

April 2012

# Honeywell ComfortPoint™ Open CPO-VAV2A Protocol Implementation Conformance Statement (PICS)

Topic: BACnet Protocol Implementation Conformance Statement (PICS)  
Date: April 2012  
Version: 1.0  
Applicable Products: ComfortPoint™ Open Compact VAV Controller (CPO-VAV2A)  
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# Honeywell ComfortPoint™ Open Compact VAV Controller

## Annex A - Protocol Implementation Conformance Statement

**Date:** 23<sup>rd</sup> April 2012

**Vendor ID:** 17

**Vendor Name:** Honeywell International Inc.

**Product Name:** Honeywell ComfortPoint™ Open Compact VAV Controller

**Product Model Number:** CPO-VAV2A

**Applications Software Version:** 4.01.46.0299

**Firmware Revision:** ComfortPoint\_Compact\_VAV\_v2.6.1

**BACnet Protocol Revision:** 9

### Product Description and Intended Use:

CPO-VAV2A is a Native BACnet® fully programmable digital controller that communicates via BACnet Master-Slave/Token-Passing (MS/TP) Protocol. CPO-VAV2A is designed to meet the requirements of a BACnet B-AAC (BACnet Advanced Application Controller) profile providing support for calendar & schedule objects too.

CPO-VAV2A controllers can be configured for both single and dual duct VAV applications and other variety of customized VAV applications.

### BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Display (B-OD)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)

### BACnet Interoperability Building Blocks Supported (Annex K):

<b>Data Sharing</b>	Read Property-B	DS-RP-B
	Read Property Multiple-B	DS-RPM-B
	Write Property-B	DS-WP-B
	Write Property Multiple-B	DS-WPM-B
	Change Of Value-B	DS-COV-B
<b>Alarm &amp; Event Management</b>	Notification Internal-B	AE-N-I-B
	Acknowledgement-B	AE-ACK-B
	Alarm Summary-B	AE-ASUM-B
	Event Information –B	AE-INFO-B
<b>Scheduling</b>	Scheduling Internal-B	SCHED-I-B
<b>Device &amp; Network Management</b>	Dynamic Device Binding-A	DM-DDB-A
	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-B	DM-DOB-B
	Device Communication Control-B	DM-DCC-B
	Time Synchronization-B	DM-TS-B
	UTC Time Synchronization-B	DM-UTC-B

	Reinitialize Device-B	DM-RD-B
	Back-up and Restore-B	DM-BR-B
	List Manipulation-B	DM-LM-B

**Following device binding methods Supported by the controller**

- Send Who-Is, receive I-Am (BIBB DM-DDB-A)
- Receive Who-Is, send I-Am (BIBB DM-DDB-B)
- Send Who-Has, receive I-Have (BIBB DM-DOB-A)
- Receive Who-Has, send I-Have (BIBB DM-DOB-B)
- Manual configuration of recipient device's network number and MAC address
- None of the above

**Segmentation Capability:**

Able to transmit segmented messages  no ⇒ no Window Size \_\_\_\_  
 Able to receive segmented messages  no ⇒ no Window Size \_\_\_\_

**Data Link Layer Options:**

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s)
- MS/TP master (Clause 9), baud rate(s): 9.6k, 19.2k, 38.4k, 76.8k bps
- MS/TP slave (Clause 9), baud rate(s):
- Point-To-Point, EIA 232 (Clause 10), baud rate(s):
- Point-To-Point, modem, (Clause 10), baud rate(s):
- LonTalk, (Clause 11), medium:
- Other:

**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

**Networking Options:**

- Router, Clause 6 - BACnet IP (Annex J) - MS/TP (3 MSTP Ports).
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)  
 Does the BBMD support registrations by Foreign Devices? ⇒  
 Yes   
 No

**Character Sets Supported:**

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

- ANSI X3.4

- IBM™/Microsoft™ DBCS
- JIS C 6226
- ISO 10646 (UCS-4)
- ISO 10646 (UCS-2)
- ISO 8859-1

**Standard Object Types Supported:**

	Object supported	Object dynamically creatable	Object dynamically deletable
ANALOG_INPUT	Y	N	N
ANALOG_OUTPUT	Y	N	N
ANALOG_VALUE	Y	N	N
AVERAGING	N	N	N
BINARY_INPUT	Y	N	N
BINARY_OUTPUT	Y	N	N
BINARY_VALUE	Y	N	N
CALENDAR	Y	N	N
COMMAND	N	N	N
DEVICE	Y	N	N
EVENT_ENROLLMENT	N	N	N
FILE	Y	N	N
GROUP	N	N	N
LOOP	N	N	N
LIFE_SAFETY_DEVICE	N	N	N
LIFE_SAFETY_ZONE	N	N	N
MULTISTATE_INPUT	N	N	N
MULTISTATE_OUTPUT	N	N	N
MULTISTATE_VALUE	Y	N	N
NOTIFICATION_CLASS	Y	N	N
PROGRAM	N	N	N
SCHEDULE	Y	N	N
TRENDLOG	N	N	N
ACCUMULATOR	N	N	N
PULSE_CONVERTER	N	N	N

**Standard Objects and Properties Supported:**

**Analog Input Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	
DESCRIPTION	

RELIABILITY	
COV_INCREMENT	COV_INCREMENT
TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
HIGH_LIMIT	HIGH_LIMIT
LOW_LIMIT	LOW_LIMIT
DEADBAND	DEADBAND
LIMIT_ENABLE	LIMIT_ENABLE
EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	

**Analog Output Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT
DESCRIPTION	
RELIABILITY	
COV_INCREMENT	COV_INCREMENT
TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
HIGH_LIMIT	HIGH_LIMIT
LOW_LIMIT	LOW_LIMIT
DEADBAND	DEADBAND
LIMIT_ENABLE	LIMIT_ENABLE
EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	

**Analog Value Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
UNITS	
DESCRIPTION	
RELIABILITY	
COV_INCREMENT	COV_INCREMENT

TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
HIGH_LIMIT	HIGH_LIMIT
LOW_LIMIT	LOW_LIMIT
DEADBAND	DEADBAND
LIMIT_ENABLE	LIMIT_ENABLE
EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT

**Binary Input Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
POLARITY	
DESCRIPTION	
RELIABILITY	
INACTIVE_TEXT	
ACTIVET_TEXT	
ELAPSED_ACTIVE_TIME	ELAPSED_ACTIVE_TIME
TIME_OF_ACTIVE_TIME_RESET	
TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
ALARM_VALUE	ALARM_VALUE
EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	

**Binary Output Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
POLARITY	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT
DESCRIPTION	
RELIABILITY	
INACTIVE_TEXT	

ACTIVET_TEXT	
ELAPSED_ACTIVE_TIME	ELAPSED_ACTIVE_TIME
TIME_OF_ACTIVE_TIME_RESET	

**Binary Value Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
DESCRIPTION	
RELIABILITY	
INACTIVE_TEXT	
ACTIVET_TEXT	
ELAPSED_ACTIVE_TIME	ELAPSED_ACTIVE_TIME
TIME_OF_ACTIVE_TIME_RESET	
TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
ALARM_VALUE	ALARM_VALUE
EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT

**Calendar Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	
DATE_LIST	DATE_LIST
DESCRIPTION	

**Device Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
SYSTEM_STATUS	
VENDOR_NAME	
VENDOR_IDENTIFIRE	
MODEL_NAME	
FIRMWARE_REVISION	
APPLICATION_SOFTWARE_VERSION	
PROTOCOL_VERSION	
PROTOCOL_REVISION	
PROTOCOL_SERVICES_SUPPORTED	

PROTOCOL_OBJECT_TYPES_SUPPORTED	
OBJECT_LIST	
MAX_APDU_LENGTH_ACCEPTED	
SEGMENTATION_SUPPORTED	
APDU_TIMEOUT	APDU_TIMEOUT
NUMBER_OF_APDU_RETRIES	
DEVICE_ADDRESS_BINDING	
DATABASE_REVISION	
LOCATION	
DESCRIPTION	
LOCAL_TIME	
LOCAL_DATE	
UTC_OFFSET	
DAYLIGHT_SAVING_STATUS	
MAX_MASTERS	MAX_MASTERS
MAX_INFO_FRAMES	
CONFIGURATION_FILES	
LAST_RESTORE_TIME	
BACKUP_FAILURE_TIMEOUT	BACKUP_FAILURE_TIMEOUT
ACTIVE_COV_SUBSCRIPTIONS	

**File Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
FILE_TYPE	
FILE_SIZE	FILE_SIZE
MODIFICATION_DATE	
ARCHIVE	ARCHIVE
READ_ONLY	
FILE_ACCESS_METHOD	
DESCRIPTION	

**Multi-State Value Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAGS	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
DESCRIPTION	
RELIABILITY	
STATE_TEXT	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	RELINQUISH_DEFAULT
TIME_DELAY	TIME_DELAY
NOTIFICATION_CLASS	
ALARM_VALUES	ALARM_VALUES
FAULT_VALUES	FAULT_VALUES



EVENT_ENABLE	EVENT_ENABLE
ACKED_TRANSITIONS	
NOTIFY_TYPE	NOTIFY_TYPE
EVENT_TIME_STAMPS	

**Notification Class Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
NOTIFICATION_CLASS	
PRIORITY	PRIORITY
RECIPIENT_LIST	RECIPIENT_LIST
ACK_REQUIRED	ACK_REQUIRED
DESCRIPTION	

**Schedule Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
EFFECTIVE_PERIOD	EFFECTIVE_PERIOD
LIST_OF_OBJECT_PROPERTY_REFERENCE	LIST_OF_OBJECT_PROPERTY_REFERENCE
PRIORITY_FOR_WRITING	PRIORITY_FOR_WRITING
STATUS_FLAGS	
RELIABILITY	
OUT_OF_SERVICE	OUT_OF_SERVICE
SCHEDULE_DEFAULT	SCHEDULE_DEFAULT
DESCRIPTION	
WEEKLY_SCHEDULE	WEEKLY_SCHEDULE
EXCEPTION_SCHEDULE	EXCEPTION_SCHEDULE