Specifications

Conditions of Sale

STANDARD: The seller's standard conditions of sale set forth in Price Sheet 150 apply.

SPECIAL TO THIS PRODUCT:

INCLUSIONS: Metal-enclosed Mini-Rupter Switches consist of a Mini-Rupter Switch within an 11-gauge steel enclosure designed for wall mounting. These metal-enclosed switches include an external nonremovable side operating handle, which is available mounted on either the right-hand or left-hand side of the enclosure. The handle is padlockable and has provisions for key interlocks. The enclosure is indoor-style with drip-proof construction, which includes gasketing on the roof plate, around the door handle and the switch operating handle mounting plate, and on the top flange of the door opening. The enclosure is protected from corrosion by S&C's light gray Ultradur® II Outdoor Finish.

The enclosure door is equipped with a flush-mounted padlockable door handle, which includes an overhang to shield the padlock shackle. To promote ventilation, louvers are provided in the enclosure door, and screened vents are provided in the enclosure bottom plate. All enclosures are provided with an internal ground pad for cable shielding as well as external, accessible ground pads to simplify connection to system ground. Lifting tabs are provided on the enclosure sides at the top. Mounting tabs are provided on the enclosure rear at the top and bottom and on the enclosure sides at the bottom front.

The Mini-Rupter Switch is a field-tested and proven three-pole, group-operated interrupter switch. Mini-Rupter Switches are furnished with Cypoxy™ Insulators, which provide generous leakage distance; unique arc compressors, which ensure controlled circuit interruption without external arc or flame; and a quick-make quick-break mechanism, factory-installed and requiring no adjustment.

Metal-enclosed switches are suitable for cable entrance through conduit with the addition of sufficient optional enclosure extenders (catalog number suffixes "-H1" through "-H4") to increase available cable-termination height, or for cable connection to terminators with the addition of optional Cypoxy Insulator bushings and bushing wells (catalog number suffix "-X1," "-X2," or "-X3").

EXCLUSIONS: Metal-enclosed switches do not include connectors; optional features, such as bushings or bushing wells; or bushing-well inserts and elbows. Connectors are available as listed in Table 1 on page 3. Available optional features are listed in Table 4 on page 5. Bushing-well inserts and elbows are to be purchased from the elbow manufacturer(s).

SPECIFICATION DEVIATIONS: Certain minor departures from the standard and optional features can be accommodated. Such deviations will be accommodated by a "minor modification." Refer to your nearest S&C Sales Office.

Conditions of Sale—Continued

Application Notes

Mini-Rupter Switches are suitable for these three-pole live-switching duties in three-phase circuits of distribution systems rated 14.4 kV:

Live Switching—Opening

• Transformer switching—Transformer load currents up through 600 amperes, as well as transformer magnetizing currents associated with the applicable loads

• Line switching—Load-splitting (parallel or loop switching) and load-dropping of currents up through 600 amperes; also line dropping (charging currents typical for distribution systems of this voltage rating)

• Cable switching—Load-splitting (parallel or loop switching) and load-dropping of currents up through 600 amperes; also cable dropping (charging currents typical for distribution systems of this voltage rating)

Live Switching—Closing

• Circuit closing—Inrush currents associated with the above opening duties

• Two-time duty-cycle fault closing—Ratings that equal or exceed the short-circuit rating of the gear—40,000 amperes, RMS, asymmetrical

How to Order

When ordering metal-enclosed switches, either the enclosure-extender options or one of the Cypoxy Insulator cable-termination options must be specified.

Metal-enclosed switches are ordered for cable entrance through conduit with the addition of sufficient optional enclosure extenders (catalog number suffixes "-H1" through "-H4") to increase the available cable-termination height. Holes for conduit entrance must be cut by the user in the top and bottom plates.

Metal-enclosed switches are ordered for cable connection to terminators with the addition of optional S&C Cypoxy Insulator bushings and bushing wells (catalog number suffix "-X1," "-X2," or "-X3"). Appropriate top and bottom plates with bus connections, bushings, and bushing wells are furnished when these options are specified.

Complete the following steps to build a Mini-Rupter Switch order catalog number. Included with the steps are fill-in boxes to help keep track of the various components of the final catalog number

STEP 1. Obtain the catalog number of the desired unit from Table 2 on page 4.

Catalog Number: ☐☐☐☐☐

STEP 2. Add suffix designations (to the catalog number above) for optional Cypoxy Insulator bushings or bushing wells or enclosure-extender options as required, as well as any other optional features desired, selected from Table 4 on page 5.

Catalog Number: ☐☐☐☐☐–☐☐☐☐☐☐

(From Step 1) *(Suffixes)*

STEP 3. Obtain the catalog number of the connectors and touch-up kit components from Table 1 and Table 3 on page 4.

Connector Catalog Number: ☐☐☐☐

Touch-Up Kit Component Catalog Number: ☐☐☐☐–☐☐☐

Example: The catalog number for a Mini-Rupter Switch with an operating handle on the right side in an indoor metal-enclosed switchgear enclosure is noted below. It also includes dual-purpose front barriers and a 5-inch enclosure extender at the top of the enclosure.

In addition, catalog numbers for a connector and a touch-up kit have been included.

Mini-Rupter Switch and Suffixes: 90632–B2H1

Connector: 4745

Touch-Up Kit Component: 9999–079

Table 1. Connector

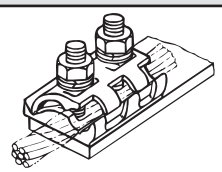
Illustration	Description	Accommodating Conductor	Catalog Number
	Bronze body, tin plated, two galvanized steel bolts, two Belleville washers	No. 2 solid (33.6 mm²) through 500 kc mil (335 mm²) stranded copper or aluminum	4745

Table 2. Metal-Enclosed Switches

Style	Rating							Catalog Number④	Page Reference for Dimensional Information
	kV			Amperes, RMS①					
	Nom.	Max	BIL	Cont. and Interr.②	Mom.	1-Sec.	Fault-Closing, Duty-Cycle, Two-Time③		
Indoor, operating handle on right	14.4	17.0	95	600	40 000	25 000	40 000●	90632	5
Indoor, operating handle on left	14.4	17.0	95	600	40 000	25 000	40 000●	90652	6

① Optional bushings and bushing wells offered with metal-enclosed switches may limit application to lower available short-circuit current levels than the ratings listed. Refer to Table 4 on page 5.

② For applications involving load currents with high harmonic content (such as rectifier load currents) on systems rated 7.2 kV and higher, refer to the nearest S&C Sales Office.

③ Two-time duty-cycle fault-closing ratings define the ability to close the Mini-Rupter Switch twice against a three-phase fault with asymmetrical current in at least one phase equal to the rated value, with the switch remaining operable and able to carry and interrupt rated current.

④ Cable-terminating devices are not included. For available cable-termination options, refer to Table 4 on page 5.

● 25,000 amperes, RMS, symmetrical, 62,500 amperes peak.

Table 3. Touch-Up Kit Components—Aerosol Coatings In 12-Ounce Cans

Item	Catalog Number
S&C light gray outdoor finish	9999-080
S&C light gray indoor finish	9999-079
S&C red-oxide primer	9999-061

Table 4. Optional Features

Item		Suffix to be Added to Metal-Enclosed Switch Catalog Number
Dual-purpose front barriers to guard against inadvertent contact with live parts. Can also be inserted into the open gap when switch is open		-B2
Ground studs on terminals, plus one on ground pad inside enclosure	At hinge end of switch	-G2
	At hinge end and at main-contact end of switch	-G3●
Enclosure extenders for increased cable-termination height to permit cable entrance through conduit	5 inches (127 mm) at top of enclosure	-H1■
	5 inches (127 mm) at bottom of enclosure	-H2■
	10 inches (254 mm) at top of enclosure	-H3■
	10 inches (254 mm) at bottom of enclosure	-H4■
Key interlock, to interlock switch operating handle with other apparatus		-K▲
Switch-position viewing window on door		-W
Cypoxy Insulator bushings and bushing wells①	200-ampere-rated bushing wells (with provisions for hold-down bail) at top and bottom of enclosure②	-X1
	600-ampere-rated bushings (with removable threaded studs) at top and bottom of enclosure③	-X2
	600-ampere-rated bushings (with removable threaded studs) at top and bottom of enclosure and 200-ampere-rated bushing wells (with provisions for hold-down bail) at bottom of enclosure②	-X3

① Bushing and bushing-well interfaces are in accordance with ANSI/IEEE Standard 386 to accept all standard separable insulated connectors and inserts. The mating bushing-well inserts and mating elbows (either loadbreak or non-loadbreak type) for use with these bushings and bushing wells should be purchased from the elbow manufacturer(s). Actual short-circuit capabilities of S&C Metal-Enclosed Switches may be limited to lower values by the capabilities of bushing-well inserts and elbows.

② Metal-enclosed switches equipped with optional S&C Bushing Wells (catalog number suffix ‘‘-X1’’ or ‘‘-X3’’) should not be applied where the short-circuit current exceeds 14,000 amperes, RMS, symmetrical.

③ Optional Cypoxy Insulator bushings (catalog number suffix “-X2”) are suitable for application up to the short-circuit rating of the metal-enclosed switches, i.e., 25,000 amperes, RMS, symmetrical.

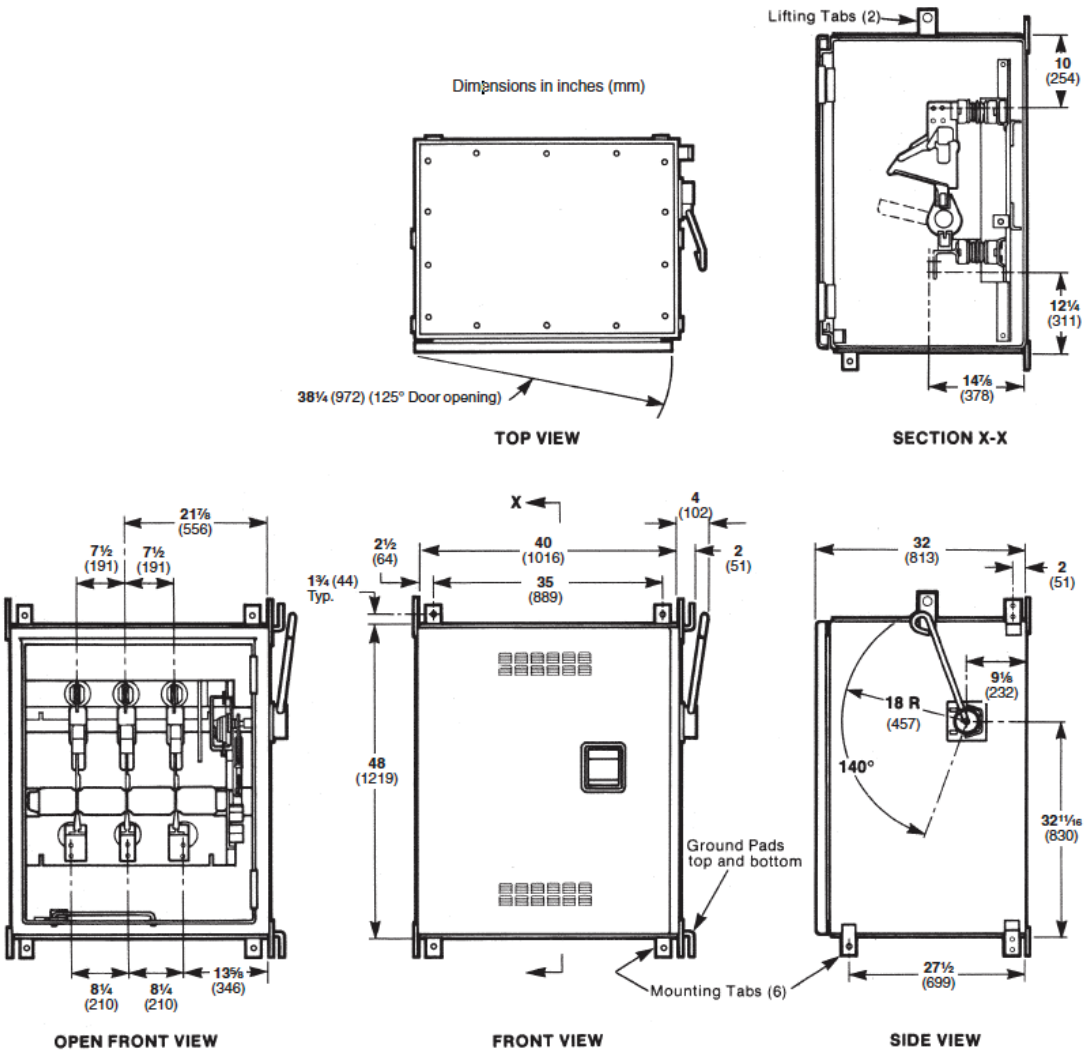
● Ground studs at main-contact end of switch (catalog number suffix “-G3”) cannot be accommodated when optional dual-purpose front barrier (suffix “-B2”) is specified.

■ Enclosure extenders cannot be accommodated when option suffix ‘‘-X1,’’ ‘‘-X2,’’ or ‘‘-X3’’ (bushings or bushing wells) is specified.

▲ When ordering key interlock, please furnish name of end user, station, and location of gear.

Indoor Style

Operating Handle on Right



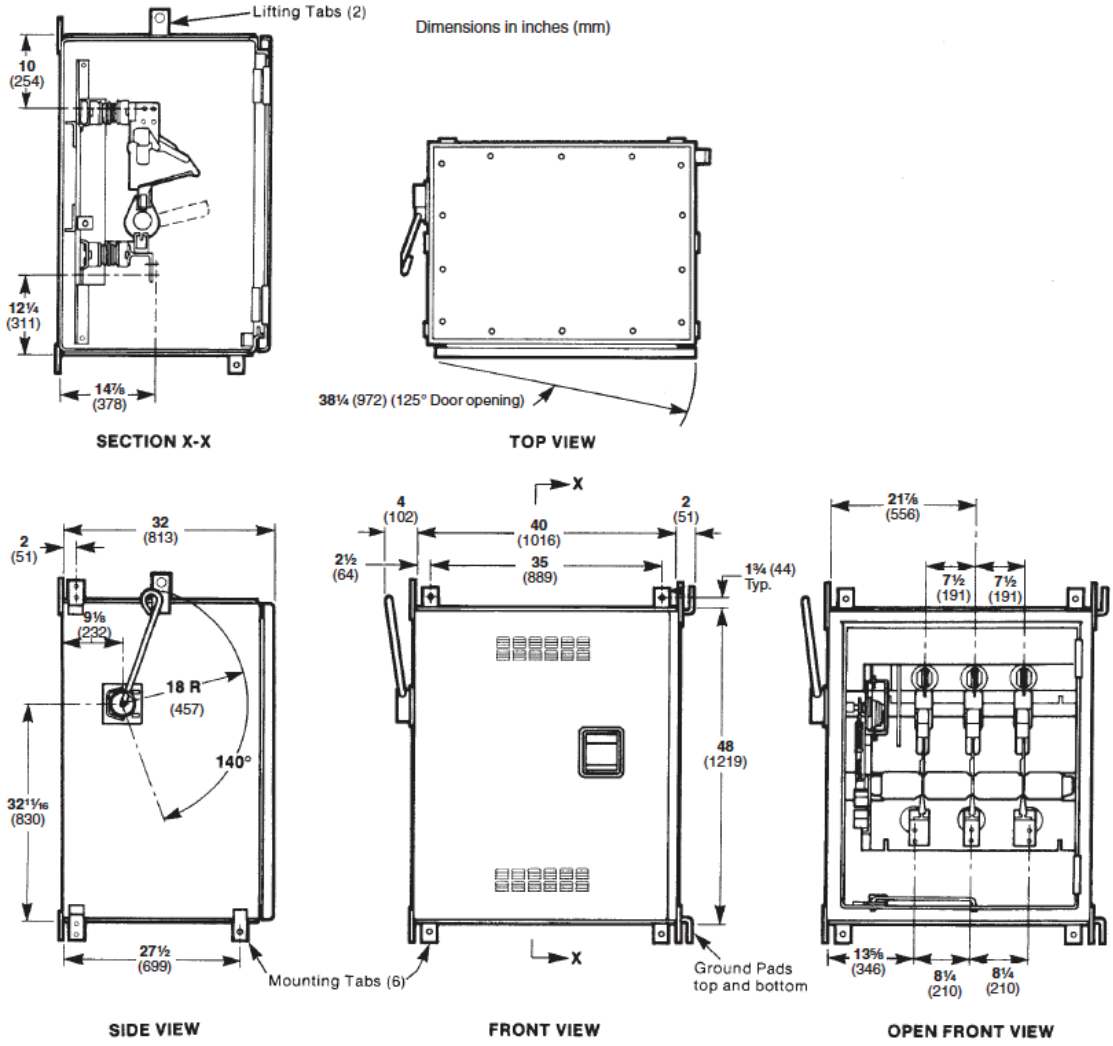
Style	Metal-Enclosed Switch Catalog Number①	kV, Nominal	Net Weight, Lbs. (Kg)②
Indoor, operating handle on right	90632	14.4	550 (249)

① Termination locations are different for cable entrance through conduit and cable connection to terminators; refer to pages 8 and 9.

② Excluding optional features.

Indoor Style

Operating Handle on Left

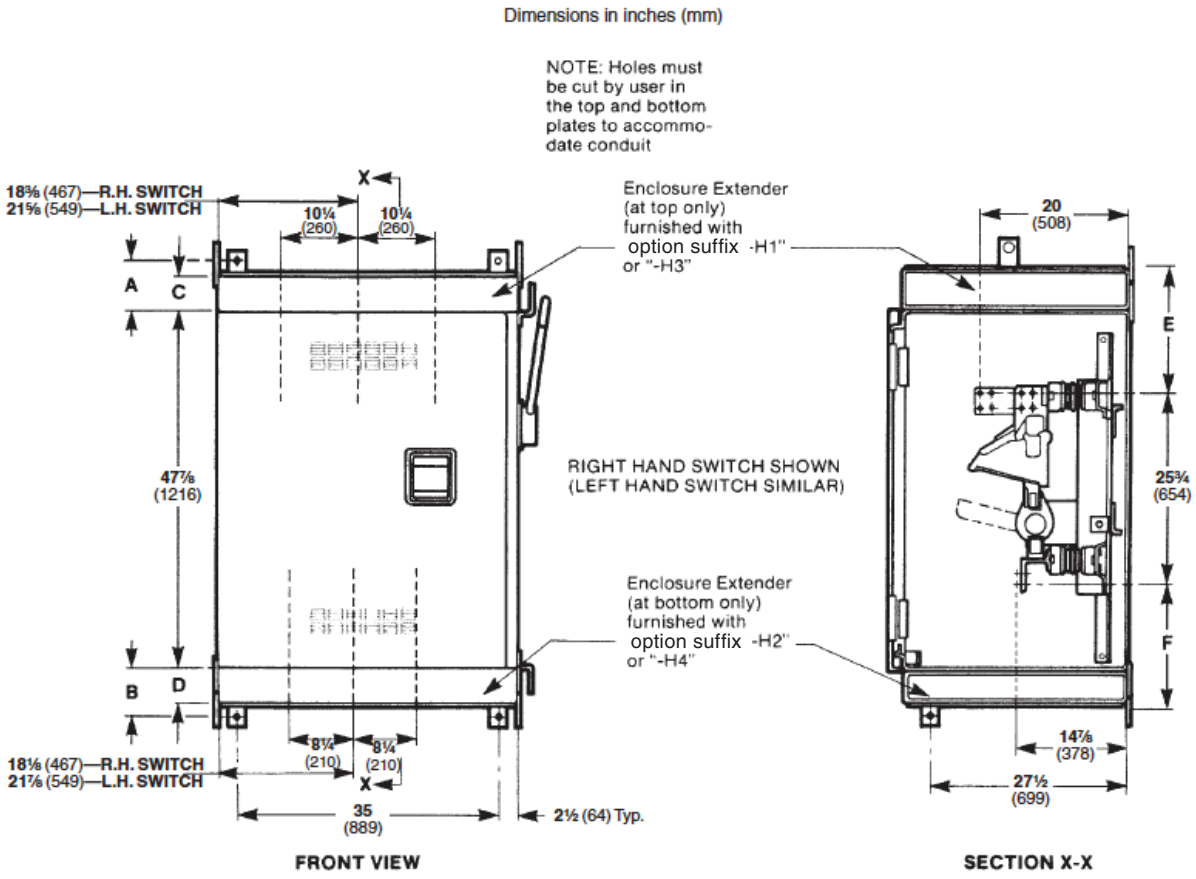


Style	Metal-Enclosed Switch Catalog Number①	kV, Nominal	Net Weight, Lbs.(Kg)②
Indoor, operating handle on left	90652	14.4	550 (249)

① Termination locations are different for cable entrance through conduit and cable connection to terminators; refer to pages 8 and 9.

② Excluding optional features.

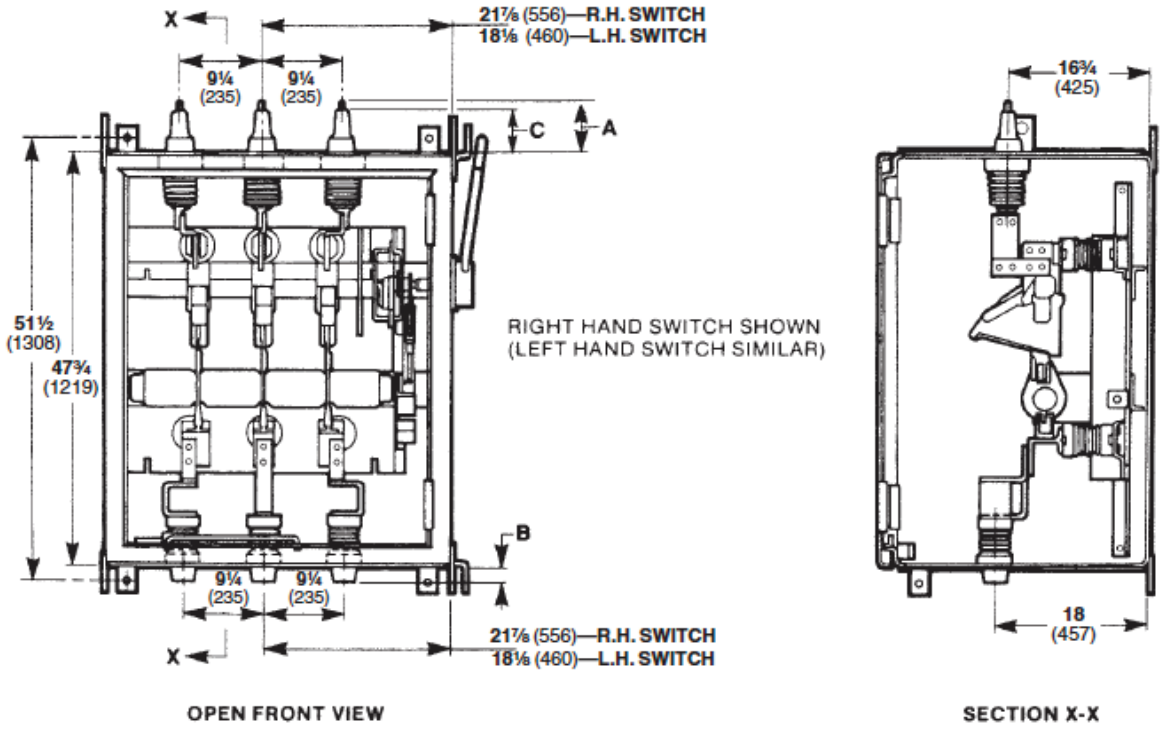
Termination Locations For Optional Enclosure Extenders, Suffixes "-H1" through "-H4"



Option Suffix	Dimensions in Inches (mm)						Increases Net Weight of Enclosure, Lbs. (Kg)
	A	B	C	D	E	F	
-H1	6 ⅞ (175)	—	5 (127)	—	15 (381)	12¼ (311)	50 (23)
-H2	—	6⅞ (175)	—	5 (127)	10 (254)	17¼ (438)	50 (23)
-H3	11⅞ (302)	—	10 (254)	—	20 (508)	12¼ (311)	80 (36)
-H4	—	11⅞ (302)	—	10 (254)	10 (254)	22¼ (565)	80 (36)

Termination Locations For Optional Bushings and Bushing Wells, Suffixes "-X1," "-X2," and "-X3"

Dimensions in inches (mm)



OPEN FRONT VIEW

SECTION X-X

Option Suffix	Terminator	Dimensions in Inches (mm)			Net Weight, Lbs. (Kg), Enclosure with Terminators
		A	B	C	
-X1	200-ampere Cypoxy Insulator bushing wells	1⅜ (35)	1⅜ (35)	—	590 (268)
-X2	600-ampere Cypoxy Insulator bushings	6⅜ (162)	6¼ (159)	5⅛ (130)	605 (274)
-X3	600-ampere Cypoxy Insulator bushings at top, 200-ampere bushing wells at bottom	6⅜ (162)	1⅜ (35)	5⅛ (130)	595 (270)