



With its extensive network routing ability to multiple open protocols, highly scalable inputs and outputs, and small size, the Reliable Controls MACH-ProCom™ achieves an optimum balance between form and function. This freely programmable internet-connected BACnet Building Controller (B-BC) is ideal for large mechanical rooms and multibuilding applications.

The MACH-ProCom provides high-speed 10/100BASE-T Ethernet and SMART-Net communications, expandable inputs and outputs, and protocol support for BACnet, SMTP, and client and server Modbus RTU and TCP. Add points to the MACH-ProCom using up to eight convenient MACH-ProPoint™ expansion modules.

Project:	Dealer Information:
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 100 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.

20 Tables

- For creating custom scaling functions.

128 Programs

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

Runtime Report

- Total the on time and record the on/off times of every binary object.
- Dynamically assigned.

Inputs and Outputs

- Add up to eight MACH-ProPoint expansion modules.
- 192 possible inputs.
- 128 possible outputs.

1,024 Values

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

128 Loops

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

128 Schedules

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

64 Calendars

- Designate days of the year as holidays.

64 System Groups

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

Multipoint Trend Logs

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

Single-point Trend Logs

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

128 Arrays

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

PRODUCT FEATURES

128 User Passwords

- Protect access to the system.
- Assign each user with a username and access level.

SMART-Net Port

- Network up to 16 SMART-Net devices.

1,536 Net Ins

- The maximum number of shares from other devices.

Warranty

- 5 years.

24 Custom Units

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

512 Net Outs

- The maximum number of writes to other devices.

Real-Time Clock

TECHNICAL SPECIFICATIONS

Processor

- Cortex-M7 700 MHz-32-bit microcontroller.

Supply Voltages

- 24 VAC $\pm 10\%$ 20 VA maximum, 50/60 Hz.
- 24 VDC $\pm 10\%$ 4 W maximum.

Expansion Modules

- Add up to eight MACH-ProPoint expansion modules.

Real-Time Clock

- ± 1 second per day.

Memory/RTC Backup

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

Dimensions

- 15.2 cm L x 13.7 cm W x 3.9 cm H
(5 15/16" L x 5 3/8" W x 1 1/2" H).

Memory

- 64 MB operating RAM.
- 2 MB nonvolatile RAM for trends and dynamic values.
- 4 MB Flash EEPROM operating system, database, and controller configuration.

Communication Options

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

Wiring Terminals

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

TECHNICAL SPECIFICATIONS

Mounting

- #8 clearance holes on 12.7 cm L x 11.0 cm W (5" L x 4 5/16" W).
- Screw depth 25 mm (1").

Certifications

- BTL Listed (B-BC).
- UL 916 Listed.
- FCC CFR 47 Part 15 Class B.
- CE.
- WEEE.

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.

Weight

- 0.25 kg (0.6 lb).

ORDERING

Models

MP-C

- MACH-ProCom.

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-H

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

MPP-IO-U

- MACH-ProPoint Input/Output Universal expansion module.

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).

ORDERING

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.

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.

SNX

- SMART-Net Expansion Board.

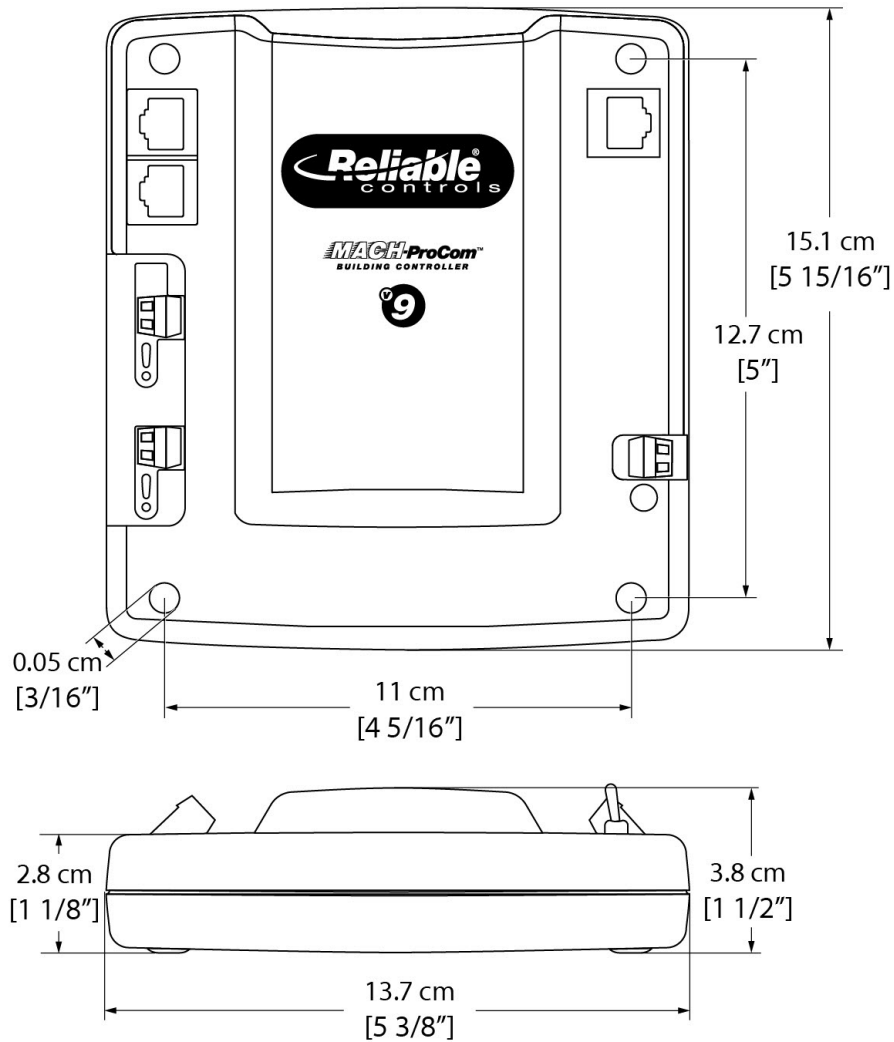
SSX

- SMART-Sensor Expansion Board.

PRODUCT IMAGES



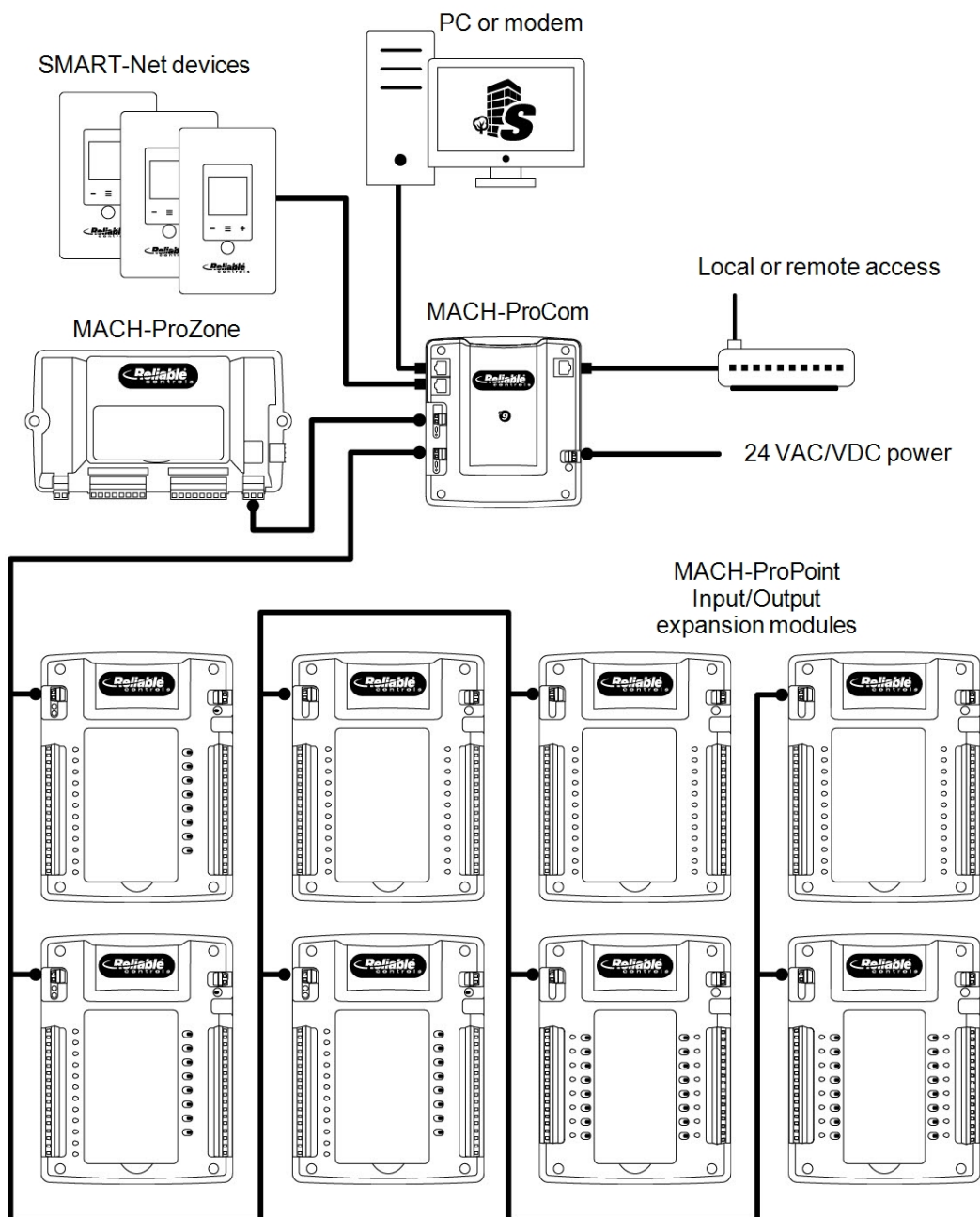
DIMENSIONS



DIAGRAMS

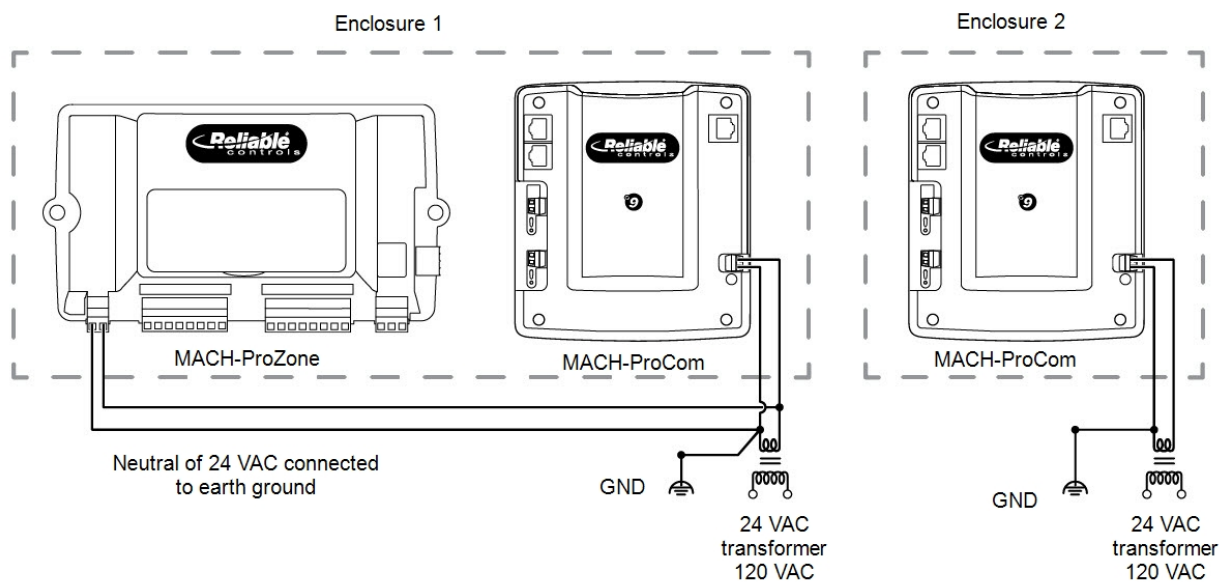
Network diagram

Connect up to eight 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

