

StruxureWare™ Building Operation

iEM3000 Energy Meter



iEM3000 Energy Meter

- Designed for tenant sub-billing and cost allocation.
- Three meter variants available: 125A Direct Connect, 63A Direct Connect, and CT Connected.
- Communication through energy management or building management systems.

Protocol Implementation Conformance Statement

Date	December 12, 2013
Vendor name	Schneider Electric
Vendor ID	10
Website	www.Schneider-Electric.com
Range name	iEM3000
Product name	iEM3000 Energy Meter
Product model numbers	A9MEM3165: ACTI 9 Energy Meter 63A Direct Connect
	A9MEM3265: ACTI 9 Energy Meter CT Connected
	A9MEM3365: ACTI 9 Energy Meter 125A Direct Connect
Application software version	1.0.5
Firmware revision	2.0
BACnet Protocol version	1
BACnet Protocol revision	6

Product description

The Acti 9 iEM3000 energy meter is designed for tenant sub-billing and cost allocation. The meter comes in three variants: direct connected to up to 125 A, direct connected to up to 63 A, and CT connected for higher amperages.

The meters are typically installed inside an electrical panel, adjacent to the final distribution circuit breakers. The meters are typically connected via communication to either a customer's energy management or building management system, and the measured values are written into the software. Electrical measurements available from the meter include: V, I, PF, kW, kvar, kVA, kWh (import and export) and kVARh (import and export).

Character Sets Supported

Character Sets	Supported
ANSI X3.4	X
ISO 8859-1	
ISO 10646 (USC-2)	
ISO 10646 (UCS-4)	
IBM™ Microsoft™ DBCS	
JIS C 6226	

BACnet Interoperability Building Blocks (BIBBs) Support

Data Sharing

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
DS-RP-A	ReadProperty-A		
DS-RP-B	ReadProperty-B	X	X
DS-RPM-A	ReadPropertyMultiple-A		
DS-RPM-B	ReadPropertyMultiple-B		X
DS-RPC-A	ReadPropertyConditional-A		
DS-RPC-B	ReadPropertyConditional-B		
DS-WP-A	WriteProperty-A		
DS-WP-B	WriteProperty-B	X	X
DS-WPM-A	WritePropertyMultiple-A		
DS-WPM-B	WritePropertyMultiple-B		
DS-COV-A	COV-A		
DS-COV-B	COV-B		X
DS-COVP-A	COVP-A		
DS-COVP-B	COVP-B		
DS-COVU-A	COV-Unsolicited-A		
DS-COVU-B	COV-Unsolicited-B		
DS-V-A	View-A		
DS-M-A	Modify-A		
DS-AV-A	Advanced View-A		
DS-AM-A	Advanced Modify-A		

BACnet Interoperability Building Blocks (BIBBS) Support (continued)

Alarms and Events

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
AE-N-A	Notification-A		
AE-N-I-B	Notification Internal-B		
AE-N-E-B	Notification External-B		
AE-ACK-A	ACK-A		
AE-ACK-B	ACK-B		
AE-ASUM-A	Summary-A		
AE-ASUM-B	Alarm Summary-B		
AE-ESUM-A	Enrollment Summary-A		
AE-ESUM-B	Enrollment Summary-B		
AE-INFO-A	Information-A		
AE-INFO-B	Information-B		
AE-LS-A	LifeSafety-A		
AE-LS-B	LifeSafety-B		
AE-AS-A	Alarm Summary-A		
AE-VN-A	View Notification-A		
AE-VM-A	View Modify-A		
AE-AVM-A	Advanced View Modify-A		
AE-AVN-A	Advanced View Notifications-A		
AE-ELVM-A	Event Log View and Modify-A		

BACnet Interoperability Building Blocks (BIBBs) Support (continued)

Schedules

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
SCHED-I-B	Scheduling - Internal-B		
SCHED-E-B	Scheduling - External-B		
SCH-VM-A	Scheduling - View Modify		
SCH-AVM-A	Scheduling - Advanced View Modify		
SCHED-WS-A	Scheduling - Weekly Schedule-A		
SCHED-WS-I-B	Scheduling Weekly Schedule Internal-B		
SCHED-R-B	Scheduling - Readonly-B		

Trends

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
T-VMT-I-B	Viewing and Modifying Trends Internal-B		
T-VMT-E-B	Viewing and Modifying Trends External-B		
T-ATR-A	Automated Trend Retrieval-A		
T-ATR-B	Automated Trend Retrieval-B		
T-V-A	View-A		
T-A-A	Archiving-A		
T-AVM-A	Advanced View and Modify-A		

BACnet Interoperability Building Blocks (BIBBs) Support (continued)

Device Management

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
DM-DDB-A	Dynamic Device Binding-A		
DM-DDB-B	Dynamic Device Binding-B	X	X
DM-DOB-A	Dynamic Object Binding-A		
DM-DOB-B	Dynamic Object Binding-B	X	X
DM-DCC-A	DeviceCommunication Control-A		
DM-DCC-B	DeviceCommunication Control-B	X	X
DM-PT-A	Private Transfer-A		
DM-PT-B	Private Transfer-B		
DM-TM-A	Text Message-A		
DM-TM-B	Text Message-B		
DM-TS-A	TimeSynchronization-A		
DM-TS-B	TimeSynchronization-B		
DM-UTC-A	UTCTimeSynchronization-A		
DM-UTC-B	UTCTimeSynchronization-B		
DM-RD-A	ReinitializeDevice-A		
DM-RD-B	ReinitializeDevice-B		
DM-BR-A	Backup and Restore-A		
DM-BR-B	Backup and Restore-B		
DM-R-A	Restart-A		
DM-R-B	Restart-B		
DM-LM-A	List Manipulation-A		
DM-LM-B	List Manipulation-B		
DM-OCD-A	Object Creation and Deletion-A		
DM-OCD-B	Object Creation and Deletion-B		

BACnet Interoperability Building Blocks (BIBBs) Support (continued)

Device Management (continued)

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
DM-VT-A	Virtual Terminal-A		
DM-VT-B	Virtual Terminal-B		
DM-ANM-A	Automatic Network Mapping-A		
DM-ADM-A	Automatic Device Mapping-A		
DM-ATS-A	Automatic Time Synchronization		
DM-MTS-A	Manual Time Synchronization-A		

Network Management

BACnet Standard			
BIBB	Description	B-ASC	Product Conformance
NM-CE-A	Connection Establishment-A		
NM-CE-B	Connection Establishment-B		
NM-RC-A	Router Configuration-A		
NM-RC-B	Router Configuration-B		

BACnet Standard Object Types Supported

Analog Input

BACnet Standard		
BACnet property name	Optional	Writable
cov_increment	X	X
event_state		
object_identifier		
object_name		
object_type		
out_of_service		
present_value		
status_flags		
units		

Analog Value

BACnet Standard		
BACnet property name	Optional	Writable
event_state		
object_identifier		
object_name		
object_type		
out_of_service		
present_value		X
status_flags		
units		

BACnet Standard Object Types Supported (continued)

Binary Input

BACnet Standard		
BACnet property name	Optional	Writable
event_state		
object_identifier		
object_name		
object_type		
out_of_service		
polarity		
present_value		
status_flags		

BACnet Standard Object Types Supported (continued)

Device

BACnet Standard		
BACnet property name	Optional	Writable
active_cov_subscriptions	X	
apdu_timeout		X
application_software_version		
database_revision		
description	X	X
device_address_binding		
firmware_revision		
local_date	X	
local_time	X	
location	X	X
max_apdu_length_accepted		
max_info_frames	X	X
max_master	X	X
model_name		
number_of_apdu_retries		X
object_identifier		
object_list		
object_name		X
object_type		
profile_name	X	
protocol_object_types_supported		
protocol_revision		
protocol_services_supported		
protocol_version		
segmentation_supported		
system_status		
vendor_identifier		
vendor_name		

Device Address Binding

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

Yes		No	X
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Proprietary Properties

Property Identifier	Object Type	Description
800	Device	Energy Reset Date/Time
801	Device	Metering Reset Date/Time
802	Device	Alarm Reset Date/Time