

# NON-LOADBREAK AND AUTO-JET® LOAD-BREAK FUSE MOUNTINGS

(All fuse-mounting base plates are galvanized steel)

**NON-LOADBREAK FOR  
SM-4 REFILL UNIT**  
Shown With S&C SM-4Z Fuseholder



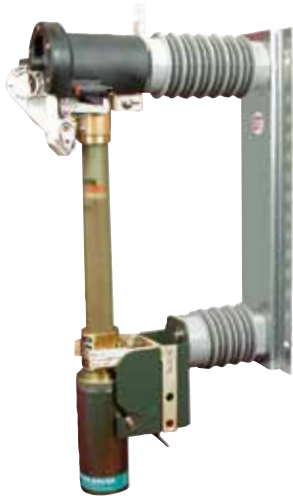
**NON-LOADBREAK FOR  
DBU, CMU or SMU-20 FUSE UNITS**  
Shown With S&C SM-20 End Fittings



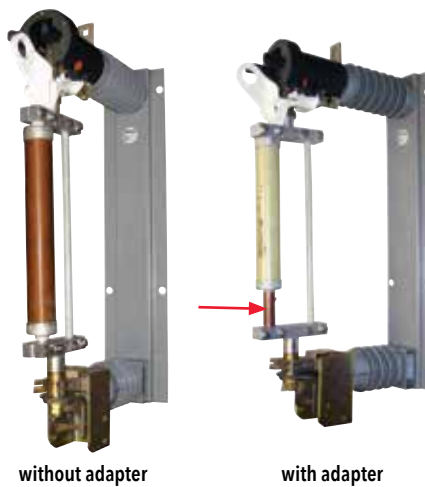
**NON-LOADBREAK FOR  
SM-5 REFILL UNIT**  
Shown With S&C SM-5S Fuseholder



**AUTO-JET® FOR SM-4 REFILL UNIT**  
Shown With S&C SML-4Z Fuseholders and includes  
positive latch indicator.



**AUTO-JET® FOR  
CURRENT-LIMITING FUSE**  
Shown With AJ-NX type holders and  
includes positive latch indicator



**AUTO-JET® FOR SMU-20  
or DBU FUSE UNIT**  
Shown With S&C SML-20 End Fittings  
same as Eaton DBU fuses and end fittings  
and includes positive latch indicator



**LOAD-BREAK** Auto-jet® fuse mountings feature the Federal Pacific EZ-Latch Mechanism with a positive-latch indicator and are available to accommodate S&C Types SM-4 and SMU-20, Eaton DBU, Cooper: Type NX, and (CT) Type X-Limiter in 15kV and 25kV class.

**NON-LOADBREAK** disconnect type fuse mountings are available to accommodate a choice of S&C Types SM-4 and SMU-20, Eaton DBU fuses in 15kV and 25kV class and S&C Type SM-5 fuses in 15kV, 25kV and 35kV class.

## FP Fuse-Unit End Fittings

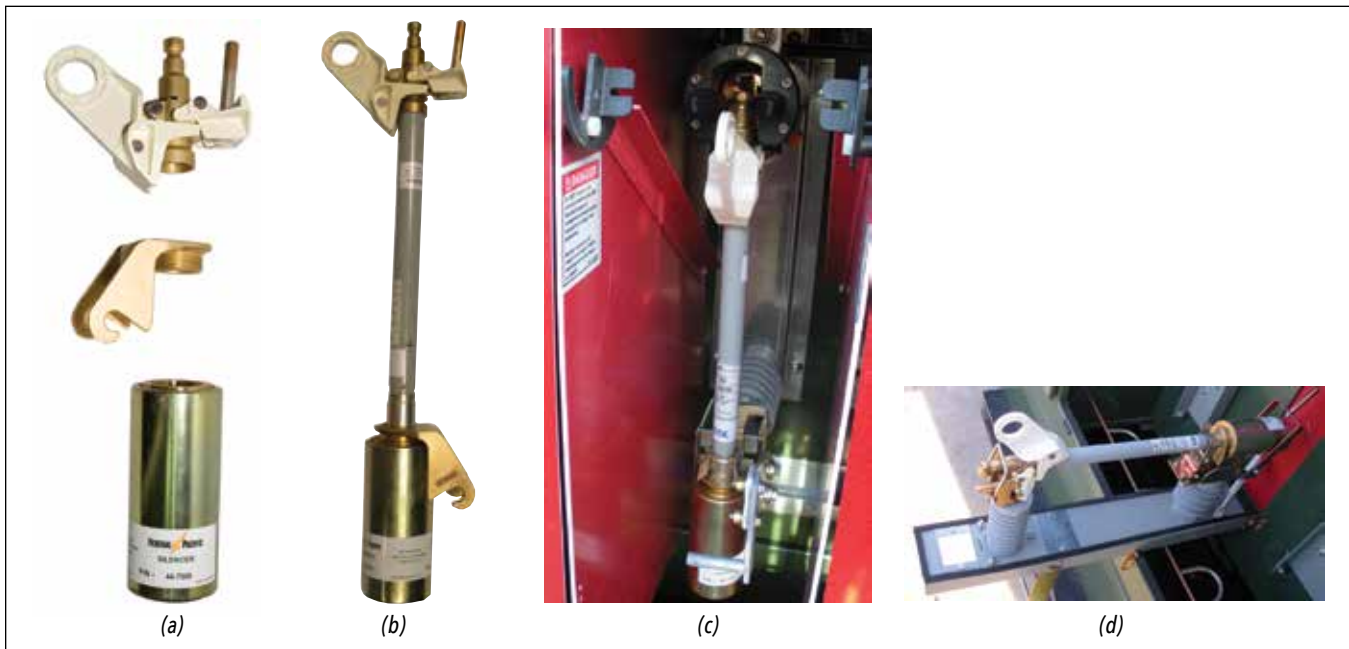


Figure 1. The individual components comprising the Federal Pacific Fuse-Unit End Fittings are pictured at (a); at (b) the components are pictured assembled on a fuse unit; and the combination is shown at (c) installed in a live-front fuse mounting and at (d) in a dead-front fuse mounting.

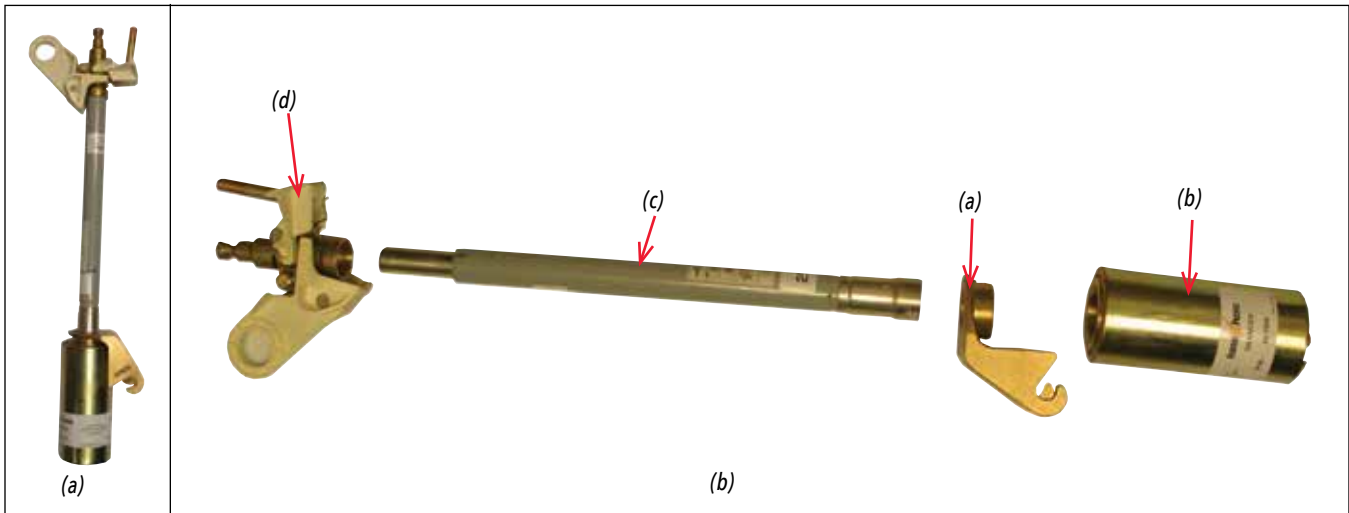


Figure 2. The complete fuse-unit-and-end-fitting assembly is pictured at (a) and the four individual components are illustrated at (b).

## Fuse-Unit End Fittings - continued

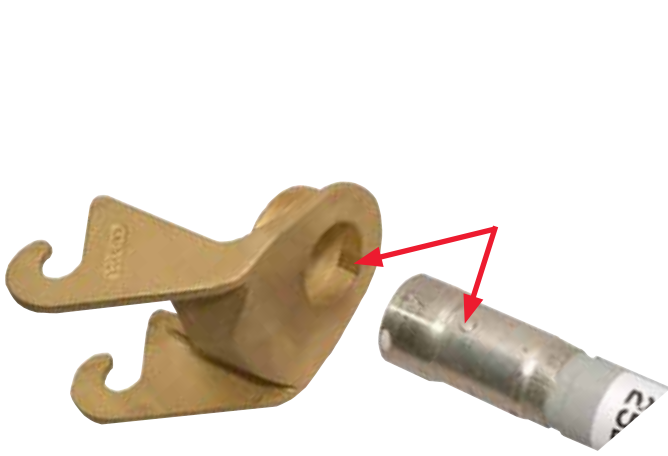


Figure 3. Federal Pacific's lower end-fitting trunnion casting has a guide slot that matches to the raised button on the fuse-unit lower-contact ferrule. The silencer/diffuser threads onto the trunnion casting.

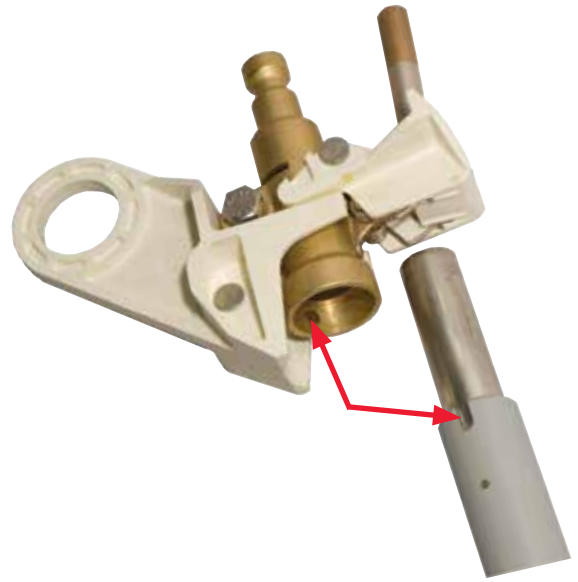


Figure 4. Federal Pacific's upper end-fitting casting has a raised button inside that matches to the guide groove adjacent to the fuse-unit upper-contact ferrule.

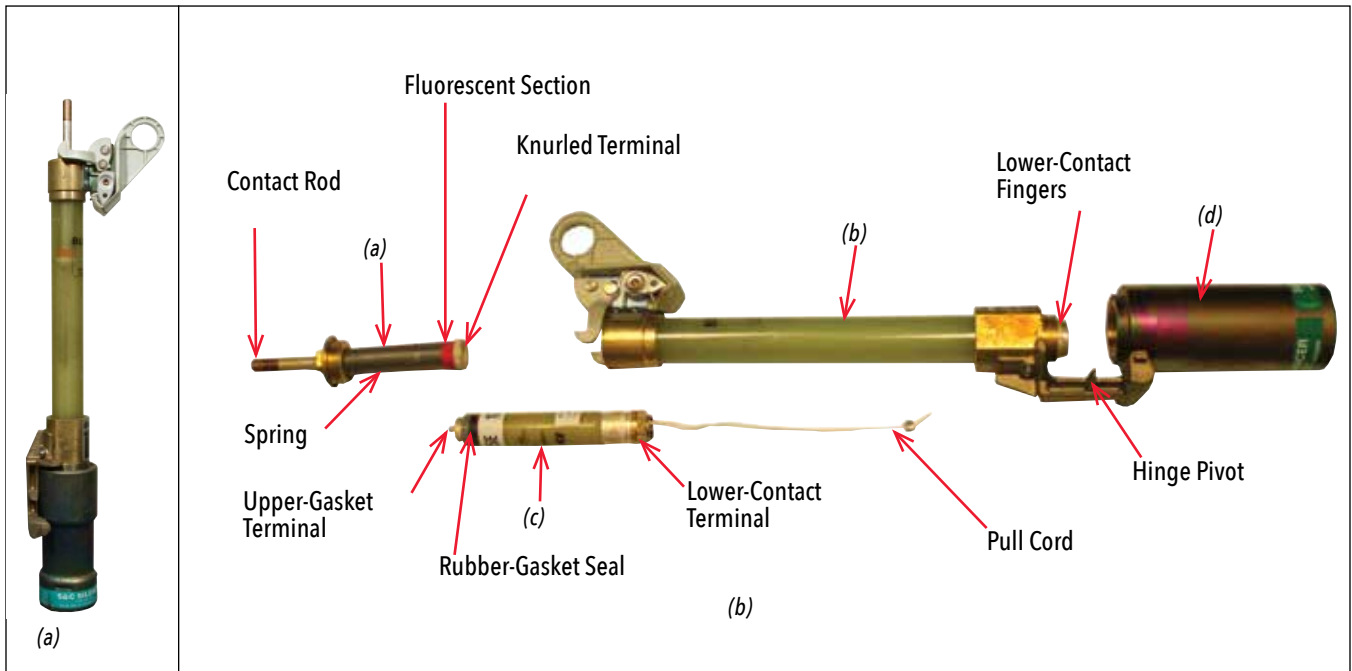


Figure 5. The complete refill-unit-and-fuse-holder assembly is pictured at (a) and the four individual components are illustrated at (b).

Application Data – Non-Loadbreak Disconnect

Fuse Manufacturer ①	Fuse-Unit or Refill Unit Type	Mounting (Including Live Parts) Catalog No. *	Ratings			Holder or End Fittings Catalog No. **	Fuse Ratings		
			kV				Amperes RMS ②		
			Nom.	Max. Des.	BIL		Max.	Interrupting SYM	Fault Close
S & C	SM-4	0025-2-03071†	14.4	17.0	95	88632R2	200	12,500	N/A
		0025-2-03070 ■	14.4	17.0	95	86632R2	200	12,500	N/A
	SMU-20	33-7027 ■	14.4	17.5	95	FP-3097	200	14,000	N/A
		33-7059 ■	25	27	125	FP-3097	200	12,500	N/A
		33-7062 ■	34.5	38	150	FP-3097	200	8,450	N/A
	SM-5S	33-7028 ■	4.8	5.5	60	86641R2 ③	400	27,000 ⑤	N/A
		0025-2-03063	14.4	17.0	95	86642R2 ④	400	25,000	N/A
		0025-2-03064	25	27	125	86643R2 ④	300	20,000	N/A
		0025-3-03087	34.5	38	150	86644R2	300	17,500	N/A
	Eaton	DBU	33-7027 ■	14.4	17.5	95	FP-3097	200	14,000
33-7059 ■			25	27	125	FP-3097	200	12,500	N/A
Cooper	CMU	33-7027 ■	14.4	17.5	95	FP-3097	200	14,000	N/A
		33-7059 ■	25	27	125	FP-3097	200	12,500	N/A

- \* Less holder/end fittings
- \*\* Includes silencer or snuffler as applicable.
- † Bus for cable termination on left side of mounting.
- Bus for cable termination on right side of mounting.

- ① For fuse application and ordering information refer to applicable S&C and Eaton publications.
- ② Fuse mountings are non-loadbreak.
- ③ Rated 7.2 kV nominal, for use in listed 4.8 kV mountings for system voltages through 4.8 kV.
- ④ Rated 14.4 kV nominal, for use in listed 13.8 kV mountings.
- ⑤ 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.

Application Data – Load-break Disconnect

Fuse Manufacturer	Fuse Unit or Refill Unit Type	Mounting (Including Live Parts) Catalog No. ①	Ratings			Holder or End Fittings (Including Silencer) Catalog Number	Fuse Ratings			
			kV				Amperes RMS			
			Nom.	Max. Des.	BIL		Max.	Loadbreak	Interrupting SYM	3-Time Fault-Close ② ASYM ③
S & C	SM-4	34-9057 ▲	14.4	17.0	95	92352	200	200	12,500	20,000
		34-9056 ◆	14.4	17.0	95	92352	200	200	12,500	20,000
		34-9055 ▲	25	27	125	92353	200	200	12,500†	20,000
		34-9054 ◆	25	27	125	92353	200	200	12,500†	20,000
	SMU-20	34-9047 ▲	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9046 ◆	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9023 ▲	25	27	125	FP-3097	200	200	12,500	20,000
		34-9022 ◆	25	27	125	FP-3097	200	200	12,500	20,000
Eaton	DBU	34-9047 ▲	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9046 ◆	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9023 ▲	25	27	125	FP-3097	200	200	12,500	20,000
		34-9022 ◆	25	27	125	FP-3097	200	200	12,500	20,000
Cooper ④ ⑤	NX	34-7101 ▲●	14.4	17.0	95	0021-2-03055 ●	⑥	⑧	50,000	40,000
		34-7101-01 ◆	14.4	17.0	95	0021-2-03055 ●	⑥	⑧	50,000	40,000
		0025-3-03058 ▲●	25	27	125	0021-2-03055 ●	⑦	⑧	50,000	40,000
		0025-3-03059 ◆●	25	27	125	0021-2-03055 ●	⑦	⑧	50,000	40,000
Cooper	CMU	34-9047 ▲	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9046 ◆	14.4	17.5	95	FP-3097	200	200	14,000	22,400
		34-9023 ▲	25	27	125	FP-3097	200	200	12,500	20,000
		34-9022 ◆	25	27	125	FP-3097	200	200	12,500	20,000

- For Code 6 fuses only. For Code 5 fuses, also specify adapter Part No. AA5519.
- ▲ Bus for cable termination on left side of mounting.
- ◆ Bus for cable termination on right side of mounting.

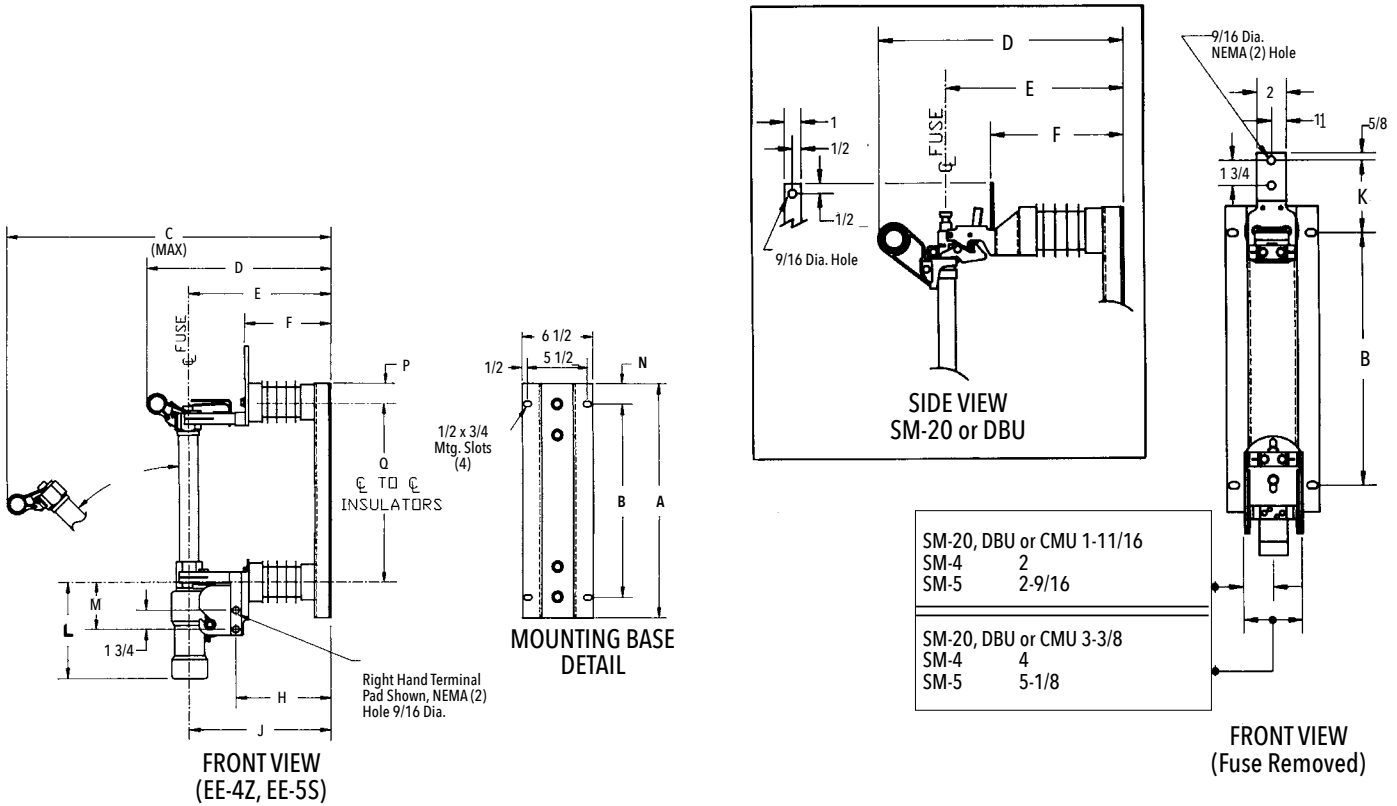
† Applicable to solidly grounded neutral systems only with fuses connected by single-conductor, concentric-neutral type cable to a transformer or transformers. Rating is 9,400 amperes RMS symmetrical, 15,040 amperes RMS asymmetrical (405 MVA) for all other applications.

- ① Less Holder and less end fittings as applicable.
- ② Three-time fault-close rating: The Auto-jet® II fuse mounting can withstand a fuse holder or fuse end fitting being closed into a fault of the magnitude specified three times when closed briskly without hesitation and remain operable and able to carry and interrupt the continuous current. (Must replace fuse after each interruption.) Refer to Federal Pacific instruction manual on FP-3097 end fittings, S&C instruction manual for SML-4Z holder and SML-20 end fitting maintenance required after each fault close or fault interruption).
- ③ Ratings express in RMS amperes asymmetrical are 1.6 times the symmetrical values listed.
- ④ For Cooper (CT) X-Limiter fuses, refer to factory.
- ⑤ Mountings
  - a. Part No. 0025-3-03058 and 59, 25kV, 125kV.
  - b. Part No. 34-7101 and 34-7101-01, 15kV, 95kV BIL accepts code 6 fuses direct. Code 5 fuses require adapter Part No. AA5519.

- ⑥ NX fused units: Auto-jet® II fuse mountings will accommodate one 100 ampere Cooper type NX current-limiting fuse rated 8.3kV, one 100 ampere fuse rated 13.5kV, or one 80 ampere fuse rated 15kV. Three sets of Auto-jet® II end fittings and three appropriately rated fuses are required in each fuse compartment.
- ⑦ NX fused units: Auto-jet® II fuse mountings will accommodate one 100 ampere Cooper type NX current-limiting fuse rated 13.5kV, one 80 ampere fuse rated 15kV, one 40 ampere fuse rated 23kV, or one 50 ampere fuse rated 27kV. Three sets of Auto-jet® end fittings and three appropriately rated fuses are required in each fuse compartment.
- ⑧ Load-break rating same as maximum continuous current rating. For fuse application and ordering information refer to the applicable S&C, Cooper or Eaton fuse publication.

**Dimensions: Auto-jet® Non-Loadbreak Fuses**

Dimensions not to be used for construction purposes.  
Refer to the factory for detailed construction drawings.



kV Class	kV BIL	Fuse Unit Type	Mounting Catalog Number *	Dimensions in Inches													
				A	B	C	D	E	F	G	H	J	K	L	M	N	P
15	95	SM-4	0025-3-03071 †	22-1/2	18-7/16	30-9/16	15-15/16	11-15/16	7-13/16	16-1/2	8-3/4	13-1/2	4-5/8	8-5/8	4-5/16	2	2
15	95		0025-3-03070 ■	22-1/2	18-7/16	30-9/16	15-15/16	11-15/16	7-13/16	16-1/2	8-3/4	13-1/2	4-5/8	8-5/8	4-5/16	2	2
15	95	SMU-20 or DBU or CMU	33-7027 ■	23-3/4	17-3/4	31-7/8	17-5/8	12-5/8	9	18	8-1/8	13	5-3/8	8	3-13/16	4-1/8	1-3/4
25	125		33-7059 ■	25-3/4	22-1/4	35-3/16	19-3/16	14-7/16	10-9/16	20-3/4	9-11/16	14-7/16	3	8	3-13/16	1-3/4	1-3/4
35	150		33-7062 ■	33-1/8	28-1/4	43	22	17-1/4	13-3/4	28-1/4	12-7/8	17-1/4	1-7/8	8	3-13/16	1-3/4	2-7/8
5	60	SM-5	33-7028	24	17-3/4	31-13/16	17-13/16	12-13/16	9-1/8	12-1/2	10-1/16	12-11/16	6-15/16	11	6-1/16	4-3/8	2-1/16
15	95		0025-2-03063	21-1/2	18-7/16	34-9/16	17-13/16	12-13/16	8-3/16	16-1/2	9-3/16	12-11/16	4-5/8	11	6-1/16	2	2
25	125		0025-2-03064	25-3/4	22-11/16	39-1/4	19-3/8	14-3/8	9-3/4	20-3/4	10-3/4	14-1/4	4-5/8	11	6-1/16	2	3
35	150		0025-3-03087	34-3/16	26-3/4	45-15/16	22-3/16	17-3/16	15-3/4	28	16-3/4	16-15/16	4-5/8	11	6-1/16	2	2

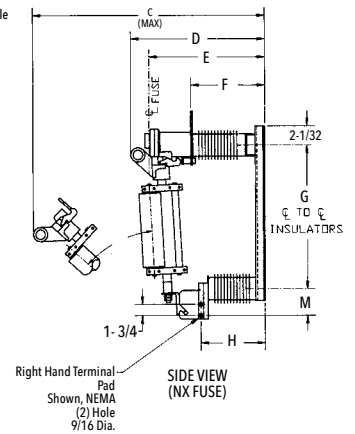
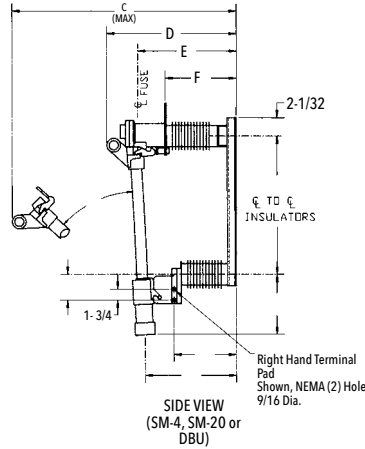
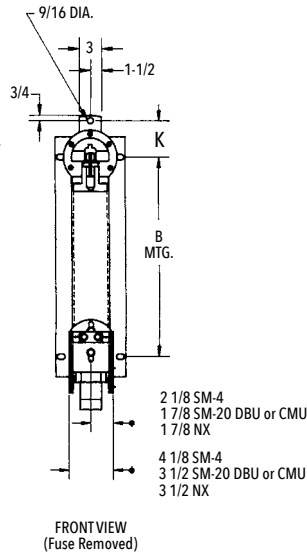
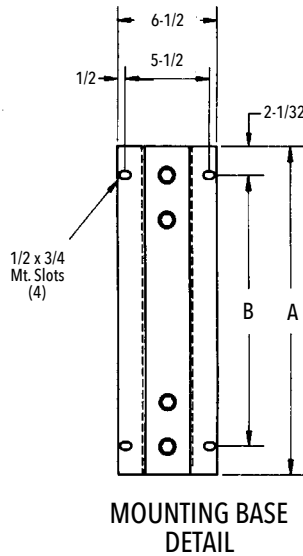
\* Holders/End Fittings and Fuse Unit/Refills not included.

† Bus for cable termination on left side of mounting.

■ Bus for cable termination on right side of mounting.

**Dimensions: Auto-jet® Load-break Fuses**

Dimensions not to be used for construction purposes.  
Refer to the factory for detailed construction drawings.



kV Class	kV BIL	Fuse Unit Type	Mounting Catalog Number *	Dimensions in Inches											
				A	B	C	D	E	F	G	H	J	K	L	M
15	95	SM-4	34-9057 ▲	22-1/2	18-7/16	30-3/4	17-3/4	12-3/4	9-1/4	18-7/16	8-1/4	12-1/4	3	8-5/8	4-3/8
15	95		34-9056 ◆	22-1/2	18-7/16	30-3/4	17-3/4	12-3/4	9-1/4	18-7/16	8-1/4	12-1/4	3	8-5/8	4-3/8
25	125		34-9055 ▲	26-3/4	22-11/16	36	20	14-3/4	11-9/16	22-11/16	10-9/16	14-1/2	3	8-5/8	4-3/16
25	125		34-9054 ◆	26-3/4	22-11/16	36	20	14-3/4	11-9/16	22-11/16	10-9/16	14-1/2	3	8-5/8	4-3/16
15	95	SM-20	34-9047 ▲	23-1/16	18-7/16	30-1/2	19-1/4	14-1/4	9-1/4	19-1/16	9-7/16	13-7/16	3	8	3-13/16
15	95		34-9046 ◆	23-1/16	18-7/16	30-1/2	19-1/4	14-1/4	9-1/4	19-1/16	9-7/16	13-7/16	3	8	3-13/16
25	125		34-9023 ▲	25-3/4	22-11/16	34-5/8	21-13/16	16-3/4	11-9/16	22-11/16	11-3/4	15-1/16	3	8	3-13/16
25	125		34-9022 ◆	25-3/4	22-11/16	34-5/8	21-13/16	16-3/4	11-9/16	22-11/16	11-3/4	15-1/16	3	8	3-13/16
15	95	DBU or CMU	34-9047 ▲	23-1/16	18-7/16	30-1/2	19-1/4	14-1/4	9-1/4	19-1/16	9-7/16	13-7/16	3	8	3-13/16
15	95		34-9046 ◆	23-1/16	18-7/16	30-1/2	19-1/4	14-1/4	9-1/4	19-1/16	9-7/16	13-7/16	3	8	3-13/16
25	125		34-9023 ▲	25-3/4	22-11/16	34-5/8	21-13/16	16-3/4	11-9/16	22-11/16	11-3/4	15-1/16	3	8	3-13/16
25	125		34-9022 ◆	25-3/4	22-11/16	34-5/8	21-13/16	16-3/4	11-9/16	22-11/16	11-3/4	15-1/16	3	8	3-13/16
15	95	NX **	34-7101 ▲	30-7/16	18-7/16	30-1/2	19-1/4	16-1/4	9-1/4	26-1/16	9-7/16	N/A	3	N/A	3-13/16
15	95		34-7101-01 ▲	30-7/16	18-7/16	30-1/2	19-1/4	16-1/4	9-1/4	26-1/16	9-7/16	N/A	3	N/A	3-13/16
25	125		0025-3-03058 ▲◆	29-7/16	22-11/16	34-5/8	21-13/16	18-3/4	11-9/16	25-3/8	10-3/16	N/A	3	N/A	3-3/4
25	125		0025-3-03059 ▲◆	29-7/16	22-11/16	34-5/8	21-13/16	18-3/4	11-9/16	25-3/8	10-3/16	N/A	3	N/A	3-3/4

● For Code 6 fuses only. For Code 5 fuses, also specify adapter Part No. AA5519.

▲ Bus for cable termination on left side of mounting.

◆ Bus for cable termination on right side of mounting.

\*Holders/End Fittings and Fuse Unit/Refills not included.

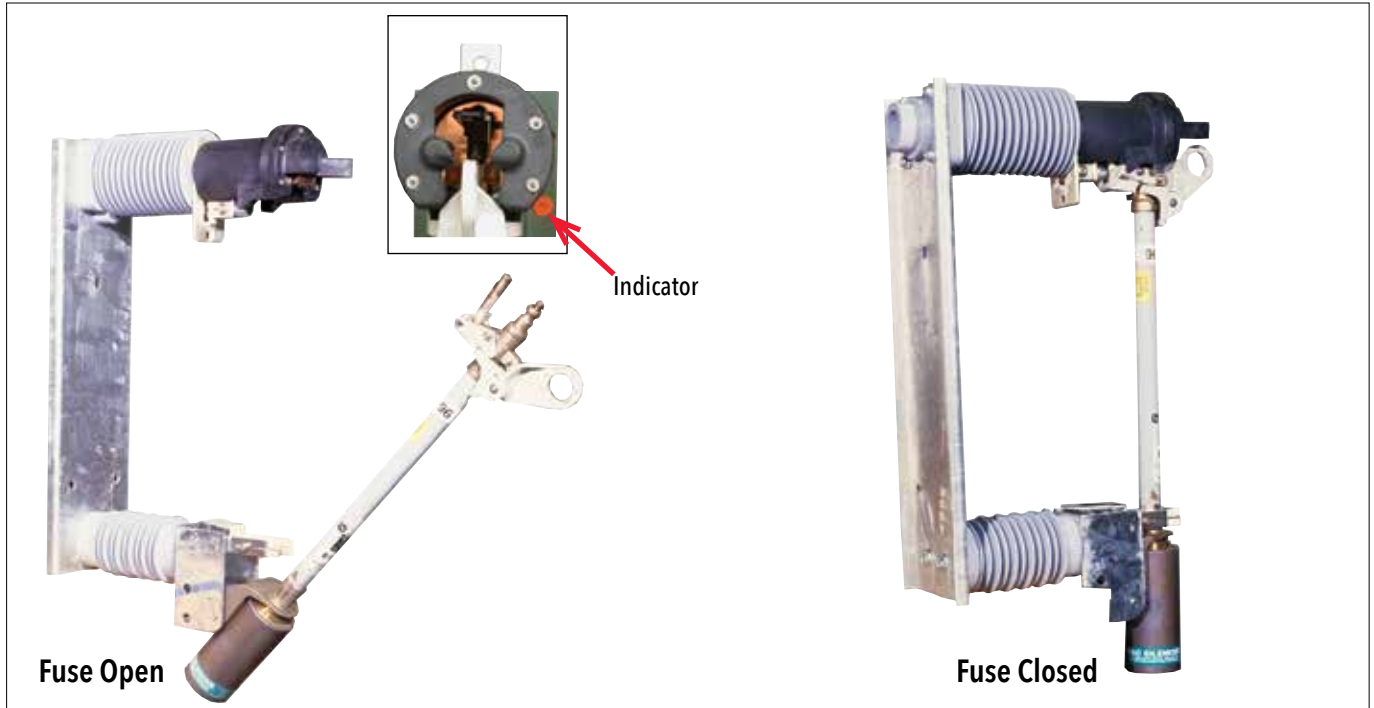
\*\*The 15kV NX fuse mountings use Code 5 or 6 fuses, order fuse adapters when using code 5 fuses in this mounting.

The 25kV NX fuse mountings use 23kV or 15.5kV Code 6 Fuses.





## FRONT CONNECTED AJ-20 AUTO-JET® LOAD-BREAK FUSE MOUNTINGS



Accommodates FP-3097 End Fittings and S&C SMU-20 Fuse Unit and also accommodates the Eaton DBU or Cooper CMU and S&C SML-20 fuse and end fittings. Fuse mounting plate is galvanized steel and fuse hinge is electrostatically plated with a hard durable yellow dichromate finish passes "Enclosure Coating System" Section 5 of ANSI C57.12.28. Inset shows positive latch indicator with red target extended, indicating that fuse is fully closed and latched.

Fuse Ratings					
Fuse Manufacturer and Type	Amperes RMS				Three-Phase MVA SYM
	Max. Cont.	Load-break ①	Interrupting SYM	Momentary & Three-Time Fault-Close ASYM ②③④	
<b>At 14.4 Nominal Voltage • 95kV BIL</b>					
S&C SM-4	200	200	12,500	20,000	310
Eaton DBU Cooper CMU and S&C SMU-20	200	200	14,000	22,400	350
<b>At 25kV Nominal Voltage • 125kV BIL</b>					
S&C SM-4	200	200	12,500	20,000	540
Eaton DBU Cooper CMU and S&C SMU-20	200	200	12,500	20,000	540

① In conjunction with Auto-Jet® Fuse Mountings.

② Ratings expressed in RMS amperes asymmetrical are 1.6 times the symmetrical values listed.

③ Unit overall ratings are limited to the lowest component rating. Ratings shown are for fuse mounting interrupter device.

④ Three-time fault-close rating: The Auto-Jet® fuse mounting can withstand a fuseholder or fuse with end fitting being closed into a fault of the magnitude specified three times when closed briskly without hesitation and remain operable and able to carry and interrupt the rated continuous current. (Must replace fuse after each interruption.) Refer to Federal Pacific instruction manual on FP-3097 end fittings, S&C instruction manual for SML-4Z holder and SML-20 end fitting and Eaton DBU instructions for maintenance required after each fault close or fault interruption.)

## Auto-Jet® Load-break Fuse

The Auto-Jet® fuse mounting has an integral stored-energy load-break device that permits single-pole live switching in single-phase or three-phase circuits by the use of an ordinary hotstick. In addition, when the fuse is fully inserted and positively latched, the EZ-Latch mechanism has a positive-latch indicator that provides a semaphore that extends. The integral load interrupter has a three-time fault-close duty cycle when, without hesitation, the fuse is briskly closed. The overall unit rating may be limited by the fuse rating.

### Illustration of Auto-Jet® Fuse Interrupter



Figure 1. Closed: Positive Latch Indicator Extended (see inset). Hookstick Ready To Open.



Figure 2. Main Contacts Have Parted, Puffer Spring Charged, and Interrupter Parted.



Figure 3. Holder Parted, Auto-jet® Reset For Next Closing Operation. Positive Latch Indicator Retracted and Out of View.

The same unique laminated air jet interrupter system used in the three-pole group-operated switches is applied in the Auto-Jet® load-break fuse mountings.

Figures 1 through 3 shown below illustrate the basic operation of the Auto-Jet® Interrupter device.

### Load-break Fuse Operation

1. Insuring latched fuse, verify extended Positive Latch Indicator. Install grappler tool in pull ring of fuse end fitting as shown. (Figure 1)
  2. Pull the fuse open with a single sharp continuous motion to the fully open position (45°). Maintain downward force on fuse pull ring until fuse opening motion has ceased. This downward force will prevent tendency for fuse to bounce toward the closed position.
- Caution:** Do not assume that an open fuse position indicates the fuse to be de-energized.
3. Re-install grappler onto fuse assembly with the cone positioned in the pull ring on the upper end fitting and with the fingers of the grappler tool cradling the tube of the fuse unit. Then, while grasping the hotstick firmly, lift fuse assembly up and out of mounting.
  4. Re-fuse using procedures as included with replacement fuse unit.
  5. Re-install grappler onto fuse assembly and place fuse assembly into fuse mounting in the 45° open (disconnect) position.
  6. Insert grappler prong into fuse pull ring and, while maintaining a downward force on the fuse pull rings, push briskly on the fuse assembly, completing the closing stroke in one motion.
  7. Before removing grappler from fuse pull ring, verify that the Positive Latch Indicator is extended indicating that the fuse is fully latched. If the indicator is not extended (DO NOT PULL OPEN), push firmly until the latch indicator target extends to assure that the fuse is completely closed and latched.

### Components Purchased Separately

#### 14.4kV Nominal

SM-4 fuse mounting requires one S&C Cat. No. 92352 SML-4Z fuseholder and one S&C SM-4 fuse refill.

SM-20 or DBU fuse mounting requires one set of Federal Pacific FP-3097 end fittings or S&C Cat. No. 3097 SML-20 fuse end fittings and one S&C SMU-20 fuse unit or one set of Federal Pacific FP-3097 end fittings or Eaton DBU Cat. Number DBU-EFID end fittings and one DBU fuse unit.

#### 25kV Nominal

SM-4 fuse mounting requires one S&C Cat. No. 92353 SML-4Z fuseholder and one S&C SM-4 fuse refill.

SMU-20 or DBU fuse mounting requires one set of Federal Pacific FP-3097 end fittings or S&C Cat. No. 3097 SML-20 fuse end fittings and one S&C SMU-20 fuse unit or one set of Federal Pacific FP-3097 end fittings or Eaton DBU Cat. Number DBU-EFID end fittings and one DBU fuse unit.