Date: December 1, 2012

Vendor Name: Schneider Electric

Product Name: TAC I/A Series® G3 BACnet Integration

Product Model Number: ENC-4xx, ENC-5xx, ENC-SW-xx (for IP or Ethernet only); JACE models TRD-J-2xx, TRD-J-6xx, TRD-J-6xx-USA, TRD-J-6xxE, TRD-J-6xxE-USA, TRD-T-6xx, TRD-RB-6xx, TRD-T-7xx, TRD-NXS-xx (for IP or Ethernet only), TRD-NXT-xx (for IP or Ethernet only)

Application Software Version: 3.6.47

Firmware Revision: 3.6.47

BACnet Protocol Revision: 7

Product Description

TAC I/A Series G3 provides the ability to view, monitor, and control BACnet devices over IP, raw Ethernet, or MS/TP media. Devices, points, schedules, alarms, and logs can be learned and managed from TAC I/A Series G3. In addition, TAC I/A Series G3 points, schedules, histories, and alarming can be exposed in a BACnet system for monitoring and control by third-party BACnet clients.

BACnet Standardized Device Profile (Annex L)

☐ **BACnet Advanced Operator Workstation (B-AWS)**

☐ **BACnet Operator Workstation (B-OWS)**

☐ **BACnet Operator Display (B-OD)**

■ **BACnet Building Controller (B-BC)**

☐ **BACnet Advanced Application Controllers (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 in BACnet 2004)

DS-RP-A	DS-RP-B	DS-RPM-A	DS-RPM-B	DS-WP-A	DS-WP-B	DS-WPM-A
DS-WPM-B	DS-COV-A	DS-COV-B	DS-COVU-A	DS-COVU-B	DS-V-A	DS-M-A
DS-COVP-B	DM-DDB-A	DM-DDB-B	DM-DOB-A	DM-DOB-B	DM-DCC-B	DM-RD-B
DM-TS-B	DM-UTC-B	DM-LM-A	DM-LM-B	DM-BR-B	DM-ANM-A	DM-ADM-A
DM-ATS-A	DM-MTS-A	AE-N-A	AE-N-I-B	AE-ACK-A	AE-ACK-B	AE-ASUM-B
AE-ESUM-B	AE-INFO-B	AE-VN-A	AE-VM-A	T-VMT-I-B	T-VMT-E-B	T-ATR-A
T-ATR-B	T-V-A	SCHED-E-B	SCHED-I-B	SCHED-VM-A	NM-CE-A	

Segmentation Capability

■ **Able to transmit segmented messages**   **Window Size:** 10

■ **Able to receive segmented messages**   **Window Size:** Any

Printed in U.S.A.   6-13
F-27463-5

Standard Object Types Supported

- The CreateObject and DeleteObject services are not supported, so no objects are dynamically creatable or deletable through BACnet service requests, although these objects are dynamically creatable and deletable through TAC I/A Series G3.
- No general range restrictions exist; however, certain specific applications may have specific range restrictions.
- All potentially available properties are listed for each object type.
- Not all instances support all optional properties.
- For writable properties, any range limitations are expressed in parentheses following the property name.

Object Type	Required Properties	Optional Properties	Writable Properties
Analog Input	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Units	Description Device_Type Reliability Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Notify_Type
Analog Output	Object_Identifier OObject_Name bject_Type Present_Value Status_Flags Event_State Out_Of_Service Units Priority_Array Relinquish_Default	Description Device_Type Reliability Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Notify_Type
Analog Value	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Units	Description Reliability Priority_Array Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Notify_Type

Object Type	Required Properties	Optional Properties	Writable Properties
Binary Input	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Polarity	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count (0) Time_Of_State_Count_Reset Elapsed_Active_Time (0) Time_Of_Active_Time_Reset Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Inactive_Text Active_Text Change_Of_State_Count (0) Elapsed_Active_Time (0) Time_Delay Notification_Class Alarm_Value Notify_Type
Binary Output	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Polarity Priority_Array Relinquish_Default	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count (0) Time_Of_State_Count_Reset Elapsed_Active_Time (0) Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Inactive_Text Active_Text Change_Of_State_Count (0) Elapsed_Active_Time (0) Minimum_Off_Time Minimum_On_Time Relinquish_Default Time_Delay Notification_Class Notify_Type
Binary Value	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service	Description Reliability Inactive_Text Active_Text Change_Of_State_Time Time_Of_State_Count_Reset Elapsed_Active_Time (0) Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Inactive_Text Active_Text Change_Of_State_Count (0) Elapsed_Active_Time (0) Minimum_Off_Time Minimum_On_Time Relinquish_Default Time_Delay Notification_Class Alarm_Value Notify_Type
Calendar	Object_Identifier Object_Type Present_Value	Description	Object_Name Description Date_List

Object Type	Required Properties	Optional Properties	Writable Properties
Device	Object_Identifier Object_Name Object_Type System_Status Vendor_Name Vendor_Identifier Model_Name Firmware_Revision Application_Software_Revision 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	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Time_Synchronization_Recipients Max_Master Max_Info_Frames Configuration_Files Last_Restore_Time Backup_Failure_Timeout Active_COV_Subscriptions UTC_Time_Synchronization _Recipients Time_Synchronization_Interval Align_Intervals Interval_Offset proprietary-1338 proprietary-1339 proprietary-1340 proprietary-1341	Location Description Time_Synchronization_Recipients Backup_Failure_Timeout UTC_Time_Synchronization_Recipients Time_Synchronization_Interval Align_Intervals Interval_Offset
File (stream access only)	Object_Identifier Object_Name Object_Type File_Type File_Size[a] Modification_Date Archive Read_Only File_Access_Method	Description	Object_Name Description File_Size [a] Archive
Loop	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Output_Units Manipulated_Variable_Reference Controlled_Variable_Reference Controlled_Variable_Value Controlled_Variable_Units Setpoint_Reference Setpoint Action Priority_For_Writing	Description Reliability Proportional_Constant Proportional_Constant_Units Integral_Constant Integral_Constant_Units Derivative_Constant Derivative_Constant_Units Bias Maximum_Output Minimum_Output COV_Increment Time_Delay Notification_Class Error_Limit Deadband Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service Setpoint[b] Proportional_Constant Integral_Constant Derivative_Constant Bias Maximum_Output Minimum_Output COV_Increment Time_Delay Error_Limit Deadband
Multistate Input	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Number_Of_States	Description Device_Type Reliability State_Text Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service State_Text Time_Delay Notification_Class Alarm_Values Notify_Type

Object Type	Required Properties	Optional Properties	Writable Properties
Multistate Output	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Number_Of_States Priority_Array Relinquish_Default	Description Device_Type Reliability State_Text Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service State_Text Relinquish_Default Time_Delay Notification_Class Notify_Type
Multistate Value	Object_Identifier Object_Name Object_Type Present_Value Status_Flags Event_State Out_Of_Service Number_Of_States	Description Reliability State_Text Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Out_Of_Service State_Text Relinquish_Default Time_Delay Notification_Class Alarm_Values Notify_Type
Notification Class	Object_Identifier Object_Name Object_Type Notification_Class Priority Ack_Required Recipient_List[c]	Description	Object_Name Description Priority Ack_Required Recipient_List[c]
Schedule	Object_Identifier Object_Name Object_Type Present_Value Effective_Period Schedule_Default List_Of_Object_Property _References[d] Priority_For_Writing[e] Status_Flags Reliability Out_Of_Service	Description Weekly_Schedule Exception_Schedule	Object_Name Description Effective_Period Weekly_Schedule Exception_Schedule Schedule_Default List_Of_Object_Property_References[d] Priority_For_Writing[e] Out_Of_Service
Trend Log	Object_Identifier Object_Name Object_Type Log_Enable[f] Stop_When_Full Buffer_Size Log_Buffer Record_Count (0)[f] Total_Record_Count Event_State Logging_Type Status_Flags	Description Start_Time Stop_Time Log_DeviceObjectProperty Log_Interval[f] Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps	Object_Name Description Log_Enable[f] Start_Time Stop_Time Log_Interval[f] Record_Count (0)[f] Notification_Class Notify_Type
Structured View	Object_Identifier Object_Name Object_Type Node_Type Subordinate_List	Description Node_Subtype Subordinate_Annotations	Object_Name Description

a. The File_Size property of File objects is only writable if the underlying system file is changeable.

b. The Setpoint property of Loop objects is writable only if the setpoint is not linked from within TAC I/A Series G3.

c. The Recipient_List property of the Notification Class object maintains entries that are internally configured within TAC I/A Series G3.

d. The List_Of_Object_Property_References property of the Schedule object maintains entries that are internally configured within TAC I/A Series G3.

e. The Priority_For_Writing property of Schedule objects is not important for internal TAC I/A Series G3 operation, as the priority at which a point is commanded is determined by the input to which the Schedule output is linked.

f. These Trend Log object properties are not writable if the backing history for the exported Trend Log was generated by TAC I/A Series G3. If the history is created as a BACnet Trend Log, then they are writable.

Data Link Layer Options

■ **BACnet IP, (Annex J)**

   ■ **Able to register as a Foreign Device**

■ **ISO 8802-3, Ethernet (10BASE5, 10BASE2, 10BASET, Fiber) (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):** 9600, 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 – List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.:**

Ethernet-BACnet/IP, Ethernet-MS/TP, MS/TP-BACnet/IP

☐ **Annex H.3, BACnet Tunneling Router over UDP/IP**

■ **BACnet/IP Broadcast Management Device (BBMD)**

Does the BBMD support registrations by Foreign Devices?   ■ Yes   ☐ No

☐ **MS/TP Slave Proxy**

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	■ ISO 8859-1
■ ISO 10646 (UCS-2)	☐ ISO 10646 (ICS-4)	☐ JIS C 6226

Non-BACnet Equipment and Network(s) Supported

If this product is a communication gateway, describe the non-BACnet equipment and network(s) that the gateway supports:

This product supports communications between BACnet and any third-party system to which TAC I/A Series G3 can connect. Contact Schneider Electric Product Support for a list of supported protocols.

Schneider Electric   1354 Clifford Avenue, P.O. Box 2940, Loves Park, IL 61132-2940, USA   1-888-444-1311   www.schneider-electric.com/buildings

F-27463-5   June 2013   tl

Schneider Electric