



Access and control your facility easily and cost-effectively from the internet using the Reliable Controls MACH-ProWebSys™ building controller. The MACH-ProWebSys combines a BTL Listed BACnet Building Controller (B-BC) with a web-ready BACnet Operator Workstation (B-OWS) in a single package no larger than a typical controller. Unlock the built-in workstation and web server to lower capital expenditures by the need for dedicated client software and ongoing IT server maintenance. Every MACH-ProWebSys can control hundreds of sensors and actuators using standard protocol networks. Backed by the industry-recognized Reliable Controls 5-year warranty and designed to remain backward compatible with previous-generation systems, the MACH-ProWebSys provides lasting value for generations.

Project:	Dealer Information:  EMS Energy Management Systems (Pvt) Ltd.
Engineer:	
Approved by:	

PRODUCT FEATURES

Protocols

- BACnet:
 - Supports one B/SN connection with RC-RemoteAccess®.
 - Supports two BACnet/IP subnetworks.
 - Ethernet, MS/TP, and PTP.
 - Maximum 75 devices on a BACnet/IP network, including host.
- DHCP: Dynamic Host Configuration Protocol.
- OpenADR.
- Internet Data Services.
- Modbus:
 - Supports Modbus RTU and TCP/IP communications.
 - Can act as a Modbus client for up to 128 server devices or as a Modbus server device.
- SMTP: Simple Mail Transfer Protocol.
 - Provides standard email communications for broadcasting email alarms.
 - Supports TLS/SSL security.
- SNMP: Simple Network Management Protocol.
- SNTP: Simple Network Time Protocol.
- SMART-Net™.

1,024 Values

- Select standard and custom ranges as well as fixed program-driven values.

64 Calendars

- Designate days of the year as holidays.

64 System Groups

- Group related objects on one display.
- 320 unique objects per group.

Inputs and Outputs

- 12 universal inputs.
- Eight onboard outputs. Outputs 1–4 are wired to unpopulated sockets; outputs 5–8 are universal.
- Add up to seven MACH-ProPoint™ expansion modules to accommodate an additional 180 inputs or 120 outputs. MACH-ProWebSys smoke control models are expandable only with MACH-ProPoint Input/Output smoke control modules.

128 Schedules

- Up to 7 on/off cycles for each weekday or exception.

20 Tables

- For creating custom scaling functions.

128 Programs

- Freely programmable control strategy in a readable, BASIC-like language.
- 3,200 bytes per program.

128 Loops

- Standard P, PI, or PID controllers for closed loop control.

129 Notification Classes

- Specify alarm configuration broadcast destination and email recipients.

128 Arrays

- Up to 128 elements in a one-dimensional array.

Runtime Report

- Total the on time and record the on/off times of every binary object.
- Automatically generated.

PRODUCT FEATURES

Single-point Trend Logs

- Record values at user-defined intervals or based on change of value.
- Dynamic; user assigned.

Multipoint Trend Logs

- Store up to eight objects in each trend log.
- Record values at user-defined intervals.
- Dynamic; user assigned.

SMART-Net Port

- Network up to 16 SMART-Net devices.

Real-Time Clock

BACnet File Services

- When enabled in RC-Studio 3.6.1 or later, the controller serves as a repository for storing and distributing resource files in the MACH-ProWeb Resource Manager.

1,536 Net Ins

- The maximum number of shares from other devices.

512 Net Outs

- The maximum number of writes to other devices.

24 Custom Units

- Eight analog engineering units.
- Eight binary units.
- Eight multistate units with eight states.

Warranty

- 5 years.

TECHNICAL SPECIFICATIONS

Processor

- 147 MHz high-performance 32-bit embedded microcontroller.

Supply Voltages

- 24 VAC $\pm 10\%$ 75 VA maximum, 50/60 Hz.
- 24 VDC $\pm 10\%$ 25 W maximum.

Peripheral Power

- Onboard variable 15–24 VDC power supply provides up to 200 mA of DC power to peripheral devices. If powered with 24 VDC, the maximum voltage output is 22 VDC.

Memory

- 8 MB operating RAM.
- 2 MB nonvolatile RAM for trends and dynamic values.
- 256 MB Flash EEPROM operating system, database, JavaScript, graphics, and controller configuration.

Communication Options

- One IEEE 802.3 (Ethernet 10/100BASE-T).
- Two EIA-485 ports that support a baud rate of up to 76.8 kbps.
- One EIA-232 port that supports a baud rate of up to 115.2 kbps. PC or modem.
- One SMART-Net port that supports up to 16 devices on a SMART-Net network.

TECHNICAL SPECIFICATIONS

Onboard Inputs

- 12 universal inputs.
- 12-bit A/D converter.
- Analog: 0–10 VDC, 4–20 mA, thermistor.
- Binary: Dry contact.
- Impedance:
 - 1 MΩ for 0–10 VDC range.
 - 250 Ω for 4–20 mA range.
 - 20 kΩ pull-up for thermistor/dry contact range.
- Pulse counting up to 150 Hz. Supports flow meters.
- 24 VAC overvoltage protection.

Expansion Modules

- Add up to seven MACH-ProPoint™ expansion modules to accommodate an additional 168 inputs or 112 outputs. MACH-ProWebSys smoke control modules are expandable only with MACH-ProPoint Input/Output smoke control modules.

Wiring Terminals

- 12–22 AWG (3.31 mm² to 0.33 mm²).
- Stranded or solid core.
- Copper conductors only.

Certifications

- BTL Listed (B-OWS).
- BTL Listed (B-BC).
- UL 916 Listed.*
*MACH-ProWebSys smoke control models are also UL 864 Listed.
- FCC CFR 47 Part 15 Class B.
- CE.
- WEEE.

Onboard Outputs

- 12 bit D/A converter.
- First four outputs have sockets to accommodate relay, TRIAC, or universal modules. Output modules sold separately.
- Four universal outputs.
- Analog: 0–12 VDC.
- Binary: Software-configurable between 0–12 VDC.
- Manual on provides adjustable 0–12 VDC for Hand/Off/Auto switches.
- LED indicator glows proportionally.
- Output power: 75 mA at 12 VDC.
- 24 VAC overvoltage and short protection.

Real-Time Clock

- ±1 second per day.

Memory/RTC Backup

- 72-hour backup.
- 10 years for database.

Dimensions

- 25.4 cm L x 13.7 cm W x 3.9 cm H
(10" L x 5 3/8" W x 1 1/2" H).

Weight

- 1.3 kg (2.7 lb).

Ambient Limits

- Operating: -20°C to 55°C (-4°F to 131°F).
- Shipping: -40°C to 60°C (-40°F to 140°F).
- Humidity: 10%–90% RH noncondensing.

Mounting

- #8 clearance holes on 23 cm L x 11.0 cm W
(9 1/16" L x 4 5/16" W).
- Screw depth 25 mm (1").

ORDERING

Models

MPW-S

- MACH-ProWebSys.

MPW-S-SMK

- MACH-ProWebSys UL 864 Listed for use in smoke control systems.

Options

- -H adds HOA switches.

Related Products

MPW-B

- MACH-ProWeb browser user interface (BUI). Must be unlocked before use.

Accessories

MP-DINRAIL

- Two-piece adapter kit to mount controller on a 35 x 7.5 mm (1 6/16" x 5/16" top hat DIN rail. DIN rail not included.

MPP-IO

- MACH-ProPoint Input/Output expansion module.

MPP-IO-SMK

- MACH-ProPoint Input/Output expansion module UL 864 Listed for use in smoke control systems.

MPP-IO-H

- MACH-ProPoint Input/Output expansion module with HOA switches.

MPP-IO-H-SMK

- MACH-ProPoint Input/Output expansion module with HOA switches UL 864 Listed for use in smoke control systems.

Accessories

MPP-I

- MACH-ProPoint Input expansion module.

MPP-I-B

- MACH-ProPoint Binary Input expansion module.

MPP-I-DL-LASER

- MACH-ProPoint Input expansion module door label sheet for laser printer.

MPP-O

- MACH-ProPoint Output expansion module.

MPP-O-H

- MACH-ProPoint Output expansion module with HOA switches.

MPP-O-DL-LASER

- MACH-ProPoint Output expansion module door label sheet for laser printer.

RM

- Package of 10 relay output modules.

TM

- Package of 10 TRIAC output modules.

UM

- Package of 10 universal output modules.

SS-RJ11TB-B

- RJ11 to six-pole terminal block base.

SS-RJ11TB-C

- RJ11 to six-pole terminal block cable; 30 cm (1 ft).

SNX

- SMART-Net Expansion Board.

ORDERING

Accessories

MPP-IO-U

- MACH-ProPoint Input/Output Universal expansion module.

MPP-IO-U-H

- MACH-ProPoint Input/Output Universal expansion module with HOA switches.

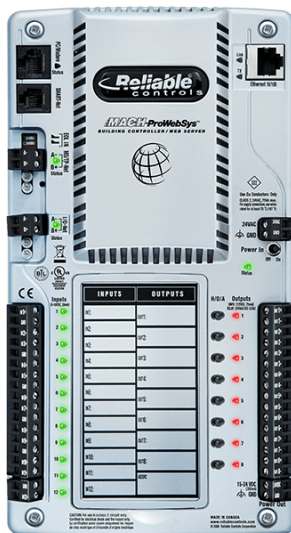
MPP-IO-DL-LASER

- MACH-ProPoint Input/Output expansion module door label sheet for laser printer.

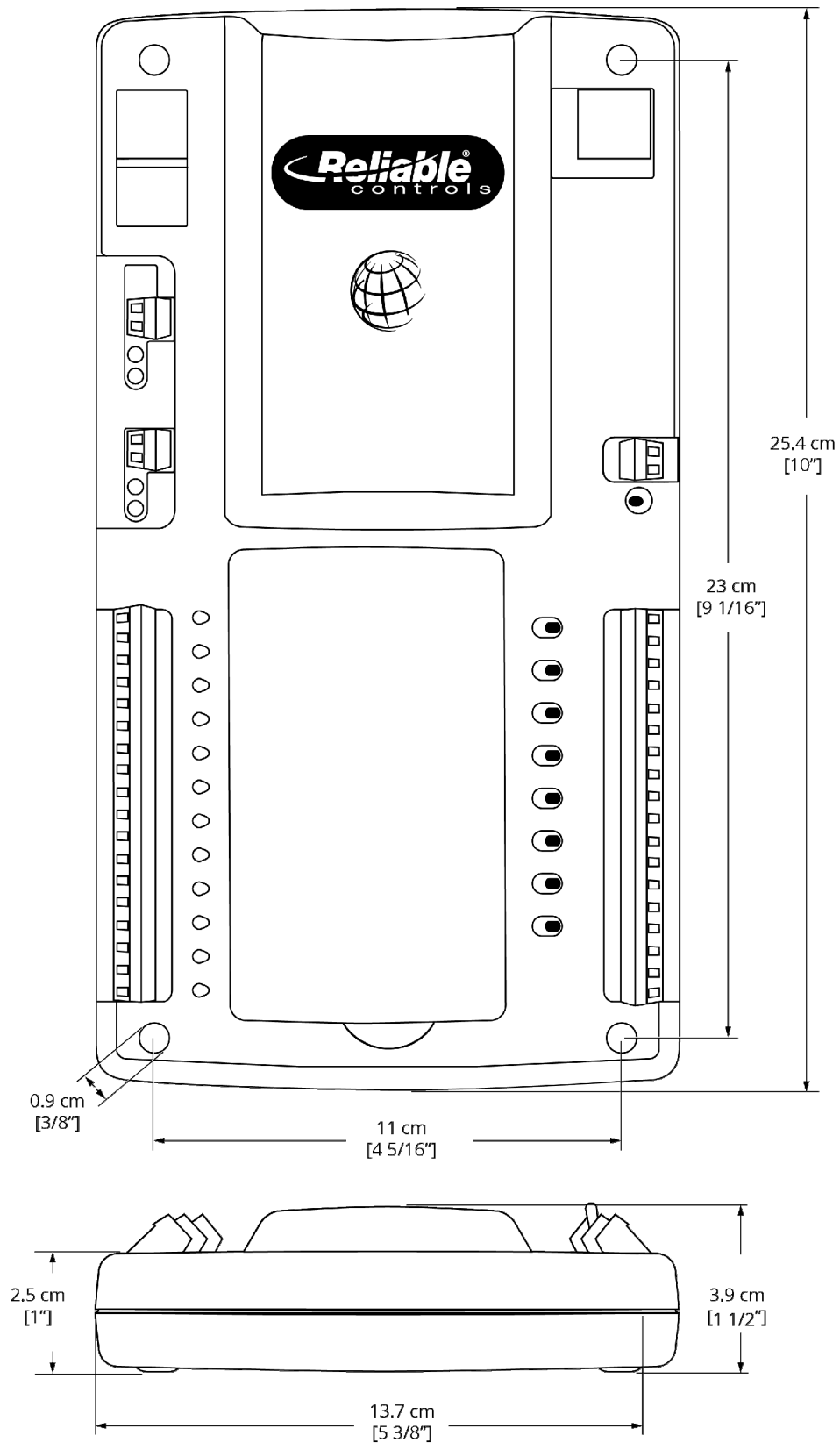
Build Your Order

The order number for a controller with HOA switches is MPW-S-H or MPW-S-H-SMK, depending which model you choose.

PRODUCT IMAGES



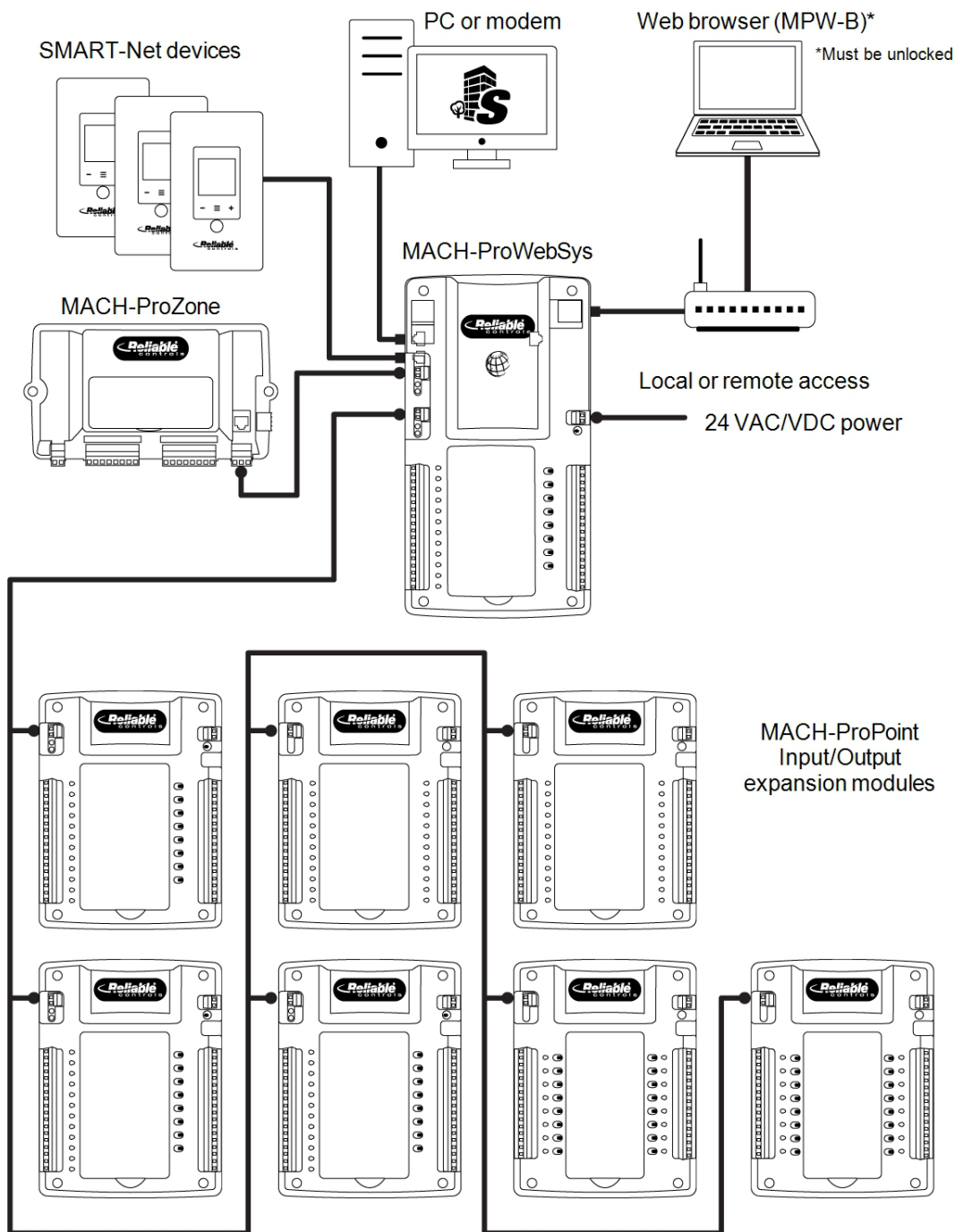
DIMENSIONS



DIAGRAMS

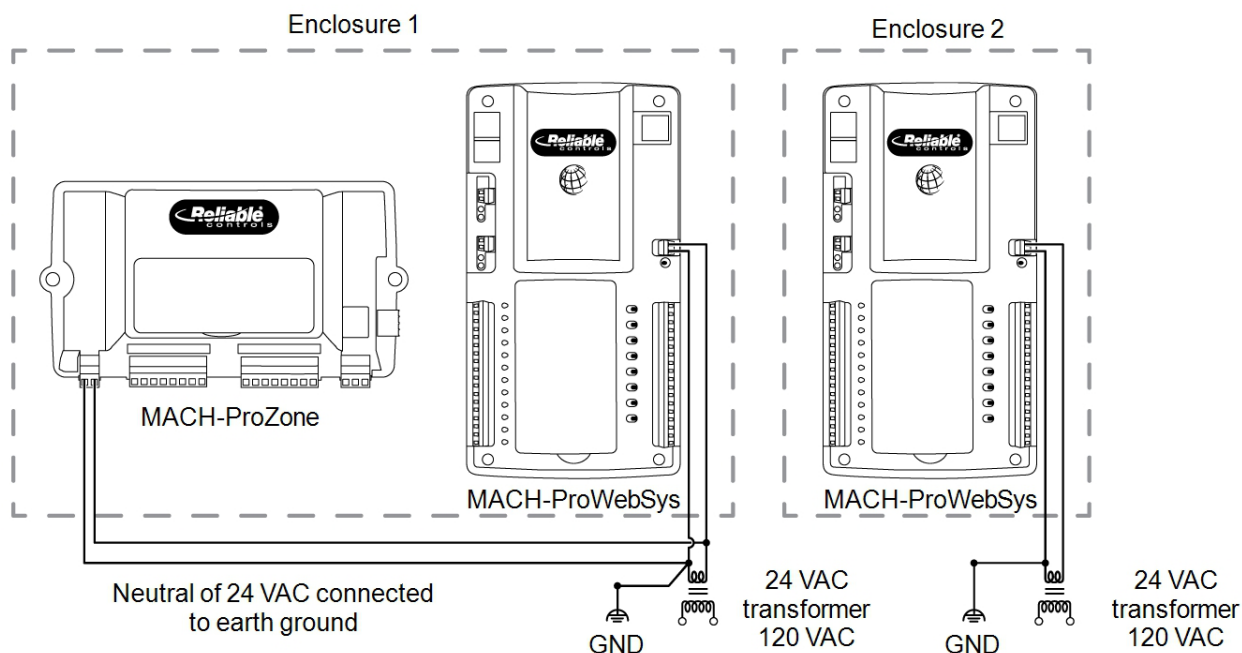
Network diagram

Connect up to seven MACH-ProPoint expansion modules of any mix with a maximum of 192 inputs or 128 outputs per controller. Daisy chain expansion modules to the controller's AUX-Net port in any order.



DIAGRAMS

Power wiring diagram



Network wiring diagram

