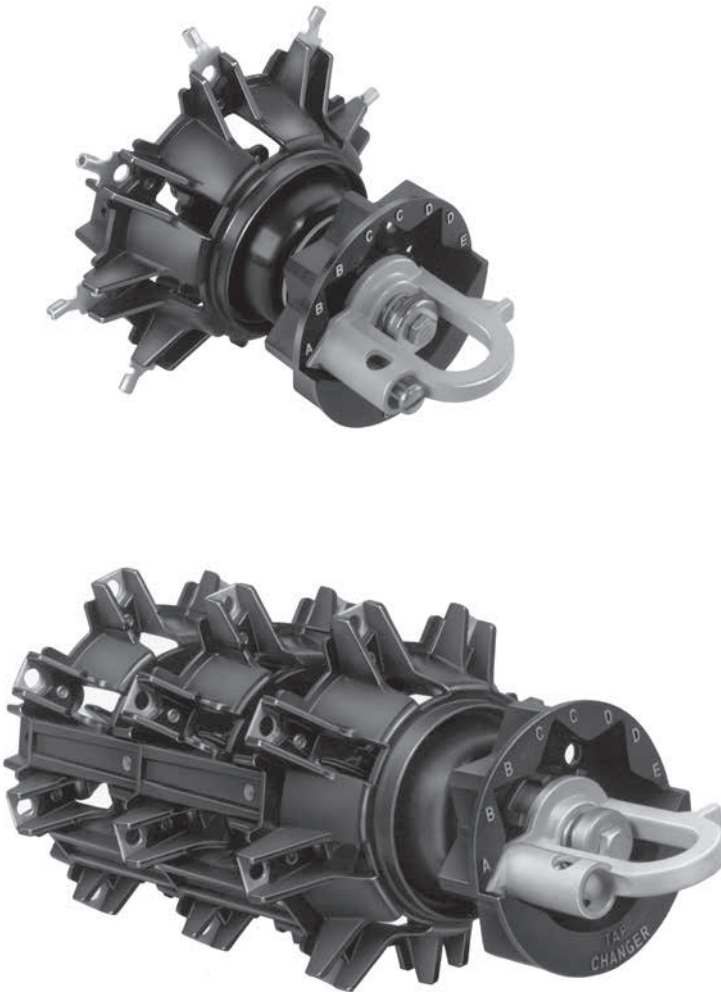


150 A externally operated tap-changer switch



General

Eaton eliminates many of the hazards associated with manual internal tap changing of distribution transformers with its Cooper Power™ series 150 A externally operated tap-changer switch 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, Envirotemp™ FR3™ fluid, or an approved equivalent.

Tap-changer switches are available with five or seven switch positions, and for sidewall- or cover-mounted 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 tap-changer 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 pad-lockable 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.

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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 S800-58-1, Manual or Hotstick-Operable, Pad-lockable 150 A Tap-Changer Switch* 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

Features and detailed description

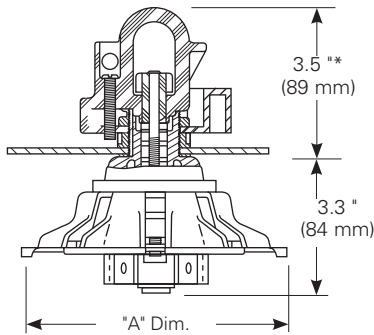


Figure 3. One-Phase Switch.

* Varies with Front Plate thickness.

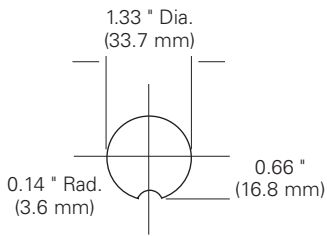


Figure 4. Mounting Hole.

Note: Dimensions given are for reference only.

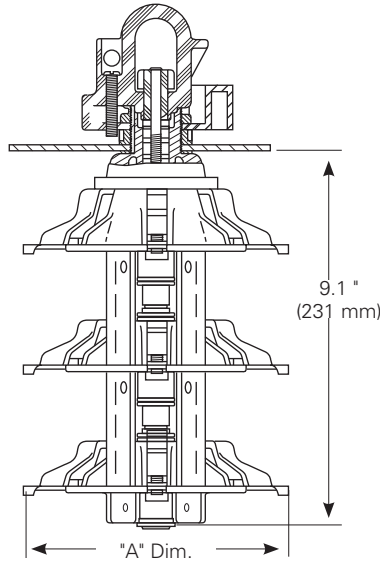


Figure 5. Three-Phase Switch.

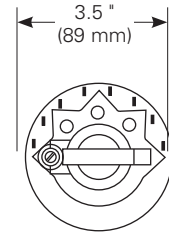


Figure 6. Five-Position Indicator.

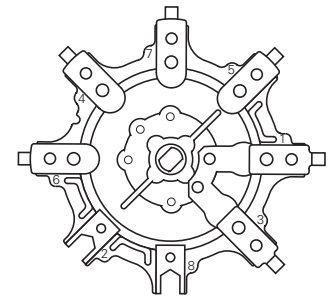


Figure 7. Contact Configuration.

Table 3. Contact Dimensions in. (mm)

Contact Type	A
Tabs 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 a 150 A tap-changer switch, specify catalog numbers for one switch and one handle hardware kit.

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	2237471C01M	2237471C51M
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 W/ 1/4-20 Stud	2237470C16M	2237470C66M	2237471C16M	2237471C66M
Bolt Tab W/ 1/4-20 Stud W/Silver plated terminals and rotors	2237470C70M	2237470C80M	2237471C70M	2237471C80M
6 Deck W/Bolt Tab	–	–	2237529C01M	2237529C51M
6 Deck Bolt Tab W/ 1/4-20 Stud	–	–	2237529C16M	2237529C66M
6 Deck Bolt Tab W/ 1/4-20 Stud W/Silver plated terminals and rotors	–	–	2237529C70M	2237529C80M
6 Deck Bolt Tab w/ 1/4-20 Stud- 200 kV BIL	–	–	2238348C06M	2238348C56M
6 Deck Bolt Tab W/ 1/4-20 Stud W/Silver plated terminals and rotors- 200 kV BIL	–	–	2238348C70M	2238348C80M
Cover Mounted				
Bolt Tab	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 W/ 1/4-20 Stud	2237472C16M	2237472C66M	2237473C16M	2237473C66M
Bolt Tab W/ 1/4-20 Stud W/Silver plated terminals and rotors	2237472C70M	2237472C80M	2237473C80M	2237473C80M
Hardware Kits				
Hotstick Handle	2237947A12H	2237947A13H	2237947A10H	2237947A11H
"T" Handle	2237947A68H	2237947A67H	2237947A66H	2237947A67H

Note: Lettered index plate is standard, 5-position (A-E), 7-position (A-G). Numbered (optional) index plate kits available. Contact your Eaton representative for more information.

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For Eaton's Cooper Power series tap-changer switch product information call 1-877-277-4636 or visit: www.eaton.com/cooperpowerseries.