

Specifications

Conditions of Sale

STANDARD: The seller's standard conditions of sale set forth in Price Sheet 150 apply, except as modified under the "Warranty Qualifications" section on page 3.

SPECIAL TO THIS PRODUCT:

NOTE: S&C Type SM and SML Power Fuses are available separately only when the ultimate user is an electric utility (investor-owned, municipal, federal, state, county, or RUS-financed cooperative) or other qualified power user. These fuses are available to other users in the form of S&C Metal-Enclosed Gear; please refer to the nearest S&C Sales Office. Type SM and SML Power Fuses are also available separately to qualified original-equipment manufacturers for subsequent installation in metal enclosures in accordance with S&C's applicable minimum construction specifications, as set forth under the "Warranty Qualifications" section on page 3.

INCLUSIONS: Complete mountings include a base, Cypoxy™ Insulators, and fuse live parts. Complete mountings are factory-assembled and adjusted and ready for installation.

SM-4Z, SM-5S, SM-5SS, and SM-20 Power Fuses: SM-4Z and SM-5S Power Fuses are offered in both the disconnect and non-disconnect styles; SM-5SS Power Fuses in the non-disconnect style only; and SM-20 Power Fuses in the disconnect style only. These power fuses (in either style) consist of three distinct components: a fuse mounting, a holder (SM-4Z, SM-5S, and SM-5SS Power Fuses) or fuse unit end-fittings including silencer (SM-20 Power Fuses), and a refill unit (SM-4Z, SM-5S, and SM-5SS Power Fuses) or fuse unit (SM-20 Power Fuses). Each component is ordered separately as described on pages 4 and 5 in the "How to Order" section.

These power fuses are not designed for live-switching duties.

SML-20 and SML-4Z Power Fuses: These power fuses are available in the disconnect style only. The SML-20 Power Fuse consists of three distinct components: a fuse mounting, including a Uni-Rupter® Interrupter and the same base as the SM-20 Power Fuse; fuse unit end-fittings (including silencer) identical to those for the SM-20 Power Fuse; and the same SMU-20® Fuse Unit used with the SM-20 Power Fuse.

The SML-4Z Power Fuse consists of three distinct components: a fuse mounting, including a Uni-Rupter Interrupter and the same base as the SM-20 and SML-20 Power Fuses; a fuse holder similar to the SM-4Z Holder, except for the provision of contacts used to operate Uni-Rupter Interrupter; and the same SM-4® Refill Unit used with SM-4Z Power Fuses. (SM-4Z Holders are not interchangeable with SML-4Z Holders in the same mounting.)

Components for Type SML Power Fuses are ordered separately, as described on pages 4 and 5 in the "How to Order" section.

SML-20 and SML-4Z Power Fuse Mountings with Uni-Rupter Interrupters provide 200-ampere single-pole live switching of single-phase and three-phase circuits (on systems where line-to-line voltage does not exceed 27 kV).

EXCLUSIONS: Complete mountings and live parts do not include holders, fuse unit end-fittings, refill units, or fuse units.

Complete mountings and live parts do not include connectors. Various connectors are available as listed in Table 7 on page 16. Specify quantity and catalog number of connectors desired.

SPECIFICATION DEVIATIONS

SM-4Z, SM-5S, SM-5SS, and SM-20 Power Fuses: Mountings for these power fuses can be supplied without insulators. Add suffix "-Z1" to the catalog number.

★ Types SM and SML Power Fuses are manufactured in accordance with a quality system certified to ISO 9002.



Conditions of Sale—Continued

Mountings for these power fuses can be supplied less bases but with insulators. Add suffix “-Z4” to the catalog number.

These mountings cannot be supplied for back connection.

Live parts for these power fuses can be purchased separately. See Tables 1 through 3 on pages 6 through 8.

When these mountings are to be provided with special connectors, consult the nearest S&C Sales Office for availability.

Mountings can be supplied with tin-plated terminal pads. To specify, add suffix “-Z5” to the catalog number. Not applicable to SM-20 Power Fuses, which are equipped with tin-plated terminal pads as a standard feature. Disconnect-style parallel SM-5S Power Fuses are furnished with aluminum terminal pads as a standard feature.

SML-4Z and SML-20 Power Fuses: Mountings for these power fuses cannot be supplied without insulators.

Mountings for these power fuses cannot be supplied without bases but with insulators.

These mountings cannot be supplied for back connection.

Live parts for these power fuses cannot be purchased separately.

When these mountings are to be provided with special connectors, consult your nearest S&C Sales Office for availability.

Application Notes

For SML-4Z and SML-20 Power Fuses only:

S&C Power Fuses with Uni-Rupter Interrupters are designed for the following single-pole live-switching duties in single-phase or three-phase circuits of distribution systems rated 14.4 kV or 25 kV:

Live Switching—Opening

- **Transformer switching**—Transformer load currents up through 200 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 200 amperes; also line dropping (charging currents typical for distribution systems of these voltage ratings)
- **Cable switching**—Load splitting (parallel or loop switching) and load dropping of currents up through 200 amperes; also cable dropping (charging currents typical for distribution systems of these voltage ratings)

Live Switching—Closing

- **Circuit closing**—Inrush currents associated with the above opening duties
- **Duty-cycle fault closing**—One-time capability equal to the interrupting rating of the fuse (in amperes RMS asymmetrical):
 - For the SML-20—22,400 at 14.4 kV, 20,000 at 25 kV
 - For the SML-4Z—20,000 at 14.4 kV, 15,000■ at 25 kV

And two-time capability of 13,000 amperes RMS asymmetrical at 14.4 kV and 25 kV.

A Note on Single-Pole Switching

In single-pole switching of ungrounded-primary three-phase transformers or banks (or single-phase transformers connected line to line), circuit connections or parameters may, in some cases, produce excessive overvoltages. In particular, for the following applications above 22 kV, single-pole switching by any means—including with a Uni-Rupter Interrupter—should be performed only under the conditions stated in italics:

● These values represent the fault-closing capabilities of the fuse with a Uni-Rupter Interrupter when the fuse is closed with a purposeful thrust without hesitation. The values are the available fault currents into which the fuse can be closed the specified number of times (once or twice), with the Uni-Rupter Interrupter remaining operable and able to carry and interrupt rated current.

■ 20,000 amperes RMS asymmetrical when applied on solidly grounded-neutral systems only with fuses connected by single-conductor, concentric-neutral type cable (or directly coupled) to a transformer or transformers.

- Switching unloaded or lightly loaded delta-connected or ungrounded-primary wye-wye connected three-phase transformers or banks (or line-to-line connected single-phase transformers), rated 150 kVA or less three-phase, or 50 kVA or less single-phase—or of any kVA when combined with unloaded cables or lines—where maximum system operating voltage exceeds 22 kV (*Single-pole switching should be performed only if each phase is carrying 5% load or more, or if the transformer or bank is temporarily grounded at the primary neutral during switching.*)
- Switching loaded or unloaded ungrounded-primary wye-delta connected three-phase transformers or banks—alone or combined with unloaded cables or lines—where maximum system operating voltage exceeds 22 kV (*Single-pole switching should be performed only if each phase is carrying 5% load or more and if the lighting-load phase is always switched open first (or switched closed last); or if the transformer or bank is temporarily grounded at the primary neutral during switching.*)

WARRANTY QUALIFICATIONS: For the standard warranty contained in the seller's standard conditions of sale (as set forth in Price Sheet 150) to apply to Types SM-4Z, SML-4Z, SM-5S, SM-5SS, and SM-20 Power Fuses, or the SML-20 Power Fuse when installed in indoor, outdoor, or indoor-outdoor enclosures of other than S&C manufacture, the enclosures must be constructed in accordance with S&C's applicable minimum construction specifications to be found in the current revision of one of the following publications:

DATA BULLETIN 252-62:

S&C Power Fuses Type SM Indoor Distribution (4.16 kV through 34.5 kV)	Minimum Construction Specifications For Indoor and Outdoor Metal Enclosures with Fuses
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INFORMATION BULLETIN 252-64:

S&C Type SML Power Fuses Indoor Distribution (13.8 kV and 25 kV)	Minimum Construction Specifications For Indoor and Outdoor Metal Enclosures with Fuses
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INFORMATION BULLETIN 792-60:

S&C Alduti-Rupter® Switches with Power Fuses Indoor Distribution (4.8 kV and 13.8 kV)	Minimum Construction Specifications For Metal Enclosures—Indoor and Outdoor
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INFORMATION BULLETIN 795-60:

S&C Mini-Rupter® Switches with Power Fuses Indoor Distribution (4.8 kV and 14.4 kV)	Minimum Construction Specifications For Metal Enclosures—Indoor and Outdoor
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For the standard warranty contained in the seller's standard conditions of sale (as set forth in Price Sheet 150) to apply to live parts when purchased separately, the live parts must be assembled on mountings in accordance with instructions to be found in the present version of one of the following publications:

INSTRUCTION SHEET 252-505:

S&C Types SM-4Z and SM-5S Power Fuses Indoor Distribution	Live Parts for Disconnect Style
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INSTRUCTION SHEET 252-510:

Types SM-4Z, SM-5S, and SM-5SS Power Fuses Indoor Distribution	Live Parts for Non-Disconnect Style
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INSTRUCTION SHEET 252-535:

S&C Type SM-20 Power Fuses Indoor Distribution	Live Parts for Disconnect Style
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With respect to Type SM or SML Power Fuses, when installed in submersible enclosures of other than S&C manufacture, the warranty does not apply unless enclosures are furnished by an approved supplier and are of watertight construction providing proper electrical clearances and proper space for fuse handling.

The standard warranty contained in the seller's standard conditions of sale (as set forth in Price Sheet 150) does not apply when fuses of other than S&C manufacture are used in S&C SM or SML Mountings or when S&C Holders, Refill Units, or Fuse Units are used in mountings of other than S&C manufacture.

Type SM and SML Power Fuses

How to Order

Complete Types SM-4Z, SML-4Z, SM-5S, and SM-5SS Power Fuses

Complete the following steps to create completed catalog numbers for orders of Types SM-4Z, SML-4Z, SM-5S, and SM-5SS Power Fuses:

STEP 1. Obtain the catalog number of the desired mounting from the “Mounting” column in Tables 1 through 3 on pages 6 through 8. If only live parts are desired, refer to the “Live Parts” column.

Note: Live parts for SML-4Z Power Fuses cannot be purchased separately.

Catalog Number:

STEP 2. Obtain the catalog number of the applicable holder from the “Holder” column in Tables 1 through 3 on pages 6 through 8, reading from the same line in which the selected mounting is listed.

Catalog Number:

STEP 3. Obtain the catalog number of the applicable refill unit from Tables 5 and 6 on pages 12 through 15, taking care to match the refill unit type to that of the mounting and to select the voltage rating of the refill unit as directed in the refill unit tables.

Catalog Number:

Note: For each mounting rated 720E amperes, order two holders and two refill units.

STEP 4. Obtain the catalog number of the desired connector from Table 7 on page 16. Order two connectors for each mounting or set of live parts.

Catalog Number:

Note: Parts, insulating barrier assemblies, and switch blades listed in Tables 8 through 11 on pages 17 through 18 and are ordered using the method outlined above.

Example 1: The catalog number for a Disconnect 45 Opening Silencer, vertical style, 25-kV SM-4Z Mounting is:

Example 2: The catalog number for live parts only for a Disconnect 45 Opening Silencer vertical style, 25-kV SM-4Z Mounting is:

Example 3: The catalog number for a Disconnect 45 Opening Silencer, vertical style, 25-kV holder for use with an SM-4Z Mounting is:

Example 4: The catalog number for a 25-kV, Standard Speed SM-4 Refill Unit rated 50E continuous is:

Example 4: The catalog number for connectors accommodating No. 2 solid (33.6 mm²) copper through 500 kc mil (335 mm²)-stranded copper or aluminum for the mounting selected in Step 1 is:

Two connectors must be ordered for the mounting.

Types SM-20 and SML-20 Power Fuses

Complete the following steps to create completed catalog numbers for orders of Types SM-20 and SML-20 Power Fuses:

STEP 1. Obtain the catalog number of the desired mounting from the “Mounting” column in Tables 1 through 3 on pages 6 through 8. If only live parts are desired, use the “Live Parts” column.

Note: Live parts for SML-20 Power Fuses cannot be purchased separately.

Catalog Number:

STEP 2. Obtain the catalog number of the applicable fuse unit end fittings from the same table used to select the mounting.

Catalog Number:

STEP 3. Obtain the catalog number of the applicable fuse unit from Table 4 on page 9, making sure to match the voltage rating of the fuse unit to that of the mounting.

Catalog Number:

STEP 4. Obtain the catalog number of the desired connector from Table 7 on page 16. Order two connectors for each mounting or set of live parts.

Catalog Number:

Catalog Number:

Note: Parts, insulating barrier assemblies, and switch blades listed in Tables 8 through 11 on pages 17 through 18 are ordered using the method outlined above.

Example 1: The catalog number for a Disconnect 45 Opening Silencer, vertical style, 25-kV SM-20 Mounting is:

The catalog number for live parts only for a Disconnect 45 Opening Silencer, vertical style, 25-kV SM-20 Mounting is:

Example 2: The catalog number for fuse unit end-fittings for use with Disconnect 45 Opening Silencer ,vertical style, 25-kV SM-20 Mounting is:

Example 3: The catalog number for a 25 kV, K Speed SMU-20 Fuse Unit rated 25K continuous is:

Example 4: The catalog number for connectors accommodating No. 2 solid (33.6 mm²) copper through 500 kc mil (335 mm²)-stranded copper or aluminum for the mounting selected in Step 1 is:

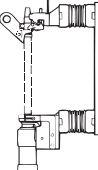
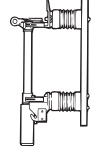
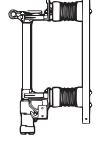
Two connectors must be ordered for the mounting.

How to Order Handling Tools

Obtain the catalog number(s) of recommended handling tool(s) from Table 12 on page 18. Refer to Specification Bulletin 851-31.

Type SM and SML Power Fuses

Table 1. SM Power Fuses—Disconnect Style—Less Connectors and Less Refill Units or Fuse Units

Style	Fuse Type	Rating					Mounting ^① (including Live Parts, less Fuse-Unit End Fittings or Holder)		Fuse-Unit End Fittings ^② (SM-20 or Holder ^③ (SM-4Z or SM-5S))		Live Parts (less Fuse-Unit End Fittings or Holder)	Page Reference for Dimensional Information
		kV			Amperes, RMS		Type	Catalog Number	Type	Catalog Number	Catalog Number	
		Nom.	Max	BIL	Max	Interrupting ^④ (Sym.)						
Disconnect 45° Opening Silencer Vertical	SM-20 	13.8 25 34.5	17.0 27 38	95 125 150	200 200 200	14 000 12 500 8 450	SM-20	90422 90423 90424	SM-20	3097 3097 3097	5040 5040 5044	19 19 19
	SM-4Z 	4.8 13.8 25 34.5	5.5 17.0 27 38	60 95 150 200	200 200 200 200	17 200 12 500 9 400● 6 250						
Disconnect 45° Opening Snuffler Vertical	SM-5S 	4.8 4.8 13.8 13.8 25 34.5	5.5 5.5 17.0 17.0 27 38	60 60 95 95 150 200	400 720 400 720 300 300	27 000▼ 27 000▼ 25 000 25 000 20 000 17 500	SM-5	87440R3 87150R4□ 87442R3 87152R4□ 87073R1 187664▽	SM-5S	86641R2▲ 86641R2▲ 86642R2◆ 86642R2◆ 86643R2 86644R2	87449R2 87159R3 87449R2 87159R3 87449R2 87449R2	20 22 20 22 20 21

① These mountings cannot be supplied for back connection.

② Includes silencer.

③ Includes silencer (SM-4Z) or snuffler (SM-5S).

④ Symmetrical ratings assigned are based on available short-circuit current at locations where the X/R ratio is 15. The interrupting ratings expressed in amperes RMS asymmetrical are 1.6 times the symmetrical ratings listed. Higher symmetrical ratings have been determined for these fuses where X/R = 10 and X/R = 5. These higher ratings as well as asymmetrical ratings are given in S&C Descriptive Bulletin 252-30.

● Rating is 12,500 amperes RMS symmetrical when applied on solidly grounded-neutral systems only with fuses connected by single-conductor, concentric-neutral type cable (or directly coupled) to a transformer or transformers.

■ Supersedes 34.5-kV, 150-kV BIL SM-4 Mounting catalog number 187634 and 34.5-kV, 200-kV BIL SM-4 Mounting catalog number 187534R1.

▲ Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

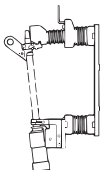
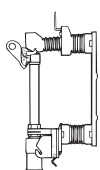
◆ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings or in discontinued 14.4-kV mountings.

▼ Applies to 7.2-kV refill unit in 7.2-kV holder for 4.8-kV system voltage only. Rating is 37,500 amperes RMS symmetrical for 4.16-kV refill unit in 7.2-kV holder for system voltages through 4.16 kV.

□ Two holders required with each mounting.

▽ Supersedes 34.5-kV, 150-kV BIL SM-5 Mounting catalog number 187644 and 34.5-kV, 200-kV BIL SM-5 Mounting catalog number 187544R2.

Table 2. SML Power Fuses—Disconnect Style—Less Connectors and less Refill Units or Fuse Units

Style	Fuse Type	Rating						Mounting ^① (including Live Parts, less Fuse Unit End-Fittings or Holder)		Fuse Unit End-Fittings ^② (SML-20) or Holder ^② (SML-4Z)		Page Reference for Dimensional Information
		kV			Amperes, RMS			Type	Catalog Number	Type	Catalog Number	
		Nom.	Max	BIL	Max	Load Dropping ^③	Inter-rupting ^④ (Sym.)					
Disconnect 45° Opening Silencer Vertical	SML-20 	13.8 25	17.0 27	95 125	200 200	200 200	14 000 12 500	SML-20 SML-20	90412 90413	SML-20 SML-20	3097 3097	23 23
	SML-4Z 	13.8 25	17.0 27	95 125	200 200	200 200	12 500 9 400●	SML-4 SML-4	90322 90323	SML-4Z SML-4Z	92352■ 92353	24 24

① These mountings cannot be supplied for back connection.

② Includes silencer.

③ The Uni-Rupter Interrupter associated with these fuses can carry and interrupt load current up to and including the emergency peak-load capabilities of the fuses. Furthermore, the fuse with a Uni-Rupter Interrupter has a one-time duty-cycle fault-closing capability equal to the interrupting rating of the fuse (expressed in amperes RMS asymmetrical), and a two-time duty-cycle fault-closing capability of 13,000 amperes RMS asymmetrical. The duty-cycle fault-closing capability defines the level of available fault current into which the fuse can be closed the specified number of times (once or twice), without quick-make mechanism and when operated vigorously through its full travel without hesitation at any point, with the Uni-Rupter Interrupter remaining operable and able to

carry and interrupt current up to the emergency peak-load capabilities of the fuse.

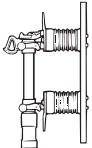
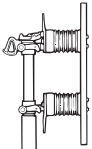
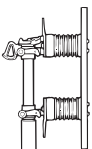
④ Symmetrical ratings assigned are based on available short-circuit current at locations where the X/R ratio is 15. The interrupting ratings expressed in amperes RMS asymmetrical are 1.6 times the symmetrical ratings listed. Higher symmetrical ratings have been determined for these fuses where X/R = 10 and X/R = 5. These higher ratings as well as asymmetrical ratings are given in S&C Descriptive Bulletin 252-30.

● Rating is 12,500 amperes RMS symmetrical when applied on solidly grounded-neutral systems only with fuses connected by single-conductor, concentric-neutral type cable (or directly coupled) to a transformer or transformers.

■ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings.

Type SM and SML Power Fuses

Table 3. SM Power Fuses—Non-Disconnect Style—Less Connectors and less Refill Units

Style	Fuse Type	Rating					Mounting ^① (including Live Parts, less Holder)		Holder ^②		Live Parts (less Holder)	Page Reference for Dimensional Information
		kV			Amperes, RMS		Type	Catalog Number	Type	Catalog Number	Catalog Number	
		Nom.	Max	BIL	Max	Inter-rupting ^③ (Sym.)						
Non-Disconnect Silencer Vertical	SM-4Z 	4.8 13.8 25 34.5	5.5 17.0 27 38	60 95 150 200	200 200 200 200	17 200 12 500 9 400● 6 250	SM-4	87200R2 87202R2 87043R1 187674■	SM-4Z	86801R2▲ 86802R2◆ 86803R2 86804R2	87109	25 25 25 26
Non-Disconnect Snuffler Vertical	SM-5S 	4.8 13.8 25 34.5	5.5 17.0 27 38	60 95 150 200	400 400 300 300	27 000▼ 25 000 20 000 17 500	SM-5	87600R3 87602R3 87053R1 187684□	SM-5S	86811R2▲ 86812R2◆ 86813R2 86814R2	87509R2	25 25 25 26
Non-Disconnect Super Snuffler Vertical	SM-5SS 	13.8	15.5	95	400	34 000△	SM-5	87602R3	SM-5SS	86402R2◆	87509R2	25

① These mountings cannot be supplied for back connection.
 ② Includes silencer (SM-4Z), snuffler (SM-5S), or super snuffler (SM-5SS).
 ③ Symmetrical ratings assigned are based on available short-circuit current at locations where the X/R ratio is 15. The interrupting ratings expressed in amperes RMS asymmetrical are 1.6 times the symmetrical ratings listed. Higher symmetrical ratings have been determined for these fuses where X/R = 10 and X/R = 5. These higher ratings as well as asymmetrical ratings are given in S&C Descriptive Bulletin 252-30.
 ● Rating is 12,500 amperes RMS symmetrical when applied on solidly grounded-neutral systems only with fuses connected by single-conductor, concentric-neutral type cable (or directly coupled) to a transformer or transformers.
 ■ Supersedes 34.5-kV, 150-kV BIL SM-4 Mounting catalog number 190034 and 34.5-kV, 200-kV BIL SM-4 Mounting catalog number 190304R1.

▲ Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.
 ◆ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings or in discontinued 14.4-kV mountings.
 ▼ Applies to 7.2-kV refill unit in 7.2-kV holder for 4.8-kV system voltage only. Rating is 37,500 amperes RMS symmetrical for 4.16-kV refill unit in 7.2-kV holder for system voltages through 4.16 kV.
 □ Supersedes 34.5-kV, 150-kV BIL SM-5 Mounting catalog number 190044 and 34.5-kV, 200-kV BIL SM-5 Mounting catalog number 190404R2.
 △ 60-Hertz only.

Table 4. SMU-20® Fuse Units (for use in SM-20 or SML-20 Mountings)①

14.4 kV Nominal, 17.0 kV Max							
"K" Ratings		"E" Ratings				"DR" Ratings	
Rating, Amperes ↓	Catalog Number	Rating, Amperes ↓	Catalog Number			Rating, Amperes ↓	Catalog Number
Speed →	S&C "K" TCC 165-2	Speed →	S&C Std. TCC 115-2			Speed →	S&C "DR" TCC 175-2
		1	702001●				
		Speed →	S&C Std. TCC 153-2	S&C Slow TCC 119-2	S&C Very Slow TCC 176-2		
3K	702003					3DR	622003
6K	702006	5E	612005			4DR	622004
8K	702008	7E	612007			5DR	622005
10K	702010	10E	612010			7DR	622007
12K	702012	13E	612013			10DR	622010
15K	702015	15E	612015	712015		15DR	622015
20K	702020	20E	612020	712020		20DR	622020
25K	702025	25E	612025	712025			
30K	702030	30E	612030	712030			
40K	702040	40E	612040	712040			
50K	702050	50E	612050	712050	602050		
65K	702065	65E	612065	712065	602065		
80K	702080	80E	612080	712080	602080		
100K	702100	100E	612100	712100	602100		
140K	702140	125E	612125	712125	602125		
200K	702200	150E	612150	712150	602150		
		175E	612175	712175	602175		
		200E	612200	712200	602200		

① These fuse units are equally suitable for use in SMD-20 Outdoor Distribution Mountings and with SME-20 Fuse Unit end-fittings listed in Specification Bulletin 665-31, "S&C Manual PME Pad-Mounted Gear" and Specification Bulletin 666-31, "S&C Remote Supervisory PME Pad-Mounted Gear."

● This fuse unit is not "E" rated.

TABLE CONTINUED ►

Type SM and SML Power Fuses

Table 4. SMU-20® FUSE UNITS (for use in SM-20 or SML-20 Mountings)①—Continued

25 kV Nominal, 27 kV Max②③							
“K” Ratings		“E” Ratings				“DR” Ratings	
Rating, Amperes ↓	Catalog Number	Rating, Amperes ↓	Catalog Number			Rating, Amperes ↓	Catalog Number
Speed →	S&C “K” TCC 165-2	Speed →	S&C Std. TCC 115-2			Speed →	S&C “DR” TCC 175-2
		1	703001●				
		Speed →	S&C Std. TCC 153-2	S&C Slow TCC 119-2	S&C Very Slow TCC 176-2		
3K	703003					3DR	623003
6K	703006	5E	613005			4DR	623004
8K	703008	7E	613007			5DR	623005
10K	703010	10E	613010			7DR	623007
12K	703012	13E	613013			10DR	623010
15K	703015	15E	613015	713015		15DR	623015
20K	703020	20E	613020	713020		20DR	623020
25K	703025	25E	613025	713025			
30K	703030	30E	613030	713030			
40K	703040	40E	613040	713040			
50K	703050	50E	613050	713050	603050		
65K	703065	65E	613065	713065	603065		
80K	703080	80E	613080	713080	603080		
100K	703100	100E	613100	713100	603100		
140K	703140	125E	613125	713125	603125		
200K	703200	150E	613150	713150	603150		
		175E	613175	713175	603175		
		200E	613200	713200	603200		

① These fuse units are equally suitable for use in SMD-20 Outdoor Distribution Mountings.

② These fuse units are equally suitable for use with SME-20 Fuse-Unit End Fittings listed in Specification Bulletin 665-31, “S&C Manual PME Pad-Mounted Gear” and Specification Bulletin 666-31, “S&C Remote Supervisory PME Pad-Mounted Gear.”

③ Also suitable for protection of single-phase-to-neutral circuits (lines or transformers) on 20/34.5 GrY-kV systems.

● This fuse unit is not “E” rated.

TABLE CONTINUED ►

Table 4. SMU-20® FUSE UNITS (for use in SM-20 or SML-20 Mountings)①—Continued

34.5 kV Nominal, 38 kV Max							
“K” Ratings		“E” Ratings				“DR” Ratings	
Rating, Amperes ↓	Catalog Number	Rating, Amperes ↓	Catalog Number			Rating, Amperes ↓	Catalog Number
Speed →	S&C “K” TCC 165-2	Speed →	S&C Std. TCC 115-2			Speed →	S&C “DR” TCC 175-2
		1	704001●				
		Speed →	S&C Std. TCC 153-2	S&C Slow TCC 119-2	S&C Very Slow TCC 176-2		
3K	704003					3DR	624003
6K	704006	5E	614005			4DR	624004
8K	704008	7E	614007			5DR	624005
10K	704010	10E	614010			7DR	624007
12K	704012	13E	614013			10DR	624010
15K	704015	15E	614015	714015		15DR	624015
20K	704020	20E	614020	714020		20DR	624020
25K	704025	25E	614025	714025			
30K	704030	30E	614030	714030			
40K	704040	40E	614040	714040			
50K	704050	50E	614050	714050	604050		
65K	704065	65E	614065	714065	604065		
80K	704080	80E	614080	714080	604080		
100K	704100	100E	614100	714100	604100		
140K	704140	125E	614125	714125	604125		
200K	704200	150E	614150	714150	604150		
		175E	614175	714175	604175		
		200E	614200	714200	604200		

① These fuse units are equally suitable for use in SMD-20 Outdoor Distribution Mountings.

● This fuse unit is not “E” rated.

Type SM and SML Power Fuses

Table 5. SM-4® Refill Units (for use in SM-4 and SML-4 Holders)

Rating, Amperes ↓	7.2 kV Nominal, 8.3 kV Max ^①		14.4 kV Nominal, 17.0 kV Max ^{② ③}		
	Catalog Number		Catalog Number		
Speed →	S&C Std. TCC 115-4		S&C Std. TCC 115-4		
1 2	121001R4 121002R4		122001R4 122002R4		
Speed →	S&C Std. TCC 153-4	S&C Slow TCC 119-4	S&C Std. TCC 153-4	S&C Slow TCC 119-4	S&C Coord. TCC 179-4
3E	121005R4		122005R4		
5E	121007R4		122007R4		
7E	121010R4		122010R4		
10E	121015R4		122015R4		
13E	121020R4		122020R4		
15E	121025R4	251025R4	122025R4	252025R4	
20E	121030R4	251030R4	122030R4	252030R4	
25E	121040R4	251040R4	122040R4	252040R4	
30E	121050R4	251050R4	122050R4	252050R4	
40E	121060R4	251060R4	122060R4	252060R4	
50E	121075R4	251075R4	122075R4	252075R4	
65E	121100R4	251100R4	122100R4	252100R4	
80E	121125R4	251125R4	122125R4	252125R4	
100E	121150R4	251150R4	122150R4	252150R4	
125E	121200R4	251200R4	122200R4	252200R4	
150E	121250R4	251250R4	122250R4	252250R4	
175E	121275R4	251275R4	122275R4	252275R4	
200E	121300R4	251300R4	122300R4	252300R4	
210					382210R4●

① Rated 7.2 kV nominal, for use in SM-4 Holders rated 7.2 kV when applied in listed mountings rated 4.8 kV or in discontinued mountings rated 7.2 kV.

② These refill units are also suitable for use with SME-4Z Holders listed in Specification Bulletin 665-31, "S&C Manual PME Pad-Mounted Gear" and Specification Bulletin 666-31, "S&C Remote Supervisory PME Pad-Mounted Gear."

③ Rated 14.4 kV nominal, for use in SM-4 Holders rated 14.4 kV when applied in listed mountings rated 13.8 kV or in discontinued mountings rated 14.4 kV.

● This S&C Coordinating Speed refill unit should be applied where the maximum continuous load current does not exceed 200 amperes and where all fault currents below 1000 amperes will be cleared by another fuse.

TABLE CONTINUED ►

Table 5. SM-4® Refill Units (for use in SM-4 and SML-4 Holders)—Continued

Rating, Amperes ↓	25 kV Nominal, 27 kV Max ^①		34.5 kV Nominal, 38 kV Max	
	Catalog Number		Catalog Number	
Speed →	S&C Std. TCC 115-4		S&C Std. TCC 115-4	
1 2	123001R4 123002R4		124001R4 124002R4	
Speed →	S&C Std. TCC 153-4	S&C Slow TCC 119-4	S&C Std. TCC 153-4	S&C Slow TCC 119-4
3E	123005R4		124005R4	
5E	123007R4		124007R4	
7E	123010R4		124010R4	
10E	123015R4		124015R4	
13E	123020R4		124020R4	
15E	123025R4	253025R4	124025R4	254025R4
20E	123030R4	253030R4	124030R4	254030R4
25E	123040R4	253040R4	124040R4	254040R4
30E	123050R4	253050R4	124050R4	254050R4
40E	123060R4	253060R4	124060R4	254060R4
50E	123075R4	253075R4	124075R4	254075R4
65E	123100R4	253100R4	124100R4	254100R4
80E	123125R4	253125R4	124125R4	254125R4
100E	123150R4	253150R4	124150R4	254150R4
125E	123200R4	253200R4	124200R4	254200R4
150E	123250R4	253250R4	124250R4	254250R4
175E	123275R4	253275R4	124275R4	254275R4
200E	123300R4	253300R4	124300R4	254300R4

① These refill units are also suitable for use with SME-4Z Holders listed in Specification Bulletin 665-31, "S&C Manual PME Pad-Mounted Gear" and Specification Bulletin 666-31, "S&C Remote Supervisory PME Pad-Mounted Gear."

Type SM and SML Power Fuses

Table 6. SM-5® Refill Units (for use in SM-5 Holders)

Rating, Amperes ↓	4.16 kV Nominal, 4.76 kV Max ^①			7.2 kV Nominal, 8.3 kV Max ^②		
	Catalog Number			Catalog Number		
Speed →	S&C Std. TCC 115-4			S&C Std. TCC 115-4		
1	130001R4			131001R4		
2	130002R4			131002R4		
Speed →	S&C Std. TCC 153-4	S&C Slow TCC 119-4	S&C Coord. TCC 173-4	S&C Std. TCC 153-4	S&C Slow TCC 119-4	S&C Coord. TCC 173-4
3E	130005R4			131005R4		
5E	130007R4			131007R4		
7E	130010R4			131010R4		
10E	130015R4			131015R4		
13E	130020R4			131020R4		
15E	130025R4	260025R4		131025R4		
20E	130030R4	260030R4		131030R4		
25E	130040R4	260040R4		131040R4		
30E	130050R4	260050R4		131050R4		
40E	130060R4	260060R4		131060R4		
50E	130075R4	260075R4		131075R4		
65E	130100R4	260100R4		131100R4		
80E	130125R4	260125R4		131125R4		
100E	130150R4	260150R4		131150R4		
125E	130200R4	260200R4		131200R4		
150E	130250R4	260250R4		131250R4		
175E	130275R4	260275R4		131275R4		
200E	130300R4	260300R4		131300R4		
250E	130400R4	260400R4		131400R4	261400R4	
300E	130500R4	260500R4		131500R4	261500R4	
400E	130600R4	260600R4		131600R4	261600R4	
410			381410R4●■			381410R4■
420			381420R4●■			381420R4■

① Rated 4.16 kV nominal, for use in SM-5 Holders rated 7.2 kV when applied in listed mountings rated 4.8 kV for system voltages through 4.16 kV.

② Rated 7.2 kV nominal, for use in SM-5 Holders rated 7.2 kV when applied in listed mountings rated 4.8 kV for 4.8-kV system voltage only, or in discontinued mountings rated 7.2 kV for system voltages of 4.8 kV through 7.2 kV.

● Catalog numbers are in italics because these are 7.2-kV refill units. Interrupting ratings are those listed in S&C Descriptive Bulletin 252-30 for 7.2-kV SM-5S Power Fuses applied to systems rated 2.4/4.16 Y kV.

■ These S&C Coordinating Speed refill units should be applied where the maximum continuous load current does not exceed 400 amperes and where all fault currents below 3000 amperes for catalog numbers 381410R4 and 382410R4 and 4000 amperes for catalog numbers 381420R4 and 382420R4 will be cleared by another fuse.

TABLE CONTINUED ►

Table 6. SM-5® Refill Units (For use in SM-5 Holders)—Continued

Rating, Amperes ↓	14.4 kV Nominal, 17.0 kV Max ^①			25 kV Nominal, 27 kV Max		34.5 kV Nominal, 38 kV Max		
	Catalog Number			Catalog Number		Catalog Number		
Speed →	S&C Std. TCC 115-4			S&C Std. TCC 115-4		S&C Std. TCC 115-4	S&C Std. TCC 153-4	S&C Slow TCC 119-4
1	132001R4			133001R4		134001R4		
2	132002R4			133002R4		134002R4		
3E							134005R4	
5E	132007R4			133007R4			134007R4	
7E	132010R4			133010R4			134010R4	
10E	132015R4			133015R4			134015R4	
13E	132020R4			133020R4			134020R4	
15E	132025R4	262025R4		133025R4	263025R4		134025R4	264025R4
20E	132030R4	262030R4		133030R4	263030R4		134030R4	264030R4
25E	132040R4	262040R4		133040R4	263040R4		134040R4	264040R4
30E	132050R4	262050R4		133050R4	263050R4		134050R4	264050R4
40E	132060R4	262060R4		133060R4	263060R4		134060R4	264060R4
50E	132075R4	262075R4		133075R4	263075R4		134075R4	264075R4
65E	132100R4	262100R4		133100R4	263100R4		134100R4	264100R4
80E	132125R4	262125R4		133125R4	263125R4		134125R4	264125R4
100E	132150R4	262150R4		133150R4	263150R4		134150R4	264150R4
125E	132200R4	262200R4		133200R4	263200R4		134200R4	264200R4
150E	132250R4	262250R4		133250R4	263250R4		134250R4	264250R4
175E	132275R4	262275R4		133275R4	263275R4		134275R4	264275R4
200E	132300R4	262300R4		133300R4	263300R4		134300R4	264300R4
250E	132400R4	262400R4		133400R4	263400R4		134400R4	264400R4
300E	132500R4	262500R4		133500R4	263500R4		134500R4	264500R4
400E	132600R4	262600R4						
410			382410R4●					
420			382420R4●					

① Rated 14.4 kV nominal, for use in SM-5 Holders rated 14.4 kV when applied in listed mountings rated 13.8 kV or in discontinued mountings rated 14.4 kV.

● These S&C Coordinating Speed refill units should be applied where the maximum continuous load current does not exceed 400 amperes and where all fault currents below 3000 amperes for catalog numbers 381410R4 and 382410R4 and 4000 amperes for catalog numbers 381420R4 and 382420R4 will be cleared by another fuse.

Type SM and SML Power Fuses

Table 7. Connectors

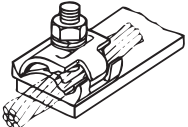
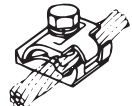
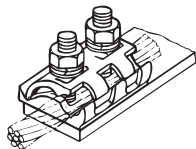
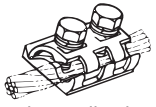
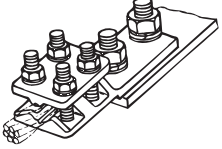
Illustration and Description	Accommodating Conductor	Applicable Power Fuse				Catalog Number
		Disconnect Styles		Non-Disconnect Styles		
		Upper Terminal Pad	Lower Terminal Pad	Upper Terminal Pad	Lower Terminal Pad	
 <p>Bronze body, tin plated, single 1/2-13 x 2 1/4 galvanized steel bolt</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (335 mm ²) stranded copper or aluminum	SM-4Z SML-4Z SM-5S SM-20 SML-20	SM-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4749
 <p>Bronze body, tin plated, single 1/2-13 x 2 1/4 galvanized steel bolt</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (335 mm ²) stranded copper or aluminum	—	SM-4Z SM-5S	—	—	5394
 <p>Aluminum alloy body, tin plated, two 1/2-13 x 2 1/2 galvanized steel bolts</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (335 mm ²) stranded copper or aluminum	SM-4Z SML-4Z SM-5S SML-20	SML-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4744
 <p>Aluminum alloy body, tin plated, two 1/2-13 x 2 1/4 galvanized steel bolts</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (335 mm ²) stranded copper or aluminum	—	SM-4Z SM-5S	—	—	4746
 <p>Standard bronze pad terminal, tin plated, four-bolt. Includes 1/2-inch galvanized steel hardware for attachment to terminal pads of fuses</p>	No. 6 solid (13.3 mm ²) through 250 kc mil (168 mm ²) copper or aluminum	—	SM-4Z SM-5S	—	—	4564R1-A
		SM-4Z SML-4Z SM-5S SML-20	SML-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4564R1-B
	1/0 solid (53.5 mm ²) through 500 kc mil (335 mm ²) copper or aluminum	—	SM-4Z SM-5S	—	—	4565R1-A
		SM-4Z SML-4Z SM-5S SML-20	SML-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4565R1-B
	2/0 stranded (89 mm ²) through 800 kc mil (539 mm ²) copper or aluminum	—	SM-4Z SM-5S	—	—	4567R1-A
		SM-4Z SML-4Z SM-5S SML-20	SML-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4567R1-B

Table 8. Parts—For use with SM-4Z, SML-4Z, SM-5S, and SM-5SS Power Fuses

Item	For Holder		Catalog Number
	Rated (kV, Nominal)	Type	
Spare spring-and-cable assembly	4.8 or 7.2	SM-4S or SM-4Z	FA-972
		SM-5S	FA-2341●
	13.8 or 14.4	SM-4S or SM-4Z	FA-973
		SML-4Z	FA-104561
	25	SML-4Z	FA-104562
	13.8 or 14.4	SM-5S	FA-2342●
	23 or 25	SM-4S or SM-4Z	FA-974
		SM-5S	FA-2343●
	34.5	SM-4S or SM-4Z	FA-975
SM-5S		FA-2344a	
Spare silencer	All ratings	SM-4Z or SML-4Z	FDA-1079
Spare snuffler	All ratings	SM-4S	FA-104328■
		SM-5S	FDA-1065
		SM-5SS	FA-104343▲

● For use only in holders carrying an arrow-shaped nameplate. Spring-and-cable assemblies for holders which do not carry an arrow-shaped nameplate are no longer available—so a new holder with the appropriate voltage rating must be ordered.

■ Product discontinued. To replace an SM-4S Snuffler (catalog number FA-104328), order one SM-4Z Silencer as listed, plus one fuse pivot, catalog number S-83670.

▲ Not usable in disconnect style mounting.

Table 9. Parts—For use with SM-20 and SML-20 Power Fuses

Item	For Power Fuses		Catalog Number
	Rated (kV, Nominal)	Type	
Spare silencer	All ratings	SM-20 or SML-20	FDA-1103

Table 10. Insulating Barrier Assemblies—For use with SM and SML Power Fuses

Item	For Power Fuses		Three-Phase Insulating-Barrier Assembly Catalog Number ^①	Replacement Barrier Catalog Number ^{②③}
	Rated (kV, Nominal)	Type		
Insulating barriers	4.8	SM-4Z	SA-41950-1	B-25770
		SM-5S	SA-41950-2	B-25771
	13.8	SM-4Z	SA-41951-1	B-25772
		SM-5S or SM-5SS	SA-41951-2	B-25773
		SM-20, SML-20, or SML-4Z	SA-41951-3	B-25774
	25	SM-4Z	SA-41952-1	B-25796
		SM-5S	SA-41952-2	B-25797
		SM-20, SML-20, or SML-4Z	SA-41952-3	B-25542-10
	34.5	SM-4Z	SA-41953-1	B-25542-6
		SM-5S	SA-41953-2	B-25542-9
SM-20		SA-41953-3	B-25542-2	

① Includes four 3/16-inch (4.8-mm) NEMA Grade GPO3 fiberglass-reinforced polyester barriers, plus a complete set of mounting hardware and adjustable-length interbarrier spacers.

② Replacement NEMA Grade GPO3 fiberglass-reinforced polyester barriers listed in this specification bulletin must only be installed with barriers of similar design and construction.

③ Includes one 3/16-inch (4.8-mm) NEMA Grade GPO3 fiberglass-reinforced polyester barrier; does not include mounting hardware or interbarrier spacers. For mounting hardware sufficient to mount one barrier, specify two (2) fastener assemblies, catalog number CA-600- For interbarrier spacers, refer to the nearest S&C Sales Office.

Type SM and SML Power Fuses

Table 11. Switch Blades^①

Item	Rating			Catalog Number
	kV		Amperes, Cont.	
	Nominal	Max		
Switch blades, for use in lieu of SML-4Z Holders in SML-4 Mountings	14.4 25	17.0 27	200 200	5442 5443
Switch blades, for use in lieu of SMU-20 Fuse Units in SML-20 Mountings	14.4 25	17.0 27	200 200	5432 5433
Switch blades, for use in lieu of SM-4Z Holders in SM-4 Mountings	7.2	7.2	200	5411
	14.4	17	200	5412
	25	27	200	5413
	34.5	38	200	5414
Switch blades, for use in lieu of SM-5S Holders in SM-5 Mountings	7.2	7.2	400	5421
	14.4	17	400	5422
	25	27	300	5423
	34.5	38	300	5424

^① When switch blades are used in lieu of SML-4Z Holders or SMU-20 Fuse Units, the Uni-Rupter Interrupter associated with these switches can carry and interrupt load currents up to and including the emergency peak-load capabilities of the fuses. Furthermore, the switches with the Uni-Rupter Interrupter have a one-time duty-cycle fault-closing capability equal to the interrupting ratings of the fuses (expressed in amperes RMS asymmetrical) and a two-time duty-cycle fault-closing capability of 13,000 amperes RMS asymmetrical. The duty-cycle fault-closing capability defines the level of available fault current into which the switch can be closed the specified number of times (once or twice), without quick-make mechanism and when operated vigorously through its full travel without

hesitation at any point, with the Uni-Rupter Interrupter remaining operable and able to carry and interrupt currents up to the emergency peak-load capabilities of the fuse.

For 14.4-kV switches with Uni-Rupter Interrupters, the one-second rating is 14,000 amperes RMS symmetrical. For 25-kV switches with Uni-Rupter Interrupters, the one-second rating is 12,500 amperes RMS symmetrical.

The momentary ratings of the switches equal or exceed the interrupting ratings of the fuses.

Table 12. Recommended Handling Tools

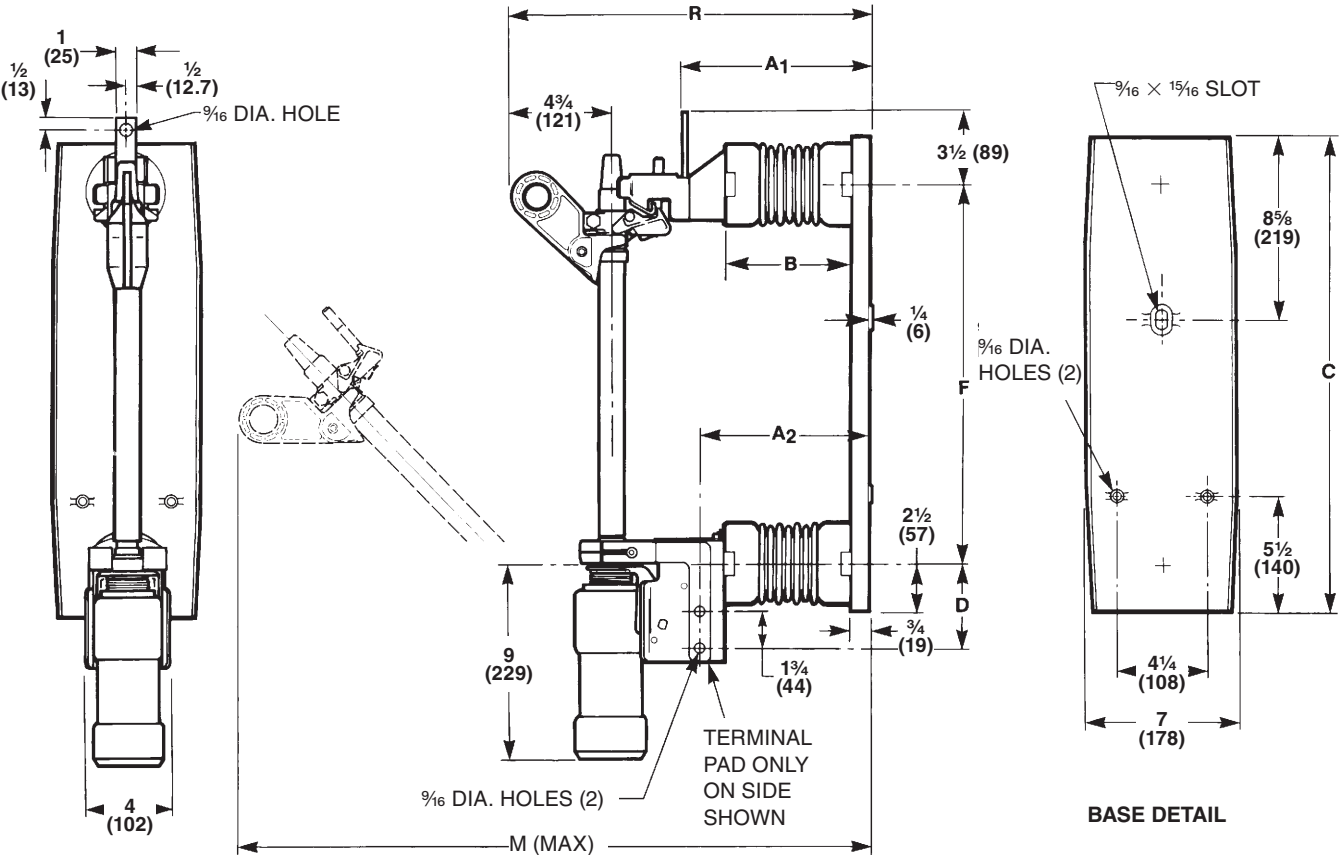
Item	For Power Fuse		Catalog Number
	Style	Type	
Grappler™ Handling Tool	Disconnect 45° opening	SM-20●, SM-4Z●, SML-20, SML-4Z	4423
Large clamp	Disconnect 45° opening	SM-5S■	4410R3
Locking prong	Non-disconnect	SM-4Z●, SM-5S■, SM-5SS	4404
Universal pole	Refer to Specification Bulletin 851-31		

● Rated 25 kV and below. SMU-20 Fuse Units and SM-4Z Holders rated 34.5 kV can be removed by hand after properly grounding the upper and lower live parts of the mounting.

■ Rated 13.8 kV and below. SM-5S Holders rated 25 kV or 34.5 kV can be removed by hand after properly grounding the upper and lower live parts of the mounting.

SM-20 Disconnect, 45° Opening
200 Amperes Max, 13.8 kV, 25 kV, and 34.5 kV

Dimensions in inches (mm)



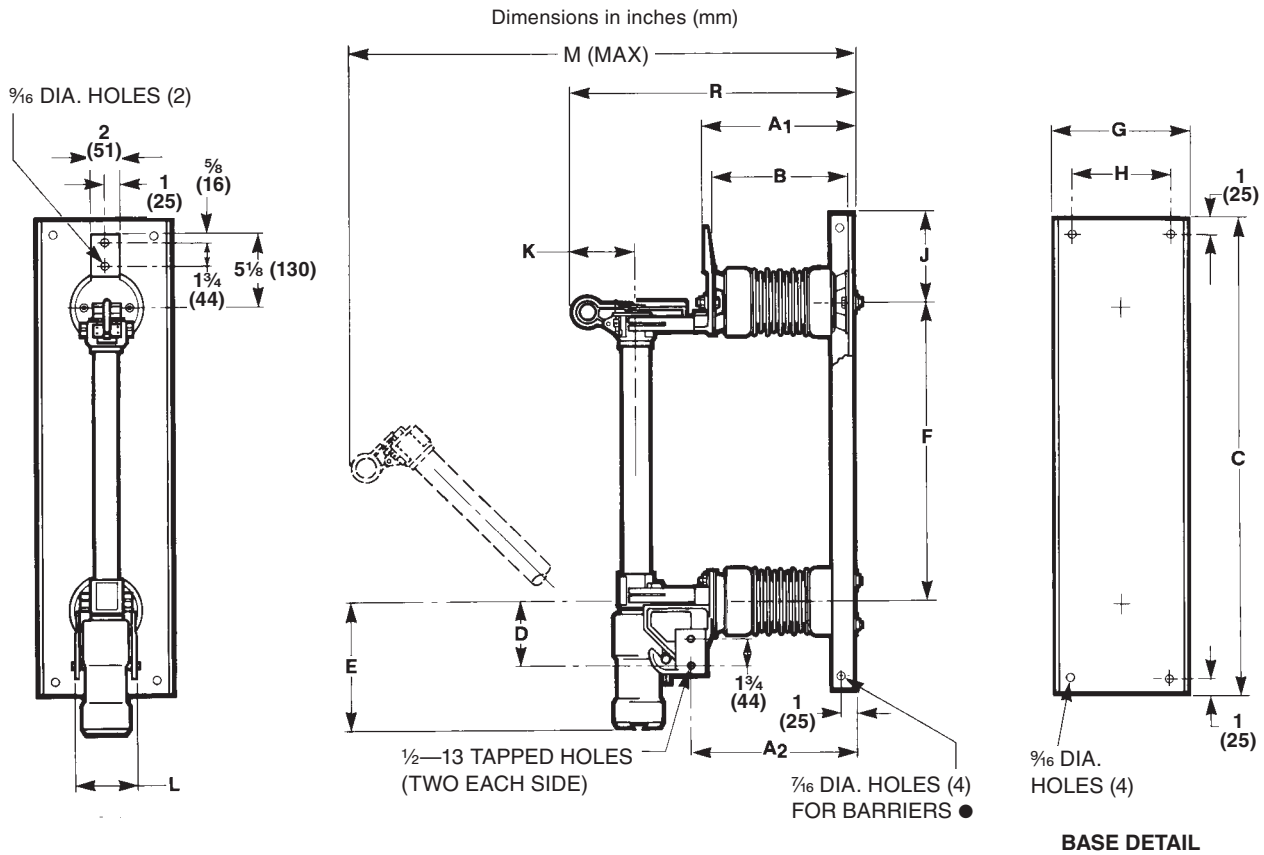
Rating			Amps, Max	Mounting ^① (including Live Parts, less Fuse Unit End-Fittings)		Fuse Unit End-Fittings ^②		Live Parts (less Fuse Unit End-Fittings)	Dimensions in Inches (mm)								Net Weight, Lbs. (kg)	
Nom.	Max	BIL		Type	Catalog Number	Type	Catalog Number		Catalog Number	A1	A2	B	C	D	F	M	R	Mtg.
13.8	17.0	95	200	SM-20	90422	SM-20	3097	5040	9 1/8 (232)	8 1/8 (206)	6 1/4 (159)	22 3/8 (568)	4 (102)	18 (457)	31 1/2 (800)	17 1/4 (438)	23 1/2 (11)	12 (5.4)
25	27	125	200	SM-20	90423	SM-20	3097	5040	10 3/8 (264)	9 3/8 (238)	7 1/2 (191)	26 3/4 (679)	3 1/4 (83)	22 1/4 (565)	34 1/2 (876)	18 1/2 (464)	27 (12)	12 (5.4)
34.5	38	150	200	SM-20	90424	SM-20	3097	5044	12 7/8 (327)	11 7/8 (302)	10 (254)	32 3/4 (832)	3 1/4 (83)	28 1/4 (718)	42 (1067)	21 (533)	30 (14)	12 (5.4)

① These mountings cannot be supplied for back connection.

② Includes silencer.

Type SM and SML Power Fuses

SM-4Z and SM-5S Disconnect, 45° Opening 200, 300, and 400 Amperes Max, 4.8 kV, 13.8 kV, and 25 kV



● These holes may be used for attachment of barriers only when the minimum recommended energized part-to-barrier clearance and minimum

recommended barrier-to-ground clearance (in vicinity of energized parts), as listed in S&C Data Bulletin 252-62, have been met or exceeded.

Rating				Mounting ^① (including Live Parts, less Holder)		Holder ^②		Live Parts (less Holder)	Dimensions in Inches (mm)														Net Weight, Lbs. (kg)	
kV		Amps, Max		Type	Catalog Number	Type	Catalog Number	Catalog Number	A1	A2	B	C	D	E	F	G	H	J	K	L	M	R	Mtg.	Holder
Nom.	Max	BIL																						
4.8	5.5	60	200	SM-4	87360R2	SM-4Z	86631R2●	87369	5 7/8 (137)	6 3/4 (171)	5 (127)	28 (711)	4 1/8 (105)	8 7/8 (225)	12 1/2 (318)	7 (178)	4 1/4 (108)	7 3/4 (197)	4 (102)	3 7/8 (98)	25 1/2 (648)	13 3/4 (349)	29 (13)	12 (5)
13.8	17.0	95	200	SM-4	87362R2	SM-4Z	86632R2■	87369	8 1/8 (206)	9 1/4 (235)	7 1/2 (191)	32 (813)	4 1/8 (105)	8 7/8 (225)	16 1/2 (419)	7 (178)	4 1/4 (108)	7 3/4 (197)	4 (102)	3 7/8 (98)	30 7/8 (784)	16 1/4 (413)	34 (15)	13 (6)
25	27	150	200	SM-4	87063R1	SM-4Z	86633R2	87369	14 5/8 (371)	15 3/4 (400)	14 (356)	32 3/4 (832)	4 1/8 (105)	8 7/8 (225)	20 3/4 (527)	7 1/2 (191)	5 (127)	6 (152)	4 (102)	3 7/8 (98)	41 (1041)	22 7/8 (581)	53 (24)	13 (6)
4.8	5.5	60	400	SM-5	87440R3	SM-5S	86641R2●	87449R2	5 7/8 (137)	6 3/4 (171)	5 (127)	28 (711)	6 (152)	11 (279)	12 1/2 (318)	7 (178)	4 1/4 (108)	7 3/4 (197)	5 (127)	4 7/8 (124)	29 1/4 (743)	15 1/4 (387)	35 (16)	28 (13)
13.8	17.0	95	400	SM-5	87442R3	SM-5S	86642R2■	87449R2	8 1/8 (206)	9 1/4 (235)	7 1/2 (191)	32 (813)	6 (152)	11 (279)	16 1/2 (419)	7 (178)	4 1/4 (108)	7 3/4 (197)	5 (127)	4 7/8 (124)	34 1/2 (1121)	17 3/4 (451)	40 (18)	28 1/2 (13)
25	27	150	300	SM-5	87073R1	SM-5S	86643R2	87449R2	14 5/8 (371)	15 3/4 (400)	14 (356)	32 3/4 (832)	6 (152)	11 (279)	20 3/4 (527)	7 1/2 (191)	5 (127)	6 (152)	5 (127)	4 7/8 (124)	44 1/8 (1124)	24 1/4 (616)	59 (27)	32 (15)

① These mountings cannot be supplied for back connection.

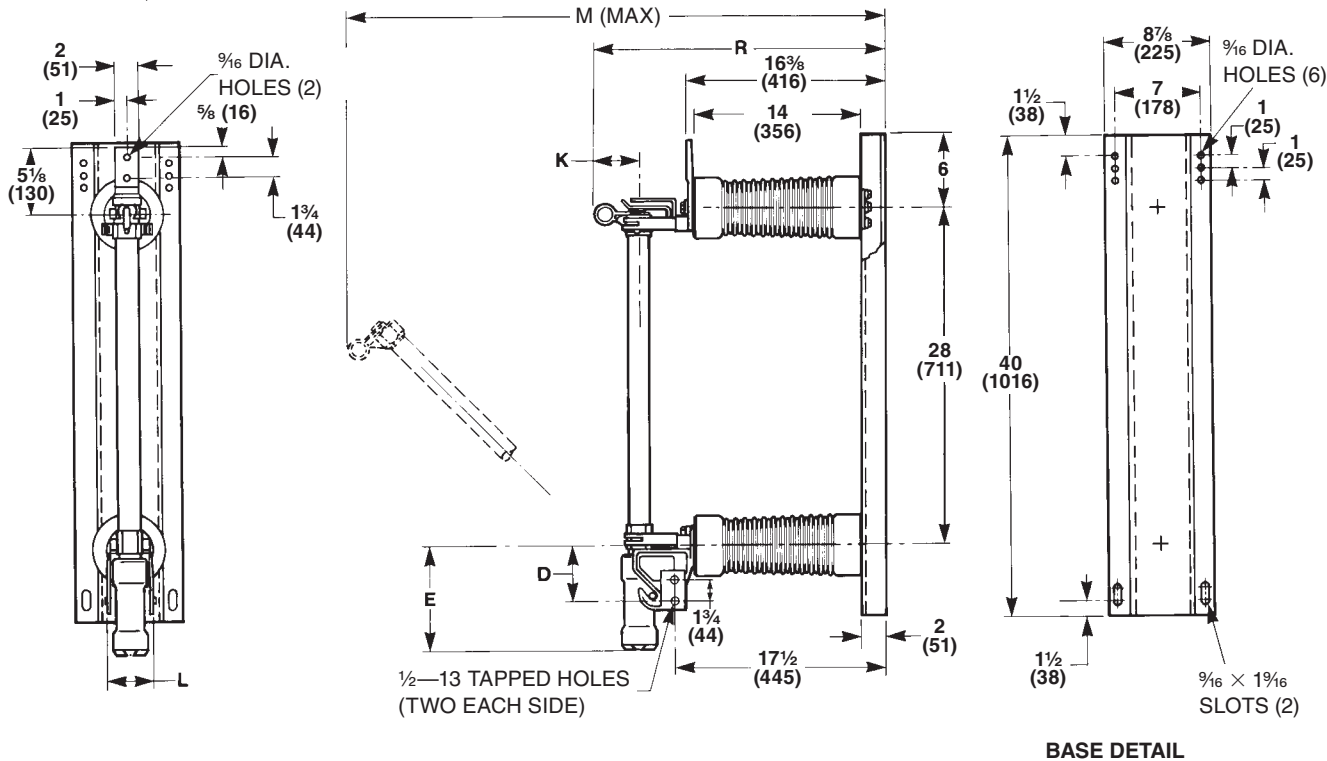
② Includes silencer (SM-4Z) or snuffler (SM-5S).

● Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

■ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings or in discontinued 14.4-kV mountings.

SM-4Z and SM-5S Disconnect, 45° Opening
200 and 300 Amperes Max, 34.5 kV

Dimensions in inches (mm)



Rating			Amps, Max	Mounting ^① (including Live Parts, less Holder)		Holder ^②		Live Parts (less Holder) Catalog Number	Dimensions in Inches (mm)						Net Weight, Lbs. (kg)	
Nom.	Max	BIL		Type	Catalog Number	Type	Catalog Number		D	E	K	L	M	R	Mtg.	Holder
34.5	38	200	200	SM-4	187654●	SM-4Z	86634R2	87369	4 1/8 (105)	8 7/8 (225)	4 (102)	3 7/8 (98)	48 (1219)	24 3/4 (629)	67 (30)	13 (6)
34.5	38	200	300	SM-5	187664■	SM-5S	86644R2	87449R2	6 (152)	11 (279)	5 (127)	4 7/8 (124)	50 7/8 (1292)	26 1/8 (664)	74 (34)	21 (10)

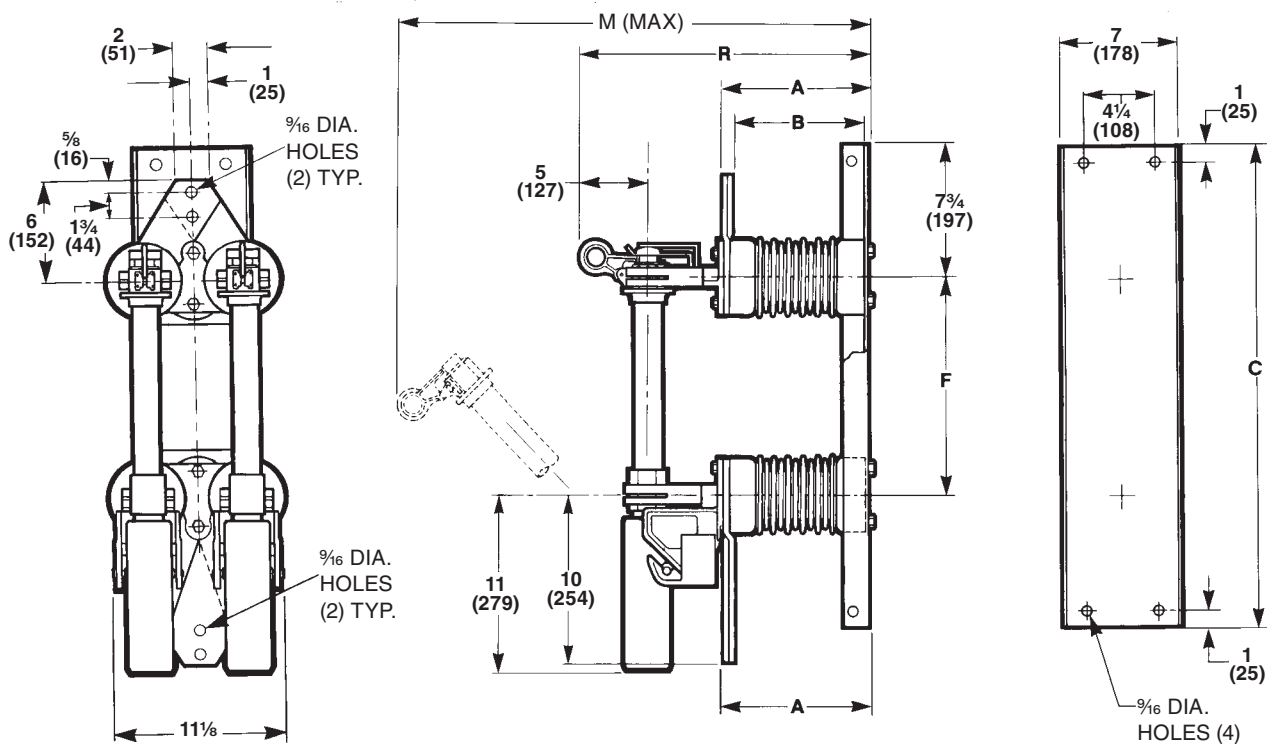
① These mountings cannot be supplied for back connection.
 ② Includes silencer (SM-4Z) or snuffler (SM-5S).
 ● Supersedes 34.5-kV, 150-kV BIL SM-4 Mounting, catalog number 187634; and 34.5-kV, 200-kV BIL SM-4 Mounting, catalog number 187534R1.

■ Supersedes 34.5-kV, 150-kV BIL SM-5 Mounting, catalog number 187644; and 34.5-kV, 200-kV BIL SM-5 Mounting, catalog number 187544R2.

Type SM and SML Power Fuses

SM-5S Disconnect, 45° Opening 720 Amperes Max, 4.8 kV and 13.8 kV

Dimensions in inches (mm)



BASE DETAIL

Rating				Mounting ^① (including Live Parts, less Holder)		Holder ^{②③}		Live Parts (less Holder)	Dimensions in Inches (mm)						Net Weight, Lbs. (kg)	
kV			Amps, Max	Type	Catalog Number	Type	Catalog Number	Catalog Number	A	B	C	F	M	R	Mtg.	Holder
Nom.	Max	BIL														
4.8	5.5	60	720	SM-5	87150R4	SM-5S	86641R2●	87159R3	5 3/4 (146)	5 (127)	28 (711)	12 1/2 (318)	29 9/8 (752)	15 1/2 (394)	64 (29)	28 (12.7)
13.8	17.0	95	720	SM-5	87152R4	SM-5S	86642R2■	87159R3	8 1/4 (210)	7 1/2 (191)	32 (813)	16 1/2 (419)	35 5/8 (899)	18 (457)	68 (31)	28 1/2 (12.9)

① These mountings cannot be supplied for back connection.

② Holders are rated 400 amperes maximum. Two holders required with each mounting.

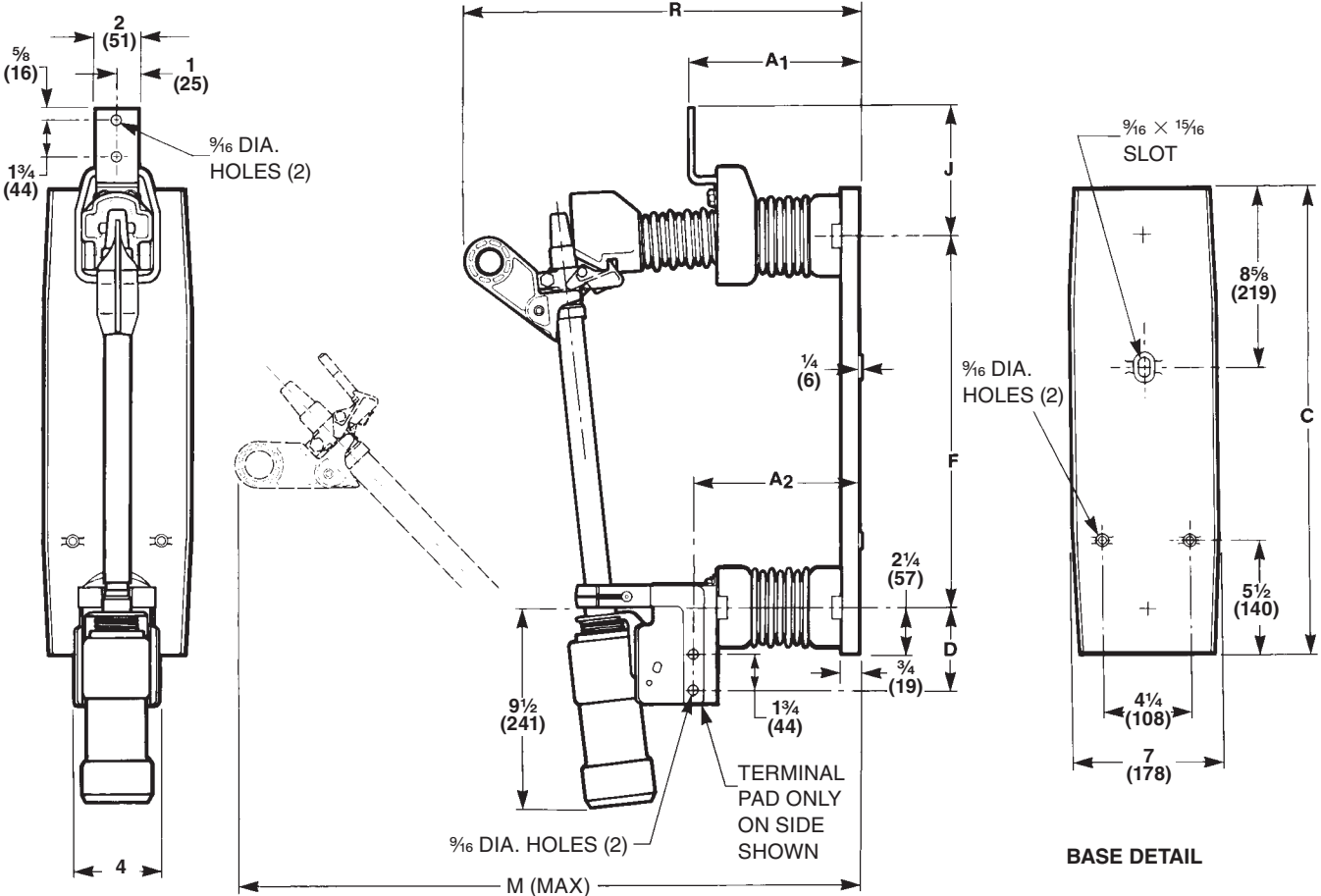
③ Includes snuffler.

● Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

■ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings or in discontinued 14.4-kV mountings.

SML-20 Disconnect, 45° Opening
200 Amperes Max, 13.8 kV and 25 kV

Dimensions in inches

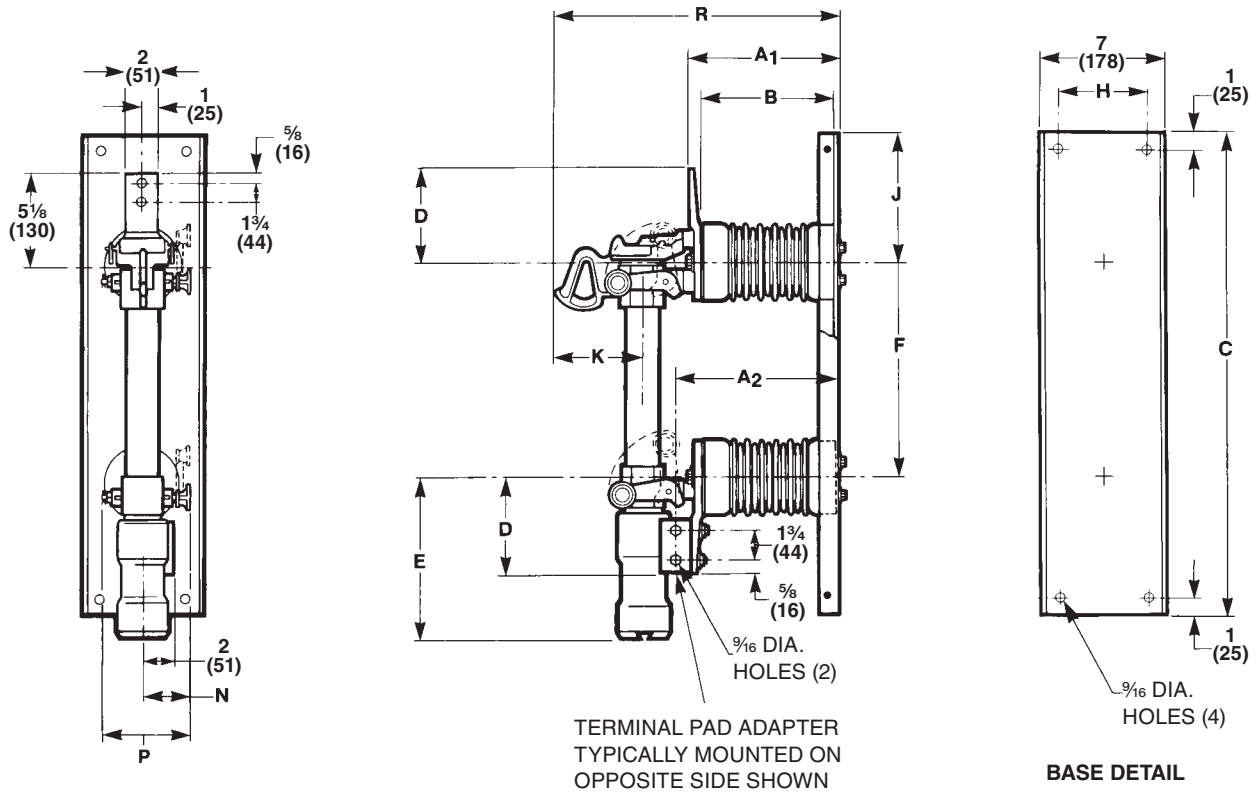


Rating			Mounting ^① (including Live Parts, less Fuse Unit End-Fittings)	Fuse Unit End-Fittings ^②		Dimensions in Inches (mm)										Net Weight, Lbs. (kg)	
kV		Amperes, Max		Type	Catalog Number	Type	Catalog Number	A1	A2	C	D	F	J	M	R	Mtg.	Fuse-Unit End Fittings
Nom.	Max		BIL														
13.8	17.0	95	200	SML-20	90412	SML-20	3097	8 3/8 (225)	8 1/8 (206)	22 3/8 (568)	4 (102)	18 (457)	6 1/4 (159)	31 1/2 (800)	19 1/2 (495)	24 (11)	12 (5)
25	27	125	200	SML-20	90413	SML-20	3097	9 1/2 (241)	9 9/8 (238)	26 3/4 (679)	3 1/4 (83)	22 1/4 (565)	7 1/4 (184)	34 3/4 (883)	20 5/8 (524)	28 (13)	12 (5)

① These mountings cannot be supplied for back connection.
 ② Includes silencer.

SM-4Z, SM-5S, and SM-5SS Non-Disconnect
200, 300, and 400 Amperes Max, 4.8 kV, 13.8 kV, and 25 kV

Dimensions in inches (mm)



Rating				Mounting ^① (including Live Parts, less Holder)	Holder ^②		Live Parts (less Holder)	Dimensions in Inches (mm)													Net Weight, Lbs. (kg)		
kV		BIL	Amps. Max		Type	Catalog Number		Type	Catalog Number	Catalog Number	A1	A2	B	C	D	E	F	H	J	K	N	P	R
4.8	5.5			60	200	SM-4	87200R2	SM-4Z	86801R2●	87109	5 ⁵ / ₈ (143)	6 ⁵ / ₈ (170)	5 (127)	28 (711)	5 ⁵ / ₈ (130)	8 ³ / ₈ (213)	12 ¹ / ₂ (318)	4 ¹ / ₄ (108)	7 ³ / ₄ (197)	4 ¹ / ₂ (114)	3 ¹ / ₈ (79)	5 ³ / ₈ (137)	13 (330)
13.8	17.0	95	200	SM-4	87202R2	SM-4Z	86802R2■	87109	8 ¹ / ₈ (206)	9 ¹ / ₈ (232)	7 ¹ / ₂ (191)	32 (813)	5 ¹ / ₈ (130)	8 ³ / ₈ (213)	16 ¹ / ₂ (419)	4 ¹ / ₄ (108)	7 ³ / ₄ (197)	4 ¹ / ₂ (114)	3 ¹ / ₈ (79)	5 ³ / ₈ (137)	15 ¹ / ₂ (394)	33 ¹ / ₂ (15)	12 (5)
25	27	150	200	SM-4	87043R1	SM-4Z	86803R2	87109	14 ⁵ / ₈ (371)	15 ⁵ / ₈ (397)	14 (356)	32 ³ / ₄ (832)	5 ⁵ / ₈ (130)	8 ³ / ₈ (213)	20 ³ / ₄ (527)	5 (127)	6 (152)	4 ¹ / ₂ (114)	3 ¹ / ₈ (79)	5 ³ / ₈ (137)	22 (559)	51 (23)	15 (7)
4.8	5.5	60	400	SM-5	87600R3	SM-5S	86811R2●	87509R2	5 ⁷ / ₈ (149)	6 ⁷ / ₈ (175)	5 (127)	28 (711)	5 ¹ / ₄ (133)	12 (305)	12 ¹ / ₂ (318)	4 ¹ / ₄ (108)	7 ³ / ₄ (197)	5 ¹ / ₄ (133)	3 ³ / ₈ (92)	6 ¹ / ₂ (165)	15 ¹ / ₂ (394)	31 (14)	25 (11)
13.8	17.0	95	400	SM-5	87602R3	SM-5S	86812R2■	87509R2	8 ³ / ₈ (213)	9 ³ / ₈ (243)	7 ¹ / ₂ (191)	32 (813)	5 ¹ / ₈ (133)	12 (305)	16 ¹ / ₂ (419)	4 ¹ / ₄ (108)	7 ³ / ₄ (197)	5 ¹ / ₄ (133)	3 ³ / ₈ (92)	6 ¹ / ₂ (165)	18 (457)	37 (17)	27 (12)
25	27	150	300	SM-5	87053R1	SM-5S	86813R2	87509R2	14 ⁷ / ₈ (378)	15 ⁷ / ₈ (403)	14 (356)	32 ³ / ₄ (832)	5 ¹ / ₈ (133)	12 (305)	20 ³ / ₄ (527)	5 (127)	6 (152)	4 ¹ / ₂ (114)	3 ¹ / ₈ (79)	5 ³ / ₈ (137)	24 ³ / ₈ (625)	55 (25)	31 (14)
13.8	15.5	95	400	SM-5	87602R3	SM-5SS	86402R2■	87509R2	8 ³ / ₈ (213)	9 ³ / ₈ (238)	7 ¹ / ₂ (191)	32 (813)	5 ¹ / ₈ (133)	12 ¹ / ₂ (318)	16 ¹ / ₂ (419)	4 ¹ / ₄ (108)	7 ³ / ₄ (197)	5 ¹ / ₄ (133)	3 ³ / ₈ (92)	6 ¹ / ₂ (165)	18 (457)	37 (17)	31 (14)

① These mountings cannot be supplied for back connection.

② Includes silencer (SM-4Z), snuffler (SM-5S), or super snuffler (SM-5SS).

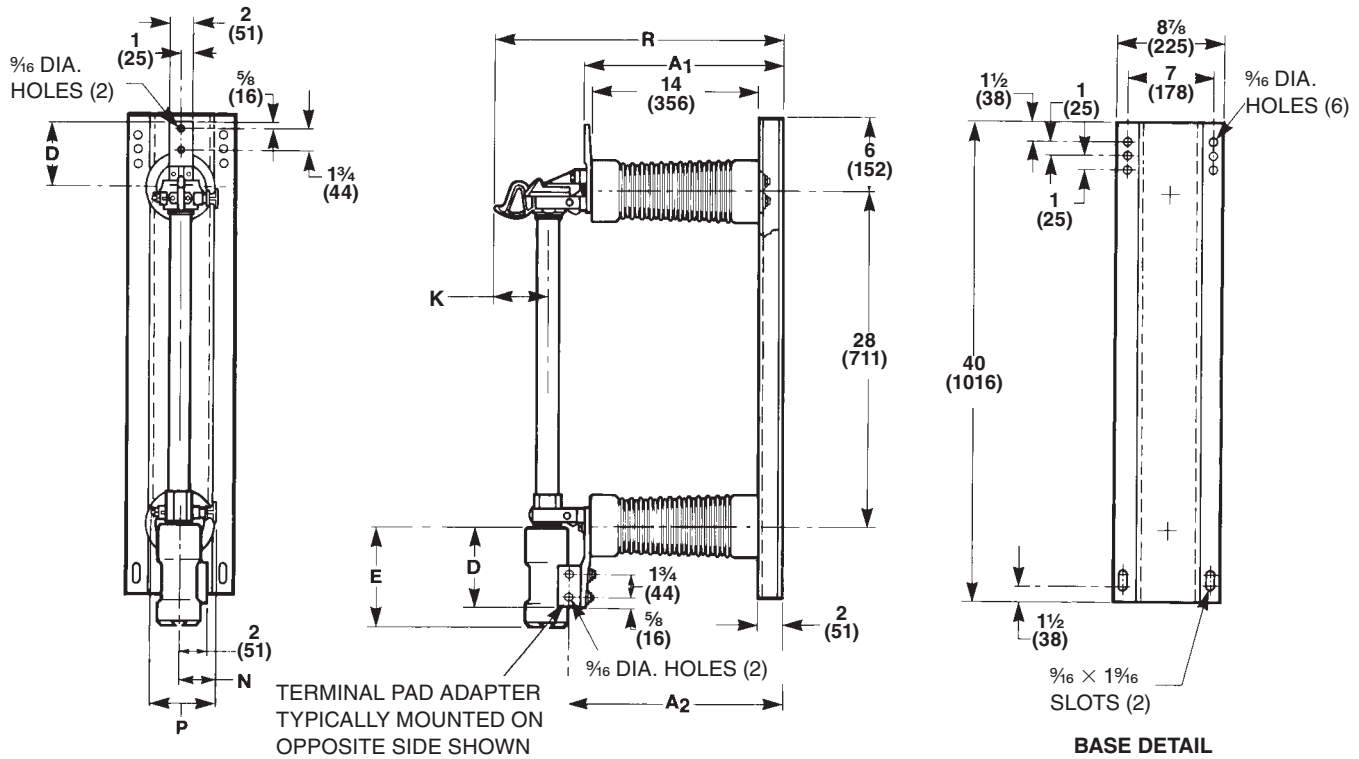
● Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

■ Rated 14.4 kV nominal, for use in listed 13.8-kV mountings or in discontinued 14.4-kV mountings.

Type SM and SML Power Fuses

SM-4Z and SM-5S Non-Disconnect 200 and 300 Amperes Max, 34.5 kV

Dimensions in inches



Rating				Mounting ^① (including Live Parts, less Holder)		Holder ^②		Live Parts (less Holder)	Dimensions in Inches (mm)								Net Weight, Lbs. (kg)	
kV			Amps, Max	Type	Catalog Number	Type	Catalog Number	Catalog Number	A1	A2	D	E	K	N	P	R	Mtg.	Holder
Nom.	Max	BIL							16 5/8 (416)	17 5/8 (441)	5 1/4 (130)	8 3/8 (213)	4 1/2 (114)	3 1/8 (79)	5 3/8 (137)	23 3/4 (603)		
34.5	38	200	200	SM-4	187674●	SM-4Z	86804R2	87109	16 5/8 (416)	17 5/8 (441)	5 1/4 (130)	8 3/8 (213)	4 1/2 (114)	3 1/8 (79)	5 3/8 (137)	23 3/4 (603)	59 (27)	13 (6)
34.5	38	200	300	SM-5	187684■	SM-5S	86814R2	87509R2	16 5/8 (422)	17 5/8 (448)	5 1/4 (133)	11 (279)	5 1/4 (133)	3 5/8 (92)	6 1/2 (165)	26 1/4 (667)	63 (29)	28 (13)

① These mountings cannot be supplied for back connection.

② Includes silencer (SM-4Z) or snuffler (SM-5S).

● Supersedes 34.5-kV, 150-kV BIL SM-4 Mounting, catalog number 190034; and 34.5-kV, 200-kV BIL SM-4 Mounting, catalog number 190304R1.

■ Supersedes 34.5-kV, 150-kV BIL SM-5 Mounting, catalog number 190044; and 34.5-kV, 200-kV BIL SM-5 Mounting, catalog number 190404R2.