

MACH-ProCom™

BACnet® Controller

**Reliable**<sup>®</sup>  
controls

## Optimum form and function

With its extensive network routing ability to multiple open protocols, and its highly scalable I/O and small footprint, the Reliable Controls® MACH-ProCom™ achieves an optimum balance between form and function. This fully programmable, Internet-connected, BACnet Building Controller (B-BC) is ideal for large mechanical rooms and multi-building applications.



**5 year**  
Warranty

Better by design

ISO  
9001  
14001  
QUALITY  
MANAGEMENT  
ASSURANCE

Member of  
**BACnet**<sup>®</sup>  
International



UL  
LISTED  
OPEN ENERGY  
MANAGEMENT  
EQUIPMENT  
69DM

[www.reliablecontrols.com/MPC](http://www.reliablecontrols.com/MPC)

## TECH SPECS

### Processor

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

### Memory

- 8 MB operating RAM
- 1 MB non-volatile RAM (trends and dynamic values)
- 4 MB Flash EEPROM operating system, database, and controller configuration

### Supply Voltages

- 24 VAC ±10% 20 VA max. 50/60 Hz
- 24 VDC ±10% 4 W max.

### Communications

- IEEE 802.3 Ethernet 10/100 BaseT
- 2 EIA-485 @ 76.8 kbps max.
- 1 EIA-232 @ 115.2 kbps max. PC or modem
- SMART-Net port @ 16 sensors max.

### Expansion Modules

- Up to 8 MACH-ProPoint expansion modules

### Real-Time Clock

- ± 1 second per day

### Memory/RTC Backup

- 72 hour backup
- 10 years for database

### Wiring Terminals

- 12 to 22AWG (3.31 mm<sup>2</sup> to 0.33 mm<sup>2</sup>)
- Stranded or solid core
- Copper conductors only

### Dimensions

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

### Mounting

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

### Weight

- 0.25 kg (0.6 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% to 90% RH non-condensing

## FEATURES

### Protocol

- BACnet
  - B/IP x 2, Ethernet, MS/TP x 2, and PTP
- DHCP
  - Dynamic Host Configuration Protocol
- Modbus
  - Supports both RTU and TCP communications in slave mode and master mode with up to 128 slave devices
- SMTP
  - Provides standard email communications for broadcasting email alarms
  - Supports TLS/SSL security
- SNMP
  - Simple Network Management Protocol
- SNTP
  - Simple Network Time Protocol

### Inputs and Outputs

- Up to 8 MACH-ProPoint expansion modules
- Maximum possible inputs of 192
- Maximum possible outputs of 128

### 1024 Variables

- Selectable standard and custom ranges, as well as fixed program-driven values

### 128 PID Loops

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

### 128 Schedules

- 14 On/Off times for each weekday or exception

### 32 Calendars

- Days of the year designated as holidays

### 20 Custom Tables

- For creating custom scaling functions

### 64 System Groups

- Allows related points to be grouped onto one display
- 160 points/group

### 128 Control-BASIC™ Programs

- User programmable control strategy in a readable, BASIC-like language
- 3200 bytes per program

### Trend Logs

- Each Trend Log stores up to 8 points
- Values recorded at user-defined intervals
- Dynamically assigned

### Runtime Logs

- Totals the On time and records the On/Off times of every binary point
- Dynamically assigned

### 128 Variable Arrays

- Up to 128 elements in a one-dimensional array

### 128 User Passwords

- Protects access to system
- Each user is assigned a user name and an access level

### Custom Units

- 8 analog engineering units
- 8 binary units
- 8 multistate units with 8 states, 30 characters each

### SMART-Net™ Port

- Networks up to 16 SMART-Sensors™

### 1536 Network In Points

### 512 Network Out Points

- The total maximum number of writes and shares to other devices

### Real-Time Clock

### Warranty

- 5 years

### Certification

- BTL Listed (B-BC)
- UL 916 Listed
- FCC CFR 47 Part 15/B
- CE

## ORDERING

### MP-C

- MACH-ProCom controller

### Accessories

#### MP-DINRAIL

- Two-piece adapter kit to mount controller onto 35 mm x 7.5 mm top hat DIN rail. DIN rail not included

#### MPP-IO

- MACH-ProPoint I/O expansion module with 12 universal inputs and 8 outputs

#### MPP-IO-H

- MPP-IO with HOA (Hand/Off/Auto) switches and potentiometer overrides for each output

#### MPP-IO-U

- MACH-ProPoint I/O expansion module with 12 universal inputs and 8 universal outputs

#### MPP-IO-U-H

- MPP-IO-U with HOA (Hand/Off/Auto) switches and potentiometer overrides for each output

#### MPP-IO-DL

- Door label sheet for MP-S, MP-S-H, MPW-S, MPW-S-H, MPP-IO, MPP-IO-H, MPP-IO-U, and MPP-IO-U-H

#### MPP-I

- MPP Input expansion module with 24 universal inputs

#### MPP-I-DL

- Door label sheet for MPP-I

#### MPP-O

- MACH-ProPoint Output expansion module with 16 universal outputs

#### MPP-O-H

- MPP-O with HOA (Hand/Off/Auto) switches and potentiometer overrides for each output

#### MPP-O-DL

- Door label sheet for MPP-O

#### SS-RJ11TB-B,

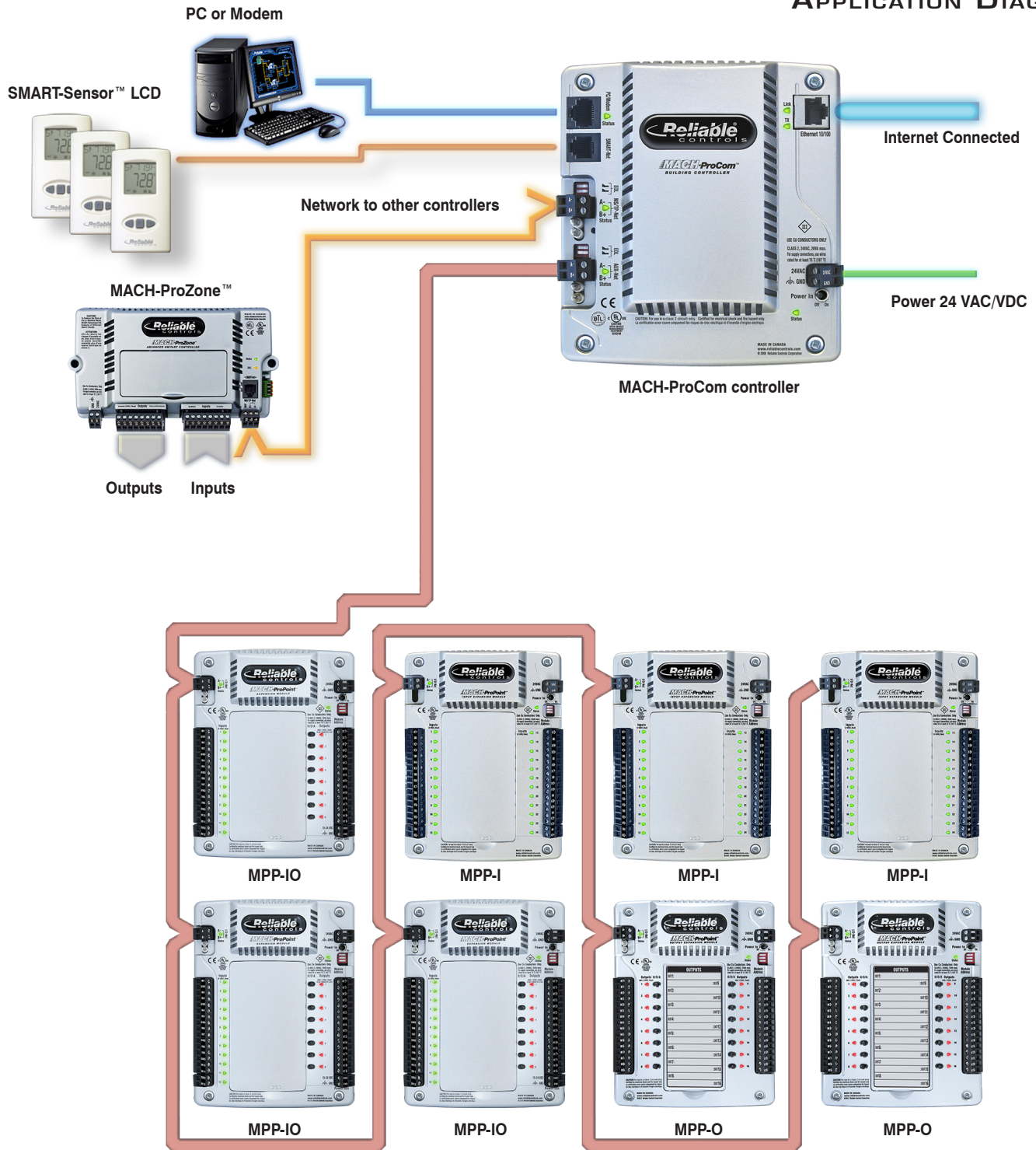
#### SS-RJ11TB-C

- SMART-Net breakout connector RJ-11 to terminal block

#### SS-X

- SMART-Sensor Network Expansion Board

**APPLICATION DIAGRAM**



Connect up to 8 MACH-ProPoint expansion modules of any mix with a maximum input count of 192, and a maximum output count of 128 per controller. Expansion modules are daisy-chained to the AUX-Net port of the controller in any combination.

Dealer Information: