UC12 VAV Unitary Controller

DESCRIPTION
The UC12VAV is a low-cost unitary controller, with 4 inputs and 8 outputs, designed for use with an external variable air volume sensor.

MECHANICAL
Size: 225 x 130 x 45 mm (8.86 x 5.12 x 1.78")
Enclosure: Injection moulded ABS
Mounting: DIN rail

ENVIRONMENT
Note: This equipment is intended for field installation within the enclosure of another product.
Ambient Temperature: 0° - 50°C (32°-122°F) ambient.
Ambient Humidity: 0% - 90% RH non-condensing
EMC Immunity: EN 50082-1
EMC Emission: EN 55011 class B

WIRING
Termination: UC12 VAV/A: PCB mounted screw terminal connections UC12 VAV/B: Plug terminals
Conductor Area:
Max: AWG 12 (3.09 mm²)
Min: AWG 22 (0.355 mm²)
Note: For plug terminals, use Copper or Copper Clad Aluminium conductors only. It is recommended that ferrules should be used with all screw terminals

ELECTRICAL
Supply Rating: 24 V AC +/- 20% 50/60 Hz
Power Rating: 10 VA
Fuse Rating: 1 A anti-surge (250VAC-1AT)

PROCESSOR
Type: Motorola 68HC11
Clock Speed: 8 MHz
Operating System Memory: 128K
User Programmable Memory: 8K RAM Battery backed for 2 years minimum

INPUTS/OUTPUTS
Note: Screened cable is recommended for all input connections.
4 Universal Inputs
Passive detectors within the range 30 Ω to 4M Ω.
Active Voltage input: 0 -10V@ 134K
Passive input recommended sensor: PT1000
Active current input: 0-20 mA @120 Ω (screened cable).
Digital Volt Free Contact: Pulse up to 12 Hz, minimum pulse width 42ms.
2 Analog Outputs
0 - 10 V @ 10 mA to drive UC16RP
As digital: 24 V AC Triac @ 500 mA or
As analog: 0 -10 V @ 10 mA
Note: Outputs 9 and 10 are fixed to analog. Outputs 11 to 16 are user definable and can be set for analog or Triac output.
6 Universal Outputs
As digital: 24 V AC Triac @ 500 mA or
As analog: 0 -10 V @ 10 mA
Note: Each datalog uses 14 strategy blocks - 1 block is used to define the datalog and 13 blocks are used to store the datalog information.

COMMUNICATIONS
Local RS232 TTL port: @ 1200 or 9600 Baud
Network RS485 port: @ 1200, 9600, 19200 or 38400 Baud

SOFTWARE FEATURES
Maximum number of strategy blocks: 190
Maximum Controller Address: 63
Maximum number of Datalog Modules: 8
Maximum Datalog Module capacity: 102 entries per Datalog

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Due to Cylon’s policy of continuous improvements these specifications may be upgraded without notice.
Universal Input Selection Jumpers
- Volt free contacts
- Passive input
- 0-20 mA input
- 0-10 V input

Legend
- Pins covered by jumper
- Pins open

Legend
- BUS
- 35

Universal Input Ports

Universal Output Configuration Jumpers
- 0-10 V Output
- Triac (24 V AC only)

Legend
- Pins covered by jumper
- Pins open

Address/Baud-Rate Selector Switch
- Sub-Network Baud Rate
- Sub-Network Address

Sub-Network Baud Rate
- 1200 baud
- 19200 baud
- 38400 baud
- 9600 baud

Sub-Network Address
The address of the controller on the Sub-Network is set on these DIP switches as binary numbers as illustrated in the examples below:

- Address 1: Binary 0
- Address 63: Binary 1

Analog Output Ports

Universal Output Ports

Power input (24 V AC)
Earth this controller by connecting the CMN wire (G), on the secondary side of the 24 V AC transformer, to Earth at one point.