

## SPACE CONTROLLER MODEL SPCC

BULLETIN 874



A Project Specific Controller

### Product Description

This controller will manage the airflow, internal pressure and temperatures within critical spaces. The controller and its programs are accurate, proven by time and are very cost effective.

A typical controller includes a 16-bit Microprocessor, 1 Meg Flash memory as well as an LCD display with four lines of 20 characters each. Set Points can be field adjusted.

### Controller Functions

The controller accepts the inputs from the HVAC devices with the space. The programmed calculations are performed which are required to maintain design space conditions. The output signals are then sent to the controlled HVAC devices. These input and output signals may also be sent to the BAS.

### Advantages

- Field adjustable to set point
- The number of inputs and outputs are selectable to the application

### Benefits

- Field changeable set points by ordinary technicians
- Time proven programs
- Remote monitoring by a BAS
- All popular communication protocols supported including LonWorks and Modbus through a serial card. A gateway will support BacNet and TCP/IP

### Typical Applications

#### Isolation Rooms

To maintain room pressures and send alarms to supervisory stations.

#### Clean Spaces and Medical Facilities

To sum individual terminal supply units and adjust the flow rates to maintain constant space velocities.

#### Laboratories

To sum hood and room exhaust flow rates and adjust the supply flow rates to maintain the required room pressures. Independently controlled room temperature is included.



**waddell**  
ENGINEERING COMPANY

## Programs Available

### Volumetric offset

Used in laboratories, isolation rooms and pharmaceutical spaces by maintaining a constant difference (offset) between supply and exhaust airflow rates. This constant volumetric difference will result in positive or negative pressures in spaces in spite of changing duct pressures.

### Volumetric offset with pressure override

Used in laboratories and other spaces which are subject to pressure upsets (door openings etc). This pressure override prevents the terminal devices from going out of control during extended room upsets.

### Pressure offset

Used in laboratories and pharmaceutical spaces to maintain space pressures relative to a corridor with changing duct pressures.

### Occupied/Unoccupied space requirements

Often used in laboratories during non-occupied times to minimize energy consumption. This includes reducing exhaust and supply air volumes as well as space temperatures if desired. Normally activated by a digital signal such as a light switch or sash position sensor.

Project specific software variations available

## Specifications

- BACnet MS/TP at 76,000 bps
- RS 232 port for field access
- 32 bit processor
- 1 MB Flash Memory
- Operating Temperatures 32°F to 131°F
- CE FCC Compliant
- UL 916 Listed
- NEMA 1 Enclosure for remote mounting

The controller has a minimum of 6 universal analog inputs, 3 analog outputs and 3 binary outputs. In many simple applications there will be extra points for a control strategy modification. The controller includes an RS 232 port for field modification of the set points. The controller also can communicate on a LAN using BACnet MS/TP. The controller uses GCL+ programming which is easily adaptable to any application. The actuator is controlled by PI loop programmed into the controller using ORCAview software.

## Power Required

24V AC or DC

## Environmental

Non-condensing, temperature ranges 32°F to 122°F

UL Approved

NEMA 1 Enclosure

