

## **S&C Manual PME Pad-Mounted Gear**

Outdoor Distribution, 14.4 kV and 25 kV

## S&C Manual PME Pad-Mounted Gear . . . Featuring Elbow-Connected Encased Components.

S&C Manual PME Pad-Mounted Gear brings in-air insulation, in-air switching, and quick, convenient, fuse handling to elbow-connected gear. Switch and fuse components are protected and isolated within an inner air-insulated, grounded, steel-enclosed component compartment that provides excellent resistance to entry of foliage, wildlife, and contaminants, and reduces exposure of the public and operating personnel to energized live parts. Switch terminals are equipped with 600-ampere bushings and fuse terminals are equipped with 200-ampere bushing wells that have interfaces designed in accordance with IEEE Standard 386 to accept all standard elbows and accessories. Bushings and bushing wells are mounted a minimum of 25 inches above the base of the gear . . . all elbows may be readily operated at a convenient angle from a standing position.

The termination compartments are accessible through doors equipped with the S&C Penta-Latch® Mechanism—the *automatic* door-latching system.

Three-phase in-air switching of source circuits is accomplished with externally operable S&C Mini-Rupter® Switches. Large viewing windows in switch-termination compartments allow visual verification of switch-blade position—there's no need to move the 600-ampere elbows to establish working clearances. Fuse access is provided by the S&C TransFuser™ Mounting. This mounting incorporates a unique fuse-handling mechanism that allows easy movement of fuses to the open, de-energized position for ready access. These mountings accommodate a choice of S&C Type SME-20 and SME-4Z Power Fuses, S&C Fault Fiter® Electronic Power Fuses, or a variety of current-limiting fuses.

### Completely Encased Medium-Voltage Components

No exposed energized components in either switch or fuse termination compartments—

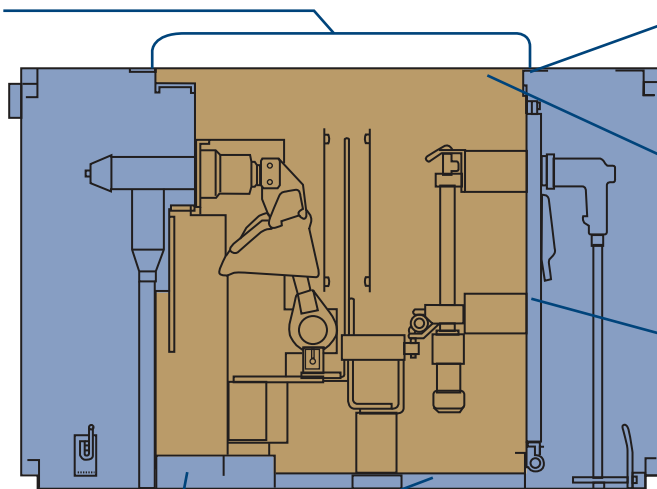
- ▶ Inner grounded steel compartment encases the Mini-Rupter Switches, fuses, and interconnecting bus

Moisture and contamination control . . . there are no direct air paths into the component compartments—

- ▶ Resilient gasketing seals roof to compartment bulkheads and enclosure walls
- ▶ Insulating "no-drip" undercoating checks roof condensation
- ▶ Dense closed-cell gaskets seal TransFuser Mountings to compartment bulkhead

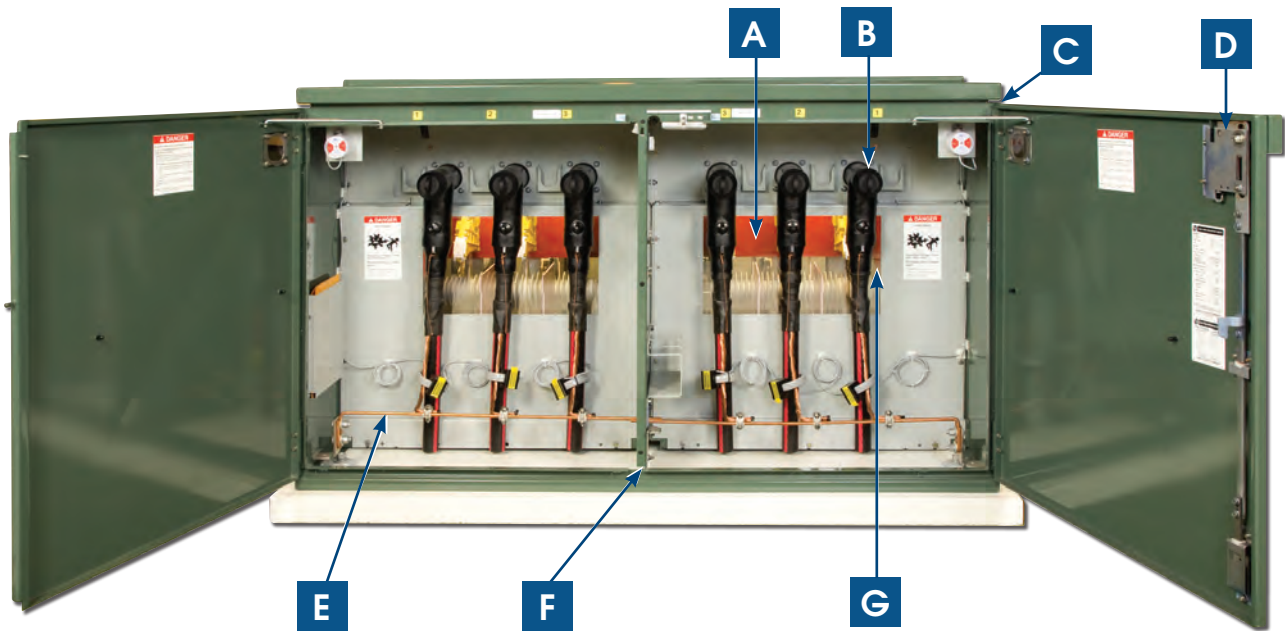
Foliage and wildlife control—

- ▶ Galvanized steel floor prevents entry from bottom of component compartment



Side-view cross section of Model PME-9.

## Switch Compartments



<b>A</b>	Wide-view, unbreakable, mar-resistant windows let you verify switch position and check for visible break.
<b>B</b>	600-Ampere Cypoxy® bushings have interfaces in accordance with IEEE Standard 386.
<b>C</b>	Corrosion-resistant non-ferrous door hinges and hinge pins.
<b>D</b>	Penta-Latch® Mechanism provides vandal-resistant, automatic, three-point door latching. Uncommonly rugged and fully coordinated with padlocking provisions.
<b>E</b>	Ground rod extends full width of each switch compartment—doors may be closed with grounding clamps in place.
<b>F</b>	Segregated compartments—steel barriers isolate side-by-side cable compartments.
<b>G</b>	Deep, spacious termination compartments accommodate a wide range of elbows and accessories with the doors closed.

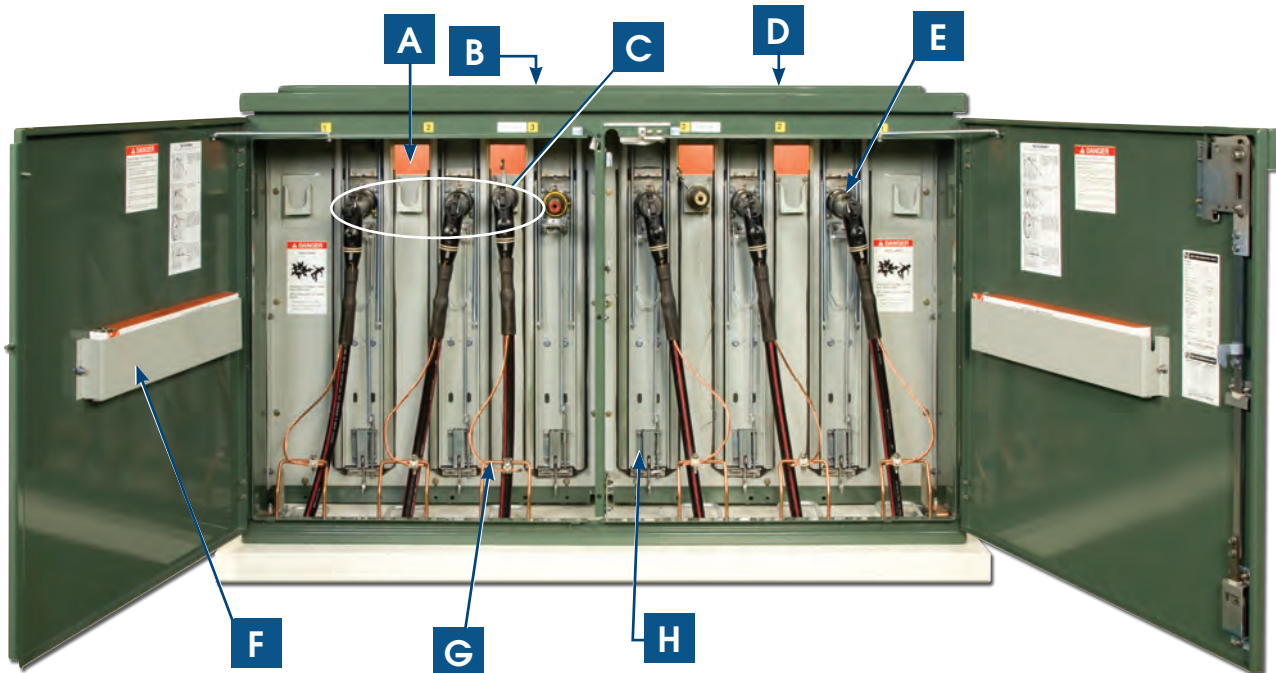


## Mini-Rupter® Switches

S&C Mini-Rupter Switches, rated 600 ampere continuous, provide controlled circuit interruption by deionizing action within the unique arc compressors—there is no external arc or flame. The switches handle all your three-pole loop splitting load dropping requirements up through 600 amperes at 14.4 kV and 25 kV. And the 14.4-kV Mini-Rupter features a 25,000 ampere short-circuit rating, in addition to having a 25,000 ampere three-time duty-cycle fault-closing rating. 25-kV Mini-Rupters are rated 12,500 amperes and carry a 12,500 ampere three-time duty-cycle fault-closing rating.



## Fuse Compartments



<b>A</b>	Viewing windows allow easy checking of blown-fuse indicators.
<b>B</b>	S&C's Ultradur® finishing system withstands more than 4,000 hours of salt-spray testing—compared to industry-standard 1,500 hours.
<b>C</b>	Generous spacing of bushing wells and parking stands accommodates a full spectrum of elbows, portable feed-thrus, and accessories.
<b>D</b>	Three-piece roof design features hinged sections over cable compartments, allows cables to be pulled up through the roof opening, makes installation quicker and easier.
<b>E</b>	200-Ampere Cypoxy® bushing wells have interfaces in accordance with IEEE Standard 386.
<b>F</b>	Fuse-storage feature accommodates spare fuse assemblies.
<b>G</b>	Ground rings are readily accessible in up-front location. Enclosure doors may be closed with grounding clamps in place.
<b>H</b>	Up-front access to fuses takes the hassle out of fuse changeout. With an almost effortless pull, TransFuser® unlatches and pivots to its open position, making the de-energized and isolated fuse accessible for easy replacement.

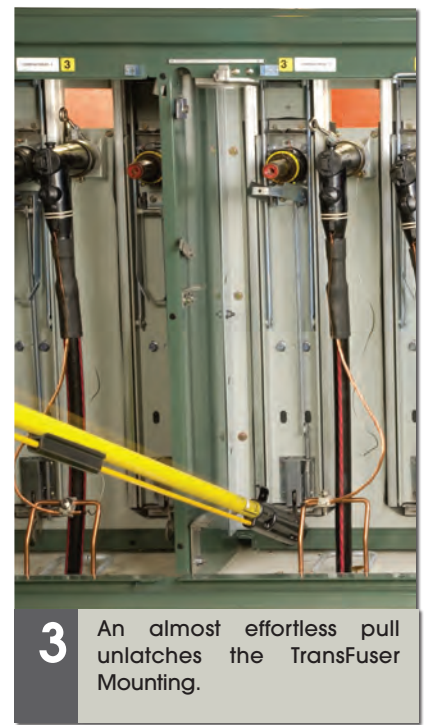
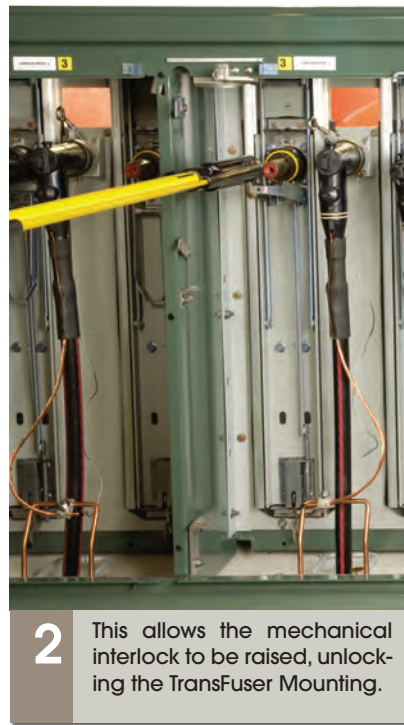
## Fuses

Type SME-20 Power Fuses, featuring the S&C SMU-20 Fuse Unit, and Type SME-4Z Power Fuses, featuring the S&C SM-4 Refill Unit—are widely applied on utility systems. They offer a broad selection of ampere ratings and time-current characteristics (TCCs), permitting close fusing of loads for full-fault-spectrum protection and optimum coordination.

Fault Fiter® Electronic Power Fuses, with their unprecedented variety of unique TCCs, provide superior protection and precise coordination in a wide range of applications. Fault Fiter Electronic Power Fuse Mountings also accommodate a variety of non-S&C-manufactured single-barrel current limiting fuses.

## TransFuser Mountings

The unique TransFuser fuse-handling system takes the work out of fuse replacement. Operators are not directly exposed to energized live parts.



## Hinged Roof

The three-piece roof design features hinged sections over the cable compartments. The hinged roof allows cables to be pulled up through the roof opening, rather than the door openings, making installation easier and quicker.

A mechanical interlock prevents full engagement of the Penta-Latch® Mechanism unless the hinged roof section is closed and latched.

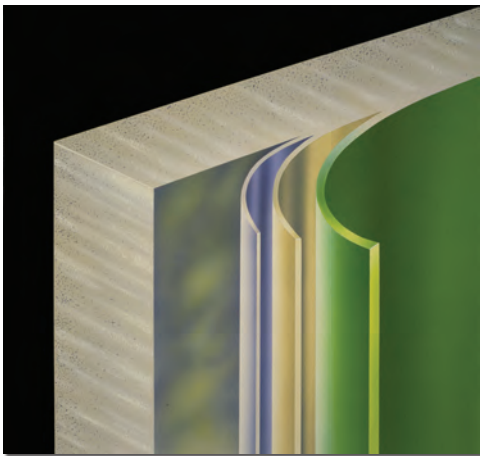


Hinged roof detail.



Overall view of gear with hinged roof.

## Exceptional Durability



### 11-Gauge Steel Construction

The enclosure is fabricated from rugged 11-gauge steel sheet. All structural joints are welded—there are no externally bolted panels to invite removal.

### S&C's Ultradur® Finish

Protecting the steel is S&C's Ultradur Finishing System—an extremely tough, uniform finish that is, through baking, ceramic-like in performance and appearance. It resists underfilm propagation of corrosion, guards against the widest variety of atmospheric contaminants, resists moisture damage, and withstands exposure to ultraviolet rays without chalking.

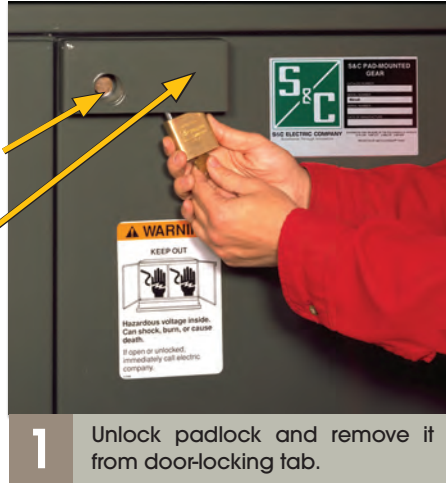
## Penta-Latch Mechanism

Provides vandal-resistant, automatic, three-point door latching. Uncommonly rugged and fully coordinated with padlocking provisions.

### Two-Step Controlled Opening of Doors

Precision recessing and spring loading of pentahead actuator discourage tampering

Protective hood shields padlock shackle from vandals

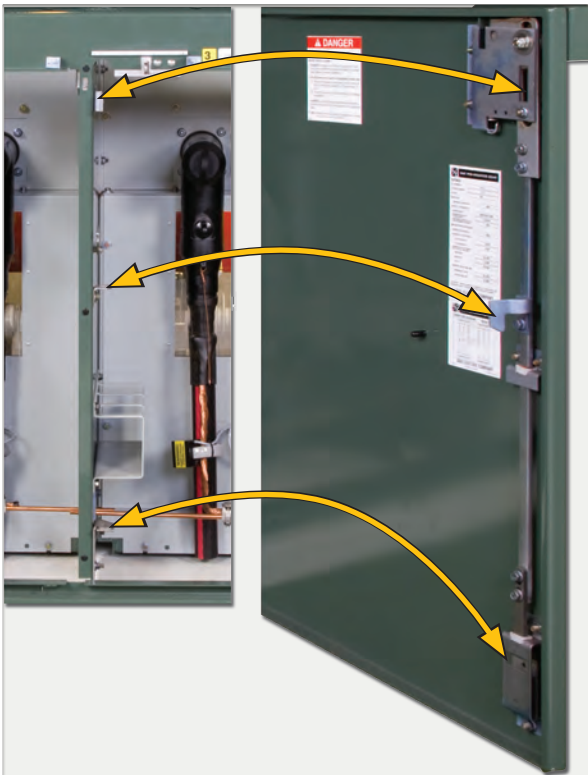


**1** Unlock padlock and remove it from door-locking tab.



**2** A single motion of a pentahead wrench unlatches the Penta-Latch Mechanism for opening and simultaneously recharges it in preparation for closing.

### Double Security for Extra Vandal Resistance



**1** Closing the door releases the charged Penta-Latch Mechanism, automatically latching the door at three points and securing the penta-head actuator.



**2** Only after the door is latched and the pentahead actuator is secured in this manner can the padlock be installed—completing the full two-step security system.

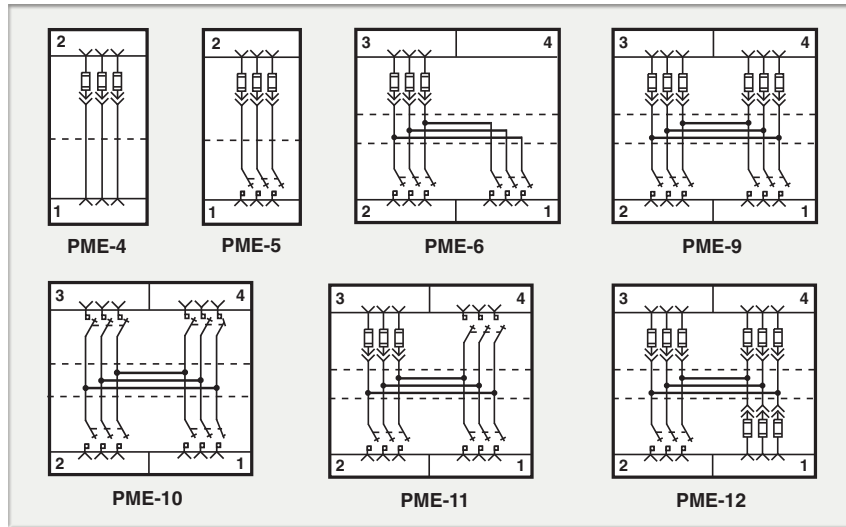


S&C ELECTRIC COMPANY

## Circuit Configurations

Seven models of S&C Manual PME Pad-Mounted Gear provide you with a choice of circuit configurations

for switching and protection of your underground distribution system.



## Ratings

Voltage, kV			Fuse Type	Current, Amperes			Short-Circuit		MVA
Nom.	Max	BIL		Fuse	Mini-Rupter Switch		Current, Amperes		
				Max	Cont.	Load Dropping	One-Second Short-Time Withstand, RMS, Sym.	Peak Withstand, Peak	
14.4	17.5	95	None	—	600	600	25 000	65 000	620
	17.0		SME-20	200			14 000	36 400	350
	17.0		SME-4Z	200			12 500	32 500	310
	17.0		Fault Fiter	200			14 000●	36 400●	350●
25	27◆	125	None	—	600	600	12 500	32 500	540
			SME-20	200			12 500	32 500	540
			SME-4Z	200			12 500▲	32 500▲	540▲
			Fault Fiter	200			12 500	32 500	540

◆ 29 kV when furnished with Fault Fiter Electronic Power Fuses.

● When furnished with current-limiting fuses having a rated maximum interrupting current of at least 25,000 amperes, RMS, symmetrical, and limiting the instantaneous peak let-through current to less than 36,000 amperes, this gear has the following short-circuit ratings:

25,000 amperes, RMS, symmetrical, one-second short-time withstand current;

65,000 amperes, peak, peak withstand current;

620 MVA, three-phase symmetrical, at rated nominal voltage.

▲ Applicable to solidly grounded-neutral systems only, with fuses connected by single-conductor, concentric-neutral-type cable to a transformer(s). For all other applications this gear has the following short-circuit ratings:

9,400 amperes, RMS, symmetrical, one-second short-time withstand current;

25,000 amperes, peak, peak withstand current;

405 MVA, three-phase symmetrical, at rated nominal voltage.

The Rural Utilities Service has accepted all S&C Manual PME Pad-Mounted Gear. UL-listed 14.4-kV models are optionally available.

