



MR-AHU-HP

Application Specific Controller

I/NET[®] Seven

Both the MR-AHU and MR-HP controllers are application specific controllers (ASCs). The intention of the design is to reduce "total install cost" through pre-engineered control algorithms and simplified installation requirements.

The MR-AHU controller provides sufficient applications flexibility to address multiple air handling unit (AHU) configurations. It is designed to operate in a stand-alone configuration or, with the support of a communications network, as an integral part of a comprehensive building automation system. Also the MR-HP controller provides sufficient applications flexibility to address multiple heat pump (HP) configurations. It is designed to operate in a stand-alone configuration or, with the support of a communications network, as an integral part of a comprehensive building automation system.

- Plug-on terminals for a thermostat, communications, power, and four external inputs.
- Plug-on terminals for six external outputs.
- A 12-position DIP switch for setting up initial application/equipment configurations.
- Indicator lamps for output status, communications, power, and self-test.



Installation guide: MR-HP TCON161
Installation sheet: MR-HP TCON162

Pocket guide: MR-HP TCON163

Installation guide: MR-AHU TCON153
Installation sheet: MR-AHU TCON154

Pocket guide: MR-AHU TCON158

TECHNICAL DATA

Communication Ports:

- Sub-LAN port
 - Baud Rate 9,600
 - Protocol Proprietary
 - Transport RS 485 multi-drop asynchronous, polling (open or closed loop) dual redundant
 - Connector 2-part screw terminal

Network Wiring Requirements:

- Length 5,000 feet per segment
- Extended Length 25,000 feet with repeaters
- Connector 2-part screw terminal
- Cable Type Belden 9184 or equivalent twisted pair shielded
- Cable Size <22AWG
- Impedance 85 to 150 Ohm
- Capacitance >30pF/ft between conductors and >55pF/ft conductor to shield

Hardware Details:

- Processor Zilog Z86193
- EPROM 32KB
- Static RAM 464Bytes
- Non-volatile Memory . 4096Bytes

Physical Details:

- Metal Baseplate 4.3" W ´ 8" L x 2.4" H & Cover
- Din Rail Mounting PC/ABS plastic rated UL94-VO on base
- Operating 32°F to 122°F Temperature
- Operating 10-90% RH, Non-condensing Humidity
- Power 24Vac, ±10%, 50/60Hz, 8VA, Requirements plus Triac load, 4 amp fused

Input Details:

- May be either thermistor or discrete contacts per the following*
- Standard Quantity 4
- Connector 2-part screw terminal
- Analog Inputs
 - Range 25°F to 113°F 10K ohm NTC thermistor (Dale 1M1002-C3)
 - Accuracy 1%
 - Resolution4% Span
 - Filtering A/D digital filtering: median value filter and 60 Hz notch filter
 - Calibration Factory-set in NOVRAM, field adjustable, 5 individual pairs.

TECHNICAL DATA

Digital Inputs

Contact Excitation 5v @ 5ma
 Input Duration2 second minimum

I/STAT Port Details:

Space Sensor input .. Supports I/STAT, Slide Stat or
 10K ohm NTC thermistor
 (Dale 1M1002-C3)

Accuracy 1° F
 Resolution32° F @ 77° F

Digital Output Details:

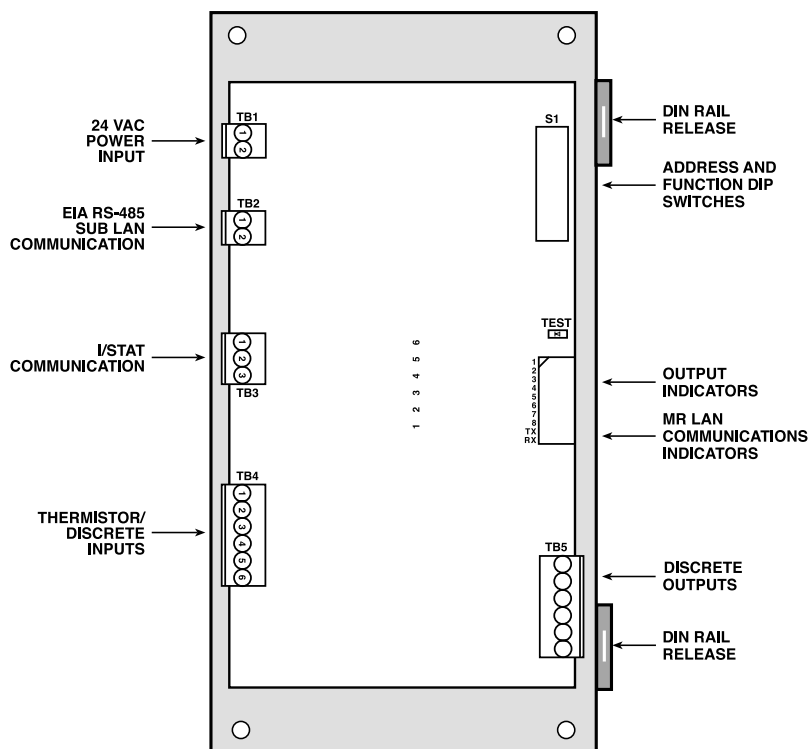
Standard Quantity 6
 Style Low Voltage Triac
 (voltage sourcing)
 Rating 24 VAC @ 0.5 A each
 (3 A maximum)
 Connector 2-part screw terminal
 Operation Mode 2-position, 3-state floating,
 time proportional modulation
 Connector 2-part screw terminal

LED Details:

Sub-LAN TX Transmit data
 Sub-LAN RX Receive data
 Test Mode Self-test indications during
 power up

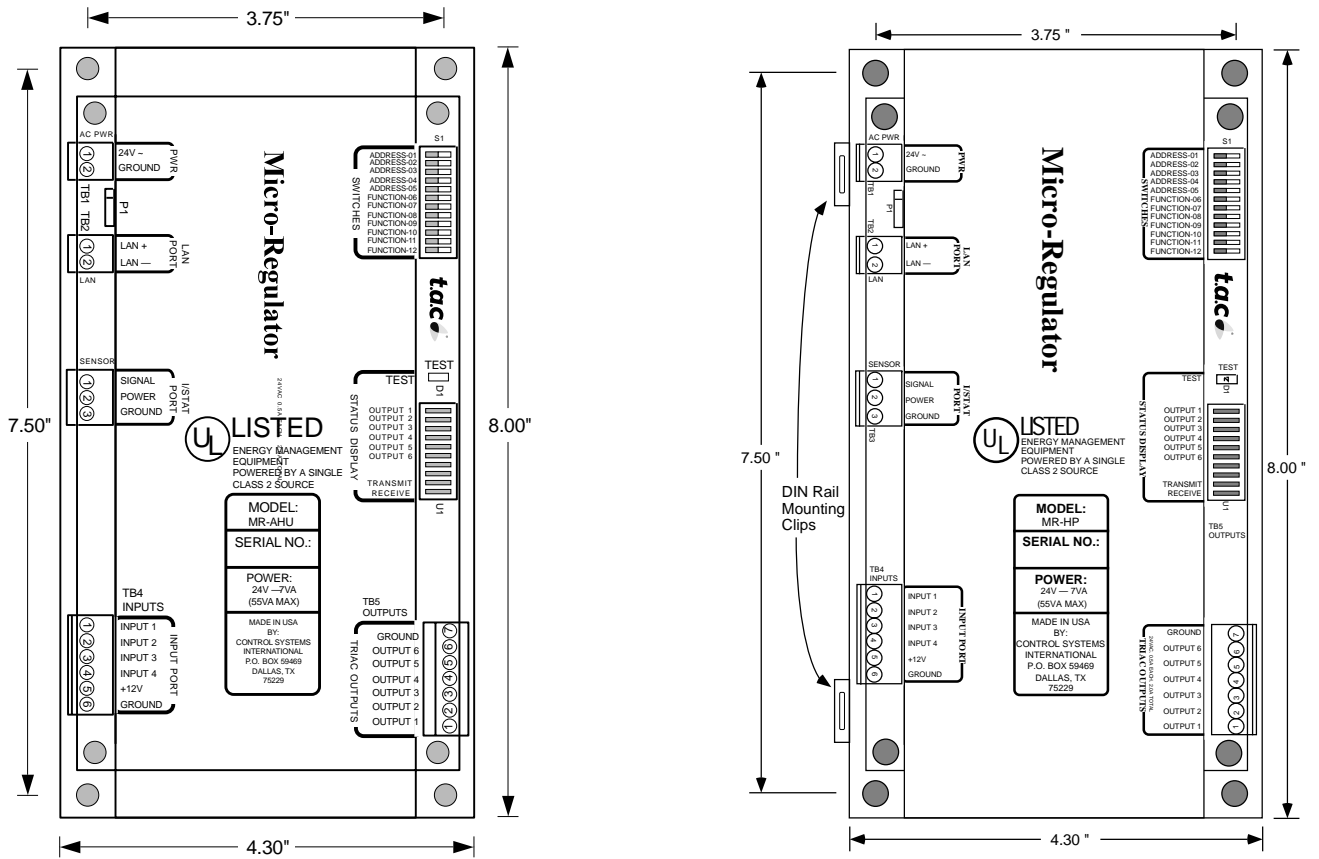
Listings:

UL916 Energy management
 equipment
 UL94-VO Plenum rated enclosure
 UL864 UUKL Smoke control and
 smoke management
 CE Marking Available
 EN61000-4-2 Electro static discharge
 EN61000-4-3 Radiated RF
 EN61000-4-4 EFT
 EN61000-4-5 Surge tested
 EN61000-4-6 Conducted RF
 EN61000-4-8 Magnetic field
 EN61000-4-11 Power quality



PART NUMBERS		UI	AI I/STAT	DI	AO	DO TRIAC
BASE	MR AHU MR AHU-C MR AHU-U8 MR AHUM-C	4	1	—	—	6
	MR HP MR HP-C MR HP-U8 MR HPM-C	4	1	—	—	6

May optionally be followed by "M" indicating metric engineering unit presentation
 Part numbers ending in -C are Ce Marked.
 Part numbers ending in -U8 are UL864 UUKL Listed.



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