

Unit Conditioner (Fan Coil) BACnet ASC Controller

Application Notes

Application 2585 — Slave Mode

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Overview

Application 2585 is the slave mode application for the Unit Conditioner (Fan Coil) BACnet ASC Controller (P/N 550-433). Slave mode is the default application that comes up when power is first applied to the controller. Slave mode provides no control. Its purpose is to allow the operator to perform equipment checkout before a control application is put into effect and to set some basic controller parameters (CTRLR ADDRESS, APPLICATION, etc.).

BACnet

The Unit Conditioner (Fan Coil) BACnet ASC Controller communicates using BACnet MS/TP protocol for open communications on BACnet MS/TP networks.

Table 1. Supported BIBBs.

Product	Supported BIBBs	BIBB Name
BTEC	DS-RP-B	Data Sharing-ReadProperty-B
	DS-RPM-B	Data Sharing-Read Property Multiple-B
	DS-WP-B	Data Sharing-WriteProperty-B
	DM-DDB-B	Device Management-Dynamic Device Binding-B
	DM-DOB-B	Device Management-Dynamic Object Binding-B
	DM-DDC-B	Device Management-Device Communication Control-B

Using Auxiliary Points

It is possible to have extra points available on a Unit Conditioner (Fan Coil) BACnet ASC Controller 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, then 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 Table 3 for point database information.

All Digital Outputs (DOs) may be used as separate DOs. They may also be used in pairs, (DO 1 and DO 2), (DO 3 and DO 4), and (DO 5 and DO 6), to control a motor as shown in the example.



If using either a motor or DOs as auxiliary points, be sure to set MTR SETUP to the correct value. See Table 2. If using a pair of DOs to control a motor, the DOs cannot be unbundled or commanded separately. Only MTR 1 COMD, MTR 2 COMD, and MTR3 COMD can be unbundled to control the motors.

Table 2. Motor Enable/Reverse Values for MTR SETUP (Point 58).

	Motor 1 Enabled			Motor 1 Enabled and Reversed			Motor 1 Not Used		
	Motor 2 Not Used	Motor 2 Enabled	Motor 2 Enabled and Reversed	Motor 2 Not Used	Motor 2 Enabled	Motor 2 Enabled and Reversed	Motor 2 Not Used	Motor 2 Enabled	Motor 2 Enabled and Reversed
Motor 3 Not Used	1	5	13	3	7	15	0	4	12
Motor 3 Enabled	17	21	29	19	23	31	16	20	28
Motor 3 Enabled and Reversed	49	53	61	51	55	63	48	52	60

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.

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

Table 3. Point Database for Application 2585.

Object Type ^a	Object Instance (Point Number) ^b	Object Name and Description	Factory Default (SI Units) ^c	Eng. Units (SI Units) ^c	Range	Active Text	Inactive Text
AO	1	CTLR ADDRESS	99	—	0-255	—	—
AO	2	APPLICATION	2585	—	2528, 2529 and 2542 through 2546	—	—
AO	3	RMTMP OFFSET	0.0 (0.0)	DEG F (DEG C)	-31.75-32	—	—
AI	{04} ^d	ROOM TEMP	74.0 (23.44888)	DEG F (DEG C)	48-111.75	—	—
AI	{13}	RM STPT DIAL	74.0 (23.44888)	DEG F (DEG C)	48-111.75	—	—
AI	{15}	AUX TEMP AI3	74.0 (23.495556)	DEG F (DEG C)	37.5-165	—	—

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Table 3. Point Database for Application 2585. (continued)

Object Type ^a	Object Instance (Point Number) ^b	Object Name and Description	Factory Default (SI Units) ^c	Eng. Units (SI Units) ^c	Range	Active Text	Inactive Text
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
BO	{29}	DAY.NGT	DAY	–	Binary	NIGHT	DAY
AO	{37}	MTR 3 COMD	0	PCT	0- 102	–	–
AO	{38}	MTR 3 POS	0	PCT	0- 102	–	–
AO	39	MTR 3 TIMING	130	SEC	0- 511	–	–
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
AO	{48}	MTR 1 COMD	0	PCT	0- 102	–	–
AO	{49}	MTR 1 POS	0	PCT	0- 102	–	–
AO	51	MTR 1 TIMING	130	SEC	0- 511	–	–
AO	{52}	MTR 2 COMD	0	PCT	0- 102	–	–
AO	{53}	MTR 2 POS	0	PCT	0- 102	–	–
AO	55	MTR 2 TIMING	130	SEC	0- 511	–	–
AO	56	MTR1 ROT ANG	90	–	0- 255	–	–
AO	57	MTR2 ROT ANG	90	–	0- 255	–	–
AO	58	MTR SETUP	0	–	0- 255	–	–
AO	59	DO DIR. REV	0	–	0- 255	–	–

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Table 3. Point Database for Application 2585. (continued)

Object Type ^a	Object Instance (Point Number) ^b	Object Name and Description	Factory Default (SI Units) ^c	Eng. Units (SI Units) ^c	Range	Active Text	Inactive Text
AO	{78}	CTL TEMP	74.0 (23.44888)	DEG F (DEG C)	48- 111.75	—	—
AO	96	CAL TIMER	12	HRS	0- 255	—	—
AO	{99}	ERROR STATUS	0	—	0- 255	—	—
^a Object Types are; Analog Input (AI), Analog Output (AO), Binary Input (BI) and Binary Output (BO). ^b Points not listed are not used in this application. ^c A single value in a column means that the value is the same in English units and in SI units. ^d Point numbers that appear in brackets {} may be unbundled at the field panel.							