

Specifications

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



Standard

The seller's standard conditions of sale set forth in Price Sheet 150 apply, except as modified under the "Warranty Qualifications" section page 4.

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 Custom Metal-Enclosed Switchgear; 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 4.

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 5 and page 6 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 page 5 and page 6 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 17. 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.
- 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 Table 1 on page 7 through Table 3 on page 9.
- 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)

● 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.

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:

- 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.*)

■ 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.

Conditions of Sale

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:

INFORMATION BULLETIN 252-62:

S&C Type SM Power Fuses 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 Type 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.

How to Order Power Fuses

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 Table 1 on page 7 through Table 3 on page 9. 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 Table 1 on page 7 through Table 3 on page 9, reading from the same line on which the selected mounting is listed.

Catalog Number:

STEP 3. Obtain the catalog number of the applicable refill unit from Table 5 on page 13 and page 14 and Table 6 on page 15 and page 16, 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 17. Order two connectors for each mounting or set of live parts.

Catalog Number:

Note: Parts, insulating barrier assemblies, and switch blades listed in Table 8 on page 18 through Table 11 on page 19 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 (253 mm²)-stranded copper or aluminum for the mounting selected in Step 1 is:

Two connectors must be ordered for the mounting.

How to Order

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 Table 1 on page 7 through Table 3 on page 9. 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 10 through 12, 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 17. 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 Table 8 on page 18 through Table 11 on page 19 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:

Example 2: The catalog number for live parts only for a Disconnect 45° Opening Silencer, vertical style, 25-kV SM-20 Mounting is:

Example 3: The catalog number for fuse unit end-fittings for use with Disconnect 45° Opening Silencer, vertical style, 25-kV SM-20 Mounting is:

Example 4: The catalog number for a 25 kV, K Speed SMU-20 Fuse Unit rated 25K continuous is:

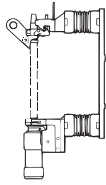
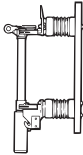
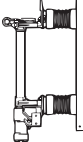
Example 5: The catalog number for connectors accommodating No. 2 solid (33.6 mm²) copper through 500 kc mil (335 mm²)-stranded copper or aluminum for the mounting selected in Step 1 is:

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 19. Refer to S&C Specification Bulletin 851-31.

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	17.0	95	200	14 000	SM-20	90422	SM-20	3097	5040	20
		25	27	125	200	12 500		90423		3097	5040	20
		34.5	38	150	200	8 450		90424		3097	5044	20
	 SM-4Z	4.8	5.5	60	200	17 200	SM-4	87360R2	SM-4Z	86631R2▲	87369	21
		13.8	17.0	95	200	12 500		87362R2		86632R2◆		21
		25	27	150	200	9 400●		87063R1		86633R2		21
		34.5	38	200	200	6 250		187654■		86634R2		22
Disconnect 45° opening snuffler— vertical	 SM-5S	4.8	5.5	60	400	27 000▼	SM-5	87440R3	SM-5S	86641R2▲	87449R2	21
		4.8	5.5	60	720	27 000▼		87150R4□		86641R2▲	87159R3	23
		13.8	17.0	95	400	25 000		87442R3		86642R2◆	87449R2	21
		13.8	17.0	95	720	25 000		87152R4□		86642R2◆	87159R3	23
		25	27	150	300	20 000		87073R1		86643R2	87449R2	21
		34.5	38	200	300	17 500		187664▽		86644R2	87449R2	22

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.

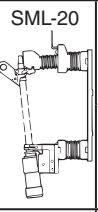
▼ Applies to 7.2-kV refill unit in 7.2-kV holder for 4.8-kV system voltage only. Rating is 37,500 amperes RMS symmetrical for 4.16-kV refill unit in 7.2-kV holder for system voltages through 4.16 kV.

□ 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.

Ordering Tables

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	Interrupting ^④ (Sym.)					
Disconnect 45° opening silence— vertical	 SML-20	13.8	17.0	95	200	200	14 000	SML-20	90412	SML-20	3097	24
		25	27	125	200	200	12 500	SML-20	90413	SML-20	3097	24
	SML-4Z	13.8	17.0	95	200	200	12 500	SML-4	90322	SML-4Z	92352■	25
		25	27	125	200	200	9 400●	SML-4	90323	SML-4Z	92353	25

① These mountings cannot be supplied for back connection.

② Includes silencer.

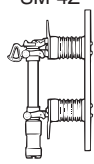
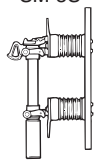
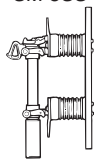
③ The Uni-Rupter Interrupter associated with these fuses can carry and interrupt load current up to and including the emergency peak-load capabilities of the fuses. Furthermore, the fuse with a Uni-Rupter Interrupter has a one-time duty-cycle fault-closing capability equal to the interrupting rating 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.

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		4.8	5.5	60	200	17 200	SM-4	87200R2	SM-4Z	86801R2▲	87109	26
		13.8	17	95	200	12 500		87202R2		86802R2◆		26
		25	27	150	200	9 400●		87043R1		86803R2		26
		34.5	38	200	200	6 250		187674■		86804R2		27
Non-disconnect snuffler—vertical		4.8	5.5	60	400	27 000▼	SM-5	87600R3	SM-5S	86811R2▲	87509R2	26
		13.8	17.0	95	400	25 000		87602R3		86812R2◆		26
		25	27	150	300	20 000		87053R1		86813R2		26
		34.5	38	200	300	17 500		187684□		86814R2		27
Non-disconnect super snuffler—vertical		13.8	15.5	95	400	34 000△	SM-5	87602R3	SM-5SS	86402R2◆	87509R2	26

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.

Ordering Tables

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.

● 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

25 kV Nominal, 27 kV Max ②③							
“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 S&C Specification Bulletin 665-31, “S&C Manual

PME Pad-Mounted Gear” and S&C 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 ►

Ordering Tables

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.

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 ^{②③}		
	Catalog Number		Catalog Number		
Speed →	S&C Std. TCC 115-4	—	S&C Std. TCC 115-4	—	—
1	121001R4	—	122001R4	—	—
2	121002R4	—	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 S&C Specification Bulletin 665-31, "S&C Manual PME Pad-Mounted Gear," and S&C 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 1,000 amperes will be cleared by another fuse.

TABLE CONTINUED ►

Ordering Tables

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	123001R4	—	124001R4	—	—
1	123001R4	—	124001R4	—	—
2	123002R4	—	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 S&C Specification Bulletin 665-31, "S&C Manual PME Pad-Mounted Gear," and S&C Specification Bulletin 666-31, "S&C Remote Supervisory PME Pad-Mounted Gear."

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	—	—	<i>381410R4</i> ●■	—	—	381410R4■
420	—	—	<i>381420R4</i> ●■	—	—	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 3,000 amperes for catalog numbers 381410R4 and 382410R4 and 4,000 amperes for catalog numbers 381420R4 and 382420R4 will be cleared by another fuse.

TABLE CONTINUED ►

Ordering Tables

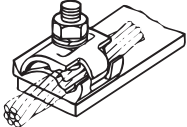
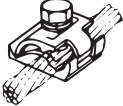
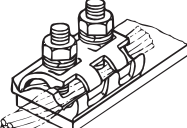
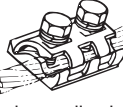
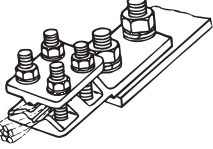
Table 6. SM-5® Refill Units (for Use in SM-5 Holders)—Continued

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	—	—
Speed →	S&C Std. TCC 153-2	S&C Slow TCC 119-4	S&C Coord. TCC 173-4	S&C Std. TCC 153-4	S&C Slow TCC 119-4	—	—	—
3E	132005R4	—	—	133005R4	—	—	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	—	—	<i>382410R4</i> ●	—	—	—	—	—
420	—	—	<i>382420R4</i> ●	—	—	—	—	—

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.

● 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.

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 3/4-inch galvanized steel bolt</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (253 mm ²) stranded copper or aluminum	SM-4Z				4749
		SML-4Z	SML-4Z	SM-4Z	SM-4Z	
		SM-5S	SM-20	SM-5S	SM-5S	
		SM-20	SML-20	SM-5SS	SM-5SS	
		SML-20				
 <p>Bronze body, tin-plated, single 1/2-13 x 2 1/4-inch galvanized steel bolt</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (253 mm ²) stranded copper or aluminum	—		—	—	5394
		—	SM-4Z	—	—	
		—	SM-5S	—	—	
		—		—	—	
 <p>Aluminum alloy body, tin-plated, two 1/2-13 x 2 1/2-inch galvanized steel bolts</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (253 mm ²) stranded copper or aluminum	SM-4Z				4744
		SML-4Z	SML-4Z	SM-4Z	SM-4Z	
		SM-5S	SM-20	SM-5S	SM-5S	
		SML-20	SML-20	SM-5SS	SM-5SS	
 <p>Aluminum alloy body, tin-plated, two 1/2-13 x 2 1/4-inch galvanized steel bolts</p>	No. 2 solid (33.6 mm ²) through 500 kc mil (127 mm ²) stranded copper or aluminum	—	SM-4Z	—	—	4746
		—	SM-5S	—	—	
 <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	—	—	4564R1-A
		—	SM-5S	—	—	
		SM-4Z				4564R1-B
		SML-4Z	SML-4Z	SM-4Z	SM-4Z	
	SM-5S	SM-20	SM-5S	SM-5S	4565R1-A	
	SML-20	SML-20	SM-5SS	SM-5SS		
	1/0 solid (53.5 mm ²) through 500 kc mil (253 mm ²) copper or aluminum	—	SM-4Z	—	—	4565R1-B
		—	SM-5S	—	—	
		SM-4Z				
		SML-4Z	SML-4Z	SM-4Z	SM-4Z	
	2/0 stranded (67.4 mm ²) through 800 kc mil (405 mm ²) copper or aluminum	SM-5S	SM-20	SM-5S	SM-5S	4567R1-A
		SML-20	SML-20	SM-5SS	SM-5SS	
—		SM-4Z	—	—	4567R1-B	
—		SM-5S	—	—		
SM-4Z				4567R1-B		
SML-4Z	SML-4Z	SM-4Z	SM-4Z			
SM-5S	SM-20	SM-5S	SM-5S	4567R1-B		
SML-20	SML-20	SM-5SS	SM-5SS			

Ordering Tables

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●
		SM-4S or SM-4Z	FA-974
	23 or 25	SM-5S	FA-2343●
		SM-4S or SM-4Z	FA-975
	34.5	SM-5S	FA-2344a
SM-4Z or SML-4Z		FDA-1079	
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 that 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 fastener assemblies, catalog number CA-600. For interbarrier spacers, refer to the nearest S&C Sales Office.

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	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 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●	4423
		SM-4Z●	
		SML-20	
		SML-4Z	
Large clamp	Disconnect 45° opening	SM-5S■	4410R3
Locking prong	Non-disconnect	SM-4Z●	4404
		SM-5S■	
		SM-5SS	
Universal pole	Refer to Specification Bulletin 851-31		

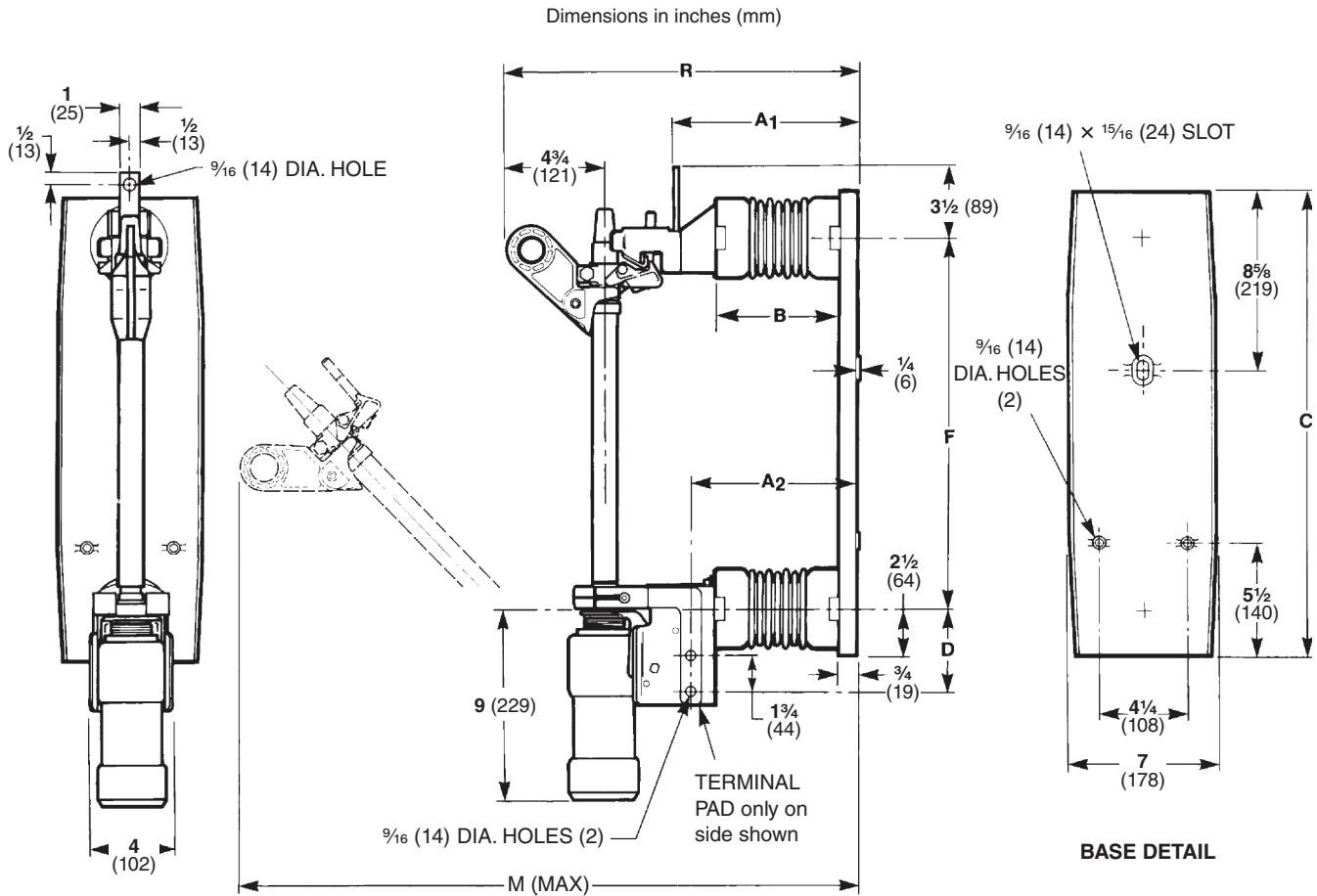
● Rated 25 kV and below. SMU-20 Fuse Units and SM-4Z Holders rated 34.5 kV can be removed by hand after properly grounding the upper and lower live parts of the mounting.

■ 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.

Dimensional Drawings

SM-20 Disconnect, 45° Opening

200 Amperes Max, 13.8 kV, 25 kV, and 34.5 kV



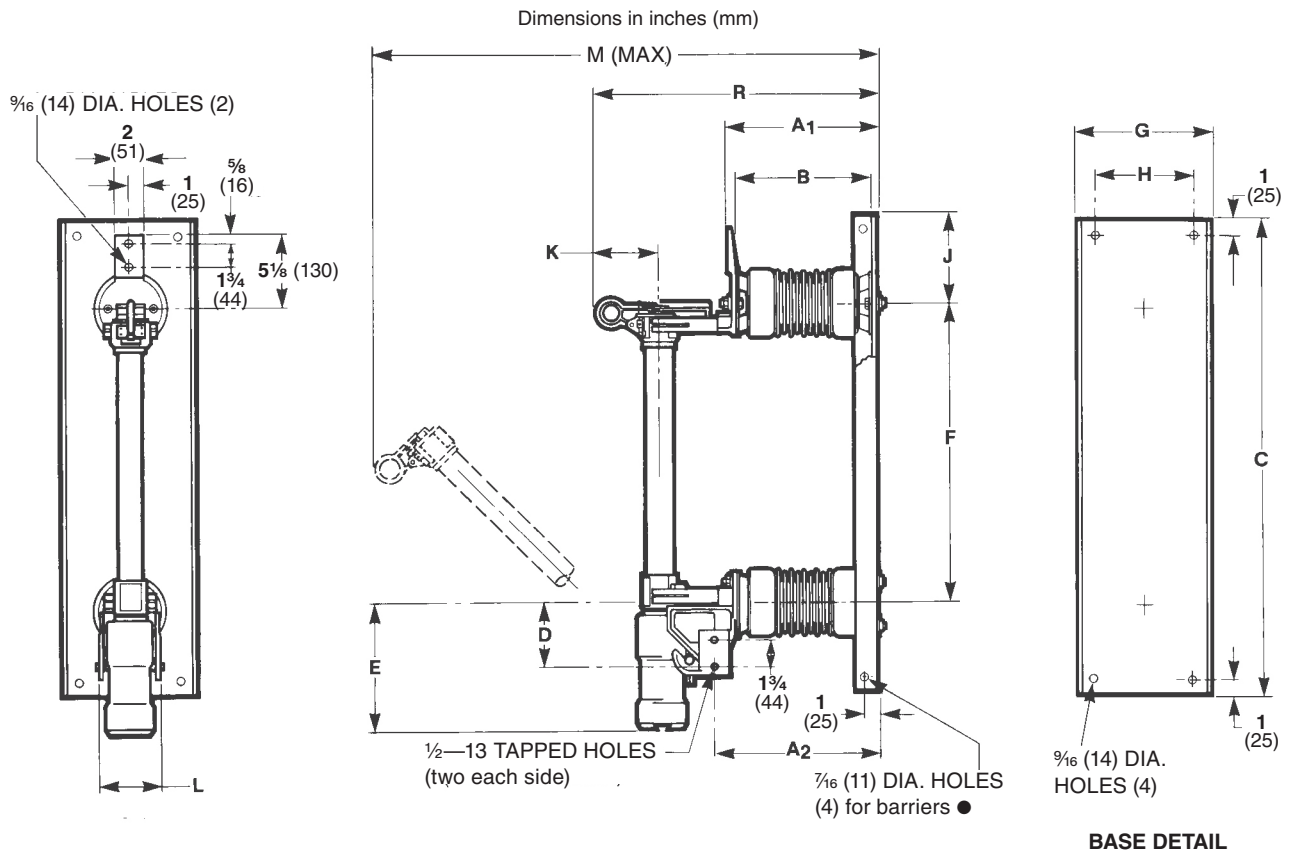
Rating			Amps, Max	Mounting ^① (Including Live Parts, Less Fuse Unit End-Fittings)		Fuse Unit End-Fittings ^②		Live Parts (Less Fuse Unit End-Fittings)	Dimensions in Inches (mm)								Net Weight, Lbs. (kg)	
Nom.	Max	BIL		Type	Catalog Number	Type	Catalog Number		Catalog Number	A1	A2	B	C	D	F	M	R	Mtg.
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 (470)	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.

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 Information 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	BIL					Type	Catalog Number	Type	Catalog Number	Catalog Number	A1	A2	B	C	D	E	F	G	H	J	K	L	M
4.8	5.5	60	200	SM-4	87360R2	SM-4Z	86631R2●	87369	5 5/8 (143)	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 5/8 (143)	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 (876)	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 (1121)	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).

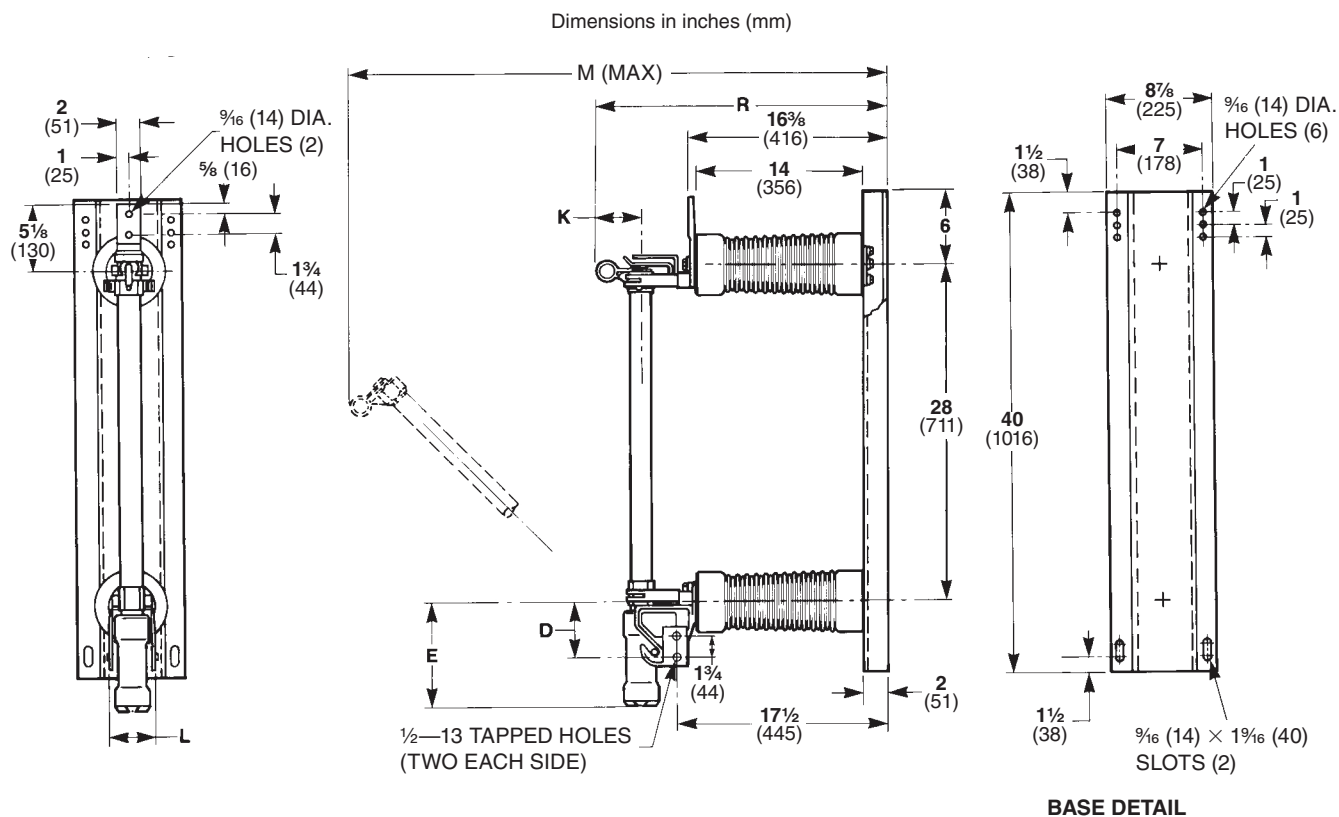
● Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

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

Dimensional Drawings

SM-4Z and SM-5S Disconnect, 45° Opening

200 and 300 Amperes Max, 34.5 kV



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	D	E	K	L	M	R	Mtg.	Holder
Nom.	Max	BIL														
34.5	38	200	200	SM-4	187654●	SM-4Z	86634R2	87369	4 1/8 (105)	8 7/8 (225)	4 (102)	3 3/8 (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)

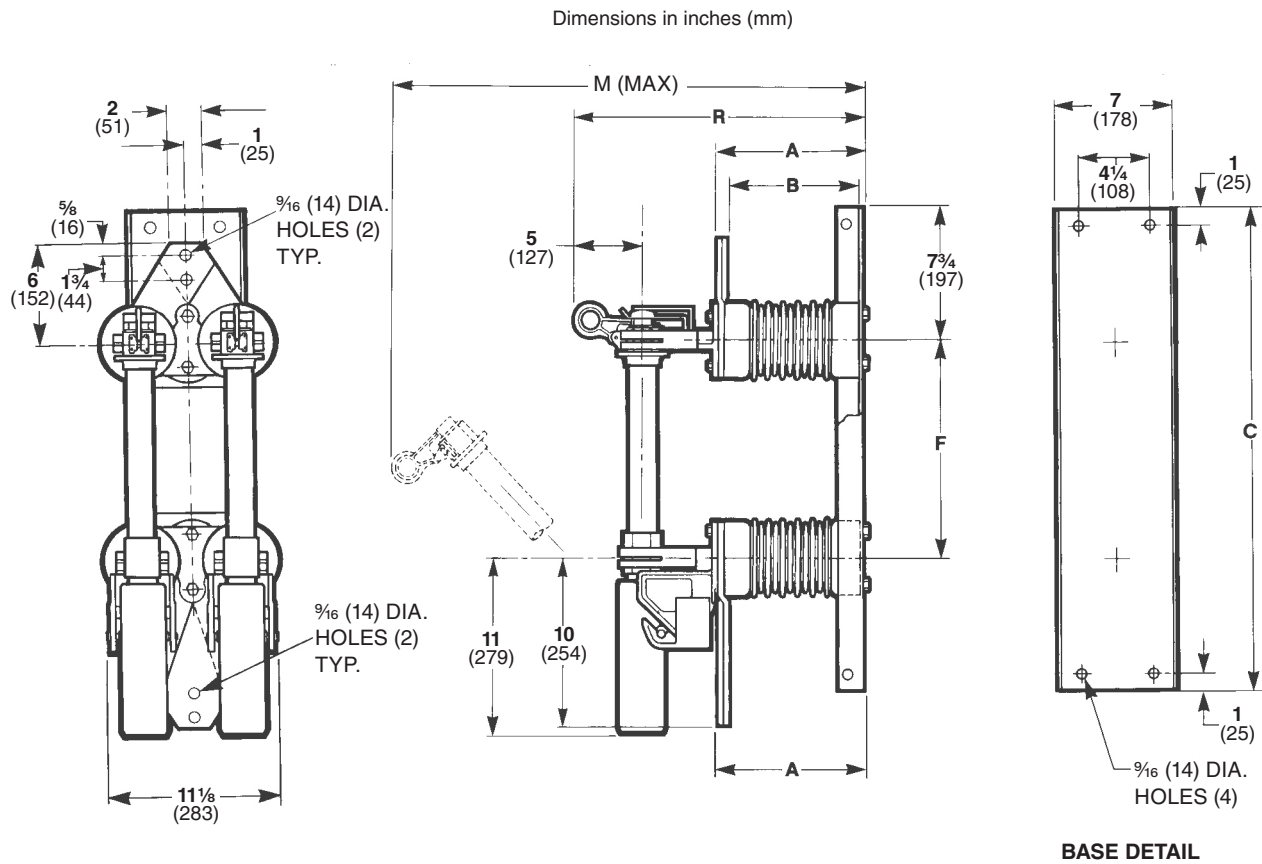
① These mountings cannot be supplied for back connection.

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.

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



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 5/8 (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 3/8 (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.

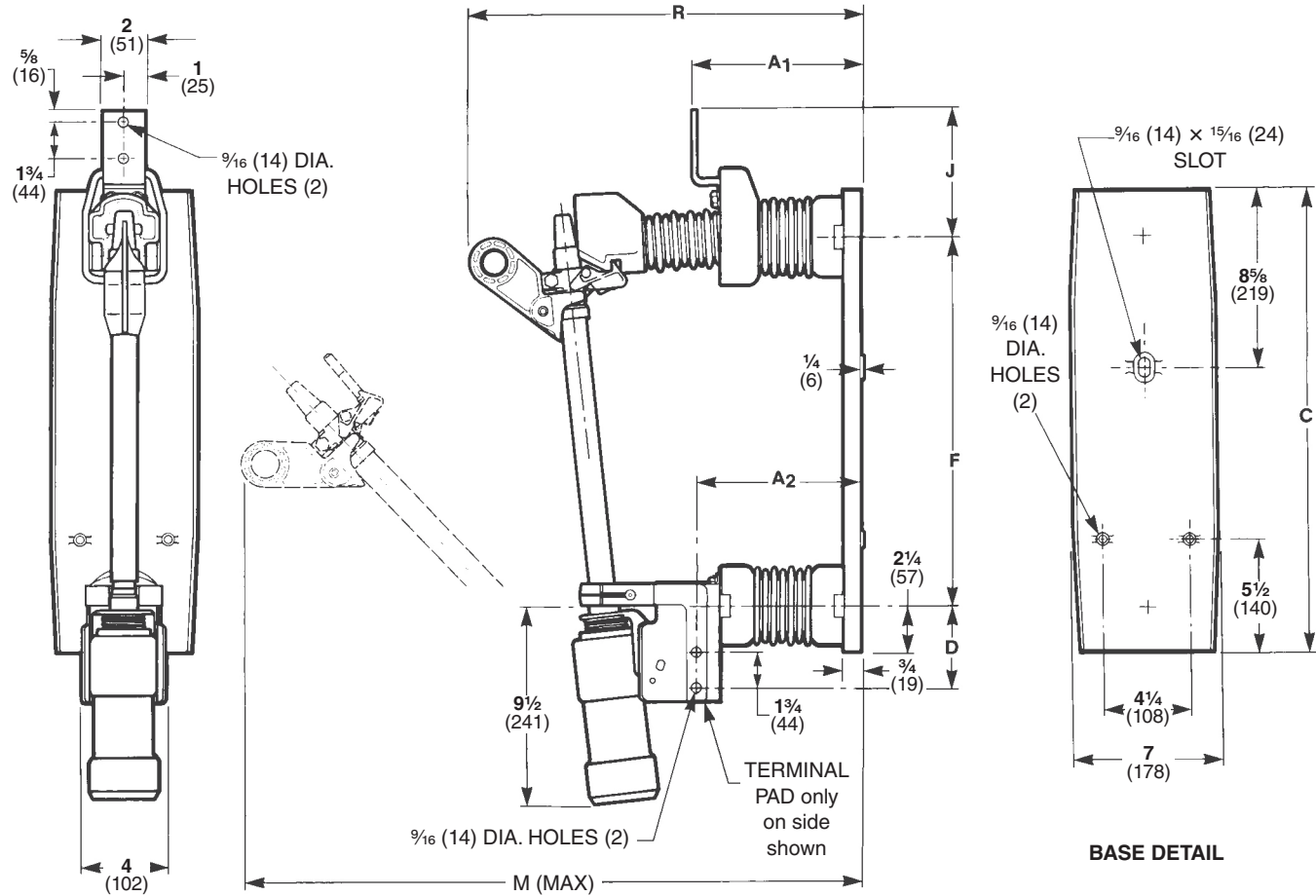
● Rated 7.2 kV nominal, for use in listed 4.8-kV mountings for system voltages through 4.8 kV, or in discontinued 7.2-kV mountings for system voltages through 7.2 kV.

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

Dimensional Drawings

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

Dimensions in inches

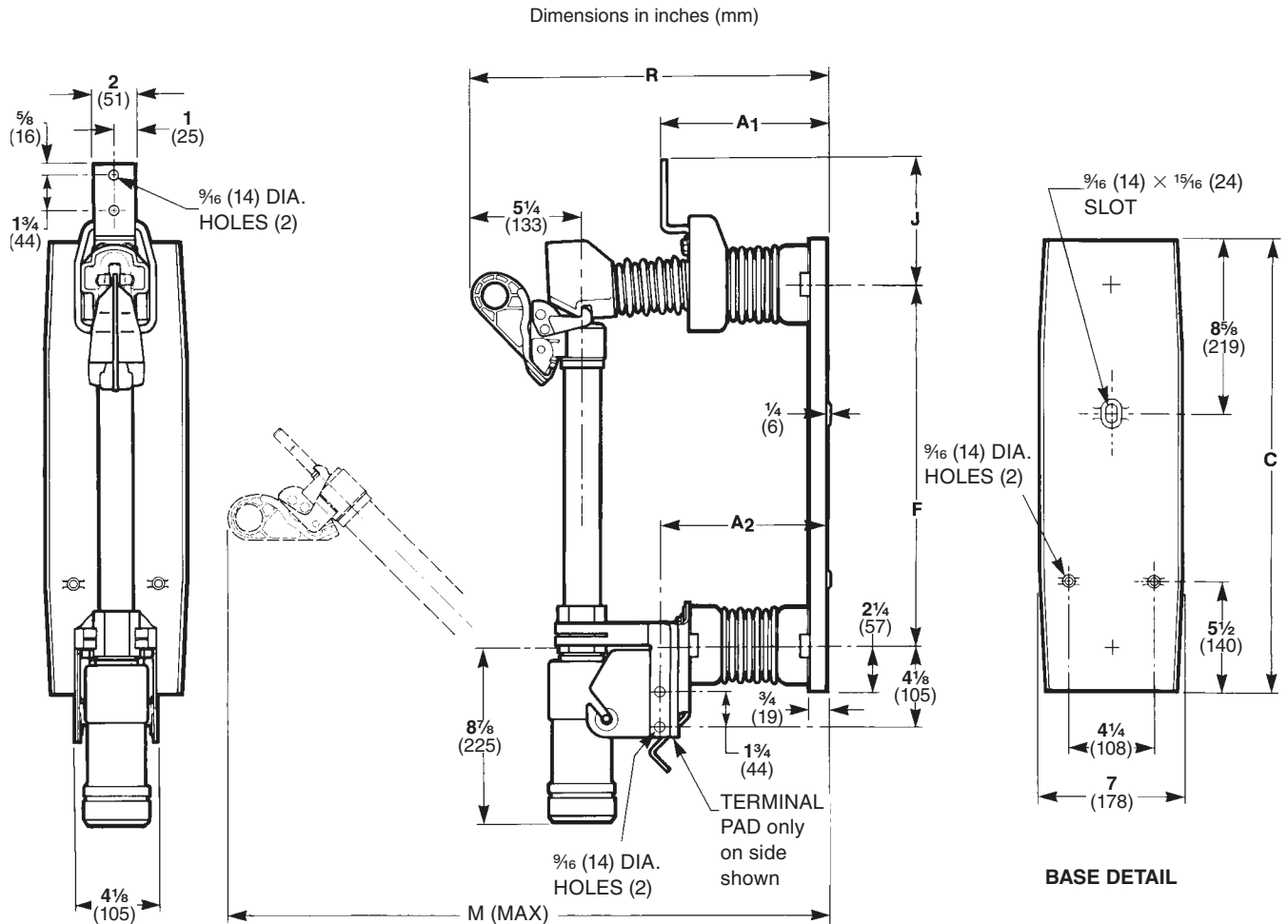


Rating				Mounting ^① (Including Live Parts, Less Fuse Unit End-Fittings)		Fuse Unit End-Fittings ^②		Dimensions in Inches (mm)								Net Weight, Lbs. (kg)	
kV			Amps, Max	Type	Catalog Number	Type	Catalog Number	A1	A2	C	D	F	J	M	R	Mtg.	Fuse-Unit End-Fittings
Nom.	Max	BIL															
13.8	17.0	95	200	SML-20	90412	SML-20	3097	8 3/8 (213)	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 3/8 (238)	26 3/4 (679)	3 1/4 (83)	22 1/4 (565)	7 1/4 (184)	34 3/4 (883)	20 3/8 (524)	28 (13)	12 (5)

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



Rating			Mounting ^① (Including Live Parts, Less Holder)	Holder ^②		Dimensions in Inches (mm)								Net Weight, Lbs. (kg)		
Nom.	Max	BIL		Type	Catalog Number	A1	A2	C	F	J	M	R	Mtg.	Holder		
13.8	17.0	95	200	SML-4	90322	SML-4Z	92352●	8 3/8 (213)	8 1/2 (216)	22 3/8 (568)	17 3/4 (451)	6 1/4 (159)	33 (838)	18 (457)	25 (11)	13 (6)
25	27	125	200	SML-4	90323	SML-4Z	92353	9 1/2 (241)	9 3/4 (248)	26 3/4 (679)	22 1/4 (565)	7 1/4 (184)	36 3/4 (933)	19 1/8 (486)	29 (13)	13 (6)

① These mountings cannot be supplied for back connection.

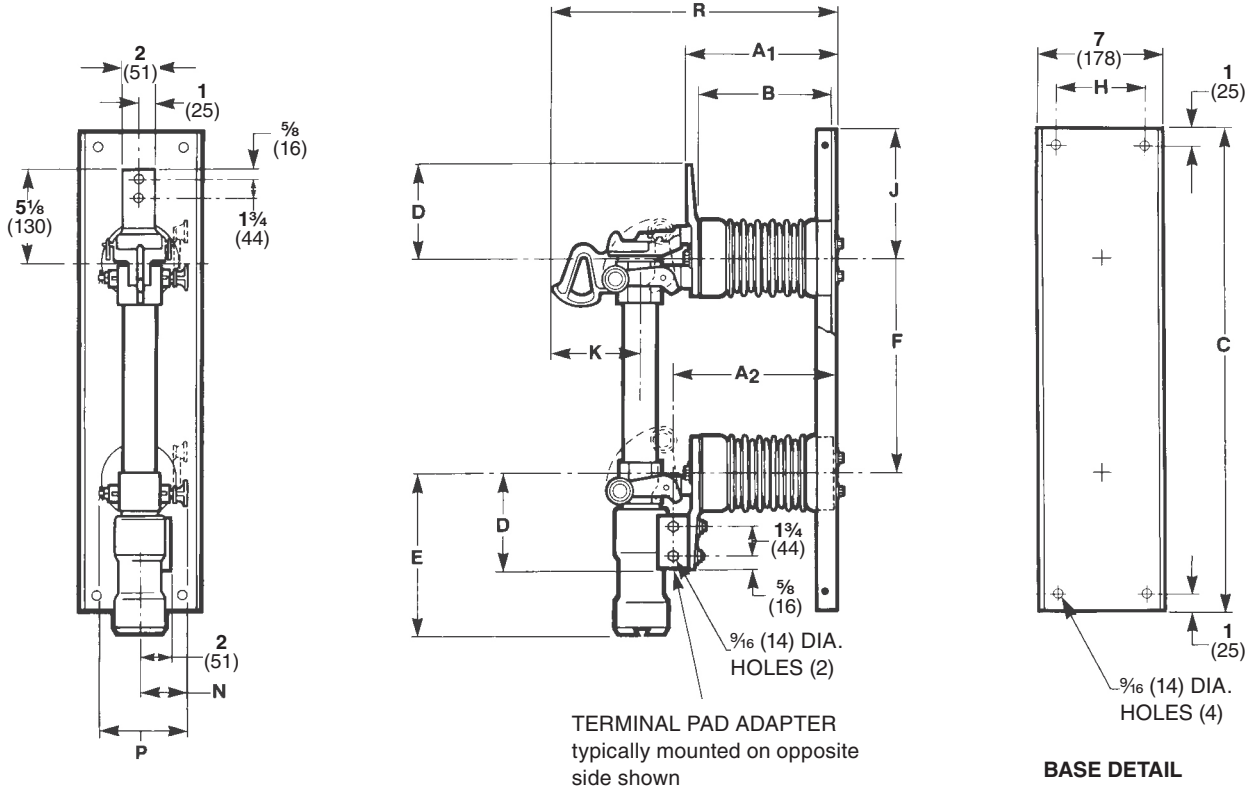
● Rated 14.4 kV nominal, for use in listed 13.8-kV mountings.

② Includes silencer.

Dimensional Drawings

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)



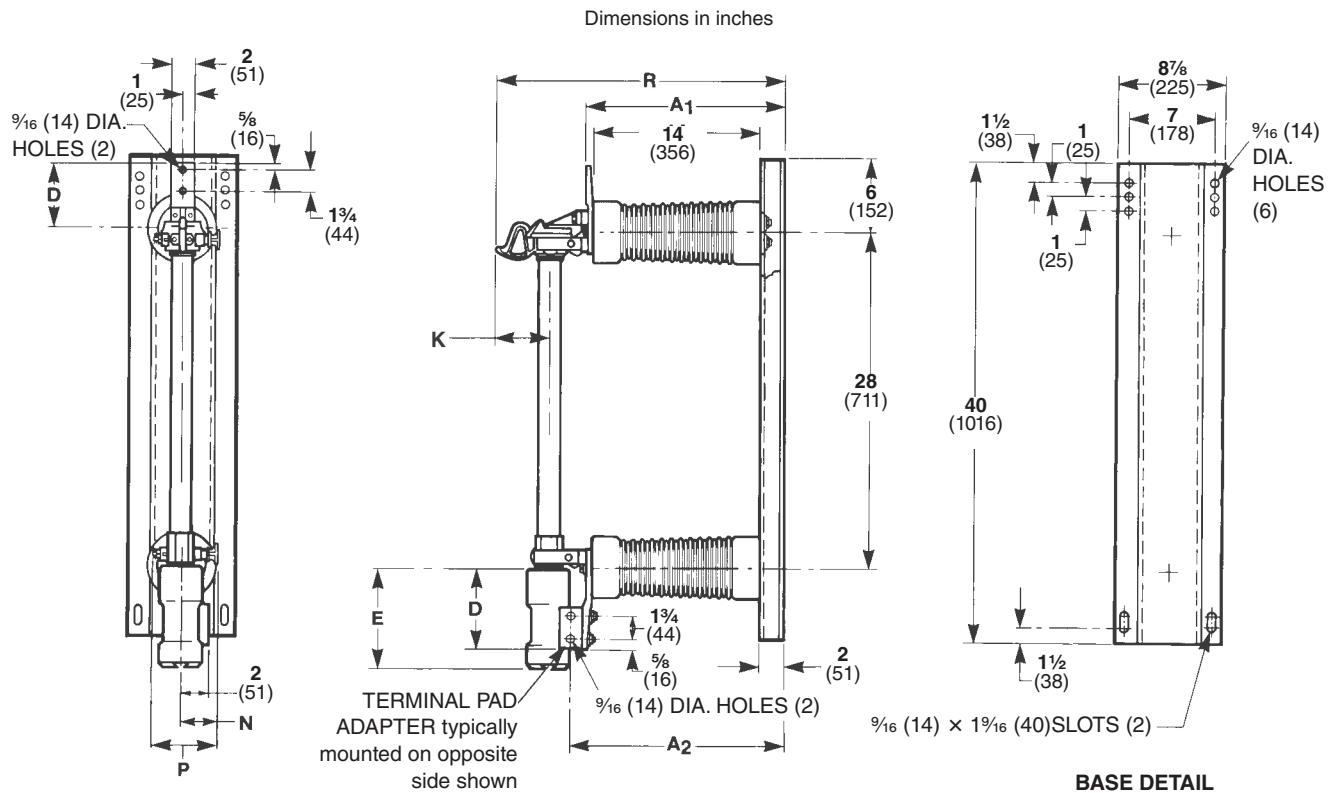
Rating			Mounting ^① (Including Live Parts, Less Holder)	Holder ^②		Live Parts (Less Holder)	Dimensions in Inches (mm)																Net Weight, Lbs. (kg)	
Nom.	Max	BIL		Amps, Max	Type		Catalog Number	Type	Catalog Number	Catalog Number	A1	A2	B	C	D	E	F	H	J	K	N	P	R	Mtg.
4.8	5.5	60	200	SM-4	87200R2	SM-4Z	86801R2●	87109	5 7/8 (143)	6 3/8 (168)	5 (127)	28 (711)	5 1/8 (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)	27 1/2 (12)	11 (5)	
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 3/8 (371)	15 3/8 (397)	14 (356)	32 3/4 (832)	5 1/8 (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 (238)	7 1/2 (191)	32 (813)	5 1/4 (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 1/4 (133)	12 (305)	20 3/4 (527)	5 (127)	6 (152)	5 1/4 (133)	3 3/8 (92)	6 1/2 (165)	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 1/4 (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.

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



Rating			Mounting ^① (Including Live Parts, Less Holder)	Holder ^②		Live Parts (Less Holder)	Dimensions in Inches (mm)										Net Weight, Lbs. (kg)	
Nom.	Max	BIL		Amps, Max	Type		Catalog Number	Type	Catalog Number	Catalog Number	A1	A2	D	E	K	N	P	R
34.5	38	200	200	SM-4	187674●	SM-4Z	86804R2	87109	16 3/8 (416)	17 3/8 (441)	5 1/8 (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 3/8 (422)	17 3/8 (448)	5 1/4 (133)	11 (279)	5 1/4 (133)	3 3/8 (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.