

Purchase Date \_\_\_\_\_

Installed By \_\_\_\_\_

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## CAUTION

The following are directions for using the **Model No. 0893 Local/Remote Control Kit** with Bodine FPM SCR Speed Controls. Please read our manual for **Type-FPM PM Motor/Adjustable Speed Controls** first. It contains instructions for operating your FPM control as well as important safety-related information. Follow the instructions in their proper sequence.

## INTRODUCTION

**Model 0893 Local/Remote Control Kit** is intended for use with FPM Models 0810, 0830 and 0850 or when used with accessory model 0888.

The kit allows manual override of "remote" analog control signals. Speed (and direction, if a Model 0890 Electronic F-B-R Kit is used) may then be controlled using a local/remote switch and a potentiometer (and a direction switch if a Model 0890 Electronic F-B-R Kit is used).

The Local/Remote Control Kit may also be used with FPM Model 0888 (Analog Board) and the Model 0890 F-B-R Kit, to disable reversing based on the polarity of the speed input signal, and instead cause reversing based on the state of a separate input line.



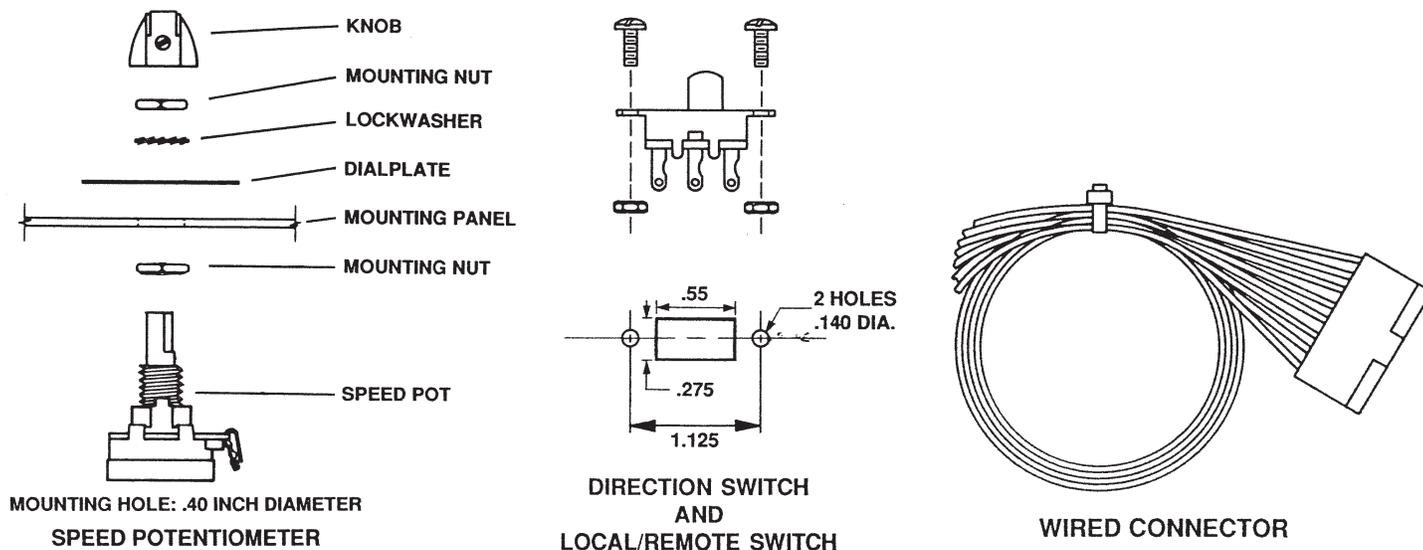
Model 0810

Models 0830 and 0850

**Bodine Type FPM Filtered DC Speed Controls**

**FIGURE 1.** Kit Parts and Mounting Hole Dimensions.

Examine the contents of your Kit and identify the parts shown.



# INSTALLATION

## WARNING

Disconnect 115 VAC line power to the control before installing the Local/Remote Control Kit or doing any work on the control or motor.

### 1. Checking the Kit's Contents

Examine the contents of your Kit and identify the parts shown in **Figure 1**. **Figure 1** also provides mounting hole dimensions for the components provided in the Kit.

### 2. Identifying the Pins in Socket J4

Position the control as shown in **Figure 2** and locate **J4** on the model 0888 Analog Interface Board. Note that **J4's** pins are numbered in the magnified view in **Figure 2**. The pins' functions are described in **Figure 3**. **Figure 3** also shows how each colored wire from the wired connector corresponds to each pin of **J4**.

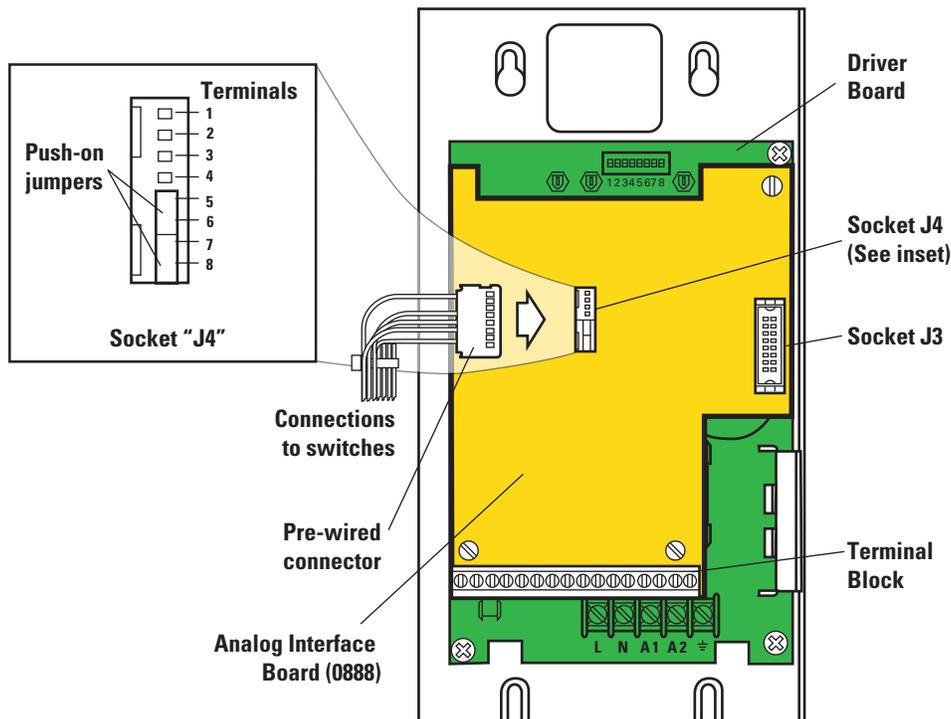
Note that **pins 7 and 8** of **J4** function only when the Model 0890 electronic Forward-Brake-Reverse board is used. Also note that **pins 1 and 2** of **J4** function only with a digital board.

Next, follow the instructions that apply to your particular control model and application.

**Figure 3.** Description of Pins on J4 on Interface Board.

Description of Pins on Socket J4		Corresponding colored wire on connector
Pin	Description	
8	INPUT—direction signal (to F-B-R board)	Gray
7	OUTPUT—direction signal generated on the Analog Board	Violet
6	INPUT—speed signal (to isolation stage)	Blue
5	OUTPUT—speed signal generated on-board	Green
4	Speed pot connection (same as J1, pin 8)	Yellow
3	Speed pot connection (same as J1, pin 12)	Orange
2	Zero Speed Input Detection	Red
1	Zero Speed Input Detection	Brown

**Figure 2.** Top view of Analog Interface Board (Model 0888).



# INSTALLATION, continued

## 3. Connecting the Kit to Model 0888 (Analog Board)

Three alternative instructions are provided below. They are for (A) adding local manual operation when an F-B-R board is used, (B) adding local operation without an F-B-R board, and (C) controlling direction with a separate input signal. Read them carefully and select the one that best suits your needs.

### A. Adding local manual operation when an Electronic F-B-R board is used.

Position the potentiometer and switches in front of you as shown in **Figure 4**. The black "Jumpers" identified in **Figure 4** are already soldered in place to simplify installation and to help you orient the switches properly.

Solder the wires from your wired connector to the switches and speed potentiometer as shown in **Figure 4**. The wires are color coded to simplify connection (**Figure 4**). Be sure to observe the proper color code. Note that the red and brown wires (from pins 1 and 2) should be removed from the connector either by pushing on the exposed edge of the pins with a pointed tool or by cutting the wire flush at the connector.

Remove the jumpers on **J4** on the analog interface board, and insert the wired connector into socket **J4**.

Mount the potentiometer and switches on your mounting panel. Hole dimensions and parts descriptions are shown in **Figure 1**.

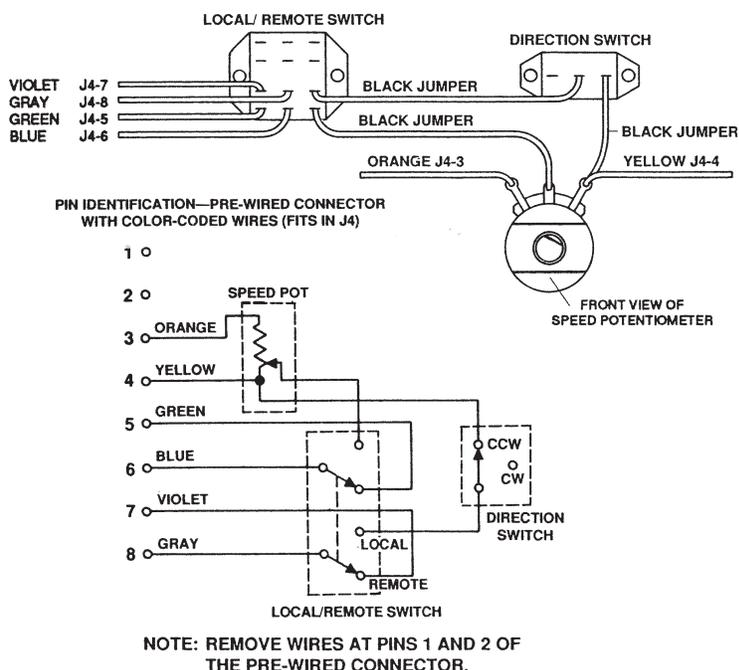
The motor may now be controlled with a speed pot, direction switch, and the "local/remote" switch. When the "local/remote" switch is in the "local" position, control will be transferred from the external signal source to the speed potentiometer and direction switch.

### B. Adding local manual operation without an Electronic F-B-R board.

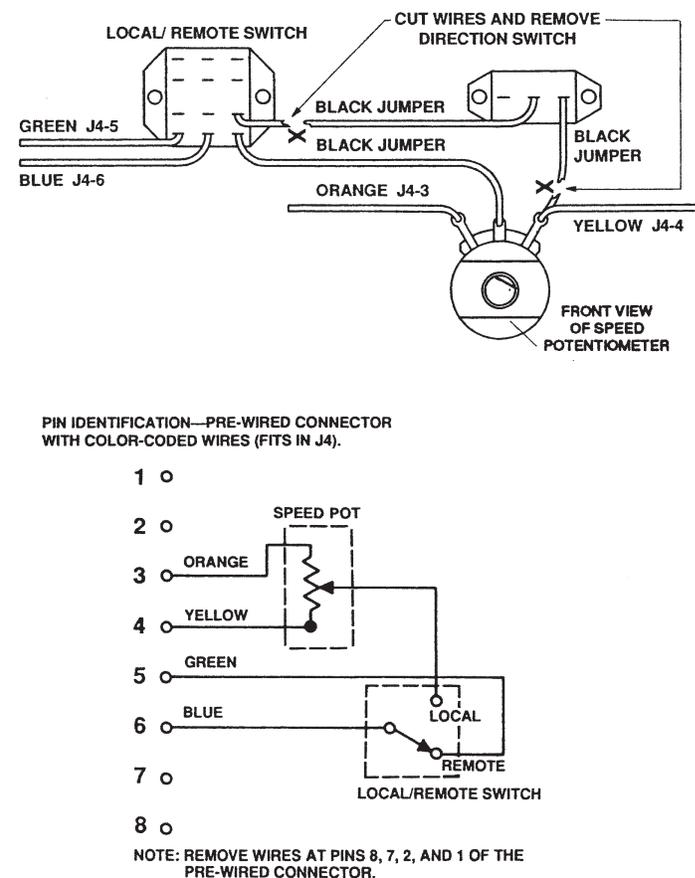
Position the potentiometer and switches in front of you as shown in **Figure 5**. The black "Jumpers" identified in **Figure 5** are already soldered in place to help you orient the switches properly.

Solder the wires from your wired connector to the switch and speed potentiometer as shown in **Figure 5**. The wires are color coded to simplify connection (**Figure 5**). Be sure to observe the proper color code. The black "Jumpers" marked in **Figure 5** with an "X" should be cut with wire cutters at the terminals of the "local/remote" switch and speed potentiometer. The "direction switch" will not be used. Also note that the gray, violet, red, and brown wires (from pins 8, 7, 2, and 1) should be removed from the connector either by pushing on the exposed edge of the pins with a pointed tool or by cutting the wire flush at the connector.

**Figure 4.** Connections for Model 0888 (Analog Board) with Model 0890 F-B-R Kit.



**Figure 5.** Connections for Model 0888 (Analog Board) without Model 0890 F-B-R Kit.



## INSTALLATION, continued

Remove the jumpers on **J4** on the analog interface board, and insert the wired connector into socket **J4**. Mount the potentiometer and “local/remote” switch on your mounting panel. Hole dimensions and parts descriptions are shown in **Figure 1**.

The motor may now be controlled with a speed pot and “local/remote” switch. When the “local/remote” switch is in the “local” position, control will be transferred from the external signal source to the speed potentiometer.

### C. Controlling direction using a separate input signal.

Wire the leads from your wired connector as shown in **Figure 6**. Note that the violet, yellow, orange, red, and brown wires (from pins 7, 4, 3, 2, and 1) should all be removed from the connector either by pushing on the exposed edge of the pins with a pointed tool or by cutting the wire flush at the connector. Also note that before the blue and green wires are soldered together, the leads should be cut to 1.5 inches in length. The soldered connection should be wrapped securely with electrical tape. Maximum recommended length of the gray wire is 24 inches.

Remove the jumpers on **J4** on the analog interface board, and insert the rewired connector into socket **J4**.

If the gray wire (pin 8, direction input to F-B-R board) is left unconnected, an internal pull-up resistor will pull this pin to 12 VDC. Rotation will be counter-clockwise-independent of the polarity of the speed input signal. Clockwise rotation will occur only when pin 8 is brought (low) to signal common potential. If a transistor is used to switch the voltage level at pin 8, the sinking current is 20 mA, and the saturation voltage is 0.3 VDC maximum.

## 4. Sending an “Interrupt Signal” to the Programmable Controller

If a Programmable Controller (PLC) is used, it may be necessary to send a signal back to the PLC whenever the local/remote

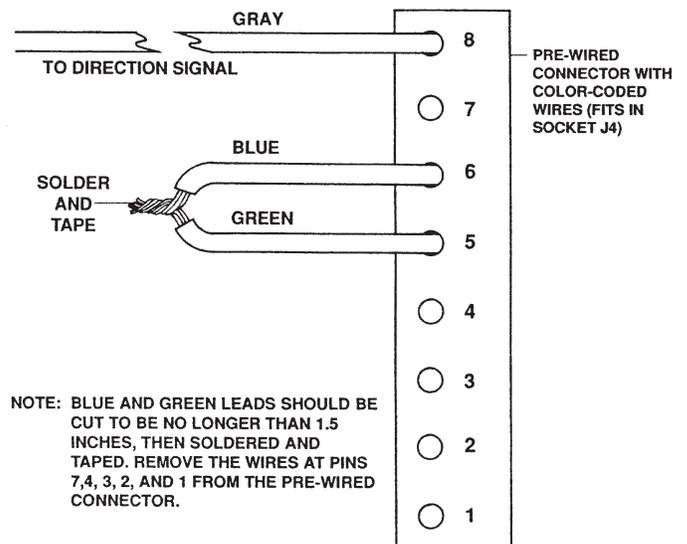
switch is set in the “Local” position. This signal would tell the PLC that automatic operation has been suspended. The desired PLC action might be to halt execution of its program.

To facilitate use of this feature, a row of unused terminals is available on the 4PDT local/remote switch. The center position of that row can be tied to a PLC input, while one side of the switch is tied to signal common.

## OPERATION

Remote (automatic) operation can be interrupted at any time by moving the local/remote switch to its “local” position. Speed may then be controlled using the potentiometer (direction can be controlled using the direction switch, provided the optional Electronic F-B-R Board (Model 0890) is used). Note that the marking of switch positions on the user’s panel is left to the user.

Figure 6. Changing direction with a “direction line.”



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