

BACnet Protocol Implementation Conformance Statement

Products

Product	Model Number	Protocol Revision	Software Version	Firmware Version
MACH-ProLight Advanced Lighting Controller	MPL	16	8.02	8.02

Vendor Information

Reliable Controls Corporation 120 Hallowell Road Victoria, B.C. Canada V9A 7K2 www.reliablecontrols.com

Product Description

Empower your facility managers to integrate lighting controls into the MACH-System™ using the MACH-ProLight lighting controller, and save energy while achieving OpenADR and Title 24 compliance. The MACH-ProLight is a freely programmable and scalable BTL-listed device, providing 0-10 V continuous dimming and BACnet® BLO object support. This allows you to implement advanced control strategies such as daylight harvesting, dim-to-off control, vacancy control, plug-load control, and scene/theme control. Compatible with standard lighting-control relays, low-voltage peripherals, EnOcean® wireless products, and the Reliable Controls SPACE-Sensor™ and SMART-Net™ products, the MACH-ProLight conveniently ships in preassembled, UL 508A listed control panels, or as individual components, and will illuminate your building's operational efficiency, today and tomorrow.

BACnet Standardized Device Profile

Product	Device Profile	Tested
MPL-44U, MPL-48U, MPL-88U, MPL-48R, MPL-416R, MPL-816R, MPL-88GE	BACnet Building Controller (B-BC), BACnet Lighting Device (B-LD)	X

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

Supported BIBBs	BIBB Name
DS-COVU-A	Data Sharing-COV-Unsolicited-A
DS-COVU-B	Data Sharing-COV-Unsolicited-B
DS-BLO-B	Data Sharing-Binary Lighting Output-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-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 and Modifying Multiple Value Internal-B
T-VMMV-E-B	Trending-Viewing and 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-UTC-A	Device Management-UTCTimeSynchronization-A
DM-TS-B	Device Management-Time Synchronization-B
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

Segmentation Capability

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

Standard Object Types Supported

Object Type	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable 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,	UTC_Offset, Max_Info_Frames, Object_Name, Description, APDU_Segment_Timeout,

			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	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 Lighting Output	Yes	Yes	Description, Reliability, Elapsed_Active_Time, Time_Of_Active_Time_Reset	Present_Value, Relinquish_Default, Object_Name, Description, Out_Of_Service, Blink_Warn_Enable, Egress_Time, Feedback_Value, Elapsed_Active_Time

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, Chage_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
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, Integratl_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,	Buffer_Size, Log_Device_Object_Property, Notification_Threshold, Last_Notify_Record, Object_Name, Stop_Time, Client_COV_Increment,

			Description, Interval_Offset, Align_Intervals, COV_Resubscription_Interval, Event_Algorithm_Inhibit, Event_Algorithm_Inhibit_Ref, Event_Detection_Enable, Event_Message_Text_Config	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

Data Link Layer Options

Data Link	Options
MS/TP-Net Master	9600, 19200, 38400, 76800

Device Address Binding

Static Binding Supported
No

Character Sets

Character Sets supported
UTF-8