

# Application 2191: Terminal Box Controller – Electronic Output Slave Mode with Secure Mode

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## Overview

Application 2191 is the slave mode application for the Terminal Box Controller – Electronic Output with Secure Mode (P/N 540-100C). 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 (CTRL ADDRESS, APPLICATION, etc.).

## Secure Mode Operation

Secure Mode prevents unauthorized users from making changes to the TEC through the MMI port or room sensor. This mode can only be enabled/disabled through an Insight command. When Secure Mode is enabled, any attempts to make point changes in the TEC will be rejected and result in an error message indicating that the priority is too low.

## Using Auxiliary Points

It is possible to have extra points available on a Terminal Box Controller – Electronic Output 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 Table 2191-1 for point database information.

All 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.

**NOTE:** If using either a motor or DOs as auxiliary points, be sure to set MTR SETUP (Point 58) 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 (Point 48) and MTR2 COMD (Point 52) can be unbundled to control the motors.

## 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 *APOGEE Automation Start-up Procedures* on InfoLink for complete motor enable/reverse procedures.

Table 2191-1. Point Database for Application 2191.

Point Number	Descriptor	Factory Default (SI Units)	Eng. Units (SI Units)	Slope (SI Units)	Intercept (SI Units)	On Text	Off Text
01	CTLR ADDRESS	99	–	1	0	–	–
02	APPLICATION	2191	–	1	0	–	–
03	RMTMP OFFSET	0.0 (0.0)	DEG F (DEG C)	0.25 (0.14)	-31.75 (-17.78)	–	–
{04}	ROOM TEMP	74.0 (23.449)	DEG F (DEG C)	0.25 (0.14)	48.0 (8.889)	–	–
{13}	RM STPT DIAL	74.0 (23.449)	DEG F (DEG C)	0.25 (0.14)	48.0 (8.889)	–	–
{15}	AUX TEMP	74.0 (23.496)	DEG F (DEG C)	0.5 (0.28)	37.5 (3.056)	–	–
18	WALL SWITCH	NO	–	–	–	YES	NO
{19}	DI OVRD SW	OFF	–	–	–	ON	OFF
{24}	DI 2	OFF	–	–	–	ON	OFF
{25}	DI 3	OFF	–	–	–	ON	OFF
{29}	DAY.NGT	DAY	–	–	–	NIGHT	DAY
{35}	AIR VOLUME	0 (0.0)	CFM (LPS)	4 (1.888)	0	–	–
36	FLOW COEFF	1.0	–	0.01	0.0	–	–
{37}	MTR3 COMD	0.0	PCT	0.4	0.0	–	–
{38}	MTR3 POS	0.0	PCT	0.4	0.0	–	–
39	MTR3 TIMING	130	SEC	1	0	–	–
{41}	DO 1	OFF	–	–	–	ON	OFF
{42}	DO 2	OFF	–	–	–	ON	OFF
{43}	DO 3	OFF	–	–	–	ON	OFF
{44}	DO 4	OFF	–	–	–	ON	OFF
{45}	DO 5	OFF	–	–	–	ON	OFF
{46}	DO 6	OFF	–	–	–	ON	OFF
{48}	MTR1 COMD	0.0	PCT	0.4	0.0	–	–
{49}	MTR1 POS	0.0	PCT	0.4	0.0	–	–
51	MTR1 TIMING	95	SEC	1	0	–	–
{52}	MTR2 COMD	0.0	PCT	0.4	0.0	–	–
{53}	MTR2 POS	0.0	PCT	0.4	0.0	–	–

1. Points not listed are not used in this application.
2. A single value in a column means that the value is the same in English units and in SI units.
3. Point numbers that appear in brackets {} may be unbundled at the field panel.

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**Table 2191-1. Point Database for Application 2191.**

Point Number	Descriptor	Factory Default (SI Units)	Eng. Units (SI Units)	Slope (SI Units)	Intercept (SI Units)	On Text	Off Text
55	MTR2 TIMING	130	SEC	1	0	–	–
56	DPR1 ROT ANG	90	–	1	0	–	–
57	DPR2 ROT ANG	90	–	1	0	–	–
58	MTR SETUP	0	–	1	0	–	–
59	DO DIR. REV	0	–	1	0	–	–
87	CAL MODULE	NO	–	–	–	YES	NO
{94}	CAL AIR	NO	–	–	–	YES	NO
95	CAL SETUP	4	–	1	0	–	–
96	CAL TIMER	12	HRS	1	0	–	–
97	DUCT AREA	1.0 (0.093)	SQ. FT (SQ M)	0.025 (0.002)	0.0	–	–
{99}	ERROR STATUS	0	–	1	0	–	–

1. Points not listed are not used in this application.
2. A single value in a column means that the value is the same in English units and in SI units.
3. Point numbers that appear in brackets {} may be unbundled at the field panel.