GE
Industrial Solutions

A-Series* II Panelboard AMP1 Integrated Power and Energy

Fact Sheet

Overview

The AMP1 Power & Energy Meter provides a cost-effective integrated solution for A-Series* II panelboard power monitoring and submetering applications. With exceptional performance, the AMP1 monitors key electrical parameters of the main power coming into the panelboard. This information can then be transmitted to a building automation system (BAS), or similar system, to analyze usage and identify potential cost saving measures. Offering ANSI 12.20 0.5% accuracy, the revenue grade AMP1 meter can be used for tenant billing and cost allocation.

The A-Series* II panelboard comes with the AMP1 meter completely integrated, including current transformers, eliminating the need for any field installation or modifications. This integrated solutions helps you to meet the Measurement and Verification points required by the LEED and GREEN building design. Optional data logging capability protects and stores up to 60-days worth of data internally.

The AMP1 meter can be factory integrated in any of the following A-Series* II panelboards up to 800 amperes: AQ, AE, AS, AQP, AEP, and ADP. Main Lug and Main Breaker configurations (THQB, THHQB, TEY, TEYF, TEYD, TEYH, TEYL, SE, SF, SG, SK) are also available. The Pulse, Modbus®, and BACnet output models offer added flexibility for system integration.

Features:

- Solutions up to 800A
- Revenue Grade, ANSI 12.20 0.5% accuracy
- Monitors voltage, amperage, power, and energy
- Backlit LCD Display
- Data logging option to ensure data is still preserved locally
- Communicates via Modbus® RTU or BACnet – Versatile and widely used protocols.
- User-enabled password protection
- UL-67 approved
- 5-Year warranty
- Earn points towards LEED Certification

Benefits:

- Analysis of potential cost saving actions
- Verify energy bills
- Identify wasteful practices & decrease unnecessary usage
- Fairly and accurately allocate energy costs to users
- Produce an energy profile
- Secure the optimum utility rate structure

Applications

- Energy monitoring in building automation systems
- Renewable energy
- Energy management
- Commercial submetering
- Industrial monitoring
- Cost allocation

imagination at work

AMP1 Technical Specifications

Inputs:	
Control Power, AC	50/60 Hz; 5VA max.; 90V min.; UL Maximums: 600V L-L (347V L-N); CE Maximums: 300V L-N (520V L-L)
Control Power, DC	3W max.; UL and CE: 125 to 300VDC (external DC current limiting required)
Voltage Input	UL: 90V L-N to 600V L-L ; CE: 90V L-N to 300V L-L
Current Input	
Scaling	5A to 32,000A
Input Range	0 to 0.333V or 0 to 1V (selectable)
Pulse Inputs (AMP4)	Contact inputs to pulse accumulators (one set with AMP4; two sets with AMP4)
Accuracy:	
Real Power and Energy	0.5% (ANSI C12.20, IEC 62053-22 Class 0.5S)
Outputs:	
All Models (except AMP4)	Real Energy Pulse: N.O. static; Alarm contacts: N.C. static
AMP1	Reactive energy pulse 30VAC/DC
AMP2 & AMP3	RS-485 2-wire Modbus® RTU (1200 baud to 38.4 kbaud)
AMP4	RS-485 2-wire BACnet MS/TP (9600 baud to 115.2 kbaud)
Mechanical:	
Mounting	DIN Rail or 3-point screw mount
Environmental:	
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 noncondensing
Safety	UL508, EN61010

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Selection Guide

	AMP1B1	AMP1C2	AMP1C3	AMP1H5
Speedi Mod Code	E5P	E5M	E5MD	E5BD
Measurement Capability - Full Data Set				
Bi-directional Energy Measurements				
Power (3-phase total and per phase): Real (kW) Reactive (kVAR), and Apparent (kVA)	•	•	•	•
Power Factor: 3-phase average and per phase	•	•	•	•
Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	•	•	•	•
Import and Export totals of Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)				
Peak Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	•	•	•	•
Current (3-phase average and per phase)	•	•	•	•
Voltage: Line-Line and Line-Neutral (3-phase average and per phase)	•	•	•	•
Frequency	•	•	•	•
Accumulated Net Energy: Real (kWh), Reactive (kVARh), and Apparent (kVAh)	•	•	•	•
Import and Export Accumulators of Real and Apparent Energy				
Reactive Energy Accumulators by Quadrant (3-phase total and per phase)				
Demand Interval Configuration: Fixed or Rolling Block	•	•	•	•
Demand Interval Configuration: External Sync to Comms		•	•	•
Data Logging				
Data Logging: 10 16-Bit Configurable (can include Date/Time) Data Buffers			•	
Data Logging: 3 Timestamped 32-Bit Configurable Data Buffers				•
Store up to 60 days of readings at 15-minute intervals			•	
Outputs				
Alarm Output (N.C.)	•	•	•	•
1 Pulse Output (N.O.)		•	•	
2 Pulse Outputs (N.O.)	•			
RS-485 Serial (Modbus® RTU Protocol)		•	•	
RS-485 Serial (BACnet MS/TP Protocol)				•
LON FT Serial (LonTalk Protocol)				
Inputs				
2 Pulse Contact Accumulator Inputs				•
1 Pulse Contact Accumulator Input				

References

Amp-series Quick install	DET-783
AMP1B1, C2, C3 install	DET-784
AMP1H5 install	DET-785