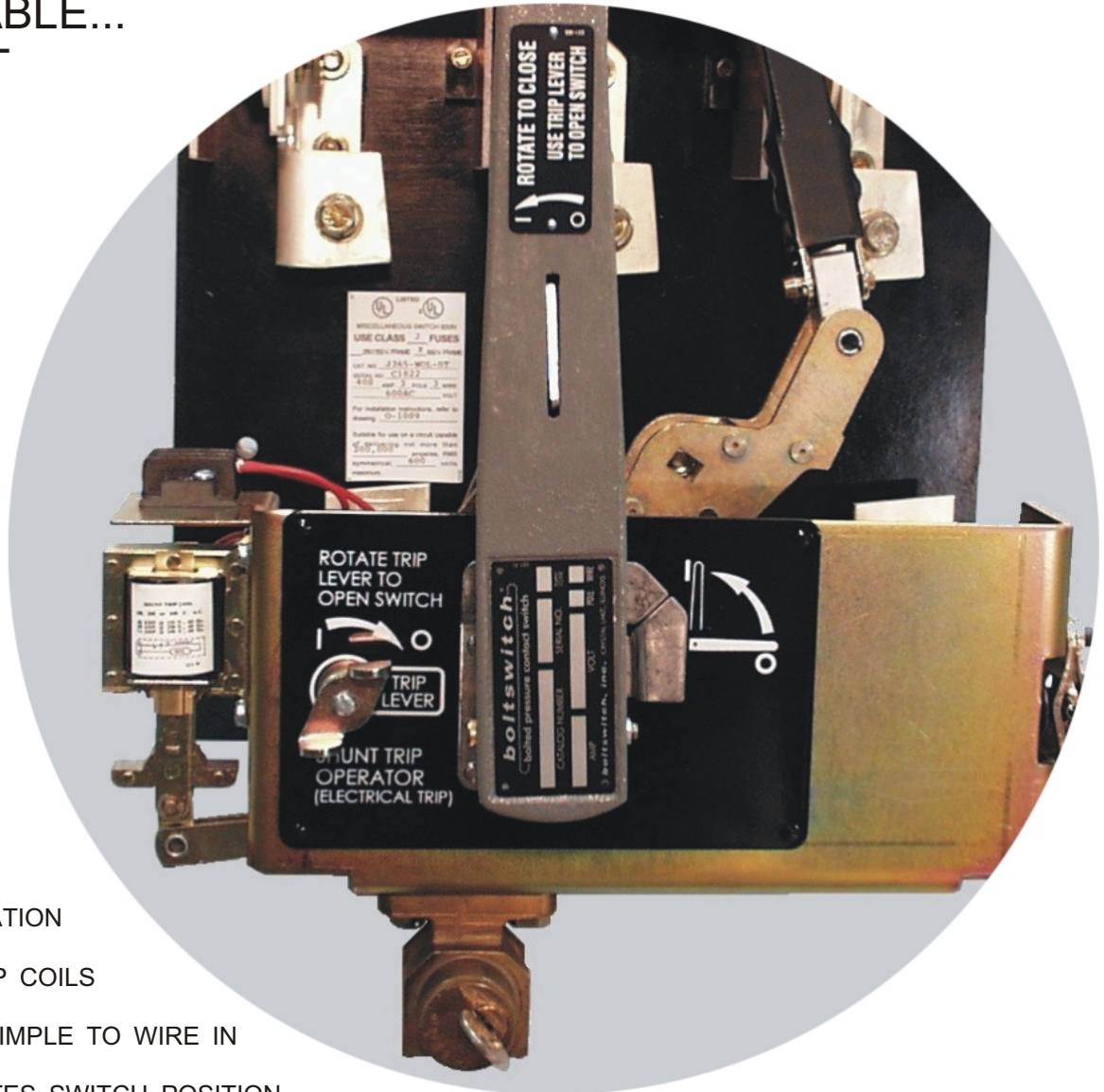


boltswitch

SHUNT TRIP OPERATORS

suffix -ST

FAST CONTACT OPENING...
DEPENDABLE...
COMPACT



FEATURES:

- EASE OF OPERATION
- AC AND DC TRIP COILS
- ACCESSORIES SIMPLE TO WIRE IN
- HANDLE INDICATES SWITCH POSITION
- HANDLE PROVIDES MANUAL CONTROL
- TARGET INDICATOR ON LARGER SIZES
- SAME DIMENSIONS AS MANUAL SWITCHES
- HANDLE FALLS BY GRAVITY AS SWITCH OPENS
- OPTIONAL KEY INTERLOCK MOUNTS BELOW HOUSING

boltswitch, inc.

6208 COMMERCIAL ROAD
CRYSTAL LAKE, IL 60014
PHONE: (815) 459-6900
FAX: (815) 455-7788



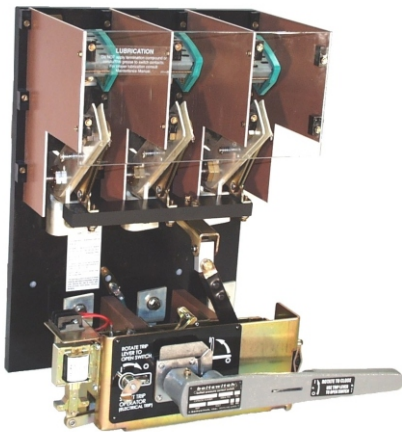
SWITCH IS ON

Boltswitch shunt trip operators are stored energy devices. A single unidirectional movement of the handle closes the switch and charges an opening spring.

The operator features a spiral closing spring and an independent opening spring. This design results in greatly reduced handle effort without sacrificing blade speed. The spring guide is contained completely within the housing. Key interlock can be achieved within the same switch depth.

The switch blade movement is “Quick Make, Quick Break” and completely independent of handle speed.

Boltswitch shunt trip operated switches unequivocally meet NEC Article 380-7. When the switch is closed, the handle is up and blocks the fuse door. When the switch is open, the handle is down, allowing easy fuse access.



SWITCH IS OFF

Once tripped, the handle may be used for breaking welds, as required by some design standards.

The handle is “trip free.” The handle is not driven down, but falls to the open position by gravity. Blocking the handle does not interfere with the mechanism opening the switch.

Series VL, VLB, SL and SLB models have a Position Indicator feature which shows the true position of the blades.

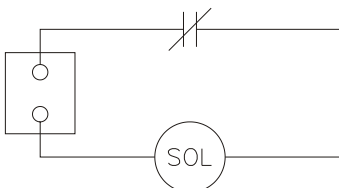
SHUNT TRIP IS FAST! CONSULT FACTORY

COIL DATA

The standard coil may be used on 120, 208, 240 VAC, or with a Boltswitch Capacitor Unit (Cat. Number CAP-2). It will operate at 66 VAC. The resistance is 18.3 ohms. The coil remains energized approximately 1/10 second and will draw:

APPLIED VOLTAGE	Hz	CURRENT (AMPS)	
		INRUSH	SEALED IN
120*	60	6.6	.56
208	60	11.4	.98
240	60	13.1	1.10

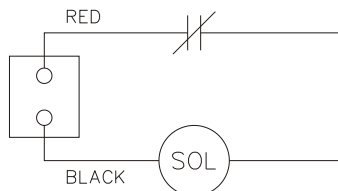
* If control transformer is used to obtain 120 volts, it should be rated 50 VA minimum.



OPTIONAL DC COILS

Coils are available for 24, 48, 125, or 250 VDC input. The coils will operate at 50% undervoltage. The coil remains energized approximately 1/10 second and will draw:

APPLIED VOLTAGE	CURRENT (AMPS)
24	32
48	16
125	6.8
250	3.4



OPTIONAL REMOTE CLOSE

Optional Remote Close Solenoid (suffix -CST) provides a second solenoid for closing. The operator springs are charged with the switch handle for a single close and trip. Energizing the close solenoid will close the switch. Energizing the trip coil will open the switch.

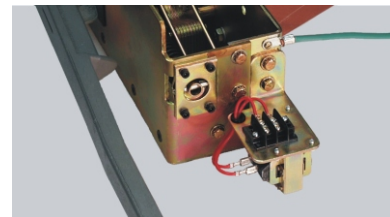


PHOTO OF OPTIONAL REMOTE CLOSE SOLENOID

UL PERFORMANCE REQUIREMENTS

A brief description of some of the tests required by the Underwriters' Laboratories, Inc., prior to listing switches with electrical trip mechanisms, are as follows:

30-1200 AMP SWITCHES (UL 98)

OPERATION: Trip at 75% of coil rating; trip at 55% of coil rating if intended for use with ground fault sensing equipment.

CIRCUIT OPENING: 3 break operations at 10 times rated current, at rated voltage; 3 break operations at 12 times rated current at rated voltage if intended for use with Class I ground fault sensing equipment without lockout.

ENDURANCE: No load endurance test operations:

SWITCH RATING IN AMPERES	NUMBER OF OPERATIONS
400	100
600	100
800	50
1200	50

800-4000 AMP SWITCHES (UL 977)

OPERATION: Trip at 75% of coil rating; trip at 55% of coil rating if intended for use with ground fault sensing equipment; trip at 85% of coil rating if intended to be powered from independent source.

CIRCUIT OPENING: 3 break operations at 10 times rated current, at rated voltage; 3 break operations at 12 times rated current at rated voltage if intended for use with Class I ground fault sensing equipment without lockout.

ENDURANCE: No load endurance test operations:

SWITCH RATING IN AMPERES	NUMBER OF OPERATIONS
800	350
1200	250
1600-2500	200
3000-4000	100

The operating mechanism of an electrically tripped switch shall be such that when the switch contacts are closed, the mechanism shall immediately be in a condition to open by the electrical tripping means without further operation, manual or otherwise.

NOTE:

Boltswitch has passed all of the required UL tests for electrically tripped switches suitable for use with Class I ground fault sensing element without lockout.

SUGGESTED SPECIFICATIONS FOR SWITCHES WITH SHUNT TRIP OPERATORS

The main switch and branch switches shall be of the fusible bolted pressure type of ampacity as shown on the drawings. Switches shall be dead front, and equipped with "Quick Make, Quick Break" tease proof operators. A non-metallic insulated bar will be used to connect the operator to the crossbar, in order to keep ground potential out of the arcing zone. The operating handle shall have provisions for padlocking in the open position with at least three padlocks.

Switches 600 amp and smaller shall accommodate Class J or R fuses.

Switches larger than 600 amp shall accommodate Class L or T fuses.

All switches 400 through 4000 amp shall have met the test requirements of UL 98 and/or UL 977, and marked suitable for use on a circuit capable of delivering 200,000 RMS symmetrical amperes.

Switches suitable for use with Class I ground fault sensing element shall be equipped with shunt trip operators and shall have a current interrupting rating of 12 times the nameplate rating. The operating mechanism shall be such that at the moment when the switch contacts close, the operating mechanism shall immediately be in a condition to open the switch contacts by the electrical tripping means without further operation, manual or otherwise.

All bolted pressure contact switches shall be manufactured by BOLTSWITCH, INC. of Crystal Lake, Illinois.

boltswitch, inc.

6208 COMMERCIAL ROAD CRYSTAL LAKE, IL 60014

NOVEMBER 2007

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