



1334-MOD-W

Control/Signal Board

Description The 1334-MOD-W Control/Signal Board is designed for use in all Bulletin 1334 AC Drives and replaces the 1334-MOD W. It is needed whenever a Drive application requires any or all of the following functions.

- **Remote Reversing Capability**
- **Thread Speed — Local or Remote Operation**
- **Fault Trip Contacts for Remote Fault Annunciation**
- **Bus Up Contact for Remote Power On Annunciation**

Remote Reversing

This function is used when the forward/reverse selector switch is located away from the Drive. The selector switch is connected between the Control/Signal Board and either the Drive internal 90V AC supply or a separate 120V AC grounded source. The open position of the switch selects the forward direction of motor rotation, the closed position selects the reverse direction.

Thread Speed

This function allows the operator to select a second analog speed reference — Thread Speed — without having to change the setting of the Drive manual speed pot. Thread speed is adjustable for 0 to 100% of the maximum frequency setting.

For **Local Operation**, both the Control/Signal Board and the 1334-MOD-F2 Thread Speed Option Kit are required for the Run or Thread Speed operation to be selected from the Drive door mounted control panel.

For **Remote Operation**, the Control/Signal Board, a customer supplied run/thread selector switch or other contact, and a 1k Ω , 2W linear taper speed pot are required. A closed switch or contact activates the thread mode.

Possible thread speed combinations are:

Local Selector Switch and Remote Potentiometer

Remote Selector Switch and Local Potentiometer

Remote Selector Switch and Remote Potentiometer

Local Selector Switch and Local 1334-MOD-F2 Potentiometer —

A Small, PC Board Mounted, Thread Speed Pot is Provided Only in The 1334-MOD-F2 Thread Speed Option Kit.

Description **Fault Trip Contacts**

(continued)

One solid state fault trip contact is provided to annunciate a Drive fault trip and is connected to **TB2702** on the Control/Signal Board. The contact between terminals **1 & 3** closes upon a Drive fault trip, and opens upon a Drive reset in which a stop/start sequence is initiated or when input power is removed.

Bus Up Contact

The bus up up contact is a normally open solid state contact that remains open when input AC line power is first applied to the Drive, and closes when the DC bus is charged up. The contact is connected between terminals **1 & 3** of terminal block **TB2703** on the Control/Signal Board.

Installation



WARNING

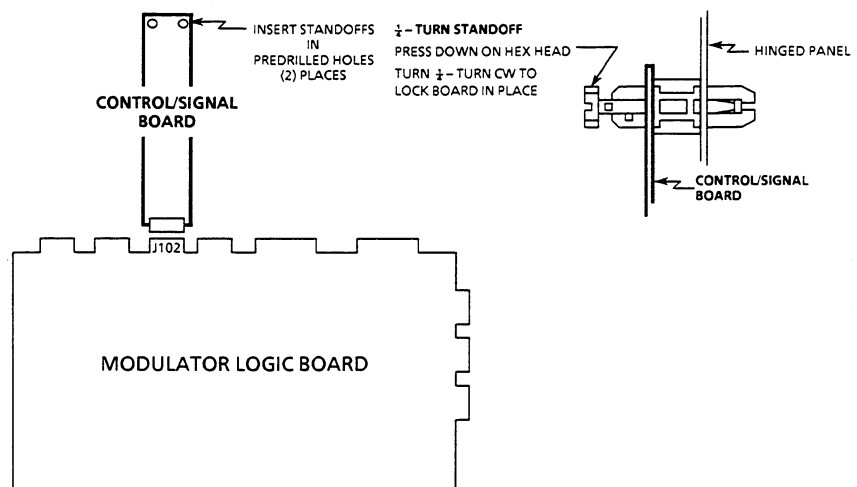
Only personnel familiar with the Drive and its associated machinery should plan or implement the installation, startup, and adjustment of MOD kits. Failure to comply may result in personal injury and/or equipment damage.

To guard against personal injury, always remove & lock-out power to the Drive at the main supply disconnect and all other power source disconnects. Ensure that DS1 is not lit when boards or wires are being installed or connected. Refer to the instruction manual for your Drive for LED location.

Each 1334-MOD-W Option Kit Includes:

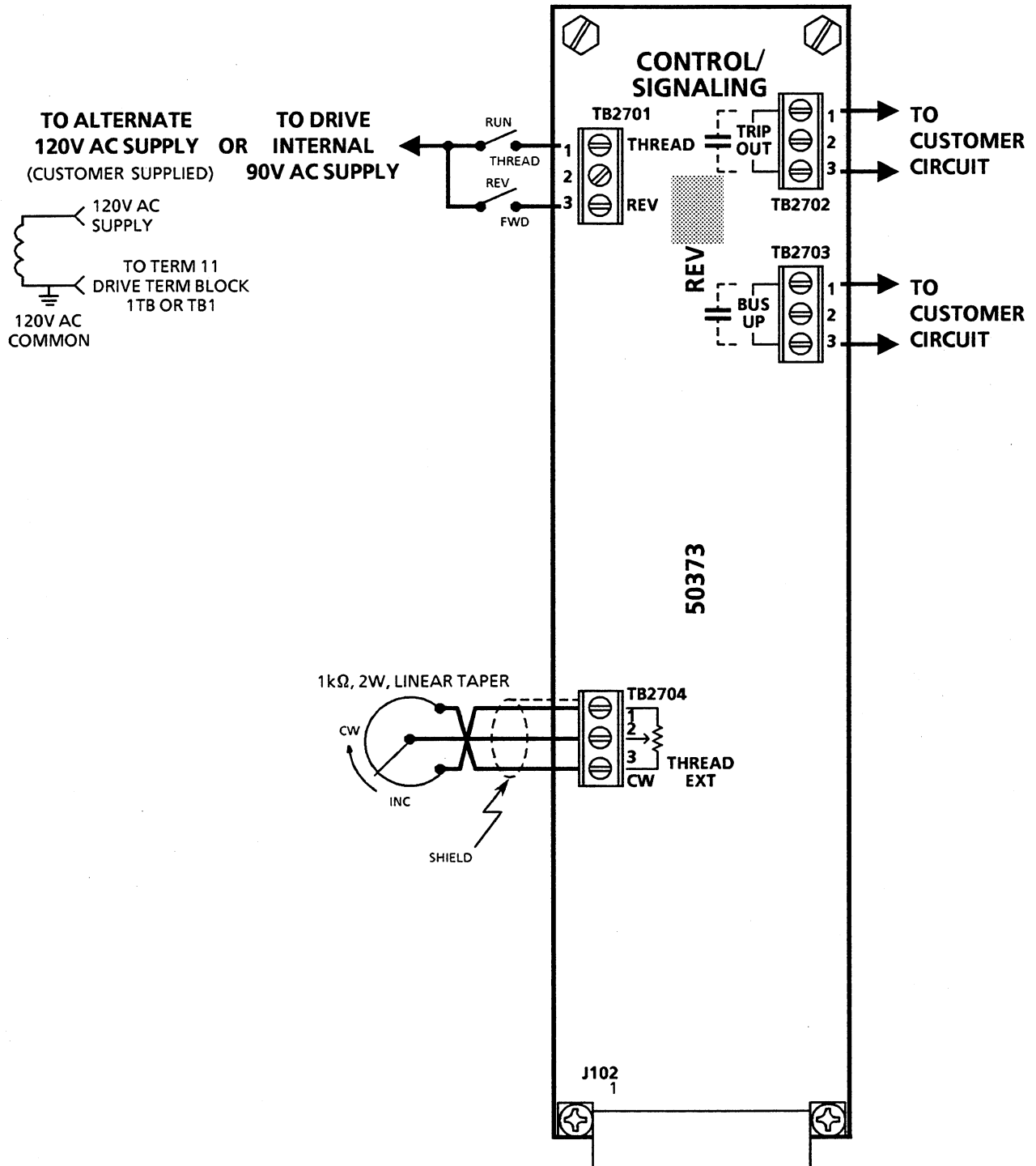
- (1) Control/Signal Board, P/N 50373
- (2) 1/4 Inch, 1/4 - Turn Standoffs, P/N 201104

As shown in the installation drawing below, two predrilled holes have been provided above Modulator Logic Board connector **J102**. Installation requires removing power to the Drive and installing (2) 1/4 - turn standoffs into the predrilled holes. The board is then plugged onto the edge connector while pressing the top of the board onto the (2) installed standoffs. To secure the board in place, press down on each hex head screw and turn 1/4 - turn CW.



Wiring

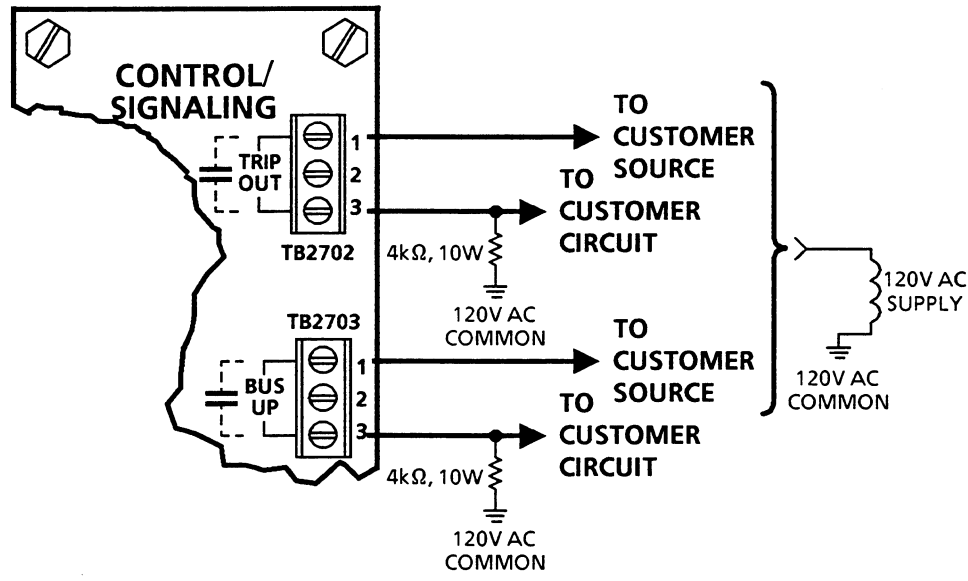
Wiring to the board is not provided with the kit. Wiring should be made as outlined in the diagram below and the text on the following pages. All relay contacts are shown in their de-energized state. The maximum wire size the Control/Signal Board will accept is 18 AWG stranded copper wire.



Wiring
(continued)

IMPORTANT

1. Both the fault trip and bus up contacts are electrically isolated from Drive high voltage potential. No reference to Drive voltages or logic common exists at the user connection points.
2. Both the fault trip and bus up contacts are solid state type contacts with an R-C snubber across them. In their open state, a leakage current of up to 8.6 mA can exist when used in an AC circuit, which may cause a false contact state indication. To pull down the leakage current to a low value, use a grounded AC power source and connect a 4kΩ, 10W resistor between the load side of the contact and AC ground. The resistor will permit an off-state voltage of no greater than 40V when connected.



Fault Trip Contacts — TB2702

The N.O. relay contact between terminals 1 & 3 closes upon a Drive reset and opens upon a fault trip.

Interconnection wiring should be 2-conductor twisted-pair — 7-10 turns per inch, 22 AWG minimum — with a maximum distance of 1,000 feet.

CONTACT RATING — INDUCTIVE AND RESISTIVE LOADS

0.33 A continuous, 2A inrush, 120V AC

Bus Up Contacts — TB2703

The N.O. relay contact closes when the DC bus is charged up after AC input power has been applied to the Drive.

For best results, interconnection wiring should be twisted-pair — 7-10 turns per inch, 22 AWG minimum — with a maximum distance of 1,000 feet.

CONTACT RATING — INDUCTIVE AND RESISTIVE LOADS

0.33 A continuous, 2A inrush, 120V AC

Wiring
(continued)

RUN/THREAD & FWD/REV Switches — TB2701

If the Drive internal 90V AC is used, connections should be made only to terminals 1, 2, 3 or 4 of 1TB for 15-50 HP Drives, or TB1 for 3-10HP Drives.

If an alternate 120V AC grounded source is used, no connections are made to terminals 1, 2, 3 or 4. The ground must be connected to terminal 11 of terminal block 1TB or TB1.

Thread Speed Pot — TB2704

If a remote thread speed pot is to be used, for best results interconnection wiring should be 3-conductor shielded cable — 7-10 turns per inch, 22 AWG minimum — with a maximum distance of 50 feet. Connect one end of the shield to terminal 1 of **TB2704**. The other end must be tied back, insulated, and left floating.

If a local thread speed pot is required, the thread speed pot supplied with the 1334-MOD-F2 must be used. Refer to the 1334-MOD-F2 Option Kit Instructions for installation information.

Adjustments

There are no field adjustments on the Control/Signal Board, however, when the thread speed feature is used, the **STD/THRD** jumper on the Modulator Logic Board must be in the **THRD** position. When the reversing feature is used, the **REV/NO REV** jumper on the Modulator Logic Board must be in the **REV** position for the reversing function to be operative. Refer to the Drive instruction manual for jumper location.



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