SIEMENS

BACnet PTEC Controllers

Configuration and Sizing Guidelines

Building Technologies

Ordering

Smoke Control Legend

All products have been evaluated for use on a smoke control network. Use the information below to determine if a product can be used for smoke control.

Code	Smoke Control Status
S1	Can be used for smoke control.
S2	Can be connected to a smoke control network but may not perform any smoke control functions.
S3	Cannot be connected to a smoke control network.
S4	Does not affect a smoke control network.

Equipment Controllers

Equipment Controller Ordering.			
Product	Product Number	Description	Smoke Control Status[1]
BACnet ATEC Controller	550-430PA/ 550-431PA	Controller	S2
	550-430PKA/ 550-431PKA	Smoke Control Listed	S1
BACnet PTEC Terminal Box (VAV, short board) Controller	550-432PA	Controller	S2
BACnet PTEC Unit Conditioner (short board) Controller	550-433PA	Controller	S2
BACnet PTEC Heat Pump Controller Multi-Stage	550-490PA	Controller	S2
	550-490PKA	Smoke Control Listed	S1
BACnet PTEC Extended I/O Controller	550-491PA	Controller	S2
	550-491PKA	Smoke Control Listed	S1
BACnet PTEC VAV Controller — Series Fan and 3-Stage Electric Heat	550-492PA	Controller	S2
	550-492PKA	Smoke Control	S1
BACnet PTEC Unit Vent Controller — 0 to 10V Output	550-493PA	Controller	S2
	550-493PKA	Smoke Control Listed	S1
BACnet PTEC VAV DCV (Chilled Beam) Controller	550-494PA	Controller	S2
BACnet PTEC Terminal Box (VAV, long board) Controller	550-495PA	Controller	S2
	550-495PKA	Smoke Control Listed	S1
BACnet PTEC Unit Conditioner (long	550-496PA	Controller	S2

Equipment Controller Ordering.			
Product	Product Number	Description	Smoke Control Status[1]
board) Controller			
	550-496PKA	Smoke Control	S1
BACnet PTEC Dual Duct 2AVS Controller	550-497PA	Controller	S2
	550-497PKA	Smoke Control Listed	S1
BACnet PTEC Constant Volume Controller	550-498PA	Controller	S2
	550-498PKA	Smoke Control Listed	S1
BACnet PTEC VAV with CO2 Monitoring Controller	550-499PA	Controller	S2
BACnet PTEC Unit Conditioner Heating and Cooling with Multi-Speed Fan Controller	550-480PA	Controller	S2

[1]   See the *Smoke Control Legend* for more information.

BACnet Equipment Controller Applications.	
Application Description	Application Number
BACnet Actuating Terminal Equipment Controller (ATEC)	
VAV Cooling Only	6630
VAV Heating and Cooling	6631
VAV with Electric Heat or Baseboard Radiation	6632
VAV with Hot Water Heat	6633
VAV Series or Parallel Fan and Electric Heat	6634/6636
VAV Series or Parallel Fan and Hot Water Reheat	6635/6637
Slave Mode	6684
BACnet PTEC VAV DCV (Chilled Beam) Controller	
VAV Demand Control Ventilation (DCV) Chilled Beam	6659
Slave Mode	6692
BACnet PTEC Terminal Box (VAV) Controller (Long Board)	
VAV Cooling Only	6600
VAV Cooling or Heating	6601
VAV with Electronic Reheat or Baseboard Radiation	6602
VAV with Hot Water Reheat	6603
VAV Series Fan Powered with Electric Reheat	6604
VAV Series Fan Powered with Hot Water Reheat	6605
VAV Parallel Fan Powered with Electric Reheat	6606

BACnet Equipment Controller Applications.	
Application Description	**Application Number**
VAV Parallel Fan Powered with Hot Water Reheat	6607
Slave Mode	6687
BACnet PTEC Unit Conditioner Controller (Long board)	
Variable Air Volume Pressure Dependent Cooling or Heating	6642
Variable Air Volume Pressure Dependent with Hot Water Reheat	6643
Two-Pipe Fan Coil Unit Cooling or Heating	6644
Fan Coil Unit Cooling and Heating	6645
Fan Coil Unit Cooling and Electric Heat	6646
Fan Coil Unit 2-Stage Cooling and Hot Water Heat	6647
Fan Coil Unit Cooling and Electric Heat	6648
Slave Mode	6691
BACnet PTEC Heat Pump — Multi-Stage Controller	
Multi-Compressor with Mixed Air and Reversing Valve Control	6673
Multiple Heating and Cooling with Mixed Air Control and Internal Reversing Valve	6674
Slave Mode	6690
BACnet PTEC Unit Vent Controller (Long Board)	
Heating and/or Chilled Water Cooling, ASHRAE Cycles I and II (0 to 10V Output)	6675
Heating and/or Chilled Water Cooling, ASHRAE Cycle III (0 to 10V Output)	6676
Heating and DX Cooling, ASHRAE Cycles I and II	6677
Heating and DX Cooling, ASHRAE Cycle III	6678
Heating and Cooling, Nesbitt Cycle W	6679
Slave Mode	6695
BACnet PTEC VAV with Fan and 3-Stage Elect. Heat Controller	
VAV Series Fan Powered with 3-Stage Electric Heat	6657
Slave Mode	6699
BACnet PTEC Extended I/O Controller	
Slave Mode	6696
BACnet PTEC Dual Duct 2AVS Controller	
Two Inlet Sensors with Optional Reheat	6665
One Inlet and One Outlet Sensor with Optional Reheat	6666
VAV Two Inlet Sensors with Optional Reheat	6667
VAV One Inlet and One Outlet Sensor with Optional Reheat	6668
VAV Two Inlet Sensors with Changeover and Optional Reheat	6669
Slave Mode	6693
BACnet PTEC Constant Volume Controller (Long Board)	
Constant Volume Cooling Only	6660

BACnet Equipment Controller Applications.	
Application Description	**Application Number**
Constant Volume with Electric Reheat	6662
Constant Volume with Hot Water Reheat	6663
Slave Mode	6694
BACnet PTEC Terminal Box (VAV) Controller (Short Board)	
VAV Cooling Only	6620
VAV Cooling or Heating	6621
VAV with Electronic Reheat or Baseboard Radiation	6622
VAV with Hot Water Reheat	6623
VAV Series Fan Powered with Electric Reheat	6624
VAV Series Fan Powered with Hot Water Reheat	6625
VAV Parallel Fan Powered with Electric Reheat	6626
VAV Parallel Fan Powered with Hot Water Reheat	6627
Slave Mode	6888
BACnet PTEC Unit Conditioner Controller (Short Board)	
Variable Air Volume Pressure Dependent Cooling or Heating	6640
Variable Air Volume Pressure Dependent with Hot Water Reheat	6641
Two-Pipe Fan Coil Unit Cooling or Heating	6650
Fan Coil Unit Cooling and Heating	6651
Fan Coil Unit Cooling and Electric Heat	6652
Fan Coil Unit 2-Stage Cooling and Hot Water Heat	6653
Fan Coil Unit Cooling and Electric Heat	6654
Slave Mode	6689
BACnet PTEC Unit Conditioner Heating and Cooling Controller	
Cooling and Heating with Multi-Speed Fan	6611
Slave Mode	6697
BACnet PTEC VAV with CO2 Monitoring Controller	
VAV with CO2 Monitoring and AOV or Floating Point Heating	6680
VAV with CO2 Monitoring, Series Fan and AOV or Floating Point Heating	6681
VAV with CO2 Monitoring, Parallel Fan and AOV or Floating Point Heating	6682
Slave Mode	6698

Accessories

Equipment Controller Accessories.			
Product	Product Number	Description	Smoke Control Status[1]
Autozero Module	540-380	Autozero Module with bracket.	S4
Relay Module	540-147	Four high-voltage (240 Vac, 1.2 amp max.) relays for electronic controllers.	S2
TEC Plug-in Relay Module	550-054	Short Platform Controller – 6 DO, 16 position terminal block with 4 relays, single unit	S2
	550-053	Short Platform Controller – 6 DO, 16 position terminal block with 4 relays, 10 pack.	
Remote Mount Kit for TEC Plug-in Relay Module	550-058	Short Platform for 6 DO, 16 position terminal block with 4 relays.	S4
Low Cost Temporary Duct Temperature Sensor	QAM1030.008P50	NTC 10K Ω Type 2, 3" Probe for Commissioning only. 50 pack commissioning sensors.	S4
Low Cost Temporary Space Temperature Sensor	540-658P25	10K thermistor with RJ11 (1" long), that enables space control if the permanent room or duct sensor is not installed (pack of 25).	S4
Controller Enclosure	550-002	Large Enclosure for electronic controller without damper actuator.	S4
	550-002K	Smoke Control, dimensions: 9^2 x 9^2 x 3^2 (230 mm x 230 mm x 76 mm)	
Controller Enclosure	540-155	Enclosure for electronic controller without damper actuator.	S4
	540-155K	Smoke control, dimensions: 9^2 x 9^2 x 3^2 (203 mm x 229 mm x 76 mm)	
Duct Temperature Sensors	540-128	2 x 4 metal enclosure, RJ-11 connector 10K (4" length).	S4
	540-739	2 x 4 metal enclosure, RJ-11 connector 10K (18" length).	
	536-811	2 x 4 metal enclosure, Leads connector 100K (4" length).	
Room Temperature Sensors	QAA2280.DWSC	Temperature with display	S4
	QAA2280.EWSC	Temperature – blank front	
	QAA2280.FWSC	Temperature with display & setpoint adjustment	
	QFA3280.DWSC	Humidity plus temperature with display	
	QFA3280.EWSC	Humidity plus temperature – blank front	
	QFA3280.FWSC	Humidity plus temperature with display & setpoint adjustment	
	QPA2282.EWSC*	CO2 plus temperature – blank front	
	QPA2284.EWSC*	CO2 plus humidity plus temperature – blank front	
	QPA2284.FWSC*	CO2 plus humidity plus temperature with display & setpoint adjustment	
	540-520A	Flush mount, plastic housing—beige	
	540-520B	Flush mount, plastic housing—white	
	540-995	Flush mount, metal housing	

*   QPA sensors require AQM2200 power supply.

1)   See the *Smoke Control Legend* for more information.

2)   M = Manufacturer Installed, F = Field Installed.

3)   Autozero modules are required and must be used in situations where the space is occupied 24 hours a day, such as hospital isolation rooms, animal holding rooms, and lab areas.

Cables and Accessories

Terminal Equipment Controller Room Sensor Cables.			
Product	Product Number	Description	Smoke Control Status[1]
Terminal Equipment Controller Room Sensor Cable	588-100A	25 ft (7.62 m) 6-conductor CMP cable with RJ-11 connectors for plenum installation.	S4
Terminal Equipment Controller Room Sensor Cable	588-100B	50 ft (15.24 m) 6-conductor CMP cable with RJ-11 connectors for plenum installation.	S4
Terminal Equipment Controller Room Sensor Cable	588-100C	100 ft (30.48 m) 6 conductor CMP cable with RJ-11 connectors for plenum installation.	S4
Single-to-Twin Modular Adapter	540-142	3 ft (91.44 cm) 6-conductor adapter cable for simultaneous connection of portable operator's terminal and room temperature sensor to Terminal Equipment Controller.	S4
Terminal Equipment Controller Cable	540-143	9-Pin female to RJ-11 connector.	S4
Ferrite Filters	550-705	10 ferrite filters per package. Use to reduce radio interference. Required in certain applications for CE compliance.	S4
RJ-11 Connector	540-141	100 connectors per package. Use with non-terminated 6-conductor cable and termination tool.	S4
Termination Tool	540-140	Use to join non-terminated 6-conductor cable and RJ-11 connector.	S4
24 VAC Power Dongle	AQM2200	24 VAC power supply for QPA2200 Series CO_2 sensors – one required per sensor.	S4
PassKey	544-643A	Pass Key tool for configuring HMI on 2200 / 3200 Series room sensors.	S4

1)   See the *Smoke Control Legend* for more information.

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Terminal Blocks

Removable Terminal Block Replacement Kits.			
Product	**Product Number**	**Description**	**Smoke Control Status[1]**
TEC 3 POS Power Terminal Block	550-799P	TEC Power Terminal Block Replacement Kit (ten 3-position per kit "C-H-E").	S4
BACnet ATEC Terminal Block	550-799R	Point Termination Block Replacement Kit.	S4
TEC Point Termination Blocks	540-496	Point Termination Block Replacement Kit (two 16-postion and two 12-position per kit).	S4
TEC 6 DO Hardware Platform Point Termination Block	540-476P10	TEC Replacement kit, 16-position I/O connector 5-piece-position terminal blocks (10 pack).	S4

[1]   See the *Smoke Control Legend* for more information.