

The enclosure and insulating-barrier dimensions listed in this document have been determined using the *minimum* clearances (shown in Table 1 on page 3) recommended to facilitate fuse handling and to maintain the inherent electrical ratings of S&C Types SML Power Fuses when installed in metal enclosures. These clearances are sufficient provided normal consideration has been given to avoidance of point-gap configurations. When installing bus or cable connections and cable terminations, these clearances should be observed.

Note: Lesser clearances than those shown are acceptable only if substantiated by impulse-testing of the complete assembly consisting of the enclosure, power fuses, barriers, bus, connectors, terminators, etc.

In addition, enclosure dimensions should be sufficient—or barriers should be provided to ensure a minimum clearance between the metal parts of a hookstick and ground during opening and closing operations as follows:

- 2 inches (51 mm) for system voltages of 13.8 kV
- 3½ inches (89 mm) for system voltages of 25 kV

There are no requirements for special reinforcement of enclosures provided the enclosures reflect adequate consideration of environmental factors, such as controlled access, tamper resistance, and sealing against ingress of rodents, insects, and weeds.

★ Not applicable to submersible enclosures.



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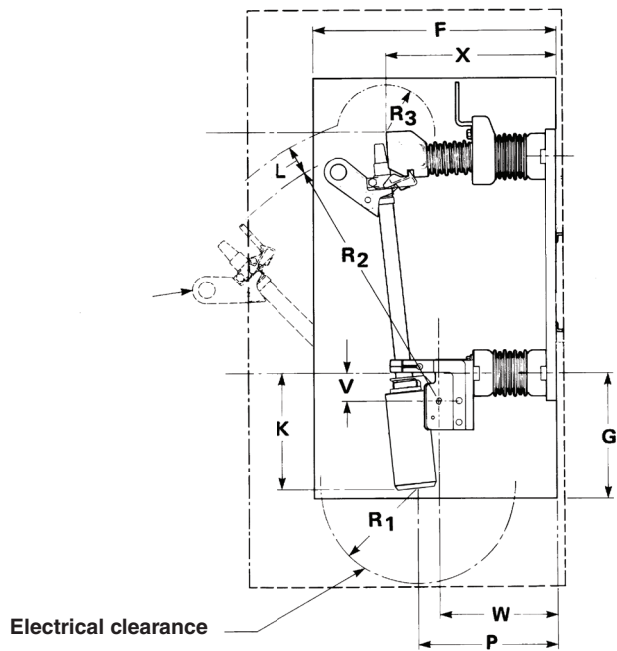
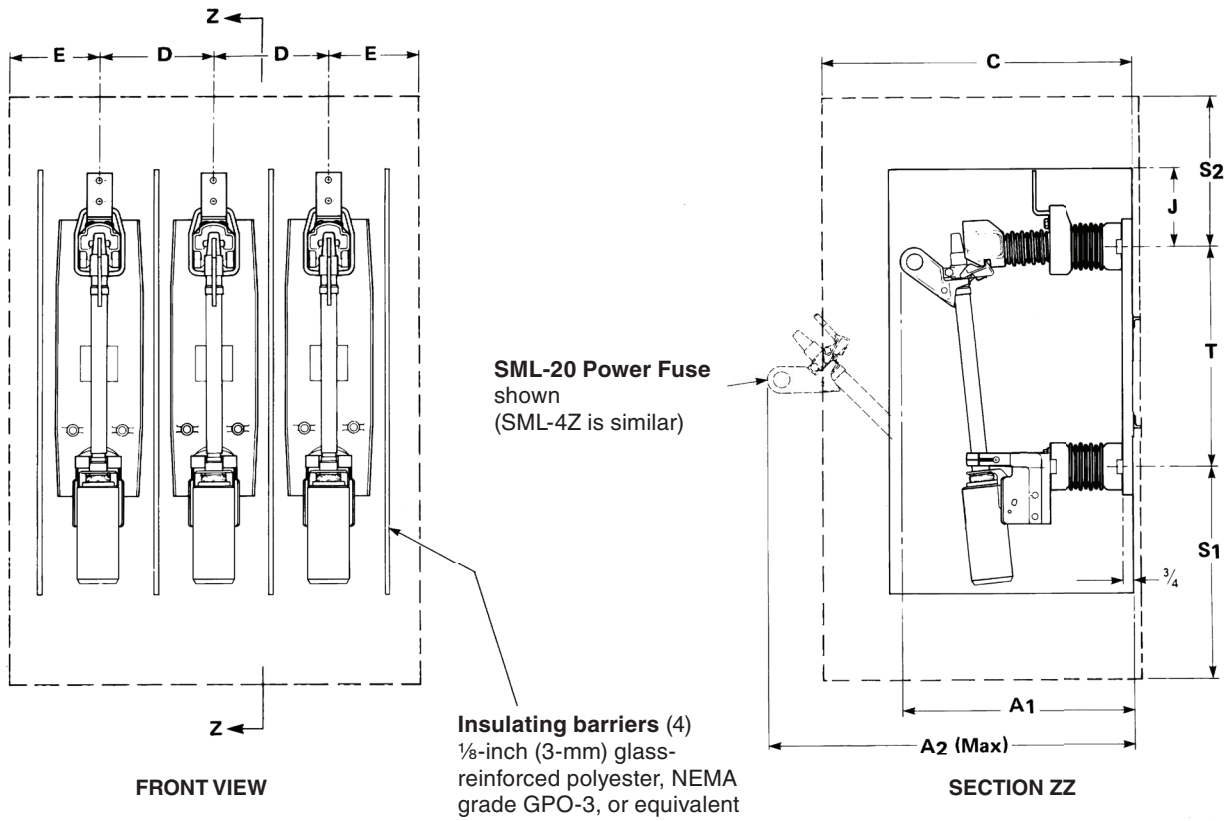
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S&C Type SML Power Fuses

See Table 2 on page 3 for the dimensions noted in letters in the diagrams.



Detail of Barrier and Clearance Requirements for S&C Type SML-20 AND SML-4Z Power Fuses

Notes

- The enclosure and insulating-barrier dimensions listed in this document have been determined using the minimum clearances recommended to facilitate fuse handling and to maintain the inherent electrical ratings of S&C Type SML Power Fuses when installed in metal enclosures. See Table 1. These clearances are sufficient provided normal consideration has been given to avoidance of point-gap configurations. When installing bus or cable connections and cable terminations, these clearances should be observed. In addition, enclosure dimensions should be sufficient, or barriers should be provided, to ensure a minimum clearance between the metal parts of a hookstick and ground during opening and closing operations as follows:
 - 2 inches (51 mm) for system voltages of 13.8 kV
 - 3½ inches (89 mm) for system voltages of 25 kV
- Dimensions “D” and “E” provide a minimum of 2 inches (51 mm) adjacent to the hinge in which to make cable or bus connections and still maintain the recommended clearance to barriers.
- Clearance from fuse unit (or holder) in the **Closed** position to any grounded part should not be less than the minimum recommended metal-to-metal clearance listed in Table 1.

- If the complete assembly consisting of enclosure, power fuses, barriers, bus, connectors, terminators, etc., is not impulse tested to verify that it will fully meet its assigned BIL rating, the assembly should be checked to ensure the minimum recommended clearances have been met or exceeded. See Table 1. Greater clearances may be required if corners, edges, or small-radius points exist.

Table 1. Recommended clearances.

Fuse Rating, Kv, BIL	Minimum Recommended Clearances, Inches (mm)		
	Metal-to-Metal ^① (phase-to-phase or phase-to-ground)	Energized Part-to-Barrier	Barrier-to-Ground (In vicinity of energized parts)
95	6 (152)	1 (25)	1 (25)
125	8½ (216)	2¼ (57)	2¼ (57)

① Where insulating barriers are provided, metal-to-metal distances should be measured around the edge of the barrier.

Table 2. Enclosure and Insulating-Barrier Dimensions.

Fuse Type	Rating		Minimum Dimensions, Inches (mm)																						
	Amps, RMS Max	kV		BIL	A ₁ ①	A ₂ ①	C②	D	E③	F	G	J	K	L④	P①	R ₁ ⑤	R ₂ ①	R ₃ ⑥	S ₁	S ₂	T①	V①	W①	X①	Y①
		Nom	Max Des.																						
SM-20	200K or 200K	13.8	17.0	95	19½ (495)	31½ (800)	25½ (648)	9¼ (235)	7¼ (184)	20 (508)	10 (254)	6¼ (159)	9½ (241)	2 (51)	11½ (292)	8 (203)	22½ (572)	4 (102)	17½ (445)	12¼ (311)	18 (457)	2⅞ (73)	9⅞ (251)	14⅞ (359)	20 (508)
		25	27	125	20⅝ (524)	34¾ (883)	29⅞ (740)	11¼ (286)	9¾ (248)	21 (533)	11 (279)	7¼ (184)	9½ (241)	3½ (89)	12¾ (324)	10½ (267)	26 (660)	5½ (140)	20 (508)	15¾ (400)	22¼ (565)	2⅞ (54)	11⅞ (283)	15⅝ (391)	24¼ (616)
SM-4Z	200E	13.8	17.0	95	18 (457)	33 (838)	23⅝ (600)	9½ (241)	7⅝ (187)	20 (508)	10 (254)	6¼ (159)	8⅞ (225)	2 (51)	12¼ (311)	8 (203)	23¼ (591)	4 (102)	17 (432)	12¼ (311)	17¾ (451)	3¾ (95)	11⅞ (283)	14⅞ (359)	20 (508)
		25	27	125	19⅞ (486)	36¾ (933)	27½ (699)	11½ (292)	9⅞ (251)	21 (533)	11 (279)	7¼ (184)	8⅞ (225)	3½ (89)	13½ (343)	10½ (267)	27½ (699)	5½ (140)	19½ (495)	15¾ (400)	22¼ (565)	3¾ (95)	12⅝ (314)	15⅝ (391)	24¼ (616)

① These dimensions are inherent to the fuses and are thus invariable.

② This dimension provides full BIL clearance from the fuse unit or holder to the enclosure door or panel with the fuse unit or holder in the **Closed** position only.

③ Add 1 inch (25 mm) to dimensions “D” and “E” if fuse mounting is equipped with the optional S&C ground stud.

④ Minimum recommended clearance to any grounded object (such as a door stile) in the vicinity of holder or fuse-unit assembly during switching.

⑤ Minimum distance to nearest switchgear component other than bus or cable of same phase.

⑥ Minimum recommended clearance to energized component of same phase.