Instructions: Switchgear Control Model 80

DANGER

All apparatus must be de-energized during installation or removal of part(s).

Do not touch or move energized products in the work area.

These instructions do not attempt to provide for every possible contingency.

Failure to follow these instructions will result in damage to the product and serious or fatal injury.

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices.

All apparatus must be installed and operated in accordance with individual user, local and national work rules and electrical standards.

If this product is supplied with a protective shipping cover(s), remove this shipping cover(s) and replace with the appropriate HV insulated cap(s) or connector(s) before submerging or energizing the circuit.

Inspect parts for damage, rating and compatibility with mating parts.

Excess distortion of the assembled product may result in its failure.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST ELASTIMOLD® OFFICE.

Limited Warranty:

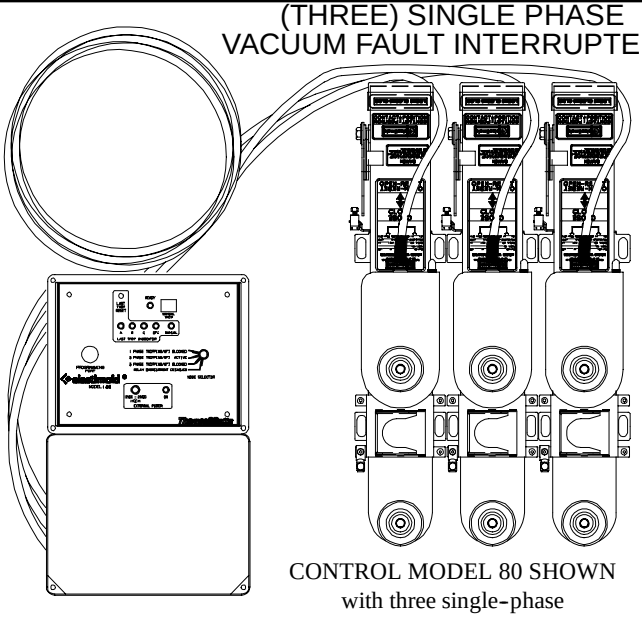
1. T&B warrants that its products will be free from defects in materials or workmanship for a period of two (2) years, except for tools which are warranted separately (see warranty accompanying those products). Fisher Pierce® products and Elastimold® Reclosers are warranted for three years; and Joslyn t VBT and VBU capacitor switches are warranted for four years or 40,000 operations whichever occurs first. Upon prompt notification of a warranted defect, T&B will, at its option, repair or replace the defective product.
2. In no event shall T&B be liable for any consequential, indirect or special damages, nor will T&B be liable for transportation, labor, or other charges arising out of the removal or reinstallation of its products. Liability for breach of warranty is limited to the cost of repair or replacement of the warranted product only.
3. Misuse, misapplication or modification of T&B products immediately voids all warranties.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE SPECIFICALLY DISCLAIMED.

IMPORTANT

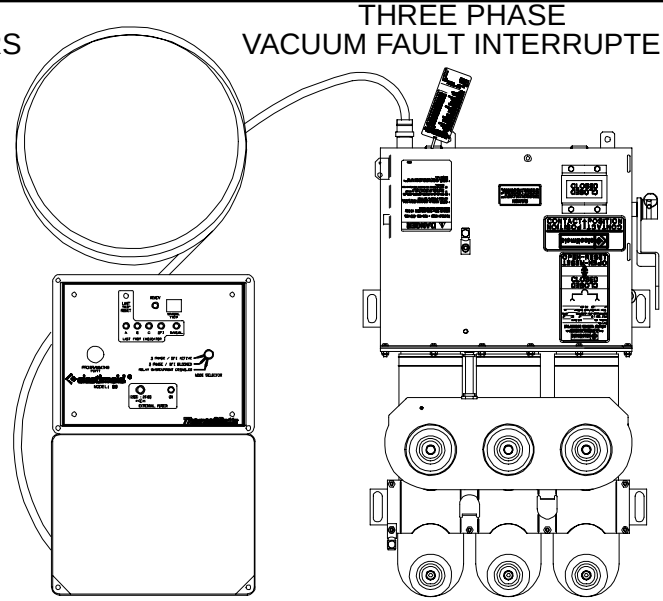
1. Check contents of package to ensure they are complete and undamaged.
2. Check all components to ensure proper fit with cable and/or mating products.
3. Read entire installation instructions before starting.
4. Have all required tools at hand and maintain cleanliness throughout the procedure.

(THREE) SINGLE PHASE
VACUUM FAULT INTERRUPTERS



CONTROL MODEL 80 SHOWN
with three single-phase
MVIs (Molded Vacuum Interrupters)

THREE PHASE
VACUUM FAULT INTERRUPTER



CONTROL MODEL 80 SHOWN
with one three-phase MVI

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GENERAL FUNCTIONS

The Model 80 monitors the individual phase currents of an Elastimold three phase system using 1000:1 current sensors (CSs). The control is powered by the current from the current sensors. The control can also be powered by a +12vdc to +24vdc external power source that uses a type M style adapter plug. The adapter plug shall be a positive center polarization type with a 2.1mm I.D x 5.5mm barrel plug.

The Dial can be set to one of the following:

For 3 Phase MVI	For 3 Single Phase MVIs
3 Phase / GFI Active	1 Phase Tripping / GFI Blocked
3 Phase / GFI Blocked	3 Phase Tripping / GFI Active
Relay Overcurrent Disabled	3 Phase Tripping / GFI Blocked
	Relay Overcurrent Disabled

Dial Settings:

3 Phase / GFI Active: All three phases will trip simultaneously if there is a fault on any phase or if there is a ground fault. The ground fault function must be programmed with the use of Eset Software in order to function. If the Eset program is set to Block, the ground fault will not trip the unit.

3 Phase / GFI Blocked: All three phases will trip simultaneously if there is a fault on any phase, but will not trip if there is a ground fault even if the E-Set Software is set for a ground fault.

1 Phase / GFI Blocked: Only the Phase that has the fault will trip. This feature can only be used when connected to three single-phase units.

Relay Overcurrent Disabled: The MVI will not trip in the event of an overcurrent on any phase. The E-Set selection of the Relay Overcurrent Disabled takes precedence over the rotary switch selection on the front panel of the control.

Control:

1. READY INDICATOR

a. will blink approximately every 2.5 seconds when the control has enough power to operate (approximately 15amps)

b. will start blinking in approximately 10 seconds when control is first powered

Note: Even if there is not enough line current to power the control and for the READY indicator to blink, the circuit is still protected. With the minimum fuse setting of 10 amps, the minimum trip is 22 amps which is more than enough to power the control.

2. MANUAL TRIP

a. push button can be used to **trip all three phases simultaneously** when the control is fully powered, either by line current or external power

CAUTION: The READY indicator must be blinking before pushing the MANUAL TRIP button.

3. LAST TRIP INDICATORS

a. will show the phase(s) that experienced an overcurrent condition

b. LEDs marked **A**, **B** or **C** indicate cause of trip was an overcurrent trip

c. GFI is illuminated when a ground fault caused a trip

d. MANUAL TRIP indicator is illuminated, if the MANUAL TRIP push button caused the last trip

4**. EXTERNAL POWER INDICATOR**

a. EXTERNAL POWER LED will blink if the trip is caused by a remote trip

b. is illuminated when (+12vdc to +24vdc) external power is applied

c. external power connection

i. temporarily through the power jack on the front of the control

ii permanently by connecting to the internal power terminal strip (J5) on the circuit board (Figure 2 & 4).

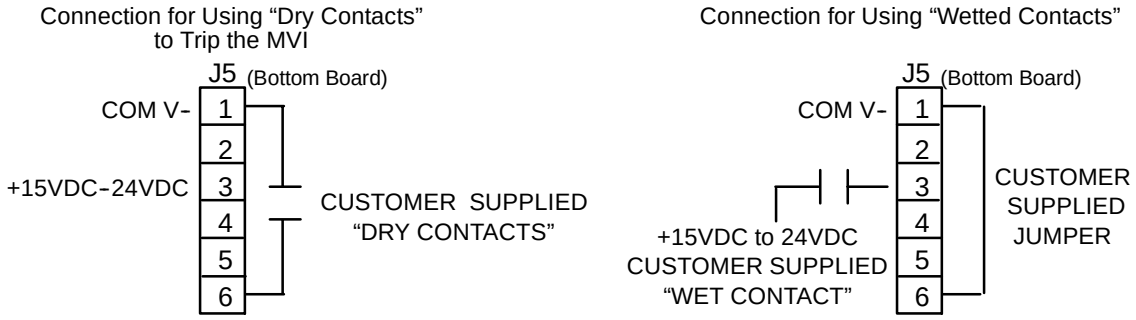
d. **LAST TRIP RESET** clears all LED trip indicators

Connection of removable plugs for the terminal strips must match the way the plug installs.

The current sensors are connected to terminal block J1. When the CS is disconnected, the CS output is limited to 15 volts.

The magnetic latches are connected to terminal block J6. The terminals marked “A, B & C” are positive polarity. The terminals marked “common” are negative polarity. The magnetic latches are polarity sensitive. The common leads of all 3 magnetic latches can be tied together. The positive lead of each magnetic latch must go to its own individual terminal strip position.

Remote Trip Configurations



To complete the installation and operation of the Elastimold Molded Vacuum Interrupter, refer to IS-0908.

Figure 1 Front Panel

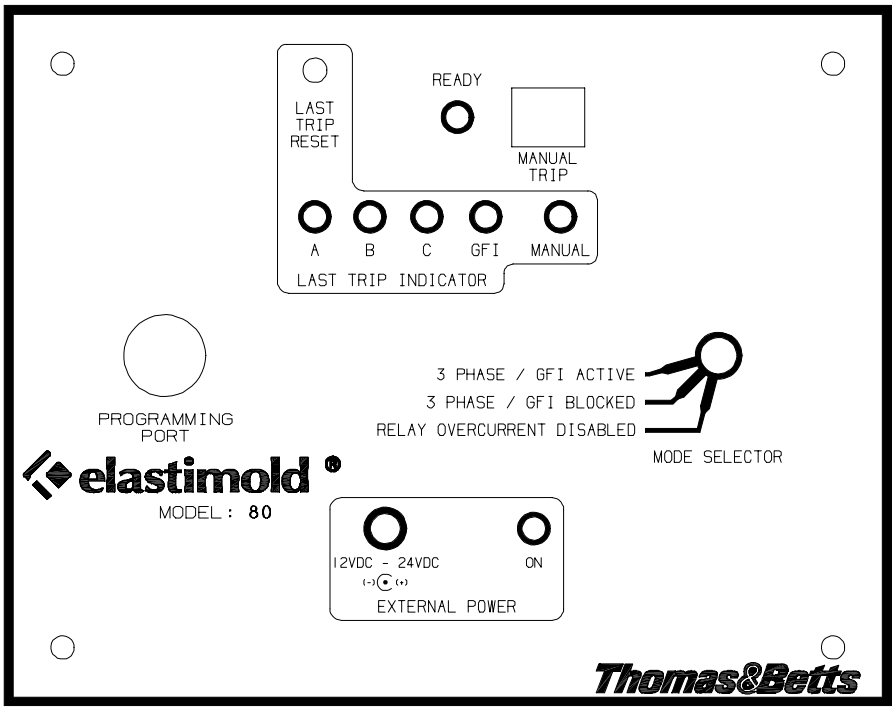


Figure 2 Main Circuit Board Connections for 10 Pin Receptacle (3 Phase MVI)

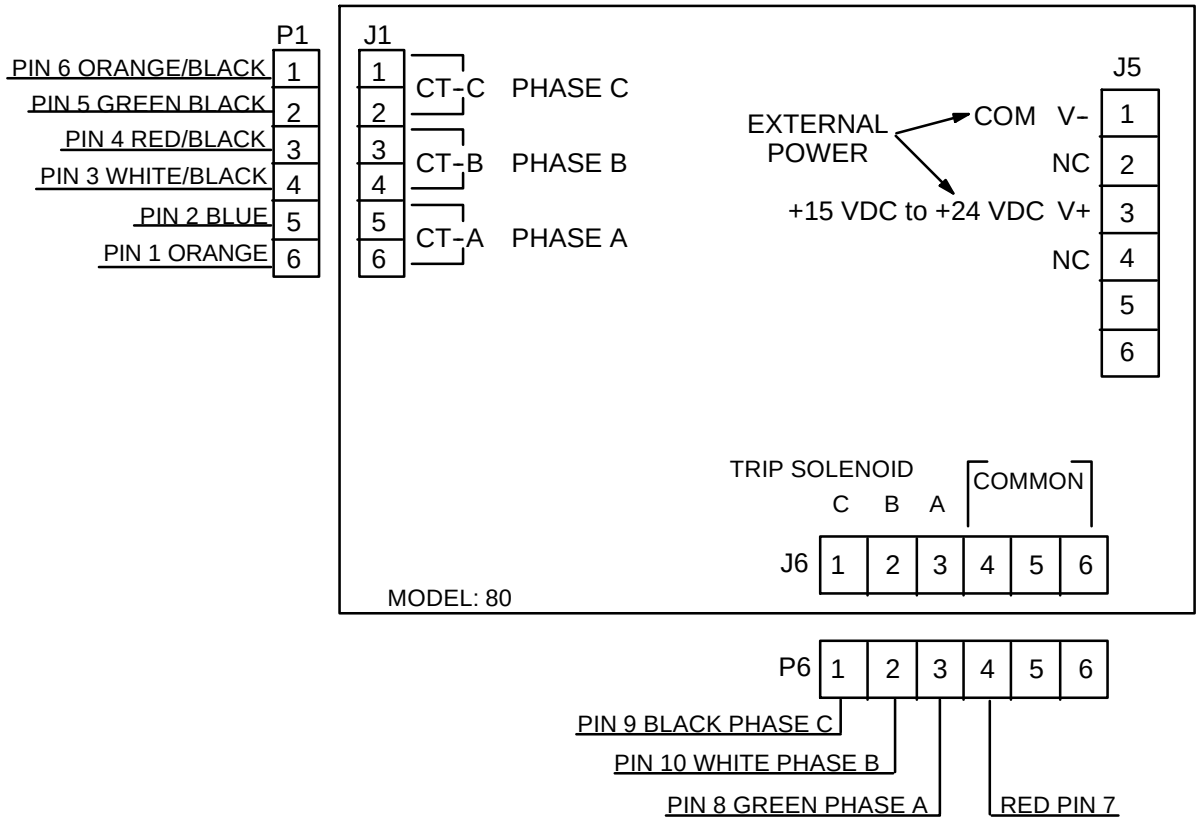


Figure 3 Front Panel

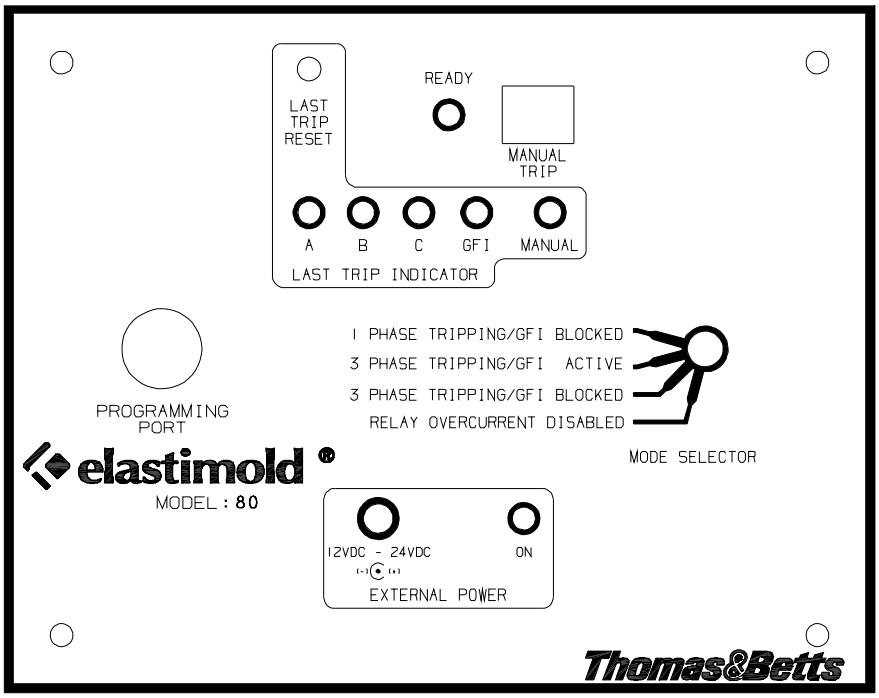


Figure 4 Main Circuit Board Connections for (3) 4 Pin Receptacle (Single Phase MVI)