



**Monitor Energy Usage For
Improved Energy Management**

Essential Information For True Energy Management

The more your customers know about energy usage from specific equipment, areas or tenants, the more they can look for energy-saving opportunities or provide tenant-specific billing. Honeywell SUB Series submeters provide that information at a glance on a built-in LCD display and output the information by pulse, BACnet®, ModBus®, LON or EZ-7®.



Proven Worldwide

From load shedding to cost allocation to energy management, Honeywell SUB Series submeters work with a variety of building automation controllers to provide building managers with information and energy-saving flexibility. No wonder they can be installed in commercial offices, industrial facilities, apartments, condominiums, campuses and governmental facilities.

E-Mon Energy Software

E-Mon Energy system monitors Honeywell electric submeters either on-site or off-site via a variety of industry standard communication methods and transmit data back to a central computer for generating profiles, graphs and tenant statements of energy usage.

- E-Mon Energy software operates with computers running Windows 2000, XP, Vista or 7.
- Software provides graphical profiling for 5-, 15-, 30- or 60-minute sampling rates and generates analytical charts and graphs of energy and demand usage.
- Reads Honeywell EZ-7® or IDR meters, either on-site or off-site, via modem, Ethernet or a directly connected computer.
- Software generates and prints itemized electric bills (using coincidental peak demand date and time.) Software will generate bills from user-specific time periods via profile data (you need not be present to generate meter readings.)
- Reads gas, water, BTU and steam meters for billing purposes and graphical display of usage.

Delivering Key Information

Submetering is important because it allows facility managers to track energy costs by area, department, tenant or even an individual piece of equipment when used with a building automation system. The information can then be used for load shedding, creating an overall energy-savings plan, allocating costs and more.

- Performance Monitoring — Measure energy usage before and after implementing an energy-savings plan.
- Load Shedding — Avoid peak demand charges by reducing power levels during critical times.
- Monitoring Main Circuits/Panels — Determine where energy is being consumed and monitor specific equipment to detect trends.
- Tenant Submetering — Track a tenant's energy consumption for billing purposes.
- Cost Allocation — Monitor multiple points in a building to divide utility bills based on department consumption.
- Class 500 Meters — Measure real-time readings of 38 different points, including voltage, kVA, kVAR, power factor percent and angle per phase, and more.

On-The-Spot Readings

With an LCD display right on the unit, the SUB family of submeters provides instant information right at the installed location. Plus, SUB Series submeters are accuracy rated to ANSI C12.1, so they can be used for billing purposes where allowed by code.

Different submeters are available for varying applications, and since SUB Series submeters work seamlessly with controllers using Pulse, ModBus®, BACnet, LON, EZ-7®, compatibility with the building automation system is never an issue.

Installation is easy, too — with split core current sensors, you won't need to touch the building wiring, and the metal housing protects the installation from the elements.

More Key Features

All Honeywell submeters share the common features listed above and are also easy to install. Honeywell submeters are certified to ANSI C12 electronic meter national accuracy standards and are UL Listed/CSA approved. All come with 0-2 volt output split-core current sensors allowing for enhanced safety and accurate remote mounting of sensors up to 2000 feet from meter without power interruption (500 feet for the Class 500 meters).

In addition, certain SUB Series submeter classes have even more to offer:

Class 100

- Provide kW and kWh data for single phase power

Class 200

- Provide kW and kWh data for 3-phase power

Class 500

- 38 points of data provided on ModBus RTU, ModBus TCP, BACnet, ethernet EZ-7®, RS485 EZ-7® or LON including:
 - kWh
 - kW (with peak date and time)
 - Power factor per phase
 - Real-time load in kW
 - Amps per phase
 - Volts per phase
- Meter is designed for use on 3-phase/3-wire (delta) and 3-phase/4-wire (wye) circuits
- Gas, water, BTU or other pulse inputs can be tied in (2 inputs)

Green Meter

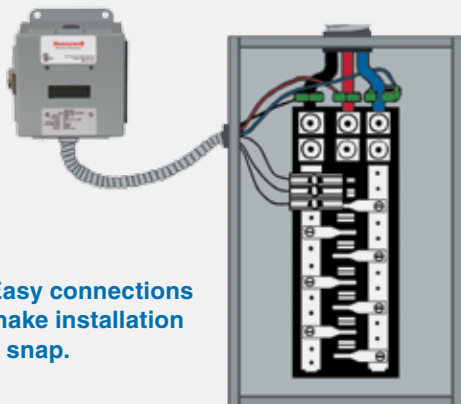
- Provide kWh, kW load and total CO₂ for 3-phase power

Green Net Meter

- Provide delivered kWh, received kWh, net kWh, net kW, total CO₂ and CO₂ load for 3-phase power

Interval Data Recorder(IDR)

- Provide kWh, kW demand information from Class 200 meters in 5, 15, 30 or 60-minute interval periods



**Easy connections
make installation
a snap.**

Meet Renewable Energy Criteria

More than ever, builders and building owners are taking environmentally friendly initiatives to heart, and Honeywell submeters are key components of EPACT 2005, EISA 2007 and other renewable energy projects. The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction and operation of high-performance buildings, and Honeywell submeters offer many ways to earn LEED criteria points*:

Core and Shell

EA Credit 1 (3-21 Points)	Optimize Energy Performance
EA Credit 4 (4 Points)	On-site Renewable Energy
EA Credit 5.1 (3 Points)	Measurement and Verification – Base Building
EA Credit 5.2 (3 Points)	Measurement and Verification – Tenant Submetering
EA Credit 6 (2 Points)	Green Power

Existing Buildings

EA Prerequisite 2	Minimum Energy Efficiency Performance
EA Credit 1 (1-18 Points)	Optimize Energy Efficiency Performance
EA Credit 2.1 (2 Points)	Existing Building Commissioning – Investigation and Analysis
EA Credit 2.2 (2 Points)	Existing Building Commissioning – Implementation
EA Credit 2.3 (2 Points)	Existing Building Commissioning – Ongoing Commissioning
EA Credit 3.1 (1 Point)	Performance Measurement – Building Automation System
EA Credit 3.2 (1-2 Points)	Performance Measurement – System-Level Metering
EA Credit 4 (1-6 Points)	On-site and Off-site Renewable Energy
EA Credit 6 (1 Point)	Emissions Reduction Reporting

New Construction/Major Renovation

EA Prerequisite	Maximize Energy Performance
EA Prerequisite 2	Minimum Energy Performance
EA Credit 1 (1-19 Points)	Optimize Energy Performance
EA Credit 2 (1-7 Points)	On-site Renewable Energy
EA Credit 5 (1-3 Points)	Measurement and Verification
EA Credit 6 (1-2 points)	Green Power

Commercial Interiors

EA Credit 3 (2-5 Points)	Measurement and Verification
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Schools Rating System

EA Prerequisite 2	Minimum Energy Performance
EA Credit 1 (1-19 Points)	Optimize Energy Performance
EA Credit 2 (1-7 Points)	On-site Renewable Energy
EA Credit 5 (2 Points)	Measurement and Verification

*LEED v3 published by USGBC (United States Green Buildings Council), April 2009.

Ordering Information

Class 100 Submeters		
MODEL #	CURRENT (A)	DESCRIPTION
SUB2120-25	25	
SUB2120-50	50	120V, 1-Phase, 2W, Pulse Output
SUB2120-100	100	(Supplied with (1) split-core current sensor)
SUB2120-200	200	
SUB3208-25	25	
SUB3208-50	50	120V/208-240V, 1- or 2-Phase, 3W, Pulse Output
SUB3208-100	100	(Supplied with (2) split-core current sensors)
SUB3208-200	200	

*Add an "R" at the end of the model number for NEMA 4X outdoor enclosure

Class 500 Submeters				
METER	OUTPUT	VOLTAGE (V)	CURRENT (A)	CLASS
SUB	Blank: Modbus RTU	208	100	C: Class 500
	M: Modbus TCP/IP	480	200	
	E: Ethernet (EZ-7 [®])	600	400	
	B: BACnet MS/TP		800	
	AC: BACnet IP		1600	
	L: LON Twisted Pair		3200	
	Z: RS485 (EZ-7)			

Example: SUBAC480-400CR: BACnet IP output, 480 Volts, 400 Amps, class 500 and NEMA 4X
*Add an "R" at the end of the model number for NEMA 4X outdoor enclosure

Interval Data Recorder			
METER	# OF CONNECTIONS	OUTPUT TYPE	TERMINALS
SUBIDR	8: 8 Inputs	Blank : RS485 (EZ-7)	A: All RJ45 Jacks
	16: 16 Inputs	E: Ethernet (EZ-7)	B: All Screw Terminals
		M: Modem	C: 8 Jacks, 8 Screw Terminals
		R: Modbus RTU	
		ER: Modbus IP	
		EB: BACnet IP	
		B: BACnet MS/TP	
		L: LON Twisted Pair	

Example: SUBIDR-16RB: IDR with 16 inputs, all screw terminals and Modbus IP output

Other Parts	
PART NUMBER	DESCRIPTION
SUB-CS25	Set of 3 25A Split-core CS
SUB-CS50	Set of 3 50A Split-core CS
SUB-CS100	Set of 3 100A Split-core CS
SUB-CS200	Set of 3 200A Split-core CS
SUB-CS400	Set of 3 400A Split-core CS
SUB-CS800	Set of 3 800A Split-core CS
SUB-CS1600	Set of 3 1600A Split-core CS
SUB-CS3200	Set of 3 3200A Split-core CS
SUB-ENERGY50	E-Mon Energy Software with 1-50 meters, includes 1 day of on-site service
SUB-ENERGY100	E-Mon Energy Software with 51-100 meters, includes 1 day of on-site service
SUB-ENERGY250	E-Mon Energy Software with 101-250 meters, includes 1 day of on-site service
SUB-ENERGY251	E-Mon Energy Software for every additional 100 meters
SUB-EZ7	EZ-7 Driver (For accepting points into Niagara ^{AX} Framework [®])
SUB-FS150	One day service within 150 miles of E-Mon office
SUB-FS151	One day service over 150 miles from E-Mon office (US and Canada)
SUB-RS232K	RS232K - RS485 Key
SUB-EKME	EKM-E - Ethernet key/modem
SUB-USBK	USBK - USB Key
SUB-EKMT	EKM-T - Telephone key/modem
SUB-P3	Pulse Output for Interface to energy management system or building management system (Not required with WEBS I/O modules)
SUB-PIM	Pulse Interface module
SUB-OUT	Outdoor meter enclosures may contain Class 100, 200, and 500 meters

Learn More

For more information on Honeywell SUB submeters, call

1-800-466-3993 or visit beyondinnovation.honeywell.com.

Automation and Control Solutions

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Class 200 Submeters			
METER	OUTPUT	VOLTAGE (V)	CURRENT (A)
SUB	Blank: No Demand	208	100
		480	200
		600	400
			800
			1600
			3200

Example: SUB208-400R: Class 200, 208 Volts, 400 Amps, NEMA 4X

*Add an "R" at the end of the model number for NEMA 4X outdoor enclosure

Green Class Meter			
METER	OUTPUT	VOLTAGE (V)	CURRENT (A)
SUBG	P: Pulse	208	100
		480	200
			400
			800
			1600
			3200

Example: SUBGP480-800: Green meter, Pulse output, 480 Volts, 800 Amps

Green Net Class Meter			
METER	OUTPUT	VOLTAGE (V)	CURRENT (A)
SUBGN	Blank: RS485 (EZ-7)	208	100
		480	200
			400
			800
			1600
			3200

Example: SUBGNE 480-400: Green net meter, Ethernet, 480 Volts, 400 Amps



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