

300 A externally operated series multiple (dual voltage) switches



General

Eaton uses its Cooper Power™ series 300 A externally operated series multiple switch to change connection of de-energized transformer windings between series and parallel to provide different common transformer voltage ratios. They also make it possible to stock one transformer with voltage conversion capability. The switches may be used for 3:1 or lower voltage ratios only. Ratios other than 2:1 or 3:1 may require a backplate. Tri-voltage switches are also available.

Externally operable switches eliminate 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 fluid. They also eliminate the need to dismount pole-type transformers for voltage adjustment and prevent exposure of the transformer tank interiors to contamination. The switches are designed for use in distribution transformers filled with transformer oil, Envirotemp™ FR3™ fluid or an approved equivalent.

Series multiple switches have pad-lockable, hotstick-operable handles, which provide greater leverage and positive indication of switch position. The switch shaft is made from high strength steel and is sealed against leakage by two high temperature resistant Viton® O-Rings. The switch body and rotor are made of a glass-reinforced polyester. The spring tempered high conductivity copper pinch-type rotor contacts provide dependable self-cleaning action.

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 S800-75-1 300 A Externally Operated Series Multiple (Dual Voltage) Switch Installation Instructions* for details.

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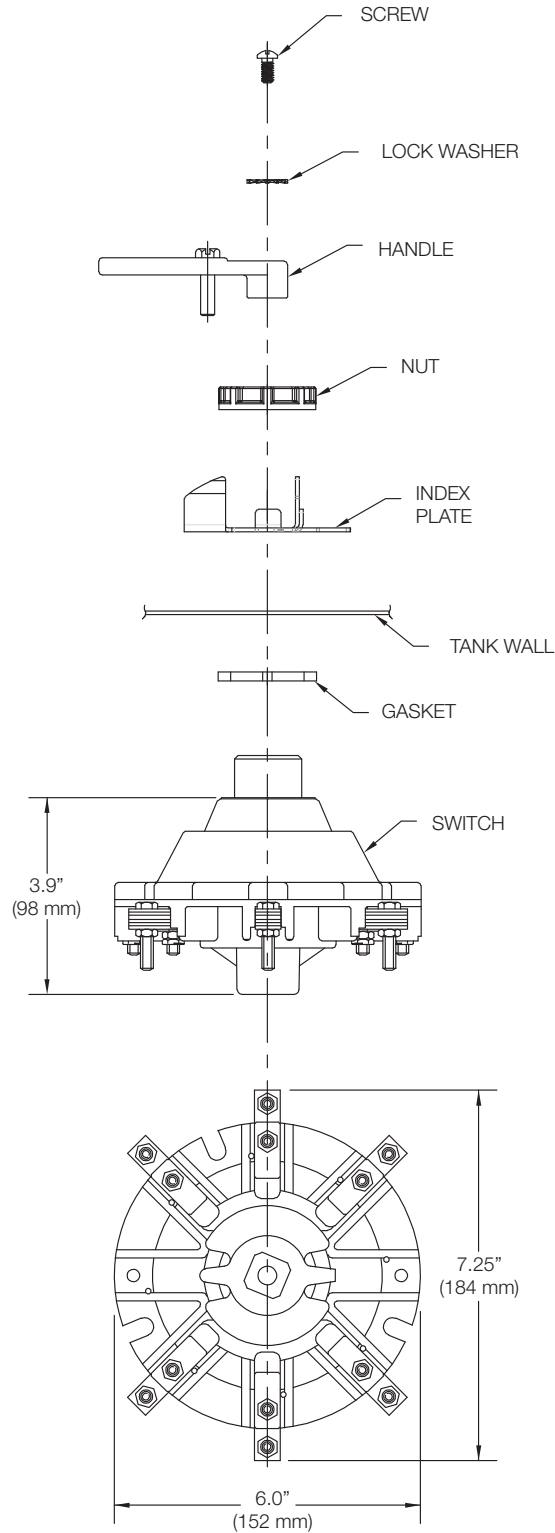


Figure 1. One-phase switch with 3" handle.

Note: Dimensions given are for reference only.

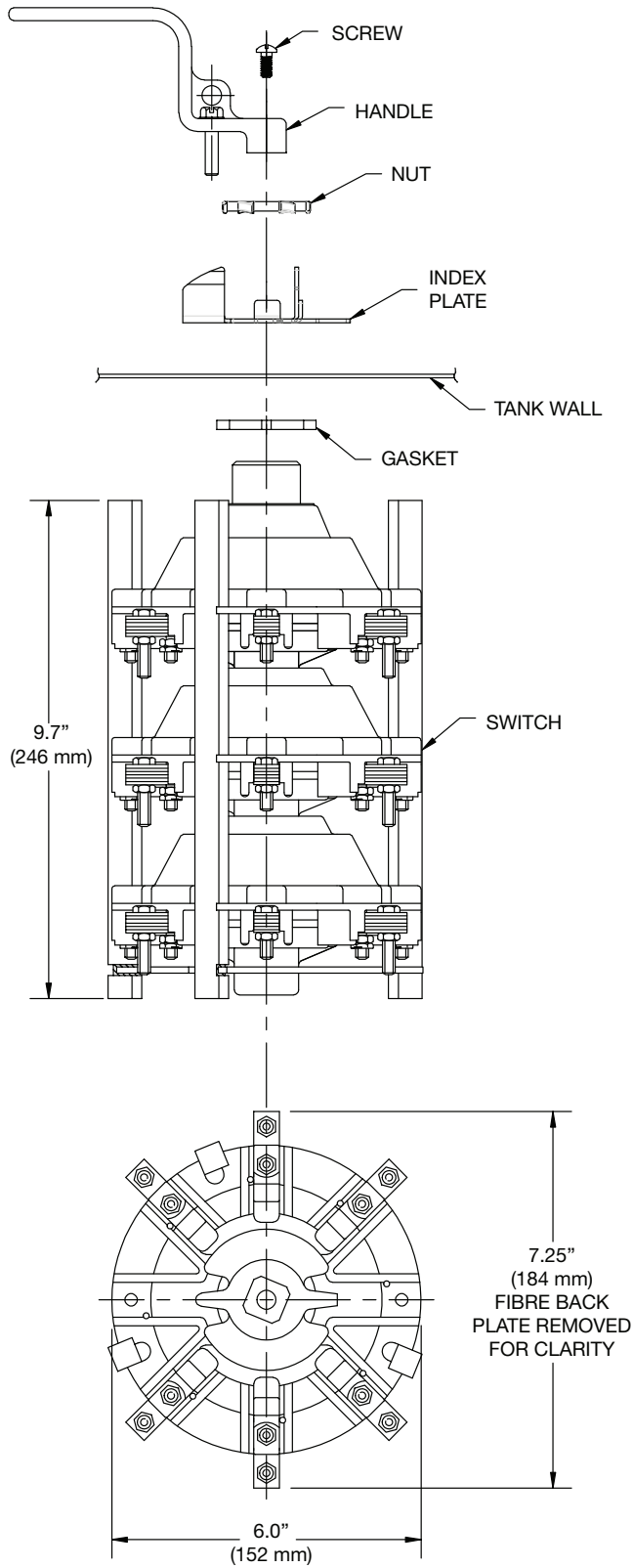


Figure 2. Three-phase switch with 5" handle.

Note: Dimensions given are for reference only.

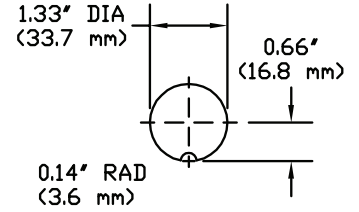


Figure 3. Mounting hole.

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 (in both series and parralel positions)	150

Voltage ratings and characteristics are in accordance with IEEE Std C57.12™ standard. (Phase-to-Phase or Phase-to-Ground).

Table 2. Current Ratings and Characteristics

Description	Amperes
Continuous	300 A rms series position 600 A rms parallel position

Ordering information

To order a 300 A series multiple switch, specify catalog numbers for one switch and one hardware kit in Tables 3 and 4.

Table 3. Dual Voltage Switches

Contact Type	Catalog Number
One-Phase Dual Voltage with 6 Terminals	2201977B01M
One-Phase Dual Voltage with 8 Terminals	2201977B23M
Two-Phase Dual Voltage with 6 Terminals on each deck	2201977B17M
Three-Phase Dual Voltage with 6 Terminals on each deck	2201977B02M
Three-Phase Dual Voltage with 8 Terminals on each deck	2201977B05M
One-Phase Dual Voltage with 4 Terminal Back Switch	2201977B04M

Note: A Hardware Kit must be ordered with each Switch.

Table 4. Hardware Kits

Description	Catalog Number
Single-Phase , 3 inch Lever Handle	2237947A21H
Single, Two, and Three-Phase, 5 inch Lever Handle	2237947A23H
Single, Two, and Three-Phase, 5 inch Hotstick Operable Lever Handle	2237947A330H
Padlocable Single-Phase, 3 inch Hotstick Operable Lever Handle	2237947A331H
Padlockable Single-Phase, 3 inch Lever Handle	2237947A336H
Hotstick Adapter Kit for Lever Handle Hardware Kit	2237913B01M

* All 5 inch Lever Handles are padlockable.

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