

**CONTROL POWER AND TERMINALS**

Advantage motor controllers require a constant source of control power to operate and indicate a tripped condition. Loss of control power or a severe drop in control voltage will cause an Advantage motor controller to open.

The location and function of each control terminal is shown below.

**3** = Terminal to which the START signal must be delivered

**P** = Terminal which must be energized to permit operation

**E** = Ungrounded side of control power source

**C** = Grounded (common) side of control power source

Control power terminals for the motor controller are shown in Figure 3. All the terminals must be supplied by the same phase. The preferred source is a control power transformer (see Figure 13) whose primary windings are connected across phase L1-L2, although phases L2-L3, phase L3-L1, or phases A, B, and C will provide satisfactory performance. In any case, the power supplied to terminals 3 and P must be from the same phase as the power to terminals E and C, except that a DC signal in the range of 5 to 125VDC (24 to 96 volts for Model E or later) may be supplied to terminals 3 and P for remote control, provided one side of the DC voltage source is grounded to the same reference point as terminal C. Be sure to place the control wires in such a position as not to interfere with the power conductor terminals.

**CONTROL CIRCUIT CHECK**

Since an Advantage motor controller can be controlled with an AC signal of 24 to 120 volts at terminals 3 and P, a high impedance fault in the control circuit that bypasses the STOP or START pushbuttons so as to supply voltage in this range can cause controller malfunction, i.e., the fault causes the controller to turn on or the fault nullifies the STOP button. Check pushbutton stations for liquid buildup and the leads to 3 and P for voltage when none should be present.

TABLE IX - AUXILIARY CONTACT RATINGS		
Voltage	Make	Break
NEMA A600 120-600VAC 28 - 120VAC	7200VA 60A	720VA 6A
NEMA Q300 28-300VDC	69VA	69VA

**TABLE X - RENEWAL PARTS**

Description	Part Number
Replacement Contacts, Size 5*	WCK53
Replacement Contacts, Size 6*	WCK63
Replacement Coil, 110-120V	1A96712G01
Replacement Circuit Board - Size 5 W201 - 60HZ	WCBC5F
Replacement Circuit Board - Size 5 W201 - 50HZ	WCBC5N
Replacement Circuit Board - Size 5 W200 - 60HZ	WCBS5F
Replacement Circuit Board - Size 5 W200 - 50HZ	WCBS5N
Replacement Circuit Board - Size 6 W201 - 60HZ	WCBC6F
Replacement Circuit Board - Size 6 W201 - 50HZ	WCBC6N
Replacement Circuit Board - Size 6 W200 - 60HZ	WCBS6F
Model E Replacement Circuit Board - Size 6 W200 - 50HZ	WCBS6N
Model E Replacement Circuit Board - Size 5 W201 - 60HZ	WCBC5EF
Model E Replacement Circuit Board - Size 5 W201 - 50HZ	WCBC5EN
Model E Replacement Circuit Board - Size 5 W200 - 60HZ	WCBS5EF
Model E Replacement Circuit Board - Size 5 W200 - 50HZ	WCBS5EN
Model E Replacement Circuit Board - Size 6 W201 - 60HZ	WCBC6EF
Model E Replacement Circuit Board - Size 6 W201 - 50HZ	WCBC6EN
Model E Replacement Circuit Board - Size 6 W200 - 60HZ	WCBS6EF
Model E Replacement Circuit Board - Size 6 W200 - 50HZ	WCBS6EN
DIP Switch Windows (10/pkg)	WDIPSW10
* These kits include contacts, screws, and crossbar assembly with armature attached.	