

# BACnet® Protocol Implementation Conformance Statement

## Products

Product Name	Model #	Protocol Revision	Software Version	Firmware Version	Tested
MACH-ProSys	MP-S, MP-S-H	14	8.08	8.08	✓

## Vendor Information

Reliable Controls Corporation  
120 Hallowell Road  
Victoria, B.C. Canada  
V9A 7K2  
[www.reliablecontrols.com](http://www.reliablecontrols.com)

## Product Description

With its onboard I/O, the Reliable Controls® MACH-ProSys™ takes the MACH-ProCom™ higher, reaching the apex of control as a fully programmable, Internet-connected, BACnet Building Controller (B-BC) ideal for large rooftop equipment, large mechanical rooms, and multi-building applications. The MACH-ProSys provides high speed 10/100 Ethernet, SMART-Net communications, 12 inputs and 8 outputs, and protocol support for BACnet®, and Modbus RTU and TCP (both master and slave). Additional points are added to the MACH-ProSys using convenient MACH-ProPoint™ expansion modules. Up to 7 MACH-ProPoint expansion modules can be added to each MACH-ProSys controller.

# BACnet® Protocol Implementation Conformance Statement

Model #	Product Name
MP-S	MACH-ProSys

## BACnet Standard Device Profile

Product	Device Profile
MACH-ProSys™	BACnet Building Controller (B-BC)

## Segmentation Capability

Segmentation	Supported	Window Size
Able to transmit segmented messages	Yes	8
Able to receive segmented messages	Yes	8

## Data Link Layer Options

Data Link	Options
Ethernet (ISO 8802-3)	
BACnet/IP	x 2
MS/TP Master	9600, 19200, 38400, 76800
Point-To-Point	9600, 19200, 38400, 57600, 115200

## Device Address Binding

Static Binding Supported	No
--------------------------	----

## Broadcast Capability

BACnet/IP Broadcast Management Device (BBMD)
Yes, supports registration by foreign devices.

## Networking Options

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

## Character Sets

Character Sets Supported	UTF-8
--------------------------	-------

## 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
DS-COV-A	Data Sharing-COV-A
DS-COV-B	Data Sharing-COV-B
DS-COVU-A	Data Sharing-COV-Unsolicited-A
DS-COVU-B	Data Sharing-COV-Unsolicited-B
AE-N-I-B	Alarm and Event-Notification Internal-B
AE-N-E-B	Alarm and Event-Notification External-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
T-VMMV-I-B	Trending-Viewing & Modifying Multiple Value Internal-B
T-VMMV-E-B	Trending-Viewing & Modifying Multiple Value External-B
T-AMVR-B	Trending-Automated Multiple Value 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-ATS-A	Device Management-Automatic Time Synchronization-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-RD-B	Device Management-Reinitialize Device-B
DM-BR-B	Device Management-Backup and Restore-B
DM-R-B	Device Management-Restart-B
DM-LM-B	Device Management-List Manipulation-B
DM-OCD-B	Device Management-Object Creation and Deletion-B
NM-RC-B	Network Management-Router Configuration-B

Supported Standard Object Types

Object Type	Dynamic Creation	Dynamic Deletion	Optional Properties Supported	Write Properties
Device	No	No	Local Time, Local Date, UTC Offset, Max Master, Max Info Frames, Description, APDU Segment Timeout, Daylight Savings Status, Max Segments Accepted, Configuration Files, Last Restore Time, Backup Failure Timeout, Time Synchronization Recipients, UTC Time Synchronization Recipients, Time Synchronization Interval, Interval Offset, Align Intervals, Last Restart Reason, Time Of Device Restart, Restart Notification Recipients, Active COV Subscriptions, Location	UTC Offset, Max Info Frames, Object Name, Description, APDU Segment Timeout, APDU Timeout, Number Of APDU Retries, Backup Failure Timeout, Time Synchronization Recipients, UTC Time Synchronization Recipients, Time Synchronization Interval, Interval Offset, Align Intervals, Restart Notification Recipients, Location
Analog Input	Yes	Yes	COV Increment, Description, Event Enable, Reliability, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, COV Increment, Object Name, Units, Description, Event Enable, Out Of Service, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Analog Output	Yes	Yes	COV Increment, Description, Event Enable, Reliability, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, COV Increment, Object Name, Description, Event Enable, Out Of Service, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Analog Value	Yes	Yes	Priority Array, Relinquish Default, COV Increment, Description, Event Enable, Reliability, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, COV Increment, Object Name, Description, Event Enable, Out Of Service, Units, High Limit, Low Limit, Deadband, Limit Enable, Time Delay, Notification Class, Notify Type, Acked Transitions Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Binary Input	Yes	Yes	Description, Event Enable, Reliability, Inactive Text, Active Text, Elapsed Active Time, Change Of State Count, Change Of State Time, Time Of State Count Reset, Time Of Active Time Reset, Alarm Value, Time Delay, Notification Class, Notify Type, Acked Transitions, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Object Name, Description, Event Enable, Out Of Service, Inactive Text, Active Text, Alarm Value, Polarity, Time Delay, Notification Class, Notify Type, Acked Transitions, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Binary Output	Yes	Yes	Minimum Off Time, Minimum On Time, Description, Reliability, Event Enable, Inactive Text, Active Text, Time Delay, Elapsed Active Time, Change Of State Count, Change Of State Time, Time Of State Count Reset, Time Of Active Time Reset, Notification Class, Feedback Value, Acked Transitions, Notify Type, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, Minimum Off Time, Minimum On Time, Object Name, Description, Event Enable, Out Of Service, Inactive Text, Active Text, Elapsed Active Time, Time Delay, Polarity, Feedback Value, Notification Class, Notify Type, Acked Transitions, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Binary Value	Yes	Yes	Priority Array, Relinquish Default, Minimum Off Time, Minimum On Time, Description, Event Enable, Reliability, Inactive Text, Active Text, Elapsed Active Time, Change Of State Count, Change Of State Time, Time Of State Count Reset, Time Of Active Time Reset, Alarm Value, Time Delay, Notification Class, Notify Type, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, Minimum Off Time, Minimum On Time, Object Name, Description, Event Enable, Out Of Service, Inactive Text, Active Text, Elapsed Active Time, Alarm Value, Time Delay, Notification Class, Acked Transitions, Notify Type, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config

Object Type	Dynamic Creation	Dynamic Deletion	Optional Properties Supported	Write Properties
Multi-State Output	Yes	Yes	Description, Reliability, Event Enable, State Text, Time Delay, Notification Class, Feedback Value, Acked Transitions, Notify Type, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, Object Name, Description, Event Enable, Out Of Service, State Text, Time Delay, Notification Class, Feedback Value, Acked Transitions, Notify Type, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Multi-State Value	Yes	Yes	Priority Array, Relinquish Default, Description, Event Enable, Reliability, State Text, Time Delay, Notification Class, Alarm Values, Fault Values, Acked Transitions, Notify Type, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Relinquish Default, Object Name, Description, Event Enable, Out Of Service, State Text, Number Of States, Time Delay, Notification Class, Alarm Values, Fault Values, Acked Transitions, Notify Type, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Program	Yes	Yes	Description, Reliability	Object Name, Description, Out Of Service, Program Change
Loop	Yes	Yes	Proportional Constant, Integral Constant, Derivative Constant, COV Increment, Reliability, Bias, Description, Proportional Constant Units, Integral Constant Units, Derivative Constant Units, Time Delay, Notification Class, Error Limit, Deadband, Event Enable, Acked Transitions, Notify Type, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Present Value, Proportional Constant, Integral Constant, Derivative Constant, COV Increment, Object Name, Out Of Service, Output Units, Controlled Variable Reference, Setpoint, Setpoint Reference, Action, Bias, Description, Manipulated Variable Reference, Priority For Writing, Proportional Constant Units, Integral Constant Units, Derivative Constant Units, Time Delay, Notification Class, Error Limit, Deadband, Event Enable, Acked Transitions, Notify Type, Event Time Stamps, Time Delay Normal, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
File	No	No	Record Count	File Size, Record Count
Notification Class	Yes	Yes	Description	Priority, Ack Required, Recipient List, Object Name, Description
Schedule	Yes	Yes	Weekly Schedule, Exception Schedule, Description	Present Value, Priority For Writing, Object Name, Weekly Schedule, Out Of Service, Effective Period, Exception Schedule, Schedule Default, Description, List Of Object Property References
Trend Log	Yes	Yes	Log Device Object Property, Records Since Notification, Notification Threshold, Last Notify Record, Stop Time, Client COV Increment, Event Enable, Reliability, Log Interval, Trigger, Start Time, Notification Class, Acked Transitions, Notify Type, Event Time Stamps, Description, Interval Offset, Align Intervals, COV Resubscription Interval, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Buffer Size, Log Device Object Property, Notification Threshold, Last Notify Record, Object Name, Stop Time, Client COV Increment, Stop When Full, Enable, Event Enable, Logging Type, Log Interval, Trigger, Start Time, Notification Class, Acked Transitions, Notify Type, Description, Interval Offset, Align Intervals, COV Resubscription Interval, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Trend Log Multiple	Yes	Yes	Records Since Notification, Notification Threshold, Last Notify Record, Event Enable, Reliability, Start Time, Trigger, Stop Time, Notification Class, Acked Transitions, Notify Type, Event Time Stamps, Description, Interval Offset, Align Intervals, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Buffer Size, Log Device Object Property, Notification Threshold, Last Notify Record, Enable, Event Enable, Start Time, Log Interval, Trigger, Stop Time, Stop When Full, Notification Class, Acked Transitions, Notify Type, Object Name, Description, Interval Offset, Align Intervals, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Event Enrolment	Yes	Yes	Description, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config	Object Property Reference, Event Parameters, Object Name, Event Enable, Notify Type, Event Type, Notification Class, Acked Transitions, Description, Event Algorithm Inhibit, Event Algorithm Inhibit Ref, Event Detection Enable, Event Message Text Config
Calendar	Yes	Yes	Description	Present Value, Object Name, Description, Date List
Global Group	Yes	Yes	Description	Object Name, Description, Group Members, Out Of Service