



Product Data

E50 Series Compact Power and Energy Meters

For use with Split Core/Solid Core CTs
Data Sheet



E50C2-T2 Modbus



E50H2-T2 BACnet

| Ordering Numbers: | Description: |
|-------------------|-----------------|
| X13690277002 | E50C2-T2 Modbus |
| X13690276002 | E50H2-T2 BACnet |

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.



Trademarks

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Overview

The E50 Series DIN Rail Meter combines exceptional performance and easy installation that delivers a cost-effective solution for power monitoring applications. The Modbus (E50C2-T2) and BACnet (E50H2-T2) output models offer added flexibility for system integration.

Features




- Revenue Grade measurements.
- Used in applications such as energy monitoring, building automation systems (BAS), energy management, commercial sub-metering, industrial monitoring, and cost allocation.
- High reliability with ANSI C12.20 0.2% accuracy, IEC 62053-22 Class 0.2S.
- DIN rail or screw mounting option for easy installation.
- Real energy output and phase loss alarm output on E50C2-T2 models (one device serves multiple applications).
- Adding to its versatility, the E50 models have a wide input range between 90-600 Vac, which alleviates the need to keep multiple models in stock.
- Compatible with current transducers (CTs) that range from 5 A to 32000 A for a wide range of service types.
- User-enabled password protection, which offers protection from tampering.
- System integration via Modbus (E50C2-T2), BACnet MS/TP (E50H2-T2); compatible with existing systems.
- Native BACnet MS/TP support (no gateway) with serial rates up to 115.2 kbps (E50H2-T2).
- BTL-certified (E50H2-T2).
- Additional pulse inputs (E50H2-T2 only) provide an easy way to incorporate simple flow sensors to track gas, water, steam, or other energy forms using a BACnet system.

Specifications

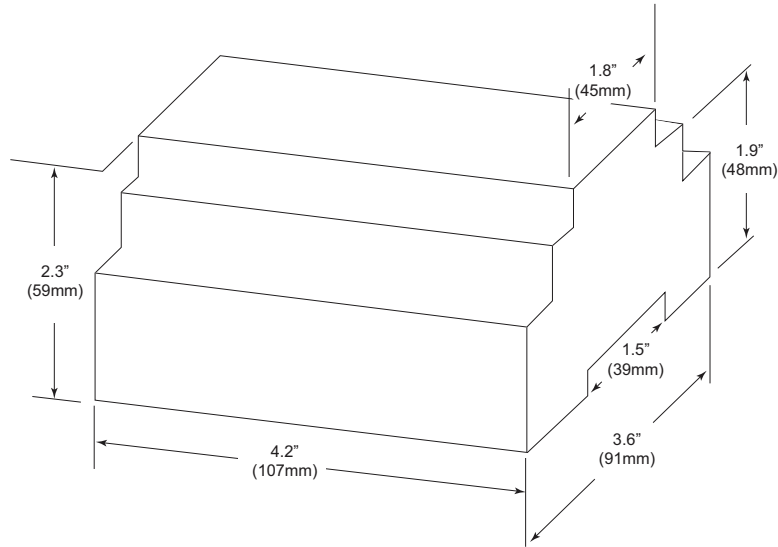
| Accuracy | |
|------------------------|---|
| Real Power and Energy: | 0.2% (ANSI C12.20, IEC 62053-22 Class 0.2S) |
| Inputs | |
| Control Power, AC: | <ul style="list-style-type: none"> • 50/60 Hz; 5 VA max.; 90 V minimum • U.L. Maximum: 600 VL-L (347 VL-N) • CE Maximum: 300 VL-N |
| Control Power, dc: | <ul style="list-style-type: none"> • 3W maximum • U.L. and CE: 125 to 300 Vdc (external DC current limiting required) |
| Voltage Input: | <ul style="list-style-type: none"> • U.L.: 90 VL-N to 600 VL-L • CE: 90 VL-N to 300 VL-N |
| Current Input | |
| Scaling: | 5 A to 32,000 A |
| Input Range: | 0 to 0.333 V or 0 to 1 V (selectable) CT must be rated for use with Class 1 voltage inputs |
| Pulse Inputs E50H2: | Contact inputs to pulse accumulators (10 k Ω Vac/dc to 4 to 10 Vdc) |
| Outputs | |
| E50C2-T2: | <ul style="list-style-type: none"> • Real Energy Pulse: N.O. static; 30 Vac/dc, 100 mA max. (AC: 50/60Hz) • Alarm contacts: N.C. static; 30 Vac/dc, 100 mA max. (AC: 50/60Hz) |
| E50C2-T2: | RS-485 2-wire Modbus RTU (1200 baud to 38.4 kbps) |
| E50H2-T2: | RS-485 2-wire BACnet MS/TP (9600 baud to 115.2 kbps) |

| Mechanical | |
|------------------------------|---|
| Mounting: | DIN Rail or 3-point screw mount |
| Environmental | |
| Altitude of Operation: | 3000 m |
| Operating Temperature Range: | -30 to 70 °C (-22 to 158 °F) |
| Storage Temperature Range: | -40 to 85 °C (-40 to 185 °F) |
| Humidity Range: | <95% RH non-condensing; indoor use only |
| Certifications | |
| Agency Approvals: | UL508 (Open Type Device), EN61010-1, California CSI Solar, ANSI C12.20, Cat III, pollution degree 2 |
| Warranty | |
| Limited Warranty: | 5 Years |

Ordering Information

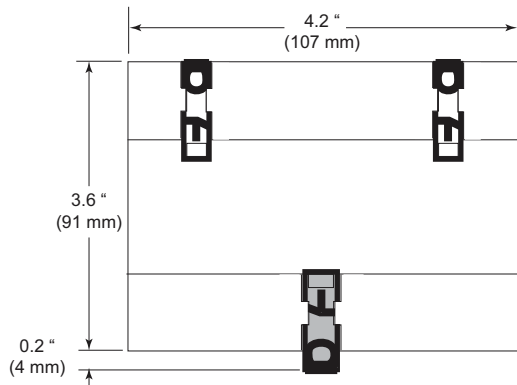
| Descriptions and Models | E50C2-T2 | E50H2-T2 |
|---|----------|----------|
| Measurement Capability - Full Data Set | | |
| Power (3-Phase Total and Per Phase): Real (kW) Reactive (kVAR), and Apparent (kVA) | X | X |
| Power Factor: 3-Phase Average and Per Phase | X | X |
| Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA) | X | X |
| Peak Power Demand: Real (kW), Reactive (kVAR) and Apparent (kVA) | X | X |
| Current (3-Phase Average and Per Phase) | X | X |
| Voltage: Line-Line and Line-Neutral (3-Phase Average and Per Phase) | X | X |
| Frequency | X | X |
| ANSI C12.20 0.2% Accuracy, IEC 62053-22 Class 0.2S | X | X |
| Accumulated Net Energy: Real (kWh), Reactive (kVARh), and Apparent (kVAh) | X | X |
| Accumulated Real Energy by Phase (kWh) | X | X |
| Demand Interval Configuration: Fixed or Rolling Block | X | X |
| Demand Interval Configuration: External Sync to Comms | X | X |
| Outputs | | |
| Alarm Output (N.C.) | X | X |
| 1 Pulse Output (N.O.) | X | |
| RS-485 Serial (Modbus RTU Protocol) | X | |
| RS-485 Serial (BACnet MS/TP Protocol) | | X |
| Inputs | | |
| 1 Pulse Contact Accumulator Input | | X |
| CE Mark | | |
| The CE mark indicates RoHS2 compliance. Refer to the CE Declaration of Conformity for additional details | | |
|    | | |
| Note: BTL Only for E50H2-T2 | | |

Dimensions

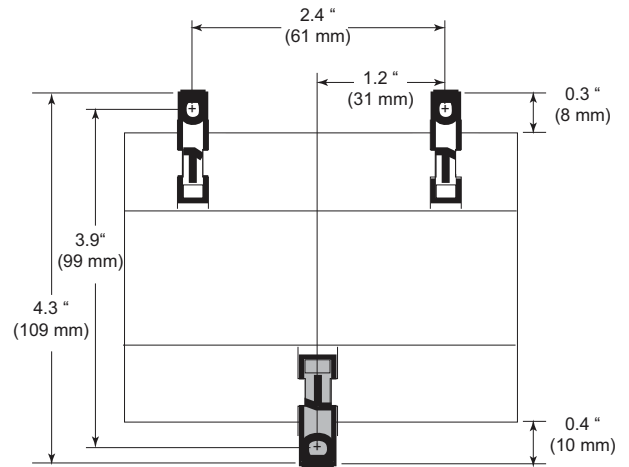


Mounting Diagrams

DIN Mount Configuration



Screw Mount Configuration



Trane - by Trane Technologies (NYSE: TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

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