Honeywell

H-Series Class 500 Meter

ADVANCED KWH/DEMAND METER

PRODUCT DATA

APPLICATION

The Honeywell Class 500 meter is a 3-Phase meter with communications. (Single Phase and Two Phase 2-element options available.) The device is used to monitor electric power usage of individual loads after the utility meter and store kW and kVAR data for automatic meter reading. The Class 500 meter is dual protocol capable and provides both RS485 and Ethernet communications.

FEATURES

- **Advanced 4-line display showing:**
  - **kWh**
  - **kW demand (with peak date & time)**
  - **Power factor per phase**
  - **Real-time load in kW**
  - **Amps per Phase**
  - **Volts per phase.**
- **On-board set-up option for:**
  - **IP address**
  - **Meter date/time**
  - **ID codes for EZ7**
  - **Modbus and BACnet.**
- **0-2 volt output split-core current sensors allow for enhanced safety and accurate remote mounting of sensors up to 500 feet from meter without power interruption (all part numbers with 'KIT' include 3 current sensors).**
- **Onboard installation diagnostics and verification system: current sensor installation diagnostics indicator, phase error indicator and phase angle diagnostics on display.**
- **Optional 5th & 6th channel available for two external meter inputs (gas, water, BTU, etc.) on Modbus, BACnet, and LonWorks (only one channel is available with EZ-7 protocol). Both channels provide interval data logging that can be read via E-Mon Energy software.**
- **Communication options/protocols:**
  - **Built in RS-485: BACnet MS/TP, Modbus RTU, Lon Twisted Pair, EZ-7**
  - **Built in Ethernet: BACnet IP, Modbus TCP/IP, EZ-7.**

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FEATURES CONTINUED

- **Compatible with E-Mon Energy software via EZ7 protocol for automatic meter reading, energy billing and profiling (applicable communication options: 02,03,05, and 07).**
- **Phase loss alarm (N.O. Contact).**
- **Built-in RS-485 communication capability supports the following connection configurations (or combinations not to exceed 52 devices per channel): - Up to 52 Class 500 meters and/or IDR interval data recorders. Cabling can be either daisy-chain or star configuration through RJ-11 modular jack (4-conductor) or terminal block (3-conductor), 18-26 AWG, up to 4,000 cable feet total.**
- **For EZ-7 meters, records kWh and kVARh delivered, kWh and kVARh received in first four channels. Data stored in 15-min. for up to 72 days or 5-minute intervals for up to 24days. Maintains data in a first-in, first-out format.**
- **Meter operates as slave device when used with Modbus or LONworks options. Meter works as a master device on BACnet MS/TP.**
- **Enclosure: Type 4X polycarbonate enclosure for outdoor/indoor installation and type 1 heavy duty JIC steel enclosure for indoor installation.**
- **UL/CUL Listed. Certified by independent test lab to ANSI C12.20 national accuracy standards. (+/- 0.2% from 1% to 100% of rated load).**
- **Non-volatile memory to maintain reading during power outages.**
- **MV-90 Compatible (with EZ7 only).**
- **Meter data points**
  - Energy delivered
  - Reactive Energy delivered
  - Energy Received
  - Real Power
  - Reactive Power
  - Apparent power
  - Power factor
  - Current total
  - Current average
  - Voltage line
  - Frequency
  - Phase angle
  - Real power for each phase
  - Reactive power for each phase
  - Apparent power for each phase
  - Power factor for each phase
  - Current for each phase
  - Voltage for each phase
  - Phase angle for each phase
  - External input 1 (optional)
  - External input 2 (optional)

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number. If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Honeywell Environmental and Combustion Controls Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care
   1885 Douglas Drive North
   Minneapolis, Minnesota 55422-4386
3. http://customer.honeywell.com or http://customer.honeywell.ca

International Sales and Service Offices in all principal cities of the world. Manufacturing in Belgium, Canada, China, Czech Republic, Germany, Hungary, Italy, Mexico, Netherlands, United Kingdom, and United States.

METER TECHNICAL SPECIFICATIONS

Input Voltage Configuration	3-wire (Delta) Or 4-wire (Wye)	
Mains Voltage Input	Up To 600 VAC RMS Available	
Input Power	12 VA Maximum Rating	
Current Sensor Rating	Up To 3200 Amps RMS AC Available	
Power Factor	0.5 Leading Or Lagging	
Line Frequency	50-60 Hz	
Metering Accuracy	All meter/current sensor amperages are accurate to ANSI C12.20 standards at +- 0.2% from 1% to 100% of current rating	
Voltage Operating Range	+/-10% Of Rated Load	
Temperature Range	-20 C To +50 C	
Relative Humidity Range	0-95% Non-condensing	
Altitude	2000 Meters Maximum	
Voltage Overload	+25% Continuously: +100% For 20 Cycles	
Current Sensor Overload	100% For 1 Minute Without Damaging Meter	
Pollution Degree	Degree 2 In Accordance With IEC 664	
Installation (Overvoltage) Category	Category 111	
Measurement Category	Category 111	
Enclosure Type	Either UL Type 1 indoor enclosure or UL NEMA Type 4X enclosure	
Display Readout	4 Line LCD	
Standard Ranges	4-Wire Wye, 120/208 VAC: 100, 200, 400, 800, 1600, 3200 Amp 2 Phase, 120/240 VAC: 100, 200, 400, 800, 1600, 3200 Amp 4-Wire Wye, 277/480 VAC: 100, 200, 400, 800, 1600, 3200 Amp 3-Wire Delta, 220/240 VAC: 100, 200, 400, 800, 1600, 3200 Amp 3-Wire Delta, 480 VAC: 100, 200, 400, 800, 1600, 3200 Amp 4-Wire Wye, 600 VAC: 100, 200, 400, 800, 1600 Amp	
RS-485 Serial Communications	Cable:	UL-listed/rated Telephone Cord. 4-cond.
	Input/output Voltage:	Ground-isolated +/-5.4VDC
	Cable Connector:	Screw Terminal Termination
	Circuit Input Isolation:	5.3kVAC
	Max Cable Distance:	4000 Feet
	Max Network Nodes:	64 Cabling Nodes (Including Master)
	Default Baud Rate:	9600 for Modbus RTU and EZ-7 38400 for BACnet MS/TP
Recommended In-line Fuse	Manufacturer:	Littlefuse
	Mfg. Part No:	KLDR.100
	Rating:	100mA, Time-delay, 600VAC Cartridge Fuse
Battery Cell	Description:	Non-rechargeable Cell Used For Memory Retention
	Manufacturer:	Panasonic
	Mfg Part No:	CR2032
	Working Voltage:	3 VDC
	Current Capacity	225 mAHr
	Electrolyte:	Manganese Dioxide Lithium

Table 1. Class 500 and Green Net 3 Phase Meter Selection Guide.

Series	Class	Voltage	Current	Enclosure Type		Protocol		Green Net - Options		Current Sensors	
H	50-	120	25HV	J	JIC STEEL ENCLOSURE	01	EZ-7, EZ-7 ETHERNET	KIT	NO OPTIONS, SPLIT CORE SENSORS	KIT	SPLIT-CORE CURRENT SENSORS
		208	100-	R	RAINTIGHT ENCLOSURE	02	MODBUS RTU, EZ-7 ETHERNET	SCS	NO OPTIONS, SOLID CORE SENSORS	SCS	SOLID-CORE CURRENT SENSORS
		400V (380-415)	200-			03	BACNET MS/TP, EZ-7 ETHERNET	-NS	METERS SHIPPED W/O SENSORS	-NS	METERS SHIPPED W/O SENSORS
		480	400-			04	EZ-7, MODBUS TCP/IP	-SP	SINGLE PHASE OR TWO PHASE (Two Element)		
		600	800-			05	EZ-7, BACNET IP	-N-	GREEN CLASS NET METER		
			1600			06	MODBUS RTU, MODBUS TCP/IP	NSP	SINGLE PHASE OR TWO PHASE (TWO ELEMENT) GREEN CLASS NET METER		
			3200			07	LONWORKS TP, EZ-7 ETHERNET				
						08	LONWORKS TP, MODBUS TCP/IP				
						09	EZ-7, EZ-7 ETHERNET WITH MODEM				
						10	EZ-7, MODBUS TCP/IP WITH MODEM				
						11	EZ-7, BACNET IP WITH MODEM				
Example: H50-480400-J05KIT = Class 500, 480V, 400A, JIC Steel Enclosure, BACnet IP and RS-485 EZ-7 with 3 Current Sensors											
Example: H50-480400-J01-N-KIT = Class 500,480V, 400A, JIC Steel Enclosure, Ethernet EZ-7 and RS 485 EZ-7, Green Net Meter with 3 Sensors included											

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