



BACnet Protocol Implementation Conformance Statement

Products

Product	Model Number	Protocol Revision	Software Version	Firmware Version
MACH-ProSys Building Controller	MPS, MPS-H	135-2004	7.11	7.11

Vendor Information

Reliable Controls Corporation
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Product Description

The MACH-ProSys™ building controller is a powerful central-point DDC controller designed to support multiple BACnet® LAN communication technologies simultaneously through 5 ports: IEEE 802.3 (Ethernet), 2 BACnet/IP, EIA-232 (PTP), and 1 EIA-485 (MS/TP). The MACH-ProSys has 12 inputs and 8 outputs and supports 7 expansion modules that contain 84 inputs and 56 outputs. This flexible and powerful controller also supports up to sixteen Reliable Controls® SMART-Sensors™.

BACnet Standardized Device Profile

Product	Device Profile	Tested
MPS	BACnet Building Controller (B-BC)	

Supported BIBBs

Supported BIBBs	BIBB Name
DS-RP-A	Data Sharing-ReadProperty-A
DS-RP-B	Data Sharing-ReadProperty-B
DS-RPM-A	Data Sharing-ReadPropertyMultiple-A
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B
DS-WP-A	Data Sharing-WriteProperty-A
DS-WP-B	Data Sharing-WriteProperty-B
DS-WPM-B	Data Sharing-WritePropertyMultiple-B
AE-N-A	Alarm and Event-Notification-A
AE-N-I-B	Alarm and Event-Notification Internal-B
AE-ACK-B	Alarm and Event-ACK-B
AE-ASUM-B	Alarm and Event-Alarm Summary-B
AE-ESUM-B	Alarm and Event-Enrollment Summary-B
AE-INFO-B	Alarm and Event-Information-B
SCHED-I-B	Scheduling-Internal-B
SCHED-E-B	Scheduling-External-B
T-VMT-I-B	Trending-Viewing and Modifying Trends Internal-B
T-VMT-E-B	Trending-Viewing and Modifying Trends External-B
T-ATR-B	Trending-Automated Trend Retrieval-B
DM-DDB-A	Device Management-Dynamic Device Binding-A
DM-DDB-B	Device Management-Dynamic Device Binding-B
DM-DOB-B	Device Management-Dynamic Object Binding-B
DM-DCC-B	Device Management-Device Communication Control-B
DM-PT-B	Device Management-Private Transfer-B
DM-PT-A	Device Management-Private Transfer-A
DM-TS-A	Device Management-Time Synchronization-A
DM-TS-B	Device Management-Time Synchronization-B
DM-UTC-A	Device Management-UTCTimeSynchronization-A
DM-UTC-B	Device Management-UTCTimeSynchronization-B
DM-ATS-A	Device Management-Automatic Time Synchronization-A
DM-RD-B	Device Management-Reinitialize Device-B
DM-BR-B	Device Management-Backup and Restore-B
DM-OCD-B	Device Management-Object Creation and Deletion-B
NM-RC-B	Network Management-Router Configuration-B

Segmentation Capability

Segmentation Type	Supported	Window Size (MS/TP product limited to 1)
Able to transmit segmented messages	Yes	1
Able to receive segmented messages	Yes	1

Standard Object Types Supported

Object Type	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties
Analog Input	Yes	Yes	Description, Reliability, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Analog Output	Yes	Yes	Description, Reliability, Relinquish_Default, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, Relinquish_Default, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Analog Value	Yes	Yes	Description, Reliability, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, Units, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Binary Input	Yes	Yes	Description, Reliability, Active_Text, Inactive_Text, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Change_Of_State_Time, Change_Of_State_Count, Time_Of_State_Count_Reset, Elapsed_Active_Time, Time_Of_Active_Time_Reset	Object_Name, Present_Value, Description, Out_Of_Service, Inactive_Text, Active_Text, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Notify_Type
Binary Output	Yes	Yes	Description, Reliability, Active_Text, Inactive_Text, Time_Delay, Notification_Class, Feedback_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Relinquish_Default, Change_Of_State_Time, Change_Of_State_Count, Time_Of_State_Count_Reset, Elapsed_Active_Time, Time_Of_Active_Time_Reset	Object_Name, Present_Value, Description, Out_Of_Service, Inactive_Text, Active_Text, Relinquish_Default, Time_Delay, Notification_Class, Event_Enable, Notify_Type
Binary Value	Yes	Yes	Description, Reliability, Active_Text, Inactive_Text, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps, Change_Of_State_Time, Change_Of_State_Count, Time_Of_State_Count_Reset, Elapsed_Active_Time, Time_Of_Active_Time_Reset	Object_Name, Present_Value, Description, , Out_Of_Service, Inactive_Text, Active_Text, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Notify_Type

Calendar	Yes	Yes	Description	Object_Name, Description, Date_List
File	No	No	Record_Count	File_Size, Record_Count
Loop	Yes	Yes	Description, Reliability, Proportional_Constant, Proportional_Constant_Units, Integral_Constant, Integral_Constant_Units, Derivative_Constant, Derivative_Constant_Units, Bias, Time_Delay, Notification_Class, Error_Limit, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, Manipulated_Variable_Reference, Controlled_Variable_Reference, Setpoint_Reference, Proportional_Constant, Integral_Constant, Derivative_Constant, Bias, Time_Delay, Notification_Class, Error_Limit, Event_Enable, Notify_Type
Multi-State Output	Yes	Yes	Description, Reliability, State_Text, Time_Delay, Notification_Class, Feedback_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, State_Text, Relinquish_Default, Time_Delay, Notification_Class, Feedback_Value, Event_Enable, Notify_Type
Multi-State Value	Yes	Yes	Description, Reliability, State_Text, Time_Delay, Notification_Class, Alarm_Values, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Description, Out_Of_Service, State_Text, Alarm_Values, Time_Delay, Notification_Class, Feedback_Value, Event_Enable, Notify_Type
Notification Class	Yes	Yes	Description	Object_Name, Description, Priority, Ack_Required, Recipient_List
Program	Yes	Yes	Reliability	Program_Change, Out_Of_Service
Schedule	Yes	Yes	Description, Weekly_Schedule, Exception_Schedule	Object_Name, Present_Value, Description, Effective_Period, Weekly_Schedule, Exception_Schedule, Schedule_Default, List_Of_Object_Property_References, Priority_For_Writing, Out_Of_Service
Trend Log	Yes	Yes	Description, Start_Time, Stop_Time, Log_DeviceObjectProperty, Log_Interval, Notification_Threshold, Records_Since_Notification, Last_Notify_Record, Notification_Class, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Description, Log_Enable, Start_Time, Stop_Time, Log_DeviceObjectProperty, Log_Interval, Stop_When_Full, Buffer_Size, Record_Count, Total_Record_Count, Notification_Threshold, Notification_Class, Event_Enable, Notify_Type

Device	No	No	Location, Description, Max_Segments_Accepted, Local_Time, Local_Date, APDU_Segment_Timeout, Time_Synchronization_Recipients, Max_Master, Max_Info_Frames, Configuration_Files, UTC_Offset, Last_Restore_Time, Backup_Failure_Timeout, Daylight_Savings_Status	Object_Name, Description, Location, Backup_Failure_Timeout, Number_Of_APDU_Retries, APDU_Timeout, UTC_Offset, APDU_Segment_Timeout, Time_Synchronization_Recipients
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Data Link Layer Options

Data Link	Options
Ethernet (ISO 8802-3)	
BACnet/IP1	
BACnet/IP2	
MS/TP-Net Master	9600, 19200, 38400, 76800
AUX-Net (MS/TP) Master	9600, 19200, 38400, 76800
Point-To-Point	9600, 19200, 38400, 57600, 115200

Device Address Binding

Static Binding Supported
No

Networking Options

Router Options
BACnet/IP1 <-> BACnet/IP2
BACnet/IP1 <-> Ethernet
BACnet/IP2 <-> Ethernet
BACnet/IP1 <-> MS/TP-Net
BACnet/IP1 <-> PTP
BACnet/IP2 <-> MS/TP-Net
BACnet/IP2 <-> PTP
Ethernet <-> MS/TP-Net
Ethernet <-> PTP
MS/TP-Net <-> PTP

BACnet/IP Broadcast Management Device (BBMD)
Yes, Supports Registration by Foreign Devices

Character Sets

Character Sets supported
ANSI X3.4