DC	Approvals
	E50C1	RS-485 2-wire Modbus RTU Basic Data Set	Warranty	
	E50C2/E51C2	RS-485 2-wire, Modbus RTU Full Data Set		CE, UL508, UL File #E339785, RoHs
	E50C3/E51C3	RS-485 2-wire Modbus RTU Full Data Set, data logging		
	E50H3	RS-485 2-wire BACnet MS/TP Full Data Set, data logging		

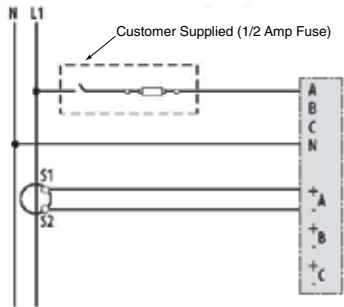
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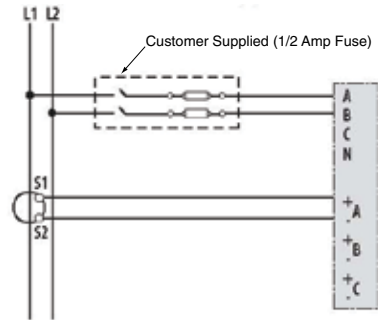


WIRING

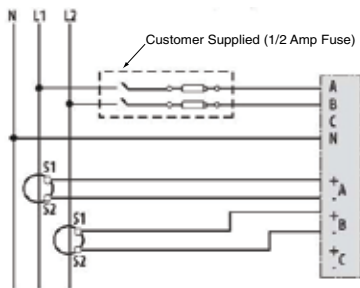
1-Phase Line-to-Neutral 2 - Wire System 1 CT



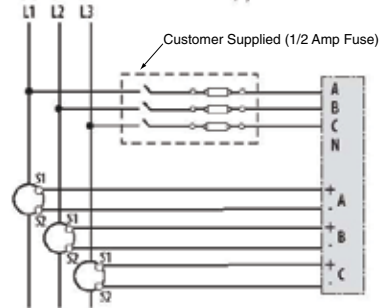
1-Phase Line-to-Line-Wire System 1 CT



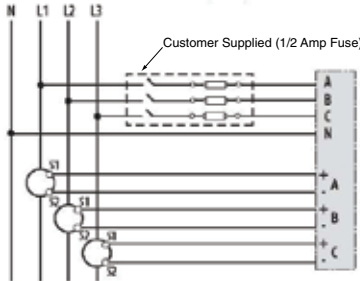
1-Phase Direct Voltage Connection 2 CT



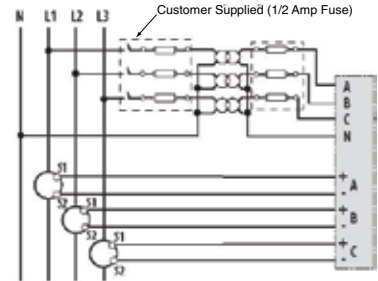
3-Phase 3-Wire 3 CT no PT



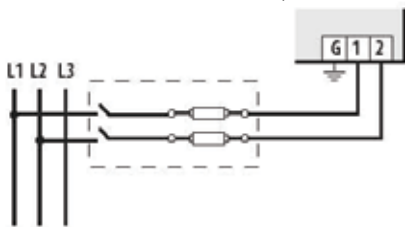
3-Phase 4-Wire Wye Direct Voltage Input Connection 3 CT



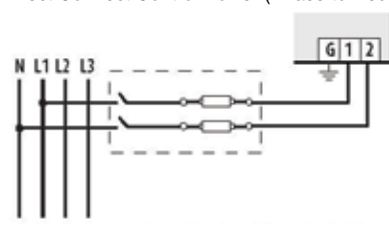
3-Phase 4-Wire Wye Connection 3 CT 3 PT



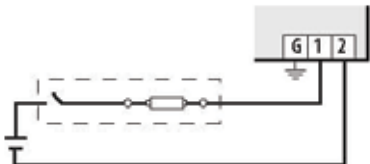
Direct Connect Control Power (Phase to Phase)



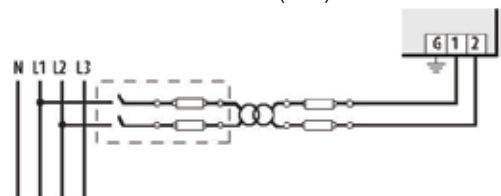
Direct Connect Control Power (Phase to Neutral)



Direct Connect Control Power (DC Control Power)



Control Power Transformer (CPT) Connection





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BACNET/MODBUS DATA OUTPUTS

Basic Data Set (BDS):

- Power (kW)
- Energy (kWh)

(User configures which 10 data points are stored in these buffers)

User configurable logging interval(When configured for a 15 minute interval, each buffer holds 60 days of data)

Full Data Set (FDS) includes BDS plus:

- Configurable for CT & PT ratios, system type, and passwords
- Diagnostic alerts
- Current: 3-phase average
- Volts: 3-phase average
- Current: by phase
- Volts: by phase Line-Line and Line-Neutral
- Power: Real, Reactive, and Apparent 3-phase total and per phase
- Power Factor: 3-phase average and per phase
- Frequency
- Power Demand: Most Recent and Peak
- Demand Configuration: Fixed, Rolling Block, and External Sync (Modbus only)

Continuous and Single Shot logging modes: user selectable

Auto write pause: read logs without disabling the meter's data logging mode

BACNET DATA LOGGING (includes all FDS outputs, plus):

Real Time Clock: uses BACnet Time

Synchronization services

3 BACnet log events: each buffer holds 5760 32-bit entries

(User configures which 3 data points are stored in these buffers)

User configurable logging interval, (When configured for a 15 minute interval, each buffer holds 60 days of data)

Continuous and single shot logging modes: user selectable

Auto write pause: read logs without disabling the meter's data logging mode

Data Logging (includes all FDS outputs, plus):

- Real Time Clock: user configurable
- 10 user configurable log buffers: each buffer holds 5760 16-bit entries

ORDERING INFORMATION

MODEL	DESCRIPTION
E51C2	Power meter bi-directional, Modbus, pulse output
E51C3	Power meter bi-directional, Modbus, pulse output , data logging
E50B1	Pulse output only
E50C1	Modbus output, basic data set
E50C2	Modbus output, full data set
E50C3	Modbus output, full data set, data logging
E50H5	Power meter FDS BACnet, 2 pulse inputs,data logging

ACCESSORIES	
AE010	Nema 4 enclosure for AE Series meters
AE011	Lock and key for AE010 enclosure
AH02	Fuse pack, 1 Phase
AH03	Fuse pack, 2 Phase
AH04	Fuse pack, 3 Phase