



The **DC1** is a full featured FCU controller. The DC1 will operate "stand alone" or as an integral part of a Building Management System (BMS). The control parameters, such as damper stroke time, can be set by the BMS and are stored in non volatile memory (EEPROM) to prevent them from being lost when the power is removed. All connections to the DC1 are by means of plug-in screw terminal connectors which provides for quick, convenient installation, commissioning and maintenance. The heater current valve can optionally be upgraded to a 3kW capacity by means of a larger external heat sink.

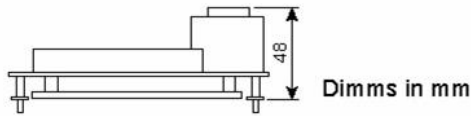
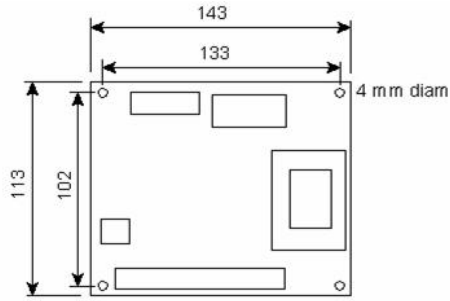
Features

- PI control
- 3 Point valve, pulse proportional valve or 1 step cooling output (24 VAC)
- Pulse proportional 2 kW heater output (Solid state relay)
- Pulse proportional heater control signal (24 VDC for external current valve)
- BMS communications support (Siemens Building Technologies System 600 compatible)
- External "dial" setpoint input
- Load shedding function for maximum demand limiting
- Fan on /off control output
- Fan run proof input
- Heater relay (Safety in case triac fails)
- Second temperature sensor input (Monitor only)
- On / Off control input
- Built-in transformer

Technical Data

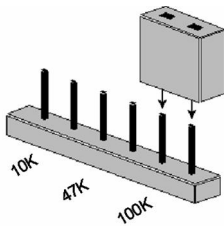
- Operating voltage 220 VAC
- Maximum 24 VAC load 4 VA + Controller consumption
- Temperature sensors
- Sensing elements - NTC thermistors 10k, 47k or 100k
- Temperature range -10 to 50°C, 0.25°C Resolution
- External setpoint
- Potentiometer 10k linear
- Temperature range 18 to 25°C
- Onboard setpoint jumper 20 to 25°C, in 1°C Steps
- 3 Point valve, pulse proportional valve or 1 step cooling output
- 24 VAC, 4 VA
- Pulse proportional heater control output 24 VAC, 3 VA
- 3 Position damper motor stroke period 1 to 255 Secs, 1 Sec Steps
- Pulse proportional heater control period 0.04 to 10 Secs, 0.04 Sec Steps
- Dead zone 0 to 50°C, 0.25°C Steps

Dimensions



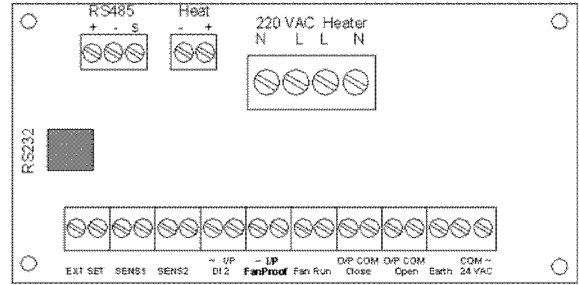
Controller Setup

The controllers must each be programmed with an address for BMS operation. The configuration program can be run from any IBM or compatible PC. The controller is connected to the PC serial port by means of the PC configuration cable.



The sensor type jumper must be set to the type of NTC thermistor that is used. There are 2 sensor type jumper selectors, one for the room temperature sensor and the other for the supply temperature sensor.

Connections



DC1 Points list (BMS)

Point	Description	Units	ON / OFF	Slope	Intercept	Type
1	Room Temp	Deg C	ON.OFF	0.25	-10	LAI
2	Monitor Temp	Deg C	ON.OFF	0.25	-10	LAI
3	Setpoint	Deg C	ON.OFF	0.25	-10	LAO
4	Setpoint Dial	Deg C		0.25	-10	LAI
5	Cooling	PCT		0.5	0	LAI
6	Heating	PCT		0.5	0	LAI
7	Min Pos	PCT		0.5	0	LAO
8	Configure	Bits		0.25	0	LAO
9	Dead Zone	Deg C		0.25	0	LAO
10	Pulse Period	Secs		0.0417	0	LAO
11	3 Point Total	Secs		1	0	LAO
29	DAY.NGT		ON.OFF	1	0	LDO
30	Heat Disable		ON.OFF	1	0	LDI
32	Fan Proof		ON.OFF	1	0	LDI
32	DI 2		ON.OFF	1	0	LDI

Typical DC1 Application

