

150 A Externally Operated Tap Changer Switch

800-58

GENERAL

The RTE® 150 A externally operated tap changer switch eliminates many of the hazards associated with manual internal tap changing of distribution transformers because line crews need not be exposed to high voltage conductors and hot transformer fluids. Tap changer switches eliminate the need to dismount pole type transformers for voltage adjustment and exposure of the transformer tank interior to contamination. They are designed for use in distribution transformers filled with transformer oil, R-Temp® fluid or an approved equivalent.

Tap changers are available with five or seven switch positions, and for sidewall- or cover-mount applications. The switch body, rotor and shaft are made of a high strength glass-filled polyester material. The operating shaft is sealed against leakage by two high temperature resistant Viton® O-rings. The tapered gasket seal controls compression and prevents overtightening.

The switch is keyed to the tank wall to prevent switch body movement during switching. Switch positions are easily changed by pulling out the spring-loaded handle turning it to the desired position, and allowing the pointer to drop into the slotted index plate. The padlockable operating handle provides greater leverage, can be operated by hand and has a lock screw. The easy to read raised white letters on the black index plate clearly identify switch position.

All copper, low resistance, pinch-type contacts provide self-wiping connections. For ease of connection, bolt tabs, bolt tabs with 1/4-20 stud, 16-14 AWG, 12-10 AWG, 8 AWG or 6 AWG crimp terminals are available. Switches with crimp terminals have additional inboard tapped holes for making separate ring tongue terminal connections without changing switch contacts. All terminals have hex recesses to hold 7/16 inch hex bolt heads of standard 1/4 inch hardware for fast, easy connections.



Figure 1.
Single-Phase, 150 A Externally Operated Tap Changer Switch.



Figure 2.
Three-Phase, 150 A Externally Operated Tap Changer Switch.

INSTALLATION

No special tools are required. The switch body is installed through a keyed 1.33 inch (34 mm) hole in the tank wall and sealed by an inside gasket. An outer sealing nut is tightened to a torque of 80 to 120 in.-lb. Refer to Service Information Section S800-58-1 for details.

TABLE 1
Voltage Ratings and Characteristics

Description	kV
Standard Voltage Class	35 Max.
ac 60 Hz 1 Minute Withstand	50
BIL and Full Wave Crest	150

Voltage ratings and characteristics are in accordance with ANSI Standard C57.12. (Phase-to-Phase or Phase-to-Ground).

TABLE 2
Current Ratings and Characteristics

Description	Amperes
Continuous	150 A rms

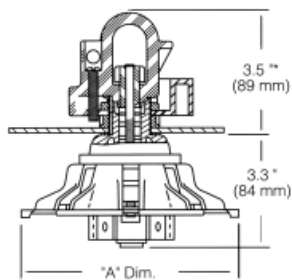


Figure 3.
One-Phase Switch.

* Varies with Front Plate thickness.



Figure 4.
Mounting Hole.

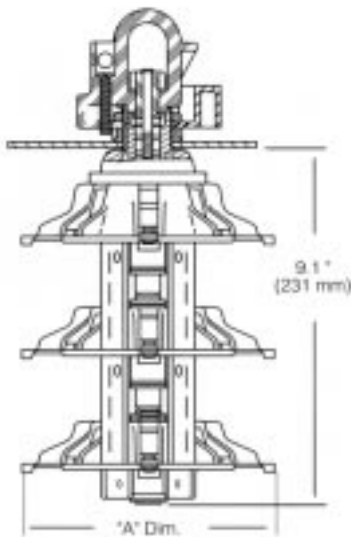


Figure 5.
Three-Phase Switch.



Figure 6.
Five Position Indicator.



Figure 7.
Contact Configuration.

NOTE: Dimensions given are for reference only.

TABLE 3
Contact Dimensions in./(mm)

Contact Type	A
Tab for 1/4" Bolts	5.6 (141)
16-14 AWG Terminals	6.7 (169)
12-10 AWG Terminals	6.7 (169)
8 AWG Terminals	6.7 (169)
6 AWG Terminals	6.9 (175)
Bolt Tab with 1/4-20 Stud	5.6 (141)

ORDERING INFORMATION

To order an RTE 150 A tap changer switch, specify catalog numbers for one switch and one handle hardware kit.

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TABLE 4
Tap Changer Switches

Contact Type	Catalog Number			
	Single-Phase		Three-Phase	
Sidewall Mounted	5 Position	7 Position	5 Position	7 Position
Bolt Tab	2237470C01M	2237470C51M	2237471C01 M	2237471C51 M
16- 14 AWG Terminals	2237470C02M	2237470C52M	2237471C02M	2237471C52M
12- 10 AWG Terminals	2237470C03M	2237470C53M	2237471C03M	2237471C53M
8 AWG Terminals	2237470C04M	2237470C54M	2237471C04M	2237471C54M
6 AWG Terminals	2237470C05M	2237470C55M	2237471C05M	2237471C55M
Bolt Tab with 1/4-20 Stud	2237470C16M	2237470C66M	2237471C16M	2237471C66M
Special, 6 deck TC	—	—	2237529C01 M	2237529C51M
Special, 6 deck TC-Bolt Tab with 1/2-20 Stud	—	—	2237529C16M	2237529C66M
Cover Mounted				
Bolt Tab Terminals	2237472C01M	2237472C51M	2237473C01M	2237473C51M
16-14 AWG Terminals	2237472C02M	2237472C52M	2237473C02M	2237473C52M
12-10 AWG Terminals	2237472C03M	2237472C53M	2237473C03M	2237473C53M
8 AWG Terminals	2237472C04M	2237472C54M	2237473C04M	2237473C54M
6 AWG Terminals	2237472C05M	2237472C55M	2237473C05M	2237473C55M
Bolt Tab with 1/4-20 Stud	2237470C16M	2237470C66M	2237471C16M	2237471C66M
Hardware Kits				
Hotstick Handle	2237947A12	223794A13	2237947A10	2237947A11
"T" Handle	2237947A68	2237947A69	2237947A66	2237947A67

NOTE: Lettered index plate is standard. Numbered index plate is available. Contact your Cooper Power Systems representative for more information.

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