

Flexible unitary zoning

Small, durable and packed with flexibility, the Reliable Controls[®] MACH-Zone[™] is a fully programmable BACnet Application Specific Controller (B-ASC) ideal for small roof-top and heatpump applications.



Better by design

www.reliablecontrols.com/MZ

Tech Specs

Processor

- 25 MHz, high-performance, 16-bit embedded microcontroller

Memory

- 32k RAM
- 128k Flash EEPROM operating system firmware and controller configurations
- Minimum 10 year retention

Supply Voltages

- 24 VAC/VDC, 24 VA max.

Communications

- EIA-485 @ 76.8 kbps max.
- SMART-Net™ (4 SMART-Sensors™ max.)

SETUP-Tool™

- SETUP-Tool™ required for configuration

Universal Inputs

- 4 universal inputs
- 10-bit A/D converter
- Analog: 0–5 VDC, 4–20 mA, thermistor
- Digital: dry contact
- Impedance:
 - 15k Ω on 0-5 VDC range
 - 250 Ω on 4-20 mA range
 - 10k Ω on thermistor range
- 24 VAC over-voltage protection

Universal Outputs

- 8 bit D/A converter
- Analog: 0–12 VDC
- Digital: 0–12 VDC
- Output power: 75 mA @ 12 VDC
- 40 Hz pulse counting (supports flow meters)
- 24 VAC over-voltage and short protection

TRIAC Outputs

- 24 VAC @ 0.5 A
- Common return

Dimensions

- 17 cm L x 9 cm W x 4.2 cm H (6 11/16" L x 3 1/2" W x 1 11/16" H)

Mounting

- #8 clearance holes on 15.7 cm L x 6.6 cm W (6 3/16" L x 2 5/16" W)

Weight

- 0.3 kg (1.0 lb.)

Ambient Limits

- Operating: -20 °C to 55 °C (-4 °F to 131 °F)
- Shipping: -20 °C to 60 °C (-4 °F to 140 °F)
- Humidity: 10% to 90% RH non-condensing

Features

Protocol

- BACnet®
 - MS/TP (EIA-485)
- Reliable Controls Protocol
 - Network (EIA-485/Token Bus)

4 Control-BASIC™ Programs

- User programmable control strategy in a readable, BASIC-like language
- 2000 bytes per program

4 Inputs

- Universal ranges
 - Jumper selectable 0–5 VDC, 4–20 mA, thermistor / dry contact

4 Outputs

- Universal ranges (base model)
- Scalable 0–12 VDC, 75 mA max.
- Single stage TRIAC
- Dual stage TRIAC

48 Variables

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

4 PID Loops

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

2 Trend Logs

- Each Trend Log stores 72 samples of 6 points at programmable time intervals

4 Runtime Logs

- Totals the On time and records the On/Off times of a digital point
- Holds 48 samples

2 System Groups

- Allows related points to be grouped onto one display 50 points/group

1 Weekly Schedule

- 4 On/Off times for each weekday and 2 override days

1 Annual Schedule

- Days of the year designated as holidays

5 Custom Tables

- For creating custom input ranges and Control-BASIC™ lookup tables

SMART-Net™ Port

- Networks up to 4 SMART-Sensors™

32 Network In Points

32 Network Out Points

Warranty

- 5 years

Certification

- BTL Listed (B-ASC)
- ISO 16484-5
- UL916 Listed
- FCC CFR 47 Part 15 Class B
- UUKL Listed

Ordering

MZ-U (base model)

- MACH-Zone™ controller with 4 universal inputs and 4 universal outputs

MZ-4T

- Base model with 4 TRIAC outputs

MZ-RT

- Base model with 1 universal output, 1 single stage TRIAC, and 2 dual stage TRIAC

(Add "-SMK" to order # for UUKL models)

APPLICATION DIAGRAM

