

BACnet Protocol Implementation Conformance Statement

Products

Product	Model Number	Protocol Revision	Software Version	Firmware Version
MACH-Global Building Controller	MG	135-2004	6.51	6.51

Vendor Information

Reliable Controls Corporation
 120 Hallowell Road
 Victoria, B.C. Canada
 VV9A 7K2
www.reliablecontrols.com

Product Description

The MACH-Global™ building controller is a powerful central-point DDC controller designed to support multiple BACnet® LAN communication technologies simultaneously through seven ports: 1-IEEE 802.3 (Ethernet), 1-BACnet/IP, 2-EIA-232 (PTP), and 3-EIA-485 (MS/TP). This flexible and powerful controller also supports up to 128 universal input/output hard points directly on board using a combination of eight modular 16-point expansion cards. In addition the MACH-Global™ supports up to sixteen Reliable Controls® SMART-Sensors™ LCDs.

BACnet Standardized Device Profile

Product	Device Profile	Tested
MG	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-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
AE-N-A	Alarm and Event-Notification-A
AE-N-I-B	Alarm and Event-Notification Internal-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-DCC-B	Device Management-Device Communication Control-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-OCD-B	Device Management-Object Creation and Deletion-B
DM-PT-B	Device Management-Private Transfer-B
DM-PT-A	Device Management-Private Transfer-A
DM-RD-B	Device Management-Reinitialize Device-B
DM-TS-A	Device Management-Time Synchronization-A
DM-TS-B	Device Management-Time Synchronization-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	No	No	Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Analog Output	No	No	Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Analog Value	Yes	Yes	Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, High_Limit, Low_Limit, Deadband, Limit_Enable, Event_Enable, Notify_Type
Binary Input	No	No	Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Notify_Type
Binary Output	No	No	Time_Delay, Notification_Class, Feedback_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, Event_Enable, Notify_Type
Binary Value	Yes	Yes	Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Acked_Transitions, Notify_Type, Event_Time_Stamps	Object_Name, Present_Value, Out_Of_Service, Time_Delay, Notification_Class, Alarm_Value, Event_Enable, Notify_Type
Calendar	Yes	Yes		Object_Name, Date_List
Multi-State Output	No	No		Object_Name, Present_Value, Out_Of_Service
Notification Class	Yes	Yes		Object_Name, Priority, Ack_Required, Recipient_List
Schedule	Yes	Yes	Weekly_Schedule. Exception_Schedule	Object_Name, Present_Value, Effective_Period, Weekly_Schedule, Exception_Schedule, Schedule_Default, List_Of_Object_Property_References, Priority_For_Writing, Out_Of_Service

Trend Log	Yes	Yes	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, Log_Enable, Stop_When_Full, Record_Count,
Device	No	No	Max_Segments_Accepted, Local_Time, Local_Date, Time_Synchronization_Recipients, Max_Master, Max_Info_Frames	Number_Of_APDU_Retries, APDU_Timeout, APDU_Segment_Timeout, Time_Synchronization_Recipients , Max_Info_Frames

Data Link Layer Options

Data Link	Options
Ethernet (ISO 8802-3)	
BACnet/IP	
MS/TP1 Master	9600, 19200, 38400, 76800
MS/TP2 Master	9600, 19200, 38400, 76800
MS/TP3 Master	9600, 19200, 38400, 76800
Point-To-Point 1	9600, 19200, 38400, 57600
Point-To-Point 2	9600, 19200, 38400, 57600

Device Address Binding

Static Binding Supported
No

Networking Options

Router Options
BACnet/IP <-> Ethernet
BACnet/IP <-> MS/TP1
BACnet/IP <-> MS/TP2
BACnet/IP <-> MS/TP3
BACnet/IP <-> PTP1
BACnet/IP <-> PTP2
Ethernet <-> MS/TP1
Ethernet <-> MS/TP2
Ethernet <-> MS/TP3
Ethernet <-> PTP1
Ethernet <-> PTP2
MS/TP1 <-> MS/TP2
MS/TP1 <-> MS/TP3
MS/TP1 <-> PTP1
MS/TP1 <-> PTP2
MS/TP2 <-> MS/TP3
MS/TP2 <-> PTP1
MS/TP2 <-> PTP2
MS/TP3 <-> PTP1
MS/TP3 <-> PTP2
PTP1 <-> PTP2

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

Character Sets

Character Sets supported
ANSI X3.4