



Alternate Terminal Pad
Arrangements

SWITCH CONFIG.	BIL kV (T:T-T:G)	VOLTAGE RATING kV	CURRENT RATING A	OPERATING MECHANISM TYPE	CONTROL VOLTAGE	OUTLINE DRAWING	VES SWITCH PART NO.
3 POLE	110-150	15	600	SOLENOID	120 VAC	1001057	1001055G1
3 POLE	110-150	15	600	15 PIN MOTOR	48 VDC/120 VAC	1001057	1002520G1
3 POLE	110-150	15	600	15 PIN MOTOR	125 VDC	1001057	1002520G2
3 POLE	110-150	15	600	35 PIN MOTOR	48 VDC/120 VAC	1001057	1003308G1
3 POLE	110-150	15	600	35 PIN MOTOR	125 VDC	1001057	1003308G2

The common uses of this switch are sectionalizing and arc furnace or capacitor bank switching. This switch may have either a motor or solenoid operated mechanism. These two mechanisms differ in the complexity of the required control systems, control current demand, available operating voltages, mechanical life, and the precision of the timing of switch contact closing.

Motor operated switches are used for capacitor bank switching and sectionalizing but not arc furnace switching. They can have simple control systems since control current demand is less than six amperes. The motor mechanism cannot be used where simultaneous contact closure in more than one switch is required. The motor mechanism has a limited life of about 30,000 operations which is much less than the more than 200,000 operations achievable by a solenoid mechanism. Motor operated switches with 15 or 35 pin connectors have two each form A (e.g. normal open) and B (e.g. normal closed) or six each form A and B contacts respectively. A common error which may damage the motor operator is to connect it to the wrong control voltage. A switch's control voltage can be determined by examining its relay panel. Relay panels are shown starting on page 36. Repair parts for this switch are found beginning on page 45 and for the motor mechanism beginning on page 54.

Common uses of the solenoid operated switch are both capacitor and also arc furnace switching. Uncommonly, two or more of these switches may be used along with three resistor modules to form a resistor insertion switch. The solenoid operated switch can be operated with three modules connected in parallel. Each module's current rating is de-rated to 500 A when connected in parallel for a total current of 1500 A. Three separate switches are then required to make a three phase set. Solenoid operated switches have one form A (e.g. normal open) and one form B (e.g. normal closed) contact. The solenoid operator requires a more elaborate control because each solenoid requires a current in the range of 60 to 65 amperes peak for 1-1/2 cycles. The requirement for a large current source can be overcome by using a stored energy control shown on page 18. The controls for arc furnace switching are shown starting on page 20. The resistor module for building a resistor insertion switch is shown on page 15.