

May 2015

## Novar RCC-1081 Case Controller Protocol Implementation Conformance Statement (PICS)

Topic: BACnet Protocol Implementation Conformance Statement (PICS)  
Revision Date: May 2015  
Version: 1.1.26  
Applicable Products: RCC-1081 - 10 Universal Inputs, 8 Relay Outputs, 1 Stepper Valve  
Driver Output  
Author: Novar

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# Novar RCC-1081 Case Controller

## Annex A - Protocol Implementation Conformance Statement

**Date:** May 2015

**Vendor ID:** 333

**Vendor Name:** Novar

**Product Name:** RCC-1081 - 10 Universal Inputs, 8 Relay Outputs, 1 Stepper Valve Driver

Product Model Number: RCC-1081

**Applications Software Version:** N/A

**Firmware Revision:** 1.1.26

**BACnet Protocol Revision:** 10

### Product Description and Intended Use:

The rcc-1081 is a BACnet application specific controller providing comprehensive, state-of-the-art, refrigeration control for display cases, cold rooms and freezers. The rcc-1081 case controller manages all case functions including lights, fans, defrost, anti-sweat heaters, cleaning shutdown, night blind setback and dual temp switchover in all types of mechanical systems. When used in Direct Expansion (DX) systems, the rcc-1081 will also manage Electronic Expansion Valve (EEV) superheat optimization assuring maximum coil energy efficiency is achieved.

### 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
<b>Device &amp; Network Management</b>	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-B	DM-DOB-B
	Device Communication Control-B	DM-DCC-B
	Reinitialize Device-B	DM-RD-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, 57.6k, 76.8k bps
- MS/TP slave (Clause 9), baud rate(s): 9.6k, 19.2k, 38.4k, 57.6k, 76.8k bps
- 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)
- 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.

- UTF-8
- 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	N	N	N
COMMAND	N	N	N
DEVICE	Y	N	N
EVENT_ENROLLMENT	N	N	N
FILE	Y	N	N
GROUP	N	N	N
LOOP	Y	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	N	N	N
PROGRAM	Y	N	N
SCHEDULE	N	N	N
TRENDLOG	N	N	N
ACCUMULATOR	Y	N	N
PULSE_CONVERTER	N	N	N

**Standard Objects and Properties Supported:**

**Analog Input Object:**

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

**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	
DESCRIPTION	

**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	UNITS
DESCRIPTION	
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	POLARITY
DESCRIPTION	
RELINQUISH_DEFAULT	
ACTIVE_TEXT	
INACTIVE_TEXT	

**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	POLARITY
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	
DESCRIPTION	
INACTIVE_TEXT	
ACTIVET_TEXT	

**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	
ACTIVE_TEXT	
INACTIVE_TEXT	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	

**Device Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	OBJECT_IDENTIFIER
OBJECT_NAME	OBJECT_NAME
OBJECT_TYPE	
SYSTEM_STATUS	
VENDOR_NAME	
VENDOR_IDENTIFIER	
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	
NUMBER_OF_APDU_RETRIES	
DEVICE_ADDRESS_BINDING	
DATABASE_REVISION	
MAX_MASTERS	MAX_MASTERS
MAX_INFO_FRAMES	
DESCRIPTION	DESCRIPTION
LOCATION	LOCATION
BAUD_RATE(6060)	
HEART_BEAT(6066)	HEART_BEAT(6066)
HARDWARE_REVISION(512)	
MANF_DATE_CODE(513)	
SERIAL_NUMBER(514)	
CASE_VENDOR_NAME(515)	CASE_VENDOR_NAME(515)
CASE_MODEL_DESCRIPTION(516)	CASE_MODEL_DESCRIPTION(516)
INSTALLED_LOCATION(517)	INSTALLED_LOCATION(517)
FUNCTION_PERFORMED(518)	FUNCTION_PERFORMED(518)
BOOTLOADER_VERSION(6063)	

**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	

**Loop Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	
OBJECT_TYPE	
PRESENT_VALUE	PRESENT_VALUE
STATUS_FLAG	
EVENT_STATE	
OUT_OF_SERVICE	OUT_OF_SERVICE
OUTPUT_UNITS	OUTPUT_UNITS
DESCRIPTION	
MANIPULATED_VARIABLE_REFERENCE	
CONTROLLED_VARIABLE_REFERENCE	
SETPOINT_REFERENCE	
CONTROLLED_VARIABLE_VALUE	
CONTROLLED_VARIABLE_UNITS	
SETPOINT	
ACTION	
PROPORTIONAL_CONSTANT	PROPORTIONAL_CONSTANT
PROPORTIONAL_CONSTANT_UNITS	
INTEGRAL_CONSTANT	INTEGRAL_CONSTANT
INTEGRAL_CONSTANT_UNITS	
DERIVATIVE_CONSTANT	DERIVATIVE_CONSTANT
DERIVATIVE_CONSTANT_UNITS	
MAXIMUM_OUTPUT	MAXIMUM_OUTPUT
MINIMUM_OUTPUT	MINIMUM_OUTPUT
PRIORITY_ARRAY	

**Multistate\_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
NUMBER_OF_STATES	
DESCRIPTION	
PRIORITY_ARRAY	
RELINQUISH_DEFAULT	
STATE_TEXT	

**Program Object:**

Readable Properties	Writable Properties
OBJECT_IDENTIFIER	
OBJECT_NAME	

OBJECT_TYPE	
PROGARM_STATE	
PROGRAM_CHANGE	PROGRAM_CHANGE
STATUS_FLAGS	
OUT_OF_SERVICE	OUT_OF_SERVICE
DESCRIPTION	

**Accumulator 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
SCALE	
UNITS	UNITS
MAX_PRES_VALUE	
DESCRIPTION	