INTELLIGENT ROOM CONTROL SOLUTIONS

Senticon
SENTIENT CONTROL SOLUTIONS

DESIGN

Colour Capacitive Touchscreen
Modern Glass Front
Use for Control Settings Adjustment
Display Measurements and System Status
Show Energy Consumption Figures
Customise the Elements and Touch Buttons
Alternate Screen Skin Colours
Black and White Enclosures

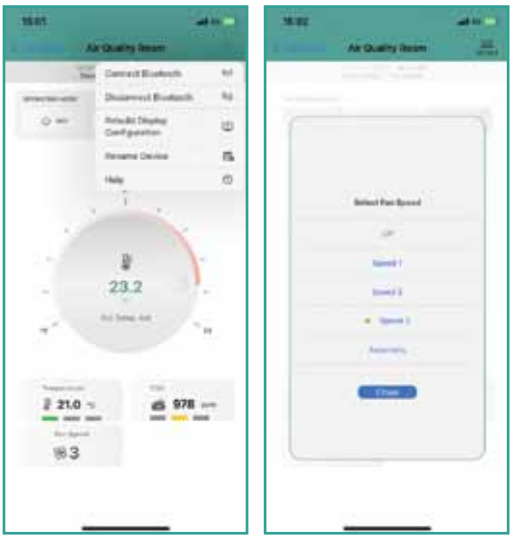
White Case

Black Case

SAVE ON CAPITAL

SAVE ON INSTALLATION

SAVE ON MAINTENANCE



USABILITY

Easy to operate touchscreen and push button versions make the operational adjustments easy.

Clear and concise screen conveys the required information effectively.

SmartPhone and Tablet Apps provide mobile interface via Bluetooth.

Bluetooth

MULTI MEASUREMENTS

Built-in measurement choices allow a compact and integrated solution. Measurements include CO2, temperature, humidity, VOC (volatile organic components) and PIR movement.

Using a single device savings can be achieved on capital, installation and maintenance.

CO2 %rH °C/°F VOC PIR

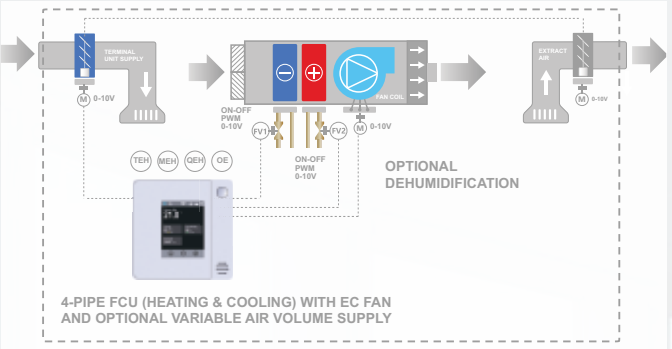
APPLICATIONS

Senticon's room controllers have flexible proven application logic. The application logic can be tailored to most room control applications fast and efficiently over the network, or using Windows / SmartApp tools.

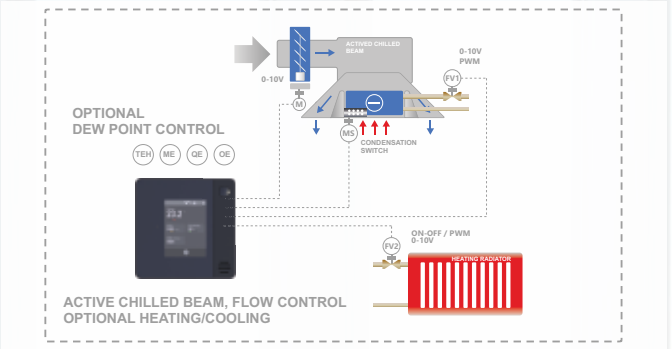
- Multi-Stage Temperature Control with Occupied/Unoccupied/ Off Modes
- Second Temperature Zone Control
- Predictive Condensation and Dew Point Calculation

6-Way Valve and Summer/Winter Change-Over Logic for Fan Coil Units

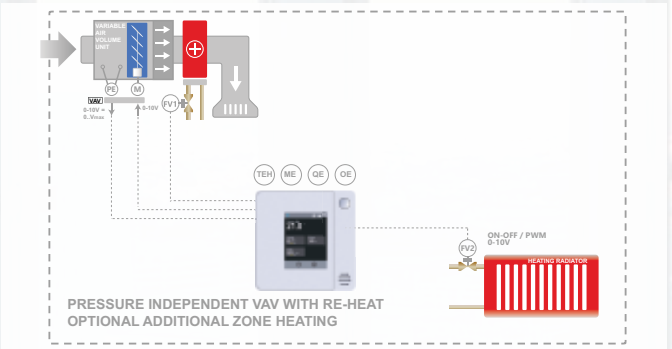
- Maximum Demand for Air Quality and Temperature Control
- Pressure Dependent and Independent VAV Control
- Humidify and Dehumidify Control Logic
- VOC (Volatile Organic Compound) Measurement and Control combined with CO2 offers effective changing room etc. air quality control.
- Energy Efficient EC Fan Control for Fan Coil Units
- Flexible IO-combinations provide effective application usage with an added benefit of operating as BMS extension points.



4-PIPE FCU (HEATING & COOLING) WITH EC FAN AND OPTIONAL VARIABLE AIR VOLUME SUPPLY



ACTIVE CHILLED BEAM, FLOW CONTROL OPTIONAL HEATING/COOLING



PRESSURE INDEPENDENT VAV WITH RE-HEAT OPTIONAL ADDITIONAL ZONE HEATING

FAN COIL UNIT CONTROL

VAV TERMINAL UNIT CONTROL

ZONE HEATING AND COOLING CONTROL

CHILLED CEILING AND BEAM CONTROL

AIR QUALITY AND OCCUPANCY CONTROL

OPEN STANDARD CONNECTIVITY

Senticon's controllers have comprehensive support of open protocols such as BACnet, Modbus and LoraWan. Full implementation of these protocols allows efficient and reliable integration to Building Management Systems.

LoraWan offers ideal solution for room space renovation with connectivity to BMS without requirement for network cabling. Senticon's LoraWan implementation allows two way communication to the room controllers.

BACnet Modbus LoRaWAN®

CONTROLLER PRODUCT RANGE

PRODUCT FAMILY											
	Series	**TCR04/ QCR04 ROOM TEMPERATURE AND CO2 CONTROLLERS**		**TCR10 / QCR10 SERIES TOUCH-SCREEN CONTROLLERS**				**TVR20 / QVR20 PRESSURE INDEPENDENT VAV CONTROLLERS**		**TCR80 SERIES CEILING MOUNTED CONTROLLERS**	
	Model	**TCR04**	**QCR4**	**TCR10**	**TCR11**	**QCR10**	**QCR11**	**TVR20**	**QVR20**	**TCR81**	**TCR82**
GENERAL	24 Power Supply	AC	AC	AC/DC	AC	AC/DC	AC	AC/DC	AC/DC	AC - 24V	AC- 24V
	230V Power Supply									AC - 230V	AC- 230V
	Case Colour ○●	W	W	W, B	W, B	W, B	W, B	W, B	W, B	W	W
INPUTS	Universal Inputs	● x2	● x2	● x2	● x2	● x2	● x2	● x1	● x1	● x2	● x4
	Flow Input							● x1	● x1		
	Built-In Temperature	●	●	●	●	●	●	●	●		
	Built-In CO2		●			●	●		●		
	Built-in rH Humidity			○	○	○	○	○	○		
	Built-In VOC			○	○	○	○	○	○		
	Built-In PIR			○	○	○	○	○	○		
OUTPUTS	24Vac Triacs	● x2	● x2		● x4		● x4			● x2	● x4
	0-10Vdc	● x3	● x3	● x4	● x1	● x4	● x1	● x4	● x4	● x4	● x4
	Relay			○ x1		○ x1		○ x1	○ x1		
	EC Fan	●	●	●	●	●	●	●	●	●	● x2
	6-Way Valve	●	●	●	●	●	●	●	●	●	●
	PWM (Thermal)	●	●		●		●			●	●
	On/Off	●	●	● Rly	●	● Rly	●	● Rly	● Rly	●	●
	3-Point				●		●			●	●
CONTROL FUNCTIONS	Heating Stages	● x2	● x2	● x3	● x3	● x3	● x3	● x3	● x3	● x3	2 Zone ● x3
	Cooling Stages	● x2	● x2	● x3	● x3	● x3	● x3	● x3	● x3	● x3	2 Zone ● x3
	Htg/Clg Change-Over	●	●	●	●	●	●			●	● x2
	Condensation	●	●	●	●	●	●	●	●	●	● x2
	Dew Point Control			● rH	● rH	● rH	● rH	● rH	● rH	●	● x2
	High/Low Limit			●	●	●	●			●	● x2
	Cascade Control / VAV							●	●		
	Occupancy Control	●	●	●	●	●	●	●	●	●	● x2
	VAV Max Demand	●	●	●	●	●	●	●	●	●	● x2
	CO2 Control		●			●	●		●	●	● x2
	VOC Control			○	○	○	○			●	● x2
	Boost			●	●	●	●	●	●	●	● x2
	Dehum/Humidify			●	●	●	●	●	●	●	● x2
	Aux Zone Control			●	●	●	●	●	●	●	
	Two Room Control										●
USER INTERFACE	Capacitive Touchscreen			○	○	○	○	○	○		
	LCD Display	●	●								
	Setpoint, Fan Speed Buttons	●	●								
	Fan Speed Selection	●	●	○	○	○	○	○	○		
	Traffic Light Alarm ●●●			○	○	○	○	○	○		
	Interface Lock			○	○	○	○	○	○		
	Occupancy, Boost			○	○	○	○	○	○		
	Colour Skins ●●●●○			○	○	○	○	○	○		
	Configurable User Interface	○	○	○	○	○	○	○	○		
	xDR USB-C Touchscreens									● x1	● x2
COMMS	Serial Tool	●	●	●	●	●	●	●	●	●	●
	Modbus RS485 Slave (model)	●	●	●	●	●	●	●	●	●	●
	Modbus Interface Master									● xDR I/f	● xDR I/f
	BACnet MS/TP Server (model)	●	●	●	●	●	●	●	●	●	●
	LoraWan			○	○	○	○	○	○		
	Internal Bluetooth			○	○	○	○	○	○		

LEGEND: ● Standard ○ Option W = White Case, B = Black Case