

Protocol Implementation Conformance Statement (PICS)

Date: December 2023

Vendor Name: Schneider Electric

Product Name: SpaceLogic Touchscreen Room Controller

Product Model Number: TRC3500, TRC6500

Application Software Version: 2.0

Firmware Revision: 2.0

BACnet Protocol Revision: 24

BACnet Standardized Device Profile Supported: BACnet Application Specific Controller (B-ASC)

Product Description

The Touchscreen Room Controller is a sophisticated addition to the Schneider Electric™ product portfolio of room controllers. With rich, customizable features, the Touchscreen Room Controller enables significant energy savings with accurate temperature control in any space.

- Elegant style combinations, designed to complement any decor
- Touch screen interface, multi-language support, discreet occupancy sensor
- Advanced control technology for powerful performance
- Optimized automation features in a simple compact device
- Simple, quick, and cost-effective installation
- Built-in scalability and easy integration

The Touchscreen Room Controllers can be easily integrated into most building management systems (BMS). Remote monitoring and control of HVAC, lighting, and metering systems allow facility managers to ensure their building is always operating at peak performance.

BACnet Interoperability Building Blocks Supported

The BACnet communicating controller meets all requirements for designation as an Application Specific Controller (B-ASC). The BACnet controller supports the following BACnet Interoperability Building Blocks (BIBBs).

Note: The controller does not support segmented requests or responses

Application Service	Designation
Data Sharing-COV-B	DS-COV-B
Data Sharing – Read Property - B	DS-RP-B
Data Sharing – Read Property Multiple - B	DS-RPM-B
Data Sharing – Write Property - B	DS-WP-B
Data Sharing - Write Property Multiple Service - B	DS-WPM-B
Device Management - Time Synchronization - B	DM-TS-B
Device Management - Device Communication Control - B	DM-DCC-B
Device Management – Dynamic Device Binding - B	DM-DDB-B
Device Management – Dynamic Object Binding - B	DM-DOB-B
Scheduling-Internal-B	SCHED-I-B

→ Object Name: Touchscreen Room Controller (all models), Type & Instance: Device.

Object Property	Controller Parameter
ADPU Timeout, Property 10 (R)	ADPU timeout value – Default is 3000 ms
Application-Software-Version Property 12 (R)	Controller base application software version – Default is based on current released version
Database Revision, Property 155 (R)	Logical revision number for the device's database
Description Property 28 (R,W)	String of printable characters – (Same as “Long Screen Message” CSV2)
Firmware Revision, Property 44 (R)	Current BACnet® firmware revision used by controller
Local Date Property 56 (R)	Indicates date to best of device knowledge
Local Time Property 57 (R)	Indicated time of day best of the device knowledge
Location Property 58 (R,W)	String of printable characters – (Same as “Short Screen Message” CSV1)
Max ADPU Length, Property 62 (R)	Maximum ADPU Length accepted – Default is 480
Max_Master (R,W)	Maximum master devices allowed to be part of network – 0 to 127, default is 127
Model Name, Property 70 (R)	Controller model number
Number of APDU Retries 73 (RW)	Maximum number of times that an APDU shall be retransmitted
Object_Identifier, Property 75 (R,W)	Unique ID number of a device on a network
Object_Name, Property 77 (R,W)	Unique name of a device on a network
Profile Name 168 (R)	Name of an object profile to which this object conforms
Protocol Object Types Supported 96 (R)	Indicates which standardized object types can be present in this device

Object Property	Controller Parameter
Protocol Revision, Property 139 (R)	Current BACnet® firmware protocol revision – Default is Version 14
Protocol Services Supported 97 (R)	Indicates which standardized protocol services are executed by this device
Protocol Version, Property 98 (R)	Current BACnet® firmware protocol version – Default is Version 1
Segmentation Supported 107 (RW)	Segmentation not supported
System Status 112 (R)	Operating State of the device
Vendor Identifier 120, (R)	10
Vendor Name 121 (R)	Schneider Electric

Segment Capability

The device is not able to transmit or receive segmented messages.

Standard Object Types Supported:

NOTE for BACnet Priorities:

- 1-3: Written in eeprom memory, the value cannot be changed at the thermostat and will remain after a power-cycle. To release it, do a "Restore Factory default" or release via BACnet at same priority level.
Usage: System configuration parameters that should not be changed.
- 4-16: Written in ram memory, the values are lost after a power-cycle.
Usage: Active writes from LUA script and/or from a BMS.
- 17: Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle.
Usage: Temperature setpoints, fan-mode, system-mode, etc.

Analog Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input AI	Output AO	Values AV		
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) the physical input object represents is not in service
Read / Write*	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
Read Only	Read Only	Read Only	Reliability Property 103	Indicates if Present_Value is "reliable"
N/A	Read Only	Read / Write †	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read Only	Read Only	Read Only	Units Property 177	Indicates measurement units of Present_Value
N/A	Read / Write	Read / Write	Hight Limit Property 1101	Specifies a limit Present_Value must exceed before an event is generated
N/A	Read / Write	Read / Write	Low Limit Property 1100	Specifies a limit Present_Value must fall below before an event is generated
Read / Write	Read / Write	Read / Write	CoV Increment Property 22	Size of change that will generate a change of value notification

N/A = Not Applicable, property not used for objects of that type

* The Present_Value is only writeable when Out_Of_Service is TRUE.

† Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle. Usage: Temperature setpoints, fan-mode, system-mode, etc.

Binary Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input BI	Output BO	Values BV		
Read Only	Read Only	Read Only	Active Text Property 4	Characterizes intended effect of the ACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Inactive Text Property 46	Characterizes intended effect of INACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read Only	Read Only	N/A	Polarity Property 84	Indicates relationship between physical state of input and Present_Value
Read / Write	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
N/A	Read Only	Read / Write	Relinquish Default Property 104	Default value to be used for Present Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type

NOTE for BACnet Priorities:

- 1-3: Written in eeprom memory, the value cannot be changed at the thermostat and will remain after a power-cycle. To release it, do a "Restore Factory default" or from BACnet at same priority level.
Usage: System configuration parameters that should not be changed.
- 4-16: Written in ram memory, the values are lost after a power-cycle.
Usage: Active writes from LUA script and/or from a BMS.
- 17: Relinquish default, the values can be changed at the thermostat and will remain in the thermostat after a power-cycle.
Usage: Temperature setpoints, fan-mode, system-mode, etc.

Calendar Objects

Read/Write	Object Property	Controller Parameter
Read / Write	Date List Property 23	List of calendar entries.
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Present Value Property 85	This property is TRUE when current date matches an entry.

CSV Objects

Read/Write	Object Property	Controller Parameter
Read Only	Event State Property 36	Indicates object has an active event state associated with it
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

File Objects

Read/Write	Object Property	Controller Parameter
Read Only	Archive Property 13	Set to FALSE when the Modification_Date property changes for any reason. An archiving process to set the value of this property to TRUE when it completes.
Read Only	File Access Method Property 41	Indicates the type(s) of file access supported for this object. Supported: "1: Stream Access".
Read / Write	File Size Property 42	Indicates the size of the file data in octets. Writing a value of 0 erases file data contents.
Read Only	File Type Property 43	Identifies the intended use of this file
Read Only	Modification Date Property 71	Indicates the last time the underlying file data or File_Size of this object was modified
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	File type object
Read Only	Read Only Property 99	Whether FALSE or TRUE the file data may be changed through the use of the AtomicWriteFile service
Read Only	Profile Name Property 168	Name of an object profile to which this object conforms

Multi-State Objects

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Number of States Property 74	Defines number of states Present_Value may have
Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read / Write*	Read / Write	Present Value Property 85	Contains values of all properties specified

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
N/A	Read Only	Priority Array Property 87	Indicates relationship between physical state of input and Present_Value
N/A	Read / Write	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	State Text Property 110	Represents descriptions of all possible states of Present_Value
Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type

* The Present_Value is only writeable when Out_Of_Service is TRUE.

Program Objects

Read/Write	Object Property	Controller Parameter
Read Only	Description Property 28	String of printable characters whose content is not restricted. Contains up to 480 bytes of the LUA program script.
Read Only	Description Of Halt Property 29	Describes the reason why a program has been halted Text is also displayed in the HMI debug log
Read Only	Instance Of Property 48	Local name of the application program being executed by this process
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read Only	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the process this object represents is not in service
Write Only	Program Change Property 90	Used to request changes to the operating state of the program. Writing to property affects all 10 PG objects
Read Only	Program State Property 92	Current logical state of the PG objects executing application programs
Read Only	Reason For Halt Property 100	If program halts, this property reflects the reason for halt
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

Schedule Objects

Read/Write	Object Property	Controller Parameter
Read Only	Effective Period Property 32	Range of dates within which the Schedule object is active. All dates are in range, so always Effective
Read / Write	Exception Schedule Property 38	Sequence of schedule actions that takes precedence over normal behavior on a specific day or days. By default, this property refers to the calendar
Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Present Value Property 85	Contains the current value of the schedule (0:unoccupied, 1:occupied). Only writeable when Out Of Service is TRUE .
Read / Write	Out Of Service Property 81	Indicates whether (TRUE/FALSE) the internal calculations of the schedule object are used to determine the value of the Present Value property

Read/Write	Object Property	Controller Parameter
Read Only	Reliability Property 103	Indicates if Present Value is "reliable"
Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read / Write	Weekly Schedule Property 123	7 elements that describe the sequence of schedule actions for each day of the week
Read Only	Schedule Default Property 174	Default value to be used when no other scheduled value is in effect. Always Unoccupied

BACnet Data Link Layer Options

- ARCNET (ATA 878.1), 2.5 Mb. (Clause 8)
- ARCNET (ATA 878.1), EIA-485 (Clause 8), baud rate(s) _____
- BACnet IP, (Annex J)
- BACnet IP, (Annex J), BACnet Broadcast Management Device (BBMD)
- BACnet IP, (Annex J), Network Address Translation (NAT Traversal)
- BACnet IPv6, (Annex U)
- BACnet IPv6, (Annex U), BACnet Broadcast Management Device (BBMD)
- BACnet/ZigBee (Annex O) _____
- Ethernet, ISO 8802-3 (Clause 7)
- LonTalk, ISO/IEC 14908.1 (Clause 11), medium: _____
- MS/TP master (Clause 9)
 - Master Slave
 - Non-isolated transceiver Isolated transceiver
 - Local 47K ohms bias resistors None Other _____
 - Transceiver unit loading: 1 1/2 1/4 1/8
 - Data rates: 9600 19200 38400 57600 76800 115200
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
- Point-To-Point, modem, (Clause 10), baud rate(s): _____
- BACnet Secure Connect (Annex AB)
 - BACnet Secure Connect Node
 - If direct connections are supported:
 - Maximum number of simultaneous direct connections initiated: _____
 - Maximum number of simultaneous direct connections accepted: _____
 - BACnet Secure Connect Hub Function
 - Maximum number of simultaneous hub connections accepted: _____
 - HTTPS Proxy Support
 - List the types of HTTPS proxies supported: _____
 - Additional cipher suites supported beyond those required for TLS V1.3
 - The additional cipher suites supported using the cipher suite names as of the TLS Cipher Suite Registry at IANA (See RFC 8446):
 - _____
 - _____
 - Additional Transport Layer Security versions other than V1.3 supported
 - The TLS versions other than V1.3 that are supported, including the supported cipher suites for the version beyond those required, using the cipher suite names as defined by the TLS version supported:
 - _____
 - _____

- Generates private keys internally, and provides matching certificate signing requests.
- DNS host name resolution supported (RFC 1123)
- mDNS host name resolution supported (RFC 6762)

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 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP

Character Sets Supported

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

- ISO 10646 (UTF-8) IBM™/Microsoft™ DBCS ISO 8859-1
 ISO 10646 (UCS-2) ISO 10646 (UCS-4) JIS X 0208

Gateway Options

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

If this product is a communication gateway which presents a network of virtual BACnet devices, a separate PICS shall be provided that describes the functionality of the virtual BACnet devices. That PICS shall describe a superset of the functionality of all types of virtual BACnet devices that can be presented by the gateway.