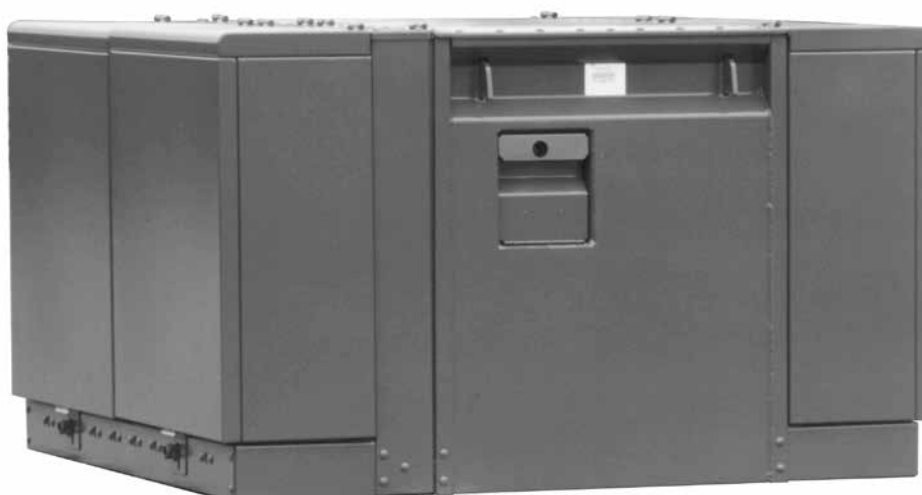


Type MOST oil switch



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General

Type MOST pad-mounted switchgear from Eaton's Cooper Power Systems (Figure 1) offers a simple, economical approach to underground switching. In addition to the inherent advantages of pad-mounted apparatus for underground switching, the Type MOST modular design provides a wide selection of switching combinations to meet specific requirements without the added cost of custom construction.

Deadfront construction provides a high level of safety for both the operator and the general public, and oil insulation offers the further advantage of low maintenance.

Oil insulation also permits construction of a compact, low-profile unit that is considerably less obtrusive than a comparable air-insulated design.

Type MOST switchgear can be used for both utility and commercial/industrial applications and can be easily fused to meet distribution system requirements. Ratings of Type MOST pad-mounted switchgear are shown in Table 1.

Table 1. Ratings of Type MOST Pad-Mounted Switchgear

Normal Voltage	15 kV	25 kV	35 kV
Maximum Design Voltage	15.5	27	38
BIL, kV	95	125	150
1-Minute Withstand (60 Hz), Switch* and Terminators, kV	35	60	70
Continuous Current, amps (max.)	600	300	200**
Load Switching, A	600	300	200**
Momentary Current 10 Cycles, A (asym.)	16,000	16,000	16,000
2 Sec., A (sym)	10,000	10,000	10,000
3 Shot Make and Latch A (asym.)	16,000	16,000	16,000

* The withstand rating of the switch is higher than that of the connectors (IEEE Std C37.74™-2003 standard).

** An alternate two-position OPEN-CLOSE switch is available for 15 kV, 25 kV, and 35 kV designs that have a 300 A continuous and load switching rating. This alternate switch meets IEEE Std C37.74™-2003 standard requirements.

Ordering information

To order a Type MOST pad-mounted switch:

1. Refer to Tables 2 or 4. Select the one-line diagram that meets your requirements for switching capability and bushing configuration. Then select operating voltage (kV). This establishes the base catalog number as seen below.
2. From Table 5, select fusing requirements.
3. From Table 6, select optional accessories required.

Ordering example: The MOST-9, three-phase, 15 kV switch with optional ground rod would be ordered as follows:

Quantity:
1-KPMT932
1-KPA1037-X

Constructing a catalog number

KPMT Base letters for Pad-Mounted Type MOST switch

9 One-line designation
3 Phase (Enter 1 if ordering single-phase)
2 Voltage/bushing rating (see Bushing Guide Table 3)

KPMT 9 3 2

KPMT932 is the base catalog number for a model 9 three-phase, 15 kV MOST switch with 600 A source bushings and 200 A tap bushings.

Table 2. Type MOST Selection and Ordering Guide*

Model	One-Line Diagram	Voltage (kV)	H/W/D** (in.)	Typical Catalog Number ***	Model	One-Line Diagram	Voltage (kV)	H/W/D** (in.)	Typical Catalog Number ***
3		15 25 35	42/32/76 44/40/87 44/40/75	KPMT331 KPMT334 KPMT339	10		15 25 35	42/62/76 44/70/87 44/70/75	KPMT031 KPMT034 KPMT039
4		15 25 35	42/32/64 44/40/75 44/40/75	KPMT433 KPMT436 KPMT439	11		15 25 35	42/62/76 44/70/87 44/70/75	KPMT1132 KPMT1135 KPMT1139
4A		15 25 35	42/62/64 44/70/75 44/70/75	KPMT4A33 KPMT4A36 KPMT4A39	11B		15 25 35	42/62/76 44/70/87 44/70/75	KPMT11B32 KPMT11B35 KPMT11B39
5		15 25 35	42/32/64 44/40/75 44/40/75	KPMT533 KPMT536 KPMT539	12		15 25 35	44/62/91 44/70/104 44/70/98	KPMT1232 KPMT1235 KPMT1239
6		15 25 35	42/62/70 44/70/81 44/70/75	KPMT632 KPMT635 KPMT639	12B		15 25 35	42/62/91 44/70/104 44/70/98	KPMT12B32 KPMT12B35 KPMT12B39
6B		15 25 35	42/62/70 44/70/81 44/70/75	KPMT6B32 KPMT6B35 KPMT6B39	13		15 25 35	42/62/76 44/70/87 44/70/75	KPMT1331 KPMT1334 KPMT1339
7		15 25 35	42/62/70 44/70/81 44/70/75	KPMT732 KPMT735 KPMT739	13A		15 25 35	42/62/76 44/70/87 44/70/75	KPMT13A31 KPMT13A34 KPMT13A39
7B		15 25 35	42/62/70 44/70/81 44/70/75	KPMT7B32 KPMT7B35 KPMT7B39	14		15 25 35	42/62/70 44/70/81 44/70/75	KPMT1432 KPMT1435 KPMT1439
8		15 25 35	42/62/70 44/70/81 44/70/75	KPMT832 KPMT835 KPMT839	15		15 25 35	42/62/85 44/70/98 44/70/98	KPMT1533 KPMT1536 KPMT1539
8B		15 25 35	42/62/70 44/70/81 44/70/75	KPMT8B32 KPMT8B35 KPMT8B39	15B		15 25 35	44/62/91 44/70/104 44/70/98	KPMT15B32 KPMT15B35 KPMT15B39
9		15 25 35	42/62/70 44/70/81 44/70/75	KPMT932 KPMT935 KPMT939					
9A		15 25 35	42/62/64 44/70/75 44/70/75	KPMT9A33 KPMT9A36 KPMT9A39					
9B		15 25 35	42/62/70 44/70/81 44/70/75	KPMT9B32 KPMT9B35 KPMT9B39					

* Contact an Eaton's Cooper Power Systems representative for information on configurations not listed.

** Approximate overall dimensions for typical units. For footprint, reduce the "D" dimension by two inches.

*** Maximum continuous and switching current ratings are 600 A for 15 kV, 300 A for 25 kV, and 200 A for 35 kV. For 35 kV units, catalog number and dimensions shown are for units with 200 A source and tap bushings. 35 kV units will be supplied with three-phase rated 200 A one-piece bushings as standard; however, 600 A, 35 kV source bushings are available if required.

Table 3. Bushing Guide

kV	Amperage Rating (Source/Tap)		
	600 A/ 600 A	600 A/ 200 A	200 A/ 200 A
15	1	2	3
25	4	5	6
35	7	7	9

Table 4. Selector Guide for Type MOST Switches with Four-Position Switch*

Model	One-Line Diagram	Voltage (kV)	H/W/D** (in.)	Typical Catalog Number ***
6S		15 25 35	42/62/70 44/70/81 44/70/75	KPMT6S32 KPMT6S35 KPMT6S39
6B-T		15 25 35	42/62/70 44/70/81 44/70/75	KPMT6BT32 KPMT6BT35 KPMT6BT39
9B-T		15 25 35	42/62/70 44/70/81 44/70/75	KPMT9BT32 KPMT9BT35 KPMT9BT39
S		15 25 35	42/62/76 44/70/87 44/70/75	KPMTS31 KPMTS34 KPMTS39

* Contact an Eaton's Cooper Power Systems representative for information on configurations not listed.

** Approximate overall dimensions for typical units. For footprint, reduce the "D" dimension by two inches.

***Maximum continuous and switching current ratings for four-position switches is 600 A for 15 kV, 300 A for 25 kV and 200 A for 35 kV. For 35 kV units, catalog number and dimensions shown are for units with 200 A source and tap bushings. 35 kV units will be supplied with three-phase rated 200 A one-piece bushings as standard; however, 600 A, 35 kV source bushings are available if required.

Table 5. Fusing Options

Type	kV	Description	Type MOST Rating-kV	Catalog Number
ELSG	8.3	E rated, full-range current-limiting rating of _____Ampere Specify 4, 8, 12, 15, 20, or 25 A Specify 30 or 40 A Specify 50, 60, 65, 80, 100, or 125 A	15	KPA102083____ KPA102083____ KPA102083____
ELSG	15.5	E rated, full-range current-limiting rating of _____Ampere Specify 4, 8, 12, 15, 20, or 25 A Specify 30 or 40 A Specify 50, 60, 65, 80, 100 A	25	KPA102155____ KPA102155____ KPA102155____
ELSG	23.0	E rated, full-range current-limiting rating of _____Ampere Specify 4, 8, 12, 15, 20, or 25 A Specify 30 or 40 A Specify 50, 65, 80, or 100 A	25 & 35	KPA102230____ KPA102230____ KPA102230____
ELSG	23.0	Equivalent to A.B. Chance Fuse SL54 - Specify 50 A SL90 - Specify 90 A	25 & 35	KPA102230S____ KPA102230S____

Table 6. Accessories

Description	Catalog Number
1/2" Copper ground rod (in lieu of ANSI® standard stainless steel ground points)	KPA1037-X**
1" drain valve with 3/8" sampler (in lieu of standard 1" drain plug and 3/8" sampler)*	KPA1051*
Fault indicator provisions, Qty. 6, located in the source or tap compartment sill	
Source compartment	*
Tap compartment	*
304L Stainless steel construction (in lieu of standard mild steel construction)	*
Spare-fuse storage rack	*
T-Handle	KPA128

* Consult an Eaton's Cooper Power Systems representative.

** "X" will be replaced with proper assembly number.

Table 7. Optional Bushings

Current Rating	Nominal kV Class	Description*	Catalog Number
200 A Loadbreak	15	3 Loadbreak bushing inserts	KPA1033
200 A Loadbreak	25	3 Loadbreak bushing inserts	KPA1034
600 A Deadbreak	15 or 25	3 PUSH-OP™ bushings **	KPA1151-3
600 A Deadbreak	35	3 PUSH-OP bushings **	KPA1153
600 A Deadbreak	15 or 25 †	3 U-OP™ Visible Break Connector System with aluminum VBJ's & U-Connectors ††	KPA1052-1-1
600 A Deadbreak	15 or 25 †	U-OP Visible Break Connector System provisions †††	KPA1053-1

* Eaton's Cooper Power Systems bushings and bushing wells provided. Consult an Eaton's Cooper Power Systems representative for alternatives.

** PUSH-OP bushings include PUSH-OP 600 A deadbreak bushing, front plate latch assembly and side-mounted load-break switch handles.

† 35 kV is not available.

†† Includes installation of mounting provisions for U-OP visible break connector system, KPA1053-1, on the tank. U-OP visible break connector system is added for each bushing of a three-phase position. When ordering, customer to specify which three-phase positions will be equipped with U-OP visible break connector system.

††† Installation of mounting provisions for U-OP visible break connector system for all 600 A bushings on the tank.

Features and detailed description

ONE-LINE DIAGRAM

Easy-to read one-line diagrams are provided on both source and tap sides.

ENERGY-LIMITING FUSES

Eaton's Cooper Power Systems energy-limiting fuses are housed in an under-oil, wet-well assembly. A fuse drip tray is provided.

CONVENIENT OPERATION

Eaton's Cooper Power Systems bushings, installed at a convenient height, give dependable, sure operation. Phase designations are clearly labeled. At least one standoff bracket per bushing is provided.

1/2-13 ground nut is mounted beneath each bushing as standard.

TAP SIDE

Type MOST pad-mounted switchgear (Figure 1) provides a simple, economical approach to switching requirements for 5, 15, 25 and 35 kV underground systems. The modular design of Type MOST switchgear allows the switching system to be tailored to specific requirements without the high cost of custom construction.

The deadfront construction of Type MOST pad/mounted switchgear offers a high safety factor for utility personnel and the general public. Inside, all terminators are covered with insulating rubber. All internal parts are completely sealed in insulating oil to reduce maintenance and eliminate the problems of moisture, dirt, and wildlife commonly associated with air-insulated switchgear.

Eaton's Cooper Power Systems oil-insulated, sealed design offers a significant added advantage: an unobtrusive, low-profile appearance that compares favorably with larger, more bulky air-insulated equipment.

Type MOST pad-mounted switchgear is versatile in its application. It is suited for utility and commercial/industrial requirements, and a wide selection of fuses makes it easily adaptable to standardized distribution systems. Type MOST switchgear fits the majority of standard pads and is compatible with commonly used tools and techniques.

Type MOST switchgear and components are a product of Eaton's Cooper Power Systems and have been proven by years of continuous field experience.

SOURCE SIDE



LOADBREAK SWITCH

Side-mounted loadbreak switch (shown with optional key locking accessory) has positive position indicator. Switch is operable by hotstick or optional hand-operated "T" handle. Frontplate-mounted switches are available as an option.

DATA PLATE

Indicates voltage and amperage ratings, catalog number, serial number, and unit weight.

Figure 1. Deadfront construction of the Type MOST pad-mounted switch includes swing-up doors with door stays. The oil-insulated, sealed design reduces maintenance and provides a low-profile appearance.

Fuse assemblies

A complete line of fuses (see Table 5 and Figure 2) is available for Type MOST pad-mounted switchgear. The ELSG full-range current-limiting fuse provides consistent clearing of low currents as well as reliable high-speed interruption of high-magnitude short circuit currents.



Figure 2. Type ELSG Full Range Current-Limiting Fuse.

In addition to providing excellent protective characteristics over a wide range of applications, the “E” rated ELSG fuses have time-current characteristics that coordinate easily with other upstream and downstream protective devices.


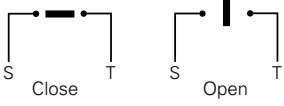
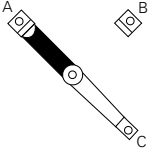
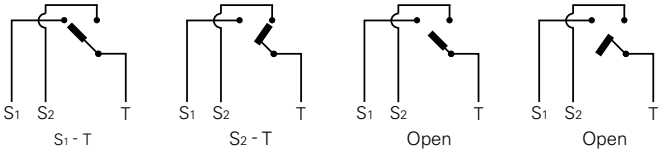
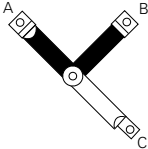
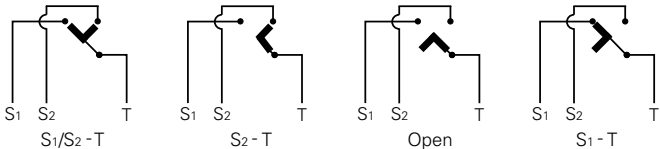
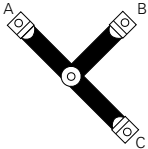
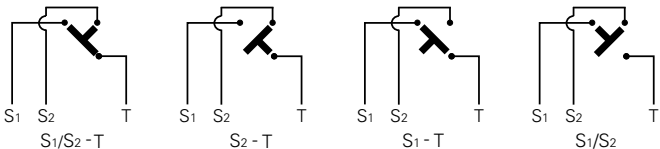
For detailed ELSG fuse information, refer to Catalog Section 240-82. For detailed SX-Limiter fuse information, refer to Catalog Section 240-81.

MOST switching system

Eaton’s Cooper Power Systems three-phase, gang-operated loadmake/loadbreak oil sectionalizing switches used in Type MOST switchgear have a history of more than twenty-five years of successful application.

Positive position indicators assure safe operation. A spring-loaded actuator provides loadbreak operation and positive latching through all positions, independent of the speed at which the operating handle is turned. The side-mounted switch can be operated by hotstick or an optional manually operated handle. Front-mounted switches are optional.

Four switch designs (Figure 3) are available: two-position open/close, four-position selector blade, four-position “V” blade, and four-position “T” blade. Eaton’s Cooper Power Systems “V” and “T” blade designs are unique in that they perform the function of three separate open/close switches. All switch operations are indicated on a single switch handle. Combining multiple functions on one switch not only permits quicker and easier operation but, in addition, makes possible a more compact unit.

Switch Types	Applications
OPEN/CLOSE 	
Selector Blade 	
“V” Blade 	
“T” Blade 	

Switch center is pivot point.
Black segments of blade rotate.
White segments are stationary.

Figure 3. Various switching configurations available for Type MOST switchgear.

Cabinet construction

The deadfront, non-ventilated, tamper-resistant construction of low-profile Type MOST switchgear makes it suitable for operation in areas subject to excessive moisture, occasional flooding, and blowing snow. Additional sealing is provided by the Buna-N rubber gasket in the bolted cover.

Swing-up doors are provided with door stays and fitted with stainless steel hinges. On units wider than 46 inches, split doors are provided to allow easy operation by one person. Both source and tap doors can be fully open at the same time. Each door has a floating lock pocket with padlock provisions and pentahead stainless steel door bolt.

Tank construction is of 10-gauge steel, and doors are made of 12-gauge steel. Recessed lifting provisions are located for a balanced lift.

Standard features include an oil level indicator, automatic pressure-relief valve, operating schematics on the doors, oil fill and drain provisions, and a standoff bracket for each bushing.

Finish

Type MOST switchgear is finished in a green color which conforms to Munsell 7GY 3.29/1.5 Green.

The coating conforms to the following specifications: IEEE Std C57.12.28™-2005 standard, ASTM B1117 1000-hour 5% salt spray corrosion test, ASTM D2247 1000-hour humidity test, ASTM G53 500-hour ultraviolet accelerated weathering test, and ASTM D2794 impact test. Certified test data is available on request.

Bushings

600 A bushings furnished on Type MOST pad-mounted switchgear are Eaton's Cooper Power Systems deadbreak aluminum type, and conform to IEEE Std 386™-2006 standard.

200 A interfaces are either Eaton's Cooper Power Systems 200 A bushing wells or 200 A one-piece 35 kV bushings and conform to IEEE Std 386™-2006 standard.

Bushings are mounted in-line and located a minimum of 24 inches above the pad.

Production testing

Before shipping, Type MOST switchgear is fully assembled, filled with oil and subjected to the following factory tests:

1. Continuity testing to insure correct internal connections.
2. High-potential testing to determine dielectric strength.
3. Pressure testing to insure that tank is completely sealed.
4. Resistance testing to insure positive electrical connections.

Eaton

1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Cooper Power Systems
2300 Badger Drive
Waukesha, WI 53188
cooperpower.com

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