# **Specifications**

#### **Conditions of Sale**

STANDARD: Seller's standard conditions of sale set forth in Price Sheet 150 apply, except as modified under "WARRANTY QUALIFICATIONS" on pages 2 and 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 your 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 "WARRANTY QUALIFICATIONS" appearing on pages 2 and 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 page 3 under "How to Order a Complete Power Fuse."

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 Uni-Rupter 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 Uni-Rupter 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, 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 page 3 under "How to Order a Complete Power Fuse."

SML-20 and SML-4Z Power Fuse Mountings with Uni-Rupter 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 the table on page 12. 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 less insulators. Add suffix "-Z1" to the catalog number.

Mountings for these power fuses can be supplied less bases but including 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 on pages 4 and 6.

When these mountings are to be provided with special connectors, consult your 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.

▲ Cypoxy is the S&C trademark for S&C's cycloaliphatic epoxy resin system. Cypoxy is nontracking, self-scouring, nonweathering . . . there's never a compromise of insulation integrity. S&C Cypoxy station post insulators meet or exceed the electrical and mechanical-strength requirements established in ANSI C29.9 for porcelain standard-strength station post insulators.

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



#### Conditions of Sale—Continued

#### SML-4Z and SML-20 Power Fuses:

Mountings for these power fuses cannot be supplied less insulators.

Mountings for these power fuses cannot be supplied less bases but including 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 are designed for the following single-pole live-switching duties in single-phase or three-phase circuits of distribution systems rated  $14.4~\rm kV$  or  $25~\rm kV$ :

### 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  $14.4~\mathrm{kV}$  and  $25~\mathrm{kV}$ .

### 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 Uni-Rupter—should be performed only under the conditions stated in italics:

- 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 wyedelta 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 seller's standard conditions of sale (as set forth in Price Sheet 150) to apply to S&C Power Fuses—Types SM-4Z, SML-4Z, SM-5S, SM-5SS, SM-20, or SML-20 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

### DATA BULLETIN 252-64:

S&C Power Fuses Type SML Indoor Distribution (13.8 kV and 25 kV) Minimum Construction Specifications For Indoor and Outdoor Metal Enclosures with Fuses

- These values represent the fault-closing capabilities of the fuse with Uni-Rupter 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 Uni-Rupter 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.

#### DATA 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

#### DATA 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

For the standard warranty contained in 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 current revision of one of the following publications:

#### **INSTRUCTION SHEET 252-505:**

S&C Power Fuses Types SM-4Z and SM-5S Indoor Distribution

Live Parts for Disconnect Style

#### **INSTRUCTION SHEET 252-510:**

S&C Power Fuses Types SM-4Z, SM-5S, and SM-5SS Indoor Distribution

Live Parts for Non-Disconnect Style

#### **INSTRUCTION SHEET 252-535:**

S&C Power Fuses Type SM-20 Indoor Distribution Live Parts for Disconnect Style

With respect to S&C Power Fuses—Types SM or SML when installed in submersible enclosures of other than S&C manufacture, 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 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.

## **How to Order a Complete Power Fuse** Types SM-4Z, SML-4Z, SM-5S, and SM-5SS

- 1. Obtain the catalog number of the desired mounting from the "Mounting" column on pages 4 through 6. If only live parts are desired, refer to the "Live Parts" column. **Note:** Live parts for SML-4Z Power Fuses cannot be purchased separately.
- 2. Obtain the catalog number of the applicable holder from the "Holder" column on pages 4 through 6, reading from the same line in which the selected mounting is listed.
- 3. Obtain the catalog number of the applicable refill unit from the tables on pages 9 through 11, 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. Note: For each mounting rated 720E amperes, order two holders and two refill units.
- 4. Obtain the catalog number of the desired connector from the table on page 12. Order two connectors for each mounting or set of live parts.

Note: Parts, insulating barrier assemblies, and switch blades listed on pages 13 and 14 are ordered using the method outlined above.

## Types SM-20 and SML-20

- 1. Obtain the catalog number of the desired mounting from the "Mounting" column on pages 4 and 5. If only live parts are desired, use the "Live Parts" column. Note: Live parts for SML-20 Power Fuses cannot be purchased separately.
- 2. Obtain the catalog number of the applicable fuse unit end fittings from the same table used to select the mounting.
- 3. Obtain the catalog number of the applicable fuse unit from the tables on pages 7 and 8, taking care to match the voltage rating of the fuse unit to that of the mounting.
- 4. Obtain the catalog number of the desired connector from the table on page 12. Order two connectors for each mounting or set of live parts.

Note: Parts, insulating barrier assemblies, and switch blades listed on pages 13 and 14 are ordered using the method outlined above.

#### **How to Order Handling Tools**

Obtain the catalog number(s) of recommended handling tool(s) from the table on page 15. Refer to Specification Bulletin 851-31.

SM PO	WER FUSES	—Disc	onnect	t Style	-Les	ss Connec	ctors an	d Less Refill U	Jnits or F	use Units		
Style	Fuse Type	Rating kV An			Amperes, RMS		Mounting <sup>②</sup> (including Live Parts, less Fuse-Unit End Fittings or Holder)		t End Fittings③ )) or Holder④ IZ or SM-5S)	Live Parts (less Fuse- Unit End Fittings or Holder)	Page Reference for Dimensional	
	,	Nom.	Max	BIL	Max	Inter- rupting <sup>①</sup> (Sym.)	Туре	Catalog Number	Туре	Catalog Number	Catalog Number	Information
	SM-20											
Discon- nect 45°		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	16 16 16
Opening Silencer	SM-4Z											
Silencer Vertical		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	87360R2 87362R2 87063R1 187654★	SM-4Z	86631R2● 86632R2► 86633R2 86634R2	87369	17 17 17 18
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	17 19 17 19 17

- ① 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.
- ② These mountings cannot be supplied for back connection.
- 3 Includes Silencer.
- ④ Includes Silencer (SM-4Z) or Snuffler (SM-5S).
- ▼ 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.
- ◆ 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-4 Mounting Catalog Number 187634 and 34.5-kV, 200-kV BIL SM-4 Mounting Catalog Number 187534R1
- 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
- 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 PC	OWER FUSE	S—Dis	conne	ct Sty	le—Le	ess Connec	tors and I	ess Refill	Units or Fuse	e Units		
	Fuse	Rating kV Amperes, RMS				MS	Mounting <sup>③</sup> (including Live Parts, less Fuse-Unit End Fittings or Holder)		Fuse-Unit End Fittings <sup>④</sup> (SML-20) or Holder <sup>④</sup> (SML-4Z)		Page Reference for	
Style	Туре	Nom.	Max	BIL	Max	Load Dropping <sup>①</sup>	Inter- rupting <sup>②</sup> (Sym.)	Type	Catalog Number	Туре	Catalog Number	Dimensional Information
Discon- nect 45°	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	20 20
Opening Silencer Vertical	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 <b>★</b> 92353	21 21

 $<sup>\</sup>ensuremath{\textcircled{1}}$  The Uni-Rupter 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 Uni-Rupter 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 dutycycle 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 remaining operable and able to carry and interrupt current up to the emergency peak-load capabilities of the fuse.

② 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.

- These mountings cannot be supplied for back connection.
- ④ Includes Silencer.
- A 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.

SM POW	/ER FUSES-	–Non-[	Discon	nect S	Style-	-Less Cor	nnectors	and less Ref	ill Units			
	Fuse	Rating kV A				eres, RMS	(includi	Mounting <sup>②</sup> (including Live Parts, less Holder)		lder <sup>③</sup>	Live Parts (less Holder)	Page
Style Type	Nom.	Max	BIL	Max	Inter- rupting <sup>①</sup> (Sym.)	Type	Catalog Number	Туре	Catalog Number	Catalog Number	Reference for Dimensional Information	
Non- Discon- nect 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	22 22 22 23
Non- Discon- nect 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	22 22 22 23
Non- Discon- nect Super Snuffler Vertical	SM-5SS	13.8	15.5	95	400	34 000▲	SM-5	87602R3	SM-5SS	86402R2▶	87509R2	22

- ① 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.
- $\ensuremath{@}$  These mountings cannot be supplied for back connection.
- ③ Includes Silencer (SM-4Z), Snuffler (SM-5S), or Super Snuffler (SM-5SS)
- ▼ 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.
- ♦ 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.

- ▲ 60-hertz only.
- ★ 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.
- 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.

SMU-20® FU	SE UNITS (For u	se in SM-20 or	SML-20 Mountir	ngs)①				
			14.4 kV Nomin	al, 17.0 kV Max	1			
"K" I	Ratings		"E" R	atings		"DR" Ratings		
Rating, Amperes	Catalog Number	Rating, Amperes		Catalog Number			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			
ЗК	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			

 $<sup>\</sup>ensuremath{\mathfrak{I}}$  These fuse units are equally suitable for use in SMD-20 Outdoor Distribution Mountings; and also, 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."

TABLE CONTINUED ▶

<sup>★</sup> This fuse unit is not "E" rated.

SMU-20® FU	SE UNITS (For u	se in SM-20 or	SML-20 Mountir	ngs)①			
			25 kV Nominal	, <b>27 kV Max</b> ②③	)		
"K" I	Ratings		"E" R	atings		"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		20011	020020
30K	703023	30E	613030	713030			
40K	703030	40E	613040	713040			
50K	703040	50E	613050	713050	603050		
65K	703050	65E	613065	713050	603065		
80K		80E	613080	713080			
	703080	100E		713080	603080		
100K	703100		613100		603100		
140K	703140	125E	613125	713125	603125		
200K	703200	150E	613150	713150	603150		
		175E	613175	713175	603175		
		200E	613200	713200	603200		
"K" I	Ratings			nal, 38 kV Max atings		"DR"	Ratings
Rating,		Rating,				Rating, I	
Amperes V	Catalog Number	Amperes ♥	S&C Std.	Catalog Number	I	Amperes <b>▼</b>	Catalog Numbe
Speed -	TCC 165-2	Speed	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	704000	100E	614100	714100	604100		
140K	704100	125E	614125	714125	604125		
200K	704140	150E	614150	714150	604150		
2001	704200	175E	614175	714175	604175		
		200E	614200	714173	604200		
	1	200E	1 014200	1 14200	1 004200	I	1

 $<sup>\</sup>ensuremath{\textcircled{1}}$  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."

 $<sup>\ ^{\</sup>textcircled{3}}$  Also suitable for protection of single-phase-to-neutral circuits (lines or transformers) on 20/34.5 GrY-kV systems.

<sup>★</sup> This fuse unit is not "E" rated.

		and SML-4 Holders)	44.413	/ Naminal 47 0 la/ l	lev@@
Rating, Amperes	7.2 kV Nominal	·	14.4 K	V Nominal, 17.0 kV N	nax ଓଡ 
	Catalog I	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 5E 7E 10E 13E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E 175E 200E	121005R4 121007R4 121010R4 121015R4 121020R4 121025R4 121030R4 121040R4 121050R4 121075R4 121100R4 121125R4 121125R4 121250R4 121250R4 121250R4 121275R4	251025R4 251030R4 251040R4 251050R4 251060R4 251075R4 251100R4 251125R4 251150R4 251250R4 251250R4 251275R4 251300R4	122005R4 122007R4 122010R4 122015R4 122020R4 122025R4 122030R4 122040R4 122050R4 122050R4 122075R4 122100R4 122150R4 122150R4 122250R4 122250R4 122250R4 122250R4 122275R4	252025R4 252030R4 252040R4 252050R4 252050R4 252075R4 252100R4 252125R4 252150R4 252200R4 252250R4 252250R4 252275R4 252300R4	
210	25 kV Nominal	27 kV Max②	34.5	kV Nominal, 38 kV	382210R4 <b>■</b>
Rating,   Amperes	Catalog	<u> </u>	04.0	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	
5E 7E 10E 13E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E	123007R4 123010R4 123015R4 123020R4 123025R4 123030R4 123040R4 123050R4 123060R4 123075R4 123100R4 123125R4 123150R4 123200R4	253025R4 253030R4 253040R4 253050R4 253060R4 253075R4 253100R4 253125R4 253150R4 253200R4	124007R4 124010R4 124015R4 124020R4 124025R4 124030R4 124040R4 124050R4 124060R4 124075R4 124100R4 124125R4 124150R4 124200R4	254025R4 254030R4 254040R4 254050R4 254060R4 254075R4 254100R4 254125R4 254150R4 254200R4	
150E	123250R4	253250R4	124250R4	254250R4	

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.

<sup>■</sup> 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

Rating, Amperes	9.8C Std. TCC 115-4 130001R4 130002R4 S&C Std. TCC 153-4 130005R4 130005R4 130010R4 130015R4 130020R4 130020R4 130020R4 130020R4 130020R4 130050R4 130050R4 130050R4 13015R4 13010R4 13015R4 13010R4 13015R4 13010R4 13015R4 13010R4 13015R4 13010R4 13015R4 13015R4 13010R4 13015R4 13015R4 13015R4 13015R4 13015R4 13020R4 13025R4 13020R4 13025R4 130275R4 13030R4 13040R4 13050R4	260025R4 260030R4 260040R4 260075R4 260100R4 260125R4 260100R4 260125R4 260200R4 260250R4 26020R4 260250R4 260250R4 260250R4 260250R4 260250R4 260250R4 260250R4 260250R4	S&C Coord. TCC 173-4	7.2 kV  S&C Std. TCC 115-4  131001R4 131002R4  S&C Std. TCC 153-4  131005R4 131007R4 131015R4 131025R4 131025R4 131030R4 131040R4 131050R4 131050R4 131155R4 131100R4 131125R4 131125R4 131150R4 131125R4 131150R4 131250R4 131250R4 131250R4 131250R4 131200R4 131250R4 131200R4 131275R4 131300R4 131275R4 131300R4 131400R4 131500R4 131500R4 131500R4	S&C Slow TCC 119-4  261400R4 261500R4 261600R4	Max <sup>②</sup> S&C Coord. TCC 173-4
Speed →	TCC 115-4  130001R4 130002R4  S&C Std. TCC 153-4  130005R4 130010R4 130015R4 130020R4 130025R4 130030R4 130040R4 130050R4 130040R4 13015R4 13010R4 13015R4 13010R4 13015R4 13010R4 13015R4 13015R4 13015R4 13015R4 13025R4	260025R4 260025R4 260030R4 260040R4 260050R4 260075R4 260100R4 260125R4 260150R4 260200R4 260250R4 260250R4 26020R4 26020R4 26020R4 26020R4 26020R4 26020R4	TCC 173-4	TCC 115-4  131001R4 131002R4  S&C Std. TCC 153-4  131005R4 131007R4 131015R4 131020R4 131025R4 131030R4 131050R4 131050R4 131050R4 131105R4 131150R4 131125R4 131150R4 131125R4 131150R4 13125R4 131150R4 131250R4 131250R4 131250R4 131250R4 131250R4 131250R4	S&C Slow TCC 119-4 261400R4 261500R4	TCC 173-4
1 2  Speed →	TCC 115-4  130001R4 130002R4  S&C Std. TCC 153-4  130005R4 130010R4 130015R4 130020R4 130025R4 130030R4 130040R4 130050R4 130040R4 13015R4 13010R4 13015R4 13010R4 13015R4 13010R4 13015R4 13015R4 13015R4 13015R4 13025R4	260025R4 260030R4 260030R4 260050R4 260050R4 260075R4 260125R4 260125R4 260150R4 260220R4 260250R4 260250R4 260275R4 260200R4 260200R4 260200R4 260250R4	TCC 173-4	TCC 115-4  131001R4 131002R4  S&C Std. TCC 153-4  131005R4 131007R4 131015R4 131020R4 131025R4 131030R4 131050R4 131050R4 131050R4 131105R4 131150R4 131125R4 131150R4 131125R4 131150R4 13125R4 131150R4 131250R4 131250R4 131250R4 131250R4 131250R4 131250R4	261400R4 261500R4	TCC 173-4
2 Speed → Spe	130002R4  S&C Std. TCC 153-4  130005R4 130007R4 130010R4 130020R4 130025R4 130030R4 130040R4 130050R4 130050R4 130015R4 13010R4 13015R4 13015R4 13015R4 13015R4 13015R4 13025R4 13025R4 13025R4 13025R4 13025R4 13025R4 13025R4 13025R4 13025R4	260025R4 260030R4 260030R4 260050R4 260050R4 260075R4 260125R4 260125R4 260150R4 260220R4 260250R4 260250R4 260275R4 260200R4 260200R4 260200R4 260250R4	TCC 173-4	131002R4  S&C Std. TCC 153-4  131005R4 131007R4 131015R4 131020R4 131025R4 131030R4 131040R4 131050R4 131075R4 131100R4 131125R4 131150R4 131250R4 131250R4 131250R4 131250R4 131250R4 131250R4	261400R4 261500R4	TCC 173-4
3E 5E 7E 10E 13E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E 175E 200E 250E 300E 400E 410 420  Rating, Amperes   \$\$1 2\$  \$\$peed \$\$\$}\$  \$\$1 2\$  \$\$\$\$\$\$\$\$7E 10E 13E 15E 20E	TCC 153-4  130005R4 130007R4 130010R4 130015R4 130020R4 130025R4 130030R4 130050R4 130050R4 130075R4 130100R4 130125R4 130125R4 130125R4 130125R4 130200R4 130250R4 130275R4 130275R4 130207R4 130275R4 130300R4 13040R4 13040R4	260025R4 260030R4 260030R4 260050R4 260050R4 260075R4 260125R4 260125R4 260150R4 260220R4 260250R4 260250R4 260275R4 260200R4 260200R4 260200R4 260250R4	TCC 173-4	TCC 153-4  131005R4 131007R4 131015R4 131015R4 131025R4 131030R4 131040R4 131050R4 131075R4 131100R4 131125R4 131150R4 13125R4 131250R4 131250R4 131250R4 131250R4 131275R4 131300R4 131275R4 131300R4 131400R4 131500R4	261400R4 261500R4	TCC 173-4
5E 7E 10E 13E 15E 20E 25E 30E 40E 50E 65E 80E 100E 125E 150E 175E 200E 250E 300E 400E 410 420  Rating, Amperes   1 2  Speed   Speed   1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 2  Speed  1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	130007R4 130010R4 130015R4 130020R4 130025R4 130030R4 130040R4 130050R4 130075R4 130100R4 130125R4 130125R4 130200R4 130250R4 130275R4 130275R4 130300R4 130400R4 130400R4	260030R4 260040R4 260050R4 260060R4 260075R4 260100R4 260125R4 260150R4 260250R4 260250R4 260275R4 260300R4 260400R4 260400R4	381/10₽/Å■	131007R4 131010R4 131015R4 131020R4 131025R4 131030R4 131050R4 131050R4 131075R4 131100R4 131125R4 131150R4 131250R4 131250R4 131250R4 131275R4 131300R4 131300R4 131400R4 131400R4	261500R4	381410R4■
Rating, Amperes ▼  Speed →  1 2  Speed →  3E 5E 7E 10E 13E 15E 20E			001710117==			
Speed → 1 2 Speed → 3E 5E 7E 10E 13E 15E 20E	14.4 k\	│ / Nominal, 17.0 k	381420R4▲■ V Max③	25 k\	/ V Nominal, 27 kV	381420R4 <b>■</b> Max
1 2 Speed		Catalog Number			Catalog Number	
2  Speed   3E 5E 7E 10E 13E 15E 20E	S&C Std. TCC 115-4			S&C Std. TCC 115-4		
3E 5E 7E 10E 13E 15E 20E	132001R4 132002R4			133001R4 133002R4		
5E 7E 10E 13E 15E 20E	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	
30E 40E 50E 65E 80E 100E 125E 150E 175E 200E 250E 300E 400E 410	132005R4 132007R4 132010R4 132015R4 132020R4 132025R4 132030R4 132040R4 132050R4 132050R4 132050R4	262025R4 262030R4 262040R4 262050R4 262050R4 262075R4 262100R4 262125R4 262150R4 262200R4 262250R4 262250R4 262275R4		133005R4 133007R4 133010R4 133015R4 133020R4 133025R4 133030R4 133050R4 133050R4 133075R4 133100R4 133125R4 133150R4 133250R4 133250R4 133250R4 133250R4 133300R4 133300R4	263025R4 263030R4 263040R4 263050R4 263060R4 263075R4 263100R4 263125R4 263150R4 263200R4 263250R4 263275R4 263300R4 263400R4 263500R4	

TABLE AND FOOTNOTES CONTINUED ▶

#### **FOOTNOTES**

- 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
- 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
- ③ 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.
- ▲ 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.

SM-5® REFIL	L UNITS (For us	se in SM-5 Hold
Rating,	34.5 kV Nomir	nal, 38 kV Max
Rating, ↓ Amperes ▼	Catalog	Number
Speed	S&C Std. TCC 115-4	
1 2	134001R4 134002R4	
Speed	S&C Std. TCC 153-4	S&C Slow TCC 119-4
3E	134005R4	
5E	134007R4	
7E	134010R4	
10E	134015R4	
13E	134020R4	
15E	134025R4	264025R4
20E	134030R4	264030R4
25E	134040R4	264040R4
30E	134050R4	264050R4
40E	134060R4	264060R4
50E	134075R4	264075R4
65E	134100R4	264100R4
80E	134125R4	264125R4
100E	134150R4	264150R4
125E	134200R4	264200R4
150E	134250R4	264250R4
175E	134275R4	264275R4
200E	134300R4	264300R4
250E	134400R4	264400R4
300E	134500R4	264500R4

CONNECTORS						
			Applicable	Power Fuse		
Illustration and Description	Accommodating Conductor	Disconne	ect Styles	Non-Discor	nect Styles	Catalog Number
2000		Upper Terminal Pad	Lower Terminal Pad	Upper Terminal Pad	Lower Terminal Pad	
Bronze Body, Tin Plated, Single ½"–13 × 2¾" Galvanized Steel Bolt	No. 2 solid (33.6 mm²) through 500 kc mil (335 mm²) stranded copper or aluminum	SM-4Z SML-4Z SM-5S SM-20 SML-20	SML-4Z SM-20 SML-20	SM-4Z SM-5S SM-5SS	SM-4Z SM-5S SM-5SS	4749
Bronze Body, Tin Plated, Single ½"–13 × ½"/4" Galvanized Steel Bolt	No. 2 solid (33.6 mm²) through 500 kc mil (335 mm²) stranded copper or aluminum	_	SM-4Z SM-5S	_	_	5394
Aluminum Alloy Body, Tin Plated, Two 1/2"–13 × 21/2" Galvanized Steel Bolts	No. 2 solid (33.6 mm²) through 500 kc mil (335 mm²) 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
Aluminum Alloy Body, Tin Plated, Two 1/2"–13 × 21/4" Galvanized Steel Bolts	No. 2 solid (33.6 mm²) through 500 kc mil (335 mm²) stranded copper or aluminum	_	SM-4Z SM-5S	_	_	4746
	No. 6 solid (13.3 mm²) through	_	SM-4Z SM-5S	_	_	4564R1-A
	250 kc mil (168 mm²) 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	4564R1-B
	1/0 solid (53.5 mm <sup>2</sup> ) through 500 kc	_	SM-4Z SM-5S	_	_	4565R1-A
Standard Bronze Pad Terminal, Tin Plated, Four-Bolt. Includes ½-inch galvanized steel	mil (335 mm²) 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	4565R1-B
hardware for attachment to terminal pads of fuses	2/0 stranded (89 mm²) through	_	SM-4Z SM-5S	_	_	4567R1-A
	800 kc mil (539 mm²) 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	4567R1-B

PARTS—For use with SM-4Z, SM	/IL-4Z, SM-5S, and SM-5SS F	Power Fuses		
lk	For H	older	Catalan Number	
Item	Rated (kV, Nominal)	Туре	- Catalog Number	
	40 0 70	SM-4S or SM-4Z	FA-972	
	4.8 or 7.2	SM-5S	FA-2341★	
	13.8 or 14.4	SM-4S or SM-4Z	FA-973	
	13.8	SML-4Z	FA-104561	
Spare Spring-and-Cable Assembly	25	SML-4Z	FA-104562	
Spare Spring-and-Cable Assembly	13.8 or 14.4	SM-5S	FA-2342★	
	00 05	SM-4S or SM-4Z	FA-974	
	23 or 25	SM-5S	FA-2343★	
	0.4.5	SM-4S or SM-4Z	FA-975	
	34.5	SM-5S	FA-2344★	
Spare Silencer	All ratings	SM-4Z or SML-4Z	FDA-1079	
		SM-4S	FA-104328◆	
Spare Snuffler	All ratings	SM-5S	FDA-1065	
		SM-5SS	FA-104343■	

<sup>★</sup> For use only in holders carrying an arrow-shaped nameplate. Springand-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.

Not usable in disconnect style mounting.

PARTS—For use with SM-20 and SML-20 Power Fuses							
Item	For Pow	Catalog Number					
item	Rated (kV, Nominal)	Туре	Catalog Number				
Spare Silencer	All ratings	SM-20 or SML-20	FDA-1103				

<sup>♦</sup> 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.

INSULATING BARRIER ASSEMBLIE	S—For use with SM a	and SML Power Fuses	;		
	For Pow	er Fuses	Three-Phase Insulating-Barrier	Replacement	
Item	Rated (kV, Nominal)	Туре	Assembly Catalog Number①	Barrier Catalog Number②③	
	4.8	SM-4Z	SA-41950-1	B-25770	
	4.0	SM-5S	SA-41950-2	B-25771	
		SM-4Z	SA-41951-1	B-25772	
	13.8	SM-5S or SM-5SS	SA-41951-2	B-25773	
		SM-20, SML-20, or SML-4Z	SA-41951-3	B-25774	
Insulating Barriers		SM-4Z	SA-41952-1	B-25796	
	25	SM-5S	SA-41952-2	B-25797	
		SM-20, SML-20, or SML-4Z	SA-41952-3	B-25542-10	
		SM-4Z	SA-41953-1	B-25542-6	
	34.5	SM-5S	SA-41953-2	B-25542-9	
		SM-20	SA-41953-3	B-25542-2	

 $<sup>^{\</sup>circ}$  Includes four  $^{\circ}$ 16-inch (4.8 mm) NEMA Grade GPO3 fiberglass-reinforced polyester barriers, plus a complete set of mounting hardware and adjustable-length interbarrier spacers.

SWITCH BLADES®				
		Rating		
Item	k	V	Amperes,	Catalog Number
	Nominal	Max	Cont.	
Switch Blades, for use in lieu of SML-4Z Holders in SML-4 Mountings	14.4	17.0	200	5442
	25	27	200	5443
Switch Blades, for use in lieu of SMU-20 Fuse Units in SML-20 Mountings	14.4	17.0	200	5432
	25	27	200	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 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 Uni-Rupter 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 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, the one-second rating is 14,000 amperes RMS symmetrical. For 25-kV switches with Uni-Rupter, 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.

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.

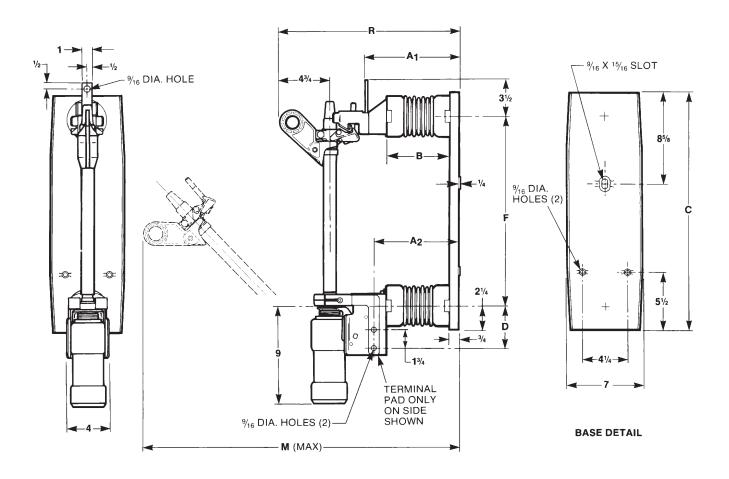
③ Includes one ¾16-inch (4.8 mm) NEMA Grade GPO3 fiberglass-reinforced polyester barrier; does not include mounting hardware or interbarrier spacers. For mounting hardware sufficient to mount one barrier, specify two (2) fastener assemblies, Catalog Number CA-600-1. For interbarrier spacers, refer to the nearest S&C Sales Office.

RECOMMENDED HANDLING TO	OLS		
Item	For Pov	ver Fuse	Catalog Number
item	Style	Туре	Catalog Number
Grappler™	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	Ret	fer to Specification Bulletin 851-31	

<sup>▲</sup> 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.

<sup>■</sup> 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

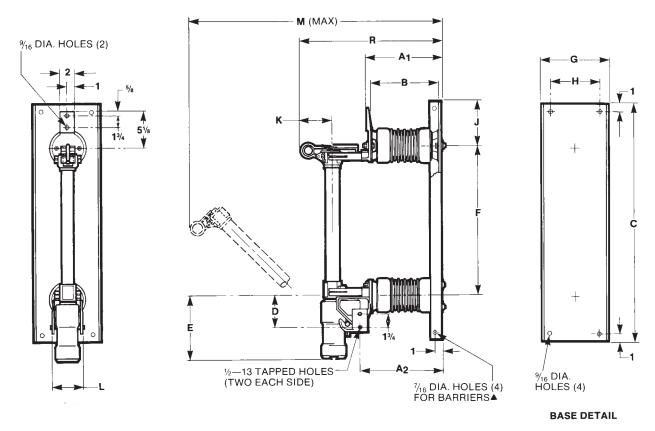


	Rat	ting	Amps,	(includ	nting <sup>①</sup> ling Live ess Fuse- d Fittings)	Fitti	Jnit End ngs <sup>②</sup>	Live Parts (less Fuse- Unit End Fittings)			Dim	ension	s in Ind	ches			Net \	Weight, Lbs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number	Catalog Number	<b>A</b> <sub>1</sub>	A <sub>2</sub>	В	С	D	F	М	R	Mtg.	Fuse-Unit End Fittings
13.8	17.0	95	200	SM-20	90422	SM-20	3097	5040	91/8	81/8	61/4	22%	4	18	31½	171⁄4	23½	12
25	27	125	200	SM-20	90423	SM-20	3097	5040	10%	9%	7½	26¾	31/4	221/4	34½	18½	27	12
34.5	38	150	200	SM-20	90424	SM-20	3097	5044	12%	11%	10	32¾	31/4	281/4	42	21	30	12

 $<sup>\</sup>ensuremath{\mathfrak{I}}$  These mountings cannot be supplied for back connection.

② Includes Silencer.

# SM-4Z and SM-5S Disconnect, $45^{\circ}$ Opening 200, 300, and 400 Amperes Max, 4.8 kV, 13.8 kV, and 25 kV



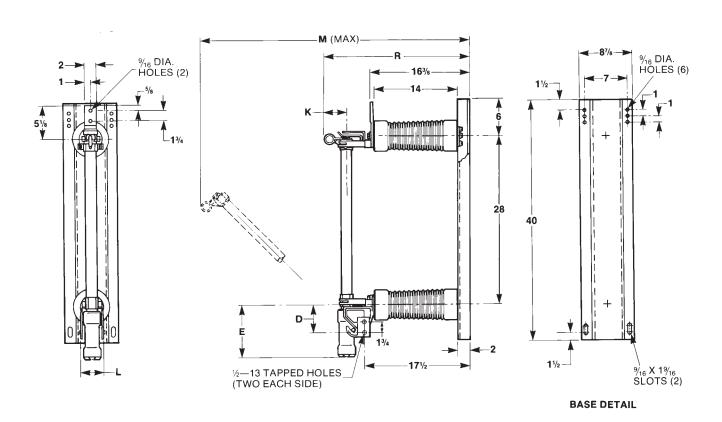
▲ These holes may be used for attachment of barriers only when the minimum recommended energized part-to-barrier clearance and minimum recommended barrier-to-ground clearance (in vicinity of energized parts), as listed in S&C Data Bulletin 252-62, have been met or exceeded.

	Rat	ting			nting <sup>①</sup> ding Live	Но	lder <sup>②</sup>	Live Parts (less						Dimei	nsion	s in Ir	nches							Weight,
	kV		Amps,		ess Holder)			Holder)															_	.bs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number	Catalog Number	A <sub>1</sub>	<b>A</b> <sub>2</sub>	В	С	D	Е	F	G	н	J	к	L	М	R	Mtg.	Holder
4.8	5.5	60	200	SM-4	87360R2	SM-4Z	86631R2•	87369	55/8	63/4	5	28	41/8	87/8	12½	7	41/4	73/4	4	3%	25½	13¾	29	12
13.8	17.0	95	200	SM-4	87362R2	SM-4Z	86632R2◆	87369	81/8	91/4	71/2	32	41/8	87/8	16½	7	41/4	7¾	4	37/8	30%	161/4	34	13
25	27	150	200	SM-4	87063R1	SM-4Z	86633R2	87369	145⁄8	15¾	14	32¾	41/8	8%	20¾	71/2	5	6	4	37/8	41	227/8	53	13
4.8	5.5	60	400	SM-5	87440R3	SM-5S	86641R2	87449R2	55/8	63/4	5	28	6	11	12½	7	41/4	73/4	5	47/8	291/4	151/4	35	28
13.8	17.0	95	400	SM-5	87442R3	SM-5S	86642R2◆	87449R2	81/8	91/4	71/2	32	6	11	16½	7	41/4	73/4	5	47/8	34½	17¾	40	28½
25	27	150	300	SM-5	87073R1	SM-5S	86643R2	87449R2	14%	15¾	14	32¾	6	11	20¾	7½	5	6	5	47/8	441/8	241⁄4	59	32

- 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.

<sup>◆</sup> 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



	Ra kV	ting	Amps,	(inclu	nting <sup>①</sup> ding Live ess Holder)		lder <sup>②</sup>	Live Parts (less Holder)		Din	nension	s in Incl	nes		Net Wei	ght, Lbs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Type Catalog Number		D	E	К	L	М	R	Mtg.	Holder
34.5	38	200	200	SM-4	187654●			87369	41/8	87/8	4	37/8	48	24¾	67	13
34.5	38	200	300	SM-5	187664◆	SM-5S	86644R2	87449R2	6	11	5	47/8	50%	261/8	74	21

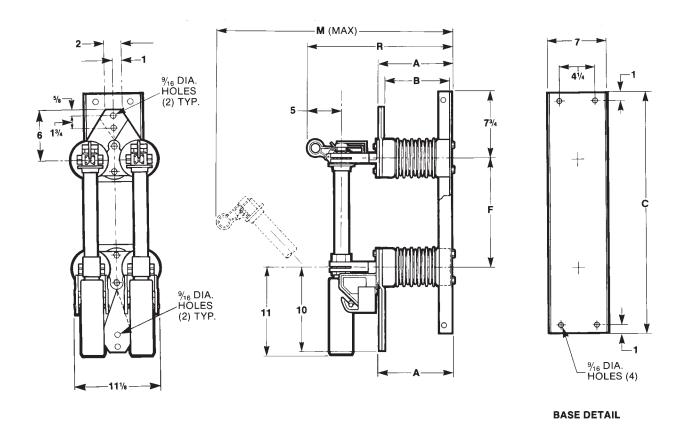
 $<sup>\</sup>ensuremath{\mathfrak{I}}$  These mountings cannot be supplied for back connection.

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.

<sup>◆</sup> 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.

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

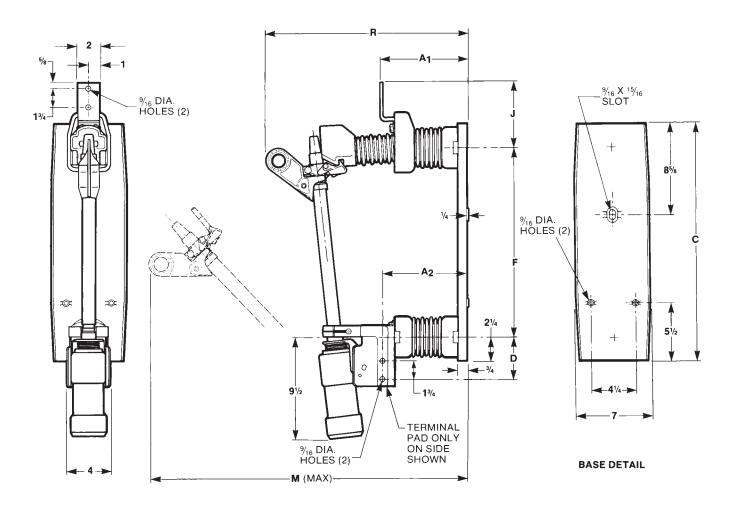


	Ra kV	ting	Amps,	(inclu	unting <sup>①</sup> ding Live ess Holder)	Hol	lder②③	Live Parts (less Holder)		Din	nension	s in Incl	nes			Weight, .bs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number	Catalog Number	Α	В	С	F	М	R	Mtg.	Holder
4.8	5.5	60	720	SM-5	87150R4	SM-5S	86641R2•	87159R3	53/4	5	28	12½	29%	15½	64	28
13.8	17.0	95	720	SM-5	87152R4	SM-5S	86642R2◆	87159R3	81/4	7½	32	16½	35%	18	68	28½

- ① These mountings cannot be supplied for back connection.
- $\ensuremath{@}$  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

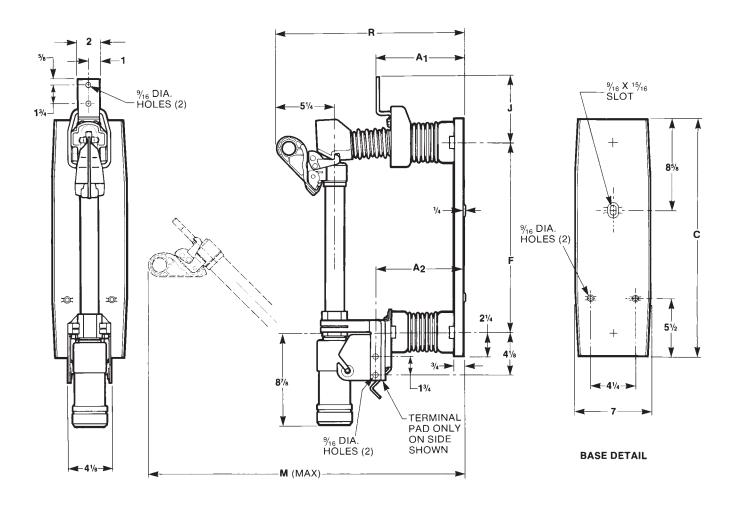


	Ra kV	ting	Amps,	(includ Parts, less	nting <sup>①</sup> ing Live s Fuse-Unit ittings)		Jnit End ngs <sup>②</sup>			Dim	ension	s in Inc	hes			Net V	Veight, Lbs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number	<b>A</b> <sub>1</sub>	A <sub>2</sub>	С	D	F J M		R	Mtg.	Fuse-Unit End Fittings	
13.8	17.0	95	200	SML-20	90412	SML-20	3097	83/8	81/8	22%	4	18	61/4	31½	19½	24	12
25	27	125	200	SML-20	90413	SML-20	3097	9½	9%	26¾	31/4	221/4	71/4	34¾	20%	28	12

 $<sup>\</sup>ensuremath{\textcircled{1}}$  These mountings cannot be supplied for back connection.

② Includes Silencer.

# SML-4Z Disconnect, 45° Opening 200 Amperes Max, 13.8 kV and 25 kV



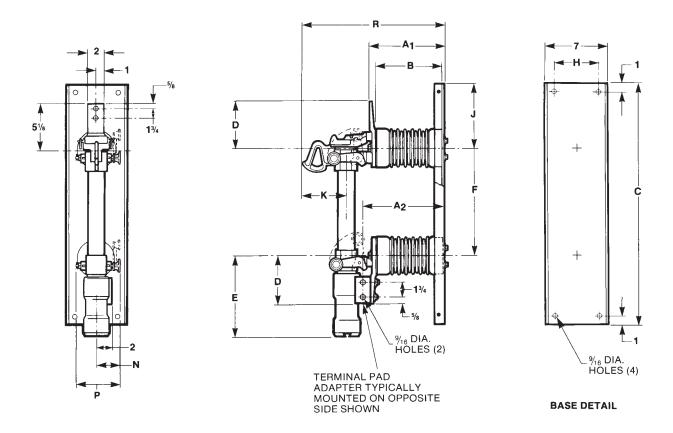
	Ra kV	ting	Amps,	(includ	nting <sup>①</sup> ing Live ss Holder)	Hole	der <sup>②</sup>			Dimen	sions in	Inches			Net Weig	ght, Lbs.
Nom.	Max	BIL	Max	Туре	I IVNA I		Catalog Number	<b>A</b> <sub>1</sub>	A <sub>2</sub>	С	F	J	М	R	Mtg.	Holder
13.8	17.0	95	200	SML-4	90322	SML-4Z	92352◆	8%	81/2	22%	17¾	61/4	33	18	25	13
25	27	125	200	SML-4	90323	SML-4Z	92353	9½	9¾	26¾	221/4	71/4	36¾	191/8	29	13

① These mountings cannot be supplied for back connection.

② Includes Silencer.

<sup>◆</sup> Rated 14.4 kV nominal, for use in listed 13.8-kV mountings.

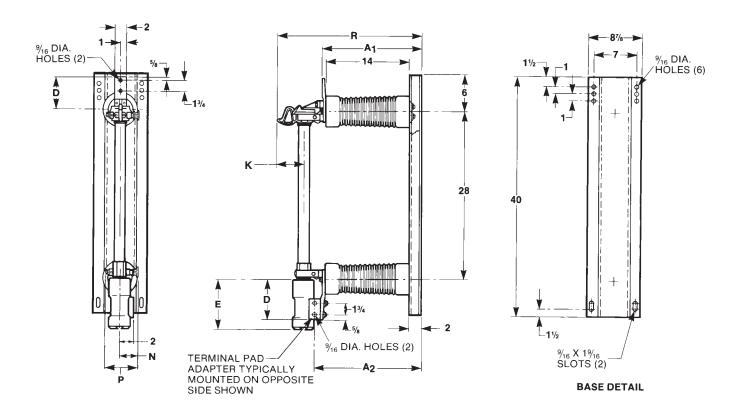
# SM-4Z, SM-5S, and SM-5SS Non-Disconnect 200, 300, and 400 Amperes Max, 4.8 kV, 13.8 kV, and 25 kV



	Ra	ting			nting <sup>①</sup> ding Live	Но	lder <sup>②</sup>	Live Parts (less					Dir	nensi	ons ii	n Inch	nes						Weight,
	kV		Amps,		ess Holder)			Holder)														_ L	.bs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number	Catalog Number	<b>A</b> <sub>1</sub>	A <sub>2</sub>	В	С	D	E	F	н	J	К	N	Р	R	Mtg.	Holder
4.8	5.5	60	200	SM-4	87200R2	SM-4Z	86801R2•	87109	5%	65/8	5	28	51/8	8%	12½	41/4	73/4	41/2	31/8	5%	13	27½	11
13.8	17.0	95	200	SM-4	87202R2	SM-4Z	86802R2★	87109	81/8	91/8	71/2	32	51/8	8%	16½	41/4	73/4	41/2	31/8	5%	15½	33½	12
25	27	150	200	SM-4	87043R1	SM-4Z	86803R2	87109	14%	15%	14	32¾	51/8	8%	20¾	5	6	41/2	31/8	5%	22	51	15
4.8	5.5	60	400	SM-5	87600R3	SM-5S	86811R2•	87509R2	57/8	67/8	5	28	51/4	12	12½	41/4	73/4	51/4	35/8	6½	15½	31	25
13.8	17.0	95	400	SM-5	87602R3	SM-5S	86812R2★	87509R2	8%	93/8	71/2	32	51/4	12	16½	41/4	73/4	51/4	35/8	6½	18	37	27
25	27	150	300	SM-5	87053R1	SM-5S	86813R2	87509R2	141//8	15%	14	32¾	51/4	12	20¾	5	6	51/4	35/8	6½	245/8	55	31
13.8	15.5	95	400	SM-5	87602R3	SM-5SS	86402R2★	87509R2	83/8	9%	71/2	32	51/4	12½	16½	41/4	73/4	51/4	35/8	6½	18	37	31

- $\ensuremath{\mathfrak{I}}$  These mountings cannot be supplied for back connection.
- @ 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.
- $\bigstar$  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 Non-Disconnect 200 and 300 Amperes Max, 34.5 kV



	Ra kV	ting	Amps,	(includ	nting <sup>①</sup> ling Live ss Holder)	Hol	der <sup>②</sup>	Live Parts (less Holder)			Dime	ension	s in In	ches			1	Weight, .bs.
Nom.	Max	BIL	Max	Туре	Catalog Number	Туре	Catalog Number			A <sub>2</sub>	D	E	К	N	Р	R	Mtg.	Holder
34.5	38	200	200	SM-4	187674●	SM-4Z	86804R2	87109	16%	17%	51/8	83/8	41/2	31/8	5%	23¾	59	13
34.5	38	200	300	SM-5	187684◆	SM-5S	86814R2	87509R2	16%	17%	51/4	11	51/4	35/8	6½	261⁄4	63	28

① These mountings cannot be supplied for back connection.

② Includes Silencer (SM-4Z) or Snuffler (SM-5S).

<sup>•</sup> 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.

<sup>◆</sup> 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.