

## Specifications

### Conditions of Sale

**STANDARD:** The seller's standard conditions of sale set forth in Price Sheet 150 apply.

### SPECIAL TO THIS PRODUCT:

**INCLUSIONS:** S&C high-speed Type LS-2 Switch Operators are designed for remote power operation of Line-Rupter™ Switches.

Type LS-2 Switch Operators include the following features:

- A built-in internal decoupling mechanism, operable by an integral external decoupling handle, with padlocking provisions and automatic mechanical locking of the output shaft
- Externally operable OPEN/CLOSE pushbuttons with a padlockable cover
- A built-in nonremovable, foldaway manual operating handle
- Mechanical position indicators for both switch operator and high-voltage switch **Open** and **Closed** positions
- A non-reset electric **Operation** counter
- A laminated safety-plate window for inspection of the built-in internal decoupling mechanism, mechanical position indicators, and an **Operation** counter (and POSITION INDICATING lamps, if furnished as accessories)
- Foolproof recoupling (It's impossible with position-indexing drums to couple the switch operator and the high-voltage switch "unsynchronized.")
- Fingertip-precision adjustment of output-shaft rotation using self-locking spring-biased cams
- An eight-pole auxiliary switch coupled to the motor, with fingertip-precision adjustment of individual contacts using self-locking spring-biased cams
- Antifriction bearings throughout; tapered roller bearings for all high-torque gear-train shafts
- Two-pole pull-out fuseholders for a space heater and motor circuit
- A weatherproof, dustproof enclosure equipped with a 120/240-Vac space heater, factory-connected for 240-Vac operation (It can readily be field reconnected for 120-Vac operation.)
- A tamper-resistant design: welded enclosure; baffled louvers; gasketed, flanged door openings; a cam-action door latch; and provisions for padlocking
- Foul-weather accessibility to interior of enclosure (Access is by door rather than by removal of entire enclosure.)

**EXCLUSIONS:** Switch operators do not include the operating linkage between the switch operator and the high-voltage switch.

**SPECIFICATION DEVIATIONS:** Various accessories are available as listed in Table 2 on page 3.

### How to Order

Complete the following steps to prepare a catalog number for an S&C Type LS-2 Switch Operator order:

- STEP 1.** Obtain the catalog number of the desired switch operator from Table 1.



## S&C Type LS-2 Switch Operator

**STEP 2.** Obtain the suffix letters of the desired accessories from Table 2 on page 3. Add the indicated suffix letters to the catalog number of the switch operator selected in STEP 1.

**Example:** For a 125-Vdc Type LS-2 Switch Operator, complete with position-indicating lamp, a duplex receptacle, and a convenience-light lamp holder with switch, specify catalog number: 38915-BMV.

### A Note on Operating Speed

The high-speed Type LS-2 Switch Operator has a maximum operating time of 2.2 seconds. It is expressly intended for application with Line-Rupter Switches and provides higher blade-tip speed for improved closing performance.

**Table 1. Type LS-2 Switch Operators (For Line-Rupter Switches)**

Application		Switch Operator Type	Motor and Control Voltage	Maximum Operating Time, Seconds <sup>①</sup>	Minimum Locked-Rotor Torque at Rated Control Voltage, Inch-Lbs.	Accelerating Current, Amperes	Catalog Number	Schematic Wiring Diagram Drawing Number	Page Reference for Dimensional Information
High-Voltage Device	Rating of High-Voltage Device								
Line-Rupter Switches	115 kV thru 230 kV	LS-2	48 Vdc 125 Vdc	2.2	18 000 21 500	30 15	38915-A 38915-B	CDR-3238	4

<sup>①</sup> Based on minimum battery and external control wire size requirements specified in S&C Data Bulletin 753-60; operating time will be less if larger-than-minimum battery size and/or external control wire size is used.

**Table 2. Accessories**

Item	Suffix to be Added to Switch Operator Catalog Number
Deletion of externally operable OPEN/CLOSE pushbuttons	-J
Space heater thermostat	-K
Key interlock with switch, locks high-voltage switch open and disconnects motor-control circuit	-L
International crating. Wood products used in the packaging are either hardwood or certified by the wood supplier as being "heat treated" (kiln dried) to a core temperature of 133°F (56°C) for a minimum of 30 minutes	-L71
Position-indicating LED lamps (one red, one green), mounted inside the enclosure	-M
Extra auxiliary switch (individually adjustable contacts), 4-PST (coupled to motor)	-Q
Duplex receptacle and convenience-light lamp holder with switch	-V
Extra auxiliary switch (individually adjustable contacts), 8-PST (coupled to high-voltage switch)①	-W
Remote-control blocking switch, prevents remote operation of switch operator when the protective cover for the externally mounted OPEN/CLOSE pushbuttons is open	-Y
Extra auxiliary switch (individually adjustable contacts), 12-PST (coupled to high-voltage switch)①	-Z

① The 8-PST extra auxiliary switch (suffix "-W") cannot be furnished if the 12-PST version (suffix "-Z") is specified, and vice versa.

