

Totally Integrated Power

Intelligent Metering and Control Devices

General

	9100	9200	9300	9330	9350	9510 ADR	9510	9610/9610H
POWER, ENERGY and DEMAND								
Voltage/current: per phase, average		•	•	•	•		•	•
Voltage/current: unbalance			•	•	•		•	•
Power: real, reactive, apparent, power factor, frequency	kW/kWh	•	•	•	•		•	•
Energy: bi-directional, import, export		•	•	•	•		•	•
Energy: total, net			•	•	•		•	•
Demand: block, sliding window		•	•	•	•		•	•
Demand: thermal predicted			•	•	•		•	•
POWER QUALITY ANALYSIS								
Sag/swell monitoring					•		•	•
Symmetrical components: zero, negative, positive								•
Transient detection, microseconds								65/17
Harmonics (individual, even, odd, total) up to		THD only	15th	15th	31st		63rd	127th/256th
Sampling rate, maximum samples/cycle		64	32	32	64		256	512/1024
Flicker, harmonics to EN50160, IEC 6100-4-7 / 4-15								•
Configurable for IEEE 519-1992, IEEE 1159, SEMI/ITIC								•
"Number of nines" uptime data (3 nines=99.9%)							•	•
DATA and WAVEFORM LOGS								
Triggered by setpoint, schedule, or external signal				•	•		•	•
Sequence-of-event logs, variable log depth				•	•		•	•
Minimum/maximum logs for any parameter				•	•		•	•
Historical logs, maximum # of channels	1			32	96	800	800	800
Waveform logs, maximum # of consecutive cycles					48		96	96
Time-stamps, resolution in seconds	•			0.001	0.001		0.001	0.001
GPS time synchronization						•	•	•
COMMUNICATION PORTS and I/O () = Optional								
RS-232/485 ports						1	1	1
RS-485-only ports		1	1	2	2	1	1	1
Ethernet ports			(1)	(1)	(1)	(1)	(1)	(1)
Infrared optical ports			1	1	1	1	1	1
Wireless Transmission	•							
PROFIBUS ports			(1)					
Built-in modems				(1)	(1)	(1)	(1)	(1)
Modbus RTU Slave on serial, modem or infrared ports (if equipped with modem or infrared port)		•	•	•	•	•	•	•
Modbus RTU Master on serial ports						•	•	•
Modbus/TCP on Ethernet ports			•	•	•	•	•	•
DNP 3.0 on serial, modem, infrared ports				•	•	•	•	•
EtherGate™: 31 other meters accessible via RS-485				•	•	•	•	•
ModemGate: 31 other meters accessible via RS-485				•	•	•	•	•
MeterM@il®: data e-mailed from meter				•	•	•	•	•
WebMeter®: on-board web server			•	•	•	•	•	•
XML			•	•	•	•	•	•
Analog inputs			(4)	(4)	(4)	(4)	(4)	(4)
Analog outputs			(4)	(4)	(4)	(4)	(4)	(4)
Digital status/counter inputs (standard/optional add-ons)				4	4	8/8	8/8	8/8
Digital relay outputs (control/pulse)		2	4	4	4	7	7	7
SETPOINTS, ALARMING and CONTROL								
Setpoints, minimum response time				1 sec	1 sec	½ cycle	½ cycle	½ cycle
Math, logic, trig, log, linearization formulas				•	•	•	•	•
Single- and multi-condition alarms				•	•	•	•	•
Call-out on alarm				•	•	•	•	•
REVENUE METERING								
ANSI C12.16 accuracy compliant	•		•	•	•		•	•
ANSI C12.20 0.2 compliant		•					•	•
IEC 60687 0.2S compliant							•	•
IEC 60687 accuracy class 0.5S compliant		•	•	•	•		•	•
ANSI class 10 (5A nominal, 10A max)			•	•	•			
ANSI class 2, IEC 1/10 (1A nominal, 10A max)							•	•
ANSI class 20, IEC 5/20 (5A nominal, 20A max)							•	•
MV-90 on serial; Ethernet ports				•	•		•	•
Time-of-use				•	•		•	•
Transformer/line loss compensation							•	•

Some features are optional. Refer to datasheets for allowable port configurations. Products meet or exceed the accuracy requirements of the standards listed; due to form factors, not all ANSI/IEC compliance tests may apply. Some products certified by third-party laboratory.