

SIEMENS

**BACnet PTEC VAV 0-10V
Series Fan and Electric Heat
Slave Mode Controller**

Application 6599

Application Note

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Overview

Application 6599 is the slave mode application for the Siemens BACnet PTEC VAV with Series Fan and 3-Stage Electric Heat (P/N 550-492P). Slave mode is the default application that comes up when power is first applied to the controller. Slave mode provides no control. Instead, it allows the operator to perform equipment checkout before a control application is put into effect and to set some basic controller parameters (CTLR ADDRESS, APPLICATION, etc.).

BACnet

The controller communicates using BACnet MS/TP protocol for open communications on BACnet MS/TP networks.

Product	Supported BIBBs	BIBB Name
BTEC	DS-RP-B B	Data Sharing-Read Property-B
	DS-RPM-B	Data Sharing-Read Property Multiple-B
	DS-WP-B	Data Sharing-Write Property-B
	DM-DDB-B	Device Management-Dynamic Device Binding-B
	DM-DOB-B	Device Management-Dynamic Object Binding-B
	DM-DCC-B	Device Management-Device Communication Control-B
	DM-RD-B	Device Management-Reinitialize Device-B
	DM-BR-B	Device Management-Backup and Restore-B
	DM-OCD-B	Device Management-Object Creation and Deletion-B

Using Auxiliary Points

It is possible to have extra points available in addition to the ones used by the current application that is running in the controller. If these extra points are to be controlled by a field panel, they must be unbundled.

Using the Controller as a Point Extension Device

If the controller is used only as a point extension device, with no control application in effect, its application must be set to slave mode and the points must be unbundled at the field panel. All of these points must be controlled from the field panel in order to be used. See the Point Database for more information.

All DOs can be used as separate DOs. In addition, DO 1 and DO 2 can be used in pairs, to control a motor, as shown in the example. DO 3 and DO 4, DO 5 and DO 6 and DO 7 and DO 8 cannot be used as pairs.

For other combinations of DOs and motors, see the *Start-up Procedures* for complete motor enable/reverse procedures.

**NOTE:**

If using either a motor or DOs as auxiliary points, be sure to set MTR SETUP to the correct value. If using a pair of DOs to control a motor, the DOs cannot be unbundled or commanded separately. Only MTR1 COMD and MTR2 COMD can be unbundled to control the motors.

Motor Enable/Reverse Values for MTR SETUP. (For Floating-Type Dampers Only.).		
Motor 1 Not Used	Motor 1 Enabled	Motor 1 Enabled and Reversed
0	1	3

Example

If using DO 1 and DO 2 as the physical terminations for a direct acting motor, follow these steps:

1. Set MTR SETUP to 1 to enable the motor.
2. Unbundle MTR1 COMD at the field panel to command the motor from the field panel.

AOV1 may be used to control a motor. Unbundle AOV1 and command it in voltage to control a 0 to 10V motor.

Application 6599 Point Database

Object Type	Object Instance (Point Number)	Object Name (Descriptor)	Factory Default (SI Units)	Eng Units (SI Units)	Range	Active Text	Inactive Text
AO	1	CTLR ADDRESS	99	--	0-255	--	--
AO	2	APPLICATION	6599	--	0-32767	--	--
AI	{04}	ROOM TEMP	74.0 (23.44888)	DEG F (DEG C)	48-111.75	--	--
BI	{10}	DI 5	OFF	--	Binary	ON	OFF
AI	{13}	RM STPT DIAL	74.0 (23.44888)	DEG F (DEG C)	48-111.75	--	--
AI	{15}	AI 3	0	PCT	0-102	--	--
BO	18	WALL SWITCH	NO	--	Binary	YES	NO
BI	{19}	DI OVRD SW	OFF	--	Binary	ON	OFF
BI	{24}	DI 2	OFF	--	Binary	ON	OFF
BI	{25}	DI 3	OFF	--	Binary	ON	OFF
AI	{35}	AIR VOLUME	0 (0.0)	CFM (LPS)	0-131068	--	--
AO	36	FLOW COEFF	1	--	0-2.55	--	--
BI	{40}	DI 4	OFF	--	Binary	ON	OFF
BO	{41}	DO 1	OFF	--	Binary	ON	OFF
BO	{42}	DO 2	OFF	--	Binary	ON	OFF
BO	{43}	DO 3	OFF	--	Binary	ON	OFF
BO	{44}	DO 4	OFF	--	Binary	ON	OFF
BO	{45}	DO 5	OFF	--	Binary	ON	OFF
BO	{46}	DO 6	OFF	--	Binary	ON	OFF
BI	{47}	DI 6	OFF	--	Binary	ON	OFF
AO	{48}	MTR1 COMD	0	PCT	0-102	--	--
AO	{49}	MTR1 POS	0	PCT	0-102	--	--
AI	{50}	AI 4	74.0 (23.495556)	DEG F (DEG C)	37.5-165	--	--
AO	51	MTR1 TIMING	95	SEC	0-511	--	--
AI	{54}	AI 5	74.0 (23.495556)	DEG F (DEG C)	37.5-165	--	--
AO	56	DPR1 ROT ANG	90	--	0-255	--	--

Object Type	Object Instance (Point Number)	Object Name (Descriptor)	Factory Default (SI Units)	Eng Units (SI Units)	Range	Active Text	Inactive Text
AO	58	MTR SETUP	0	--	0-255	--	--
AO	59	DO DIR. REV	0	--	0-255	--	--
AO	{66}	AOV 1	0	VOLTS	0-10.23	--	--
AO	{70}	AOV 2	0	VOLTS	0-10.23	--	--
AO	{78}	CTL TEMP	74.0 (23.44888)	DEG F (DEG C)	48-111.75	--	--
AO	{91}	AOV 3	0	VOLTS	0-10.23	--	--
BO	{94}	CAL AIR	NO	--	Binary	YES	NO
AO	95	CAL SETUP	4	--	0-255	--	--
AO	96	CAL TIMER	12	HRS	0-255	--	--
AO	97	DUCT AREA	1.0 (0.09292)	SQ. FT (SQ M)	0-6.375	--	--
AO	{99}	ERROR STATUS	0	--	0-255	--	--
AO	102	RMTMP OFFSET	0.0 (0.0)	DEG F (DEG C)	-63.75	--	--
BO	{103}	DO 7	OFF	--	Binary	ON	OFF
BO	{104}	DO 8	OFF	--	Binary	ON	OFF
AO	122	AI 4 OFFSET	0.0 (0.0)	DEG F (DEG C)	-63.75	--	--
AO	123	AI 5 OFFSET	0.0 (0.0)	DEG F (DEG C)	-63.75	--	--
AO	124	STAT SUPV	0	--	0-255	--	--
AI	{125}	RM CO2	1000	PPM	0-8191	--	--
AI	{126}	RM RH	50	PCT	0-102	--	--
BO	{127}	PPCL STATE	EMPTY	--	Binary	LOADED	EMPTY