

# Open Style Service Entrance Switches

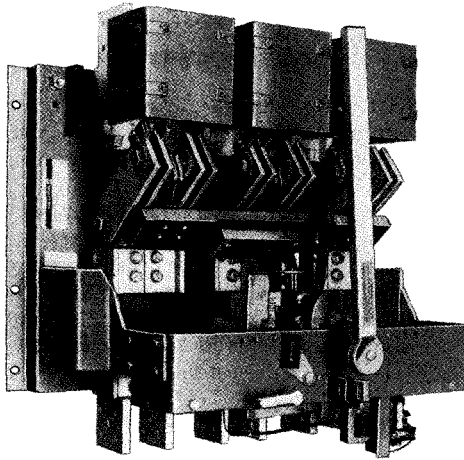
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**SQUARE D COMPANY**

**OPEN TYPE—SINGLE THROW—WITHOUT TERMINAL LUGS**



Open type manual front operated BOLT-LOC switches are load-break devices for switchboard and control apparatus installations. Fusible switches are furnished with provisions for NEMA Class L fuses and are rated for 100% continuous duty. Switches are supplied without terminal lugs.

**FRONT-OPERATED SWITCHES**

Volts	Ampere Rating	2-Pole—2-Wire		3-Pole—3-Wire	
		Type	Price	Type	Price
<b>FUSIBLE—(Prices do not include fuses)</b>					
240 V. AC 60 Hz	800	BLO-22080	\$1286.	BLO-32080	\$1500.
	1200	BLO-22120	1400.	BLO-32120	1654.
	1600	BLO-22160	1502.	BLO-32160	1791.
	2000	BLO-22200	1613.	BLO-32200	1927.
	2500	BLO-22250	1957.	BLO-32250	2313.
	3000	BLO-22300	2738.	BLO-32300	3226.
480 V. AC 60 Hz *	4000	BLO-22400	4213.	BLO-32400	5279.
	800	BLO-24080	1512.	BLO-34080	1654.
	1200	BLO-24120	1648.	BLO-34120	1823.
	1600	BLO-24160	1760.	BLO-34160	1959.
	2000	BLO-24200	1890.	BLO-34200	2098.
	2500	BLO-24250	2236.	BLO-34250	2486.
600 VAC	3000	BLO-24300	3172.	BLO-34300	3638.
	4000	BLO-26400	4429.	BLO-36400	5709.

**NOTE:** All Fusible Switches are factory warranted for 600 Volt dc application, replace the second numerical digit "4" with a "7" and add UPS to the catalog number. No price increase is involved.

**NOT FUSIBLE**

240 V. AC 60 Hz	800	BLO-22080-U	\$1226.	BLO-32080-U	\$1403.
	1200	BLO-22120-U	1342.	BLO-32120-U	1559.
	1600	BLO-22160-U	1439.	BLO-32160-U	1697.
	2000	BLO-22200-U	1551.	BLO-32200-U	1836.
	2500	BLO-22250-U	1905.	BLO-32250-U	2219.
	3000	BLO-22300-U	2740.	BLO-32300-U	3133.
480 V. AC 60 Hz *	4000	BLO-22400-U	4152.	BLO-32400-U	5188.
	800	BLO-24080-U	1452.	BLO-34080-U	1559.
	1200	BLO-24120-U	1590.	BLO-34120-U	1730.
	1600	BLO-24160-U	1692.	BLO-34160-U	1867.
	2000	BLO-24200-U	1831.	BLO-34200-U	2002.
	2500	BLO-24250-U	2174.	BLO-34250-U	2394.
600 VAC	3000	BLO-24300-U	3109.	BLO-34300-U	3448.
	4000	BLO-26400-U	4520.	BLO-36400-U	5618.

**\*NOTE:** For 600 V ac requirements, replace the second numerical digit "4" with a "6". No price increase.

**Approx. Weight (Lbs)**

Ampere Rating	2P.		3P.	
	2P.	3P.	2P.	3P.
800	110	125	2500	215
1200	115	135	3000	300
1600	120	150	4000	325
2000	200	250		520

**ORDERING INFORMATION REQUIRED**

1. Class, Type number and Form letters (if any) of switch.
2. Number of poles and wires.
3. Voltage and ampere rating.
4. If special features (other than listed) are desired, order as Class 9810, Type \_\_\_\_\_, Form \_\_\_\_\_, except (clearly describe special feature, see page 5 for modifications which are available).

Prices subject to change without notice



**OPEN TYPE**

**MODIFICATIONS AND SPECIAL FEATURES**

Item	Form Letter	Description	Price
1	K K1	<b>Key Interlock.</b> Provisions for Key interlock on manual switch .....	<b>\$ 190.</b>
		With Key interlock mounted on switch. (specify locking sequence) .....	<b>362.</b>
2	X1	<b>Auxiliary electrical switch, 10 ampere, with 1-N.O. and 1-N.C. contact.</b> Electrical ratings are the same as Class 9007, Type B switch .....	<b>170.</b>
3	BMFD	<b>Blown Main Fuse Detector Assembly</b> .....	<b>465.</b>
4	E	<b>Electric Trip Mechanism, Installed on manually operated switch. Avail-</b> able only on 3 pole, 3 wire or 3 pole, 4 wire 480/600 Volt ac rated switches (Not available on side operated switches) .....	<b>1015.</b>
5	I	<b>Inverted Feed Bolt-Loc Switches</b> —To accommodate bottom feed ser- vice conductors. Manually Operated—800 thru 3000 amperes at 240, 480 and 600 Volts ac (price manually operated switch and add 10%) .....	
		Electric Trip—800 thru 2500 amperes at 480 and 600 Volts ac (price manually operated switch with Form E modification and add 10%)..	
6	N08	<b>Neutral Assembly</b> 800 Amperes .....	<b>120.</b>
	N12	1200 Amperes .....	<b>125.</b>
	N16	1600 Amperes .....	<b>141.</b>
	N20	2000 Amperes .....	<b>185.</b>
	N25	2500 Amperes .....	<b>192.</b>
	N30	3000 Amperes .....	<b>201.</b>
7	N40	4000 Amperes (75% Rated Only).....	<b>319.</b>
		<b>Ground Fault Protection</b> (includes sensor, solid state relay and control transformer as separate items). Electric trip mechanism must be specified and priced as separate item.	
	G4▲ G5▲	Sensor having 8" x 20" conductor window GT 1224 (800-2500A) .....	<b>1395.</b>
8		Sensor having 11" x 26" conductor window GT 1530 (3000-4000A) .....	<b>1475.</b>
	CT-200 CT-400	<b>Capacitor trip</b> (800-1200A Electric Trip).....	<b>456.</b>
9		<b>Capacitor trip</b> (1600-4000A Electric Trip).....	<b>495.</b>
	M5	<b>Motor operator</b> (Motor Close—Motor Open) Operates on 120VAC, 60HZ Only .....	<b>3118.</b>

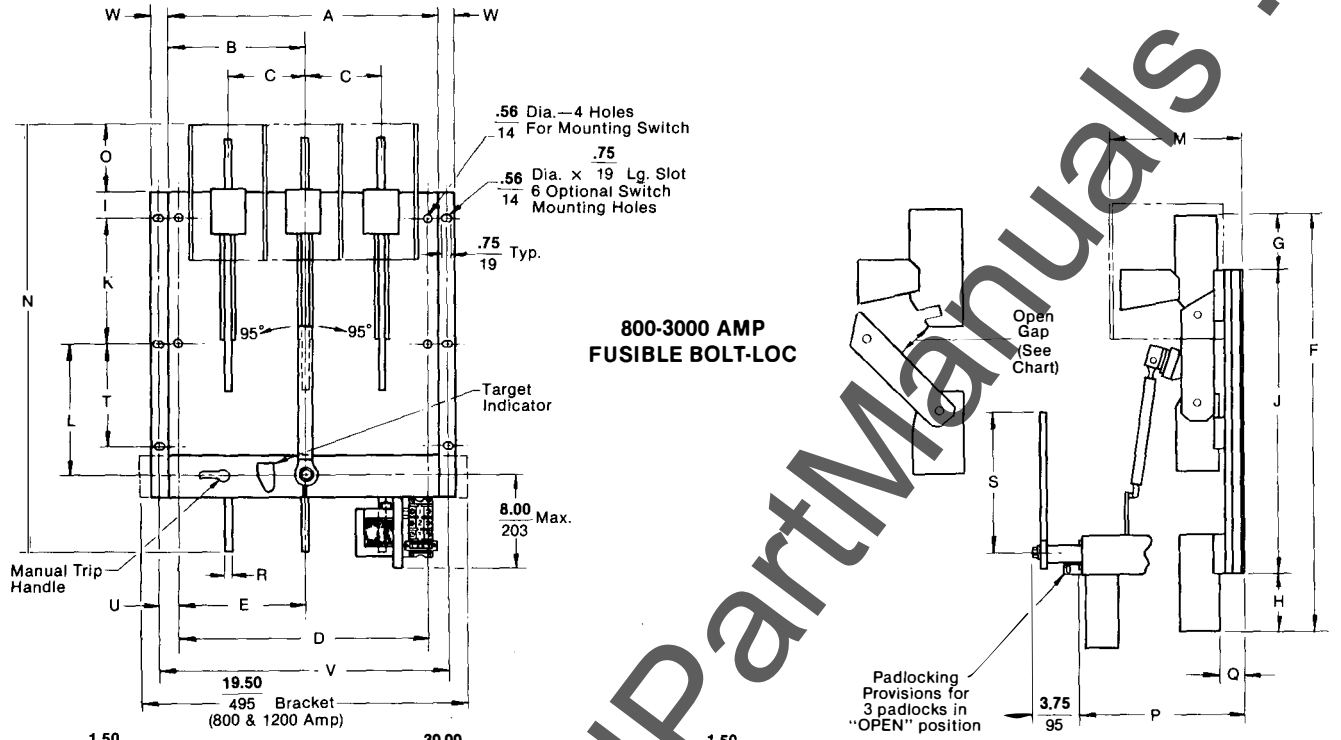
▲ Complete the form letter designation by adding appropriate ground fault relay number 1, 2, 3 or 5 for desired time delay as described below:

- 1 = .1 Sec. Delay
- 2 = .2 Sec. Delay
- 3 = .3 Sec. Delay
- 5 = .5 Sec. Delay

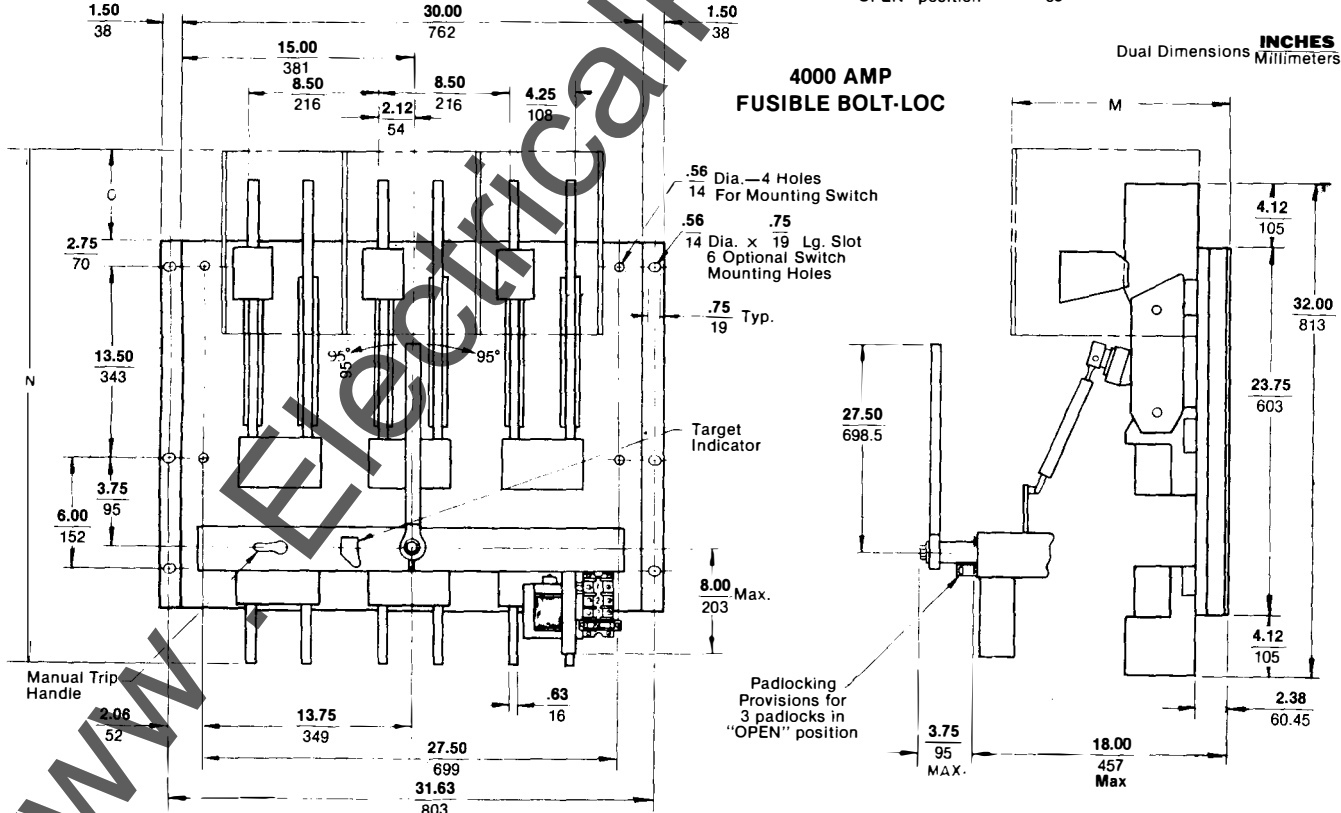
Prices subject to change without notice

**APPROXIMATE DIMENSIONS**

**NOT FOR CONSTRUCTION UNLESS ENDORSED**



**800-3000 AMP  
FUSIBLE BOLT-LOC**



**4000 AMP  
FUSIBLE BOLT-LOC**

Dual Dimensions **INCHES**  
Millimeters

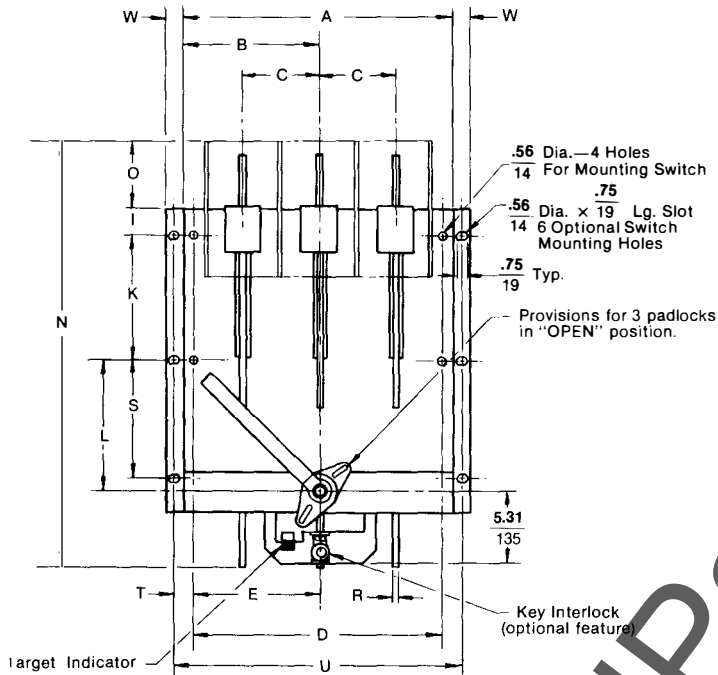


**MANUALLY OPERATED BOLT-LOC SWITCHES 240 & 480 & 600 VAC**

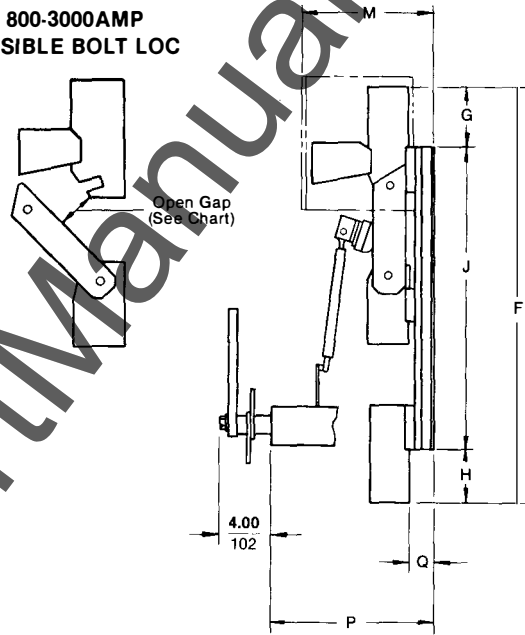
**UPRIGHT/INVERTED (800-3000 AMPERE)**

**DIMENSIONS**

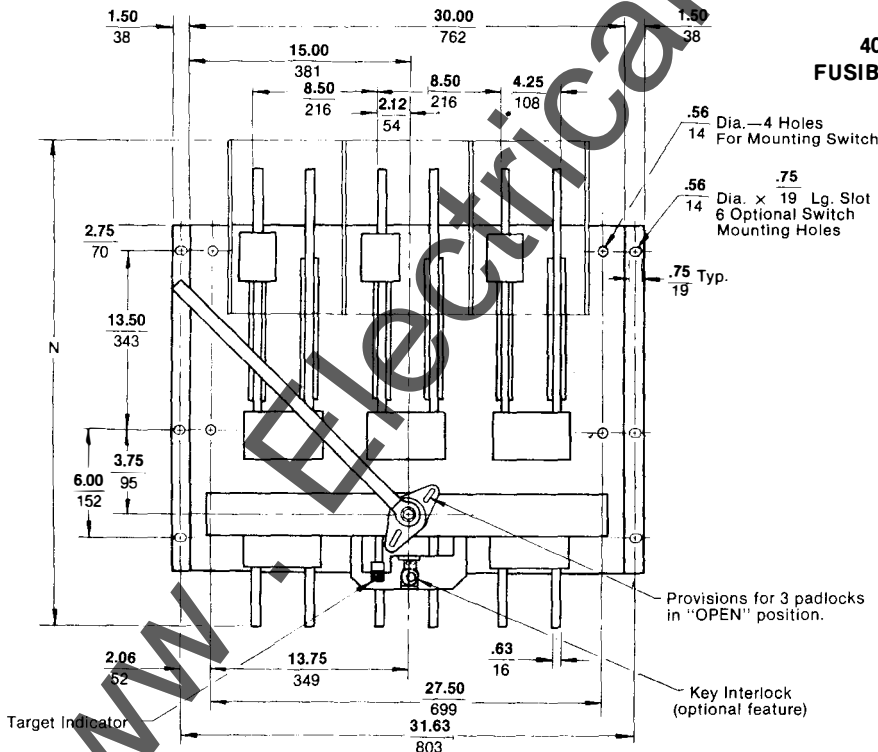
**NOT FOR CONSTRUCTION UNLESS ENDORSED**



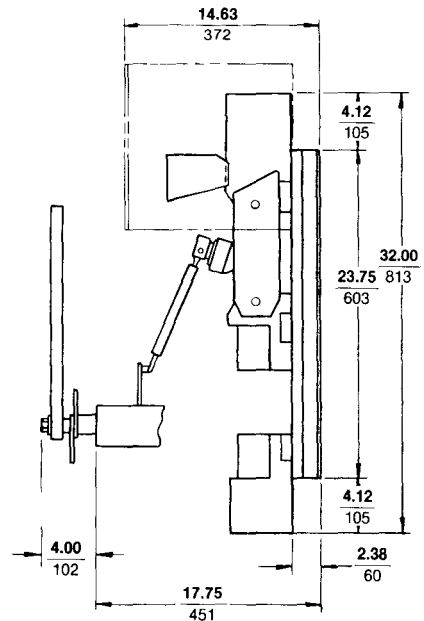
**800-3000AMP  
FUSIBLE BOLT LOC**



**4000 AMP  
FUSIBLE BOLT LOC**



Dual Dimensions **INCHES**  
Millimeters



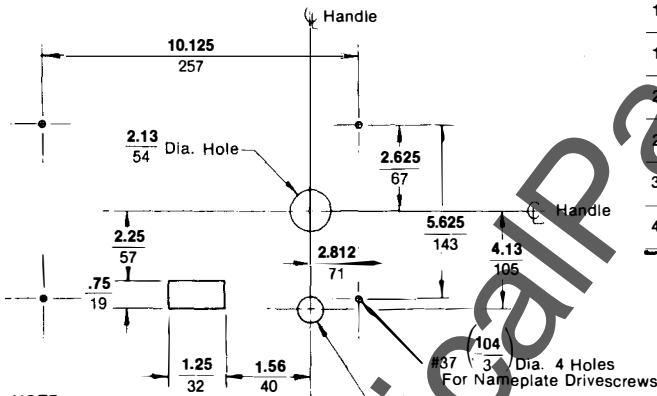
WWW.ElectricalPartManuals.com

**DIMENSIONS**

**NOT FOR CONSTRUCTION UNLESS ENDORSED**

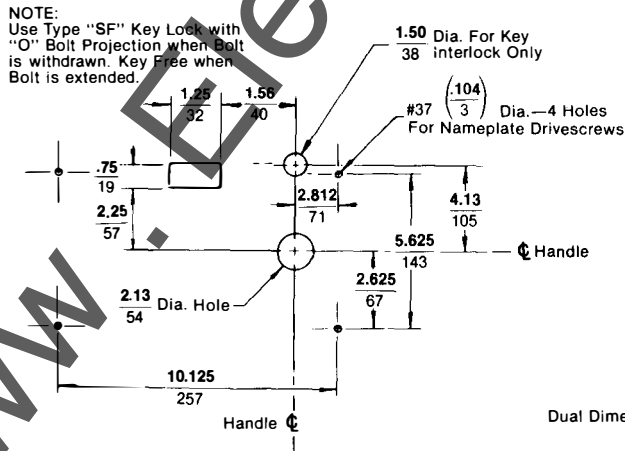
Amp	Terminal Drilling		240 Volt											480/600 Volt		P	Q	R				
			A	B	C	D	E	F	G	H	I	J	K	L	M				N	O	N	O
800	Detail No. 1	IN	16.50	8.25	4.50	15.00	7.50	25.25	2.38	2.38	1.75	20.50	9.00	8.25	11.50	25.25	2.38	28.25	5.38	11.75	1.75	.38
		mm	419	210	114	381	191	641	60	60	44	521	229	210	292	641	60	718	137	298	44	10
1200	Detail No. 1	IN	16.50	8.25	4.50	15.00	7.50	26.75	2.38	2.38	1.75	22.00	9.00	9.75	11.50	26.75	2.38	29.75	5.38	11.75	1.75	.38
		mm	419	210	114	381	191	679	60	60	44	559	229	248	292	679	60	756	137	298	44	10
1600	Detail No. 2	IN	19.50	9.75	5.50	18.00	9.00	30.25	4.12	4.12	1.75	22.00	9.00	9.75	14.50	28.50	2.38	33.25	7.13	11.75	1.75	.50
		mm	495	248	140	457	229	768	105	105	44	559	229	248	292	724	60	845	181	298	44	13
2000	Detail No. 3	IN	24.00	12.00	7.00	22.00	11.00	32.50	4.63	4.12	2.00	23.75	10.50	9.75	12.88	30.25	2.38	30.25	2.38	13.75	1.88	.63
		mm	610	305	178	559	279	826	118	105	51	603	267	248	327	768	60	768	60	349	48	16
2500	Detail No. 3	IN	24.00	12.00	7.00	22.00	11.00	32.50	4.63	4.12	2.00	23.75	10.50	9.75	12.88	31.25	3.38	31.25	3.38	13.75	1.88	.75
		mm	610	305	178	559	279	826	118	105	51	603	267	248	327	794	86	794	86	349	48	19
3000	Detail No. 4	IN	24.00	12.00	7.00	21.75	10.88	34.50	4.63	4.12	2.50	25.75	12.00	9.75	14.13	34.75	4.88	34.75	4.88	17.75	3.00	.75
		mm	610	305	178	552	276	876	118	105	64	654	305	248	359	883	124	883	124	451	76	19
4000	Detail No. 5	IN	—	—	—	—	—	—	—	—	—	—	—	—	—	33.13	5.25	33.13	13.00	—	—	—
		mm	—	—	—	—	—	—	—	—	—	—	—	—	—	842	133	841	330	—	—	—

**PANEL DRILLING—UPRIGHT  
(800-4000 AMP)**



NOTE:  
Use Type "SF" Key Lock with "O" Bolt Projection when Bolt is withdrawn. Key Free when Bolt is extended.

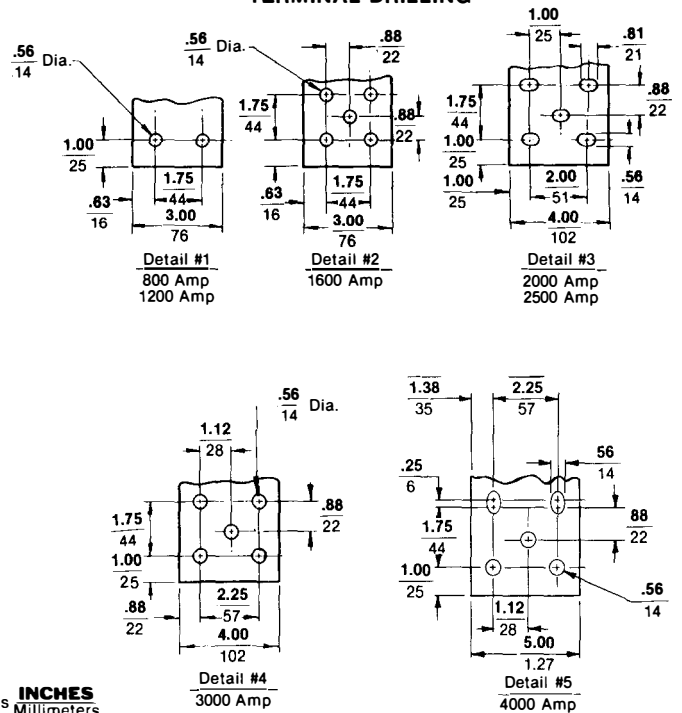
**PANEL DRILLING—INVERTED  
(800-3000 AMP)**



NOTE:  
Use Type "SF" Key Lock with "O" Bolt Projection when Bolt is withdrawn. Key Free when Bolt is extended.

Amp	Terminal Drilling		S	T	U	V	W	Open Gap		Handle Length
								Min.	Max.	
800	Detail No. 1	IN	7.50	1.56	18.12	—	1.50	2.38	2.75	12.00
		mm	191	40	460	—	38	60	70	305
1200	Detail No. 1	IN	9.00	1.56	18.12	—	1.50	2.38	2.75	12.00
		mm	229	40	460	—	38	60	70	305
1600	Detail No. 2	IN	9.00	1.56	21.12	—	1.50	2.38	2.75	12.00
		mm	229	40	536	—	38	60	70	305
2000	Detail No. 3	IN	9.00	2.06	26.12	—	1.75	2.38	2.75	14.00
		mm	229	52	663	—	44	60	70	356
2500	Detail No. 3	IN	9.00	2.06	26.12	—	1.75	2.38	2.75	14.00
		mm	229	52	663	—	44	60	70	356
3000	Detail No. 4	IN	9.00	1.94	25.62	—	1.50	2.63	2.88	18.00
		mm	229	49	651	—	38	67	73	457
4000	Detail No. 5	IN	—	—	—	—	—	2.00	2.50	21.50
		mm	—	—	—	—	—	51	57	457

**TERMINAL DRILLING**



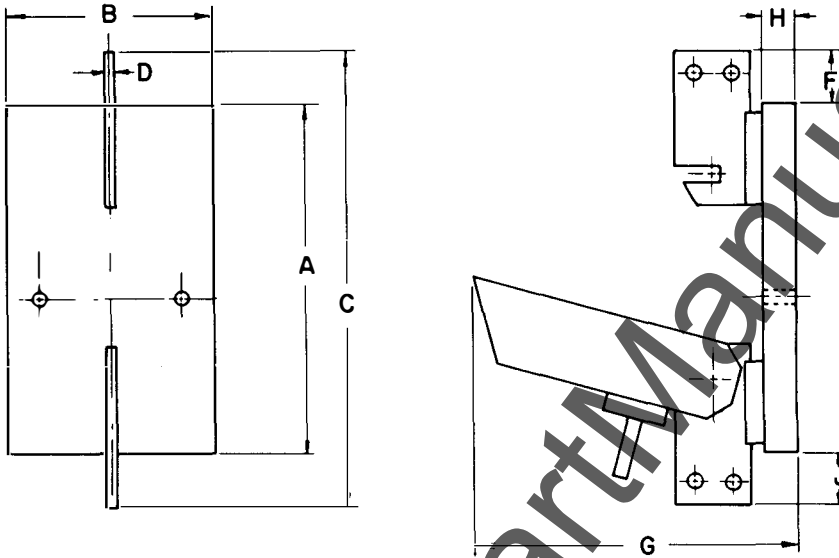
Dual Dimensions **INCHES**  
Millimeters



SINGLE THROW MANUALLY OPERATED, WITHOUT TERMINAL LUGS  
NOT FUSIBLE, FRONT CONNECTED, NON-LOAD BREAK

**DIMENSIONS**

NOT FOR CONSTRUCTION UNLESS ENDORSED



**FRONT CONNECTED BOLTED PRESSURE SWITCH DIMENSIONS**

Ampere Rating	(One-Pole)															
	A		B		C		D		F		G		H		J	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	13	330	8	203	17.75	451	.38	10	2.69	68	10.75	273	1.38	35	2.06	52
1600	13	330	8	203	20.5	521	.38	10	4.06	103	10.75	273	1.38	35	3.44	87
2000	13	330	8	203	21.5	546	.50	13	4.44	113	9.50	241	1.38	35	4.06	103
2500	16	406	8	203	23.5	597	.63	16	3.75	95	9.88	251	1.13	29	3.75	95
3000	16	406	8	203	23.5	597	.75	19	3.75	95	10.19	259	1.13	29	3.75	95
4000	16	406	12	305	21.5	546	.63	16	2.69	68	11.69	297	1.81	46	2.69	68

Ampere Rating	(Two-Pole)															
	A		B		C		D		F		G		H		J	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	13	330	13.5	343	17.75	451	.38	10	2.69	68	10.75	273	1.38	35	2.06	52
1600	13	330	13.5	343	20.5	521	.38	10	4.06	103	10.75	273	1.38	35	3.44	87
2000	13	330	13.5	343	21.5	546	.50	13	4.44	113	9.50	241	1.38	35	4.06	103
2500	16	406	14	356	23.5	597	.63	16	3.75	95	9.88	251	1.13	29	3.75	95
3000	16	406	14	356	23.5	597	.75	19	3.75	95	10.19	259	1.13	29	3.75	95
4000	N/A															

Ampere Rating	(Three-Pole)															
	A		B		C		D		F		G		H		J	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	13	330	19	483	17.75	451	.38	10	2.69	68	10.75	273	1.38	35	2.06	52
1600	13	330	19	483	20.5	521	.38	10	4.06	103	10.75	273	1.38	35	3.44	87
2000	13	330	19	483	21.5	546	.50	13	4.44	113	9.50	241	1.38	35	4.06	103
2500	16	406	20	508	23.5	597	.63	16	3.75	95	9.88	251	1.13	29	3.75	95
3000	16	406	20	508	23.5	597	.75	19	3.75	95	10.19	259	1.13	29	3.75	95
4000	N/A															

Dual Dimensions INCHES  
Millimeters





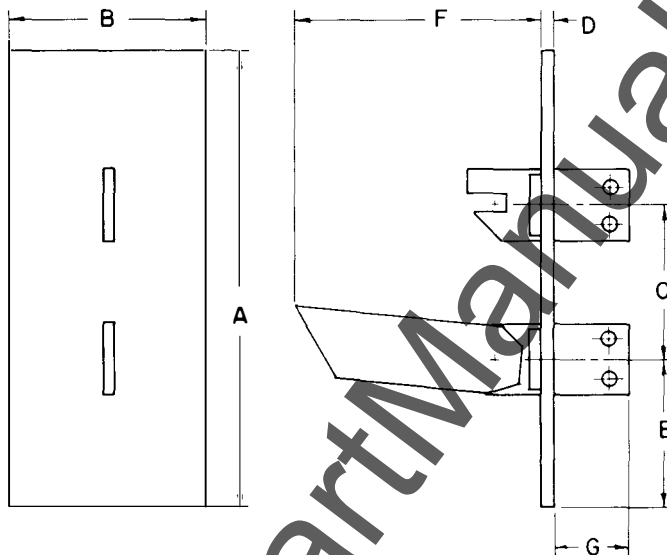
# OPEN TYPE BOLTED CONTACT SWITCHES

CLASS  
9810

SINGLE-THROW, MANUALLY OPERATED, WITHOUT TERMINAL LUGS  
NOT FUSIBLE, BACK CONNECTED, NON-LOAD BREAK

## DIMENSIONS

NOT FOR CONSTRUCTION UNLESS ENDORSED



### BACK CONNECTED BOLTED PRESSURE SWITCH DIMENSIONS

Ampere Rating	(One-Pole)													
	A		B		C		D		E		F		G	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	18.50	470	8	203	6.31	160	.50	13	6.19	157	10	254	2.75	70
1600	18.50	470	8	203	6.31	160	.50	13	6.19	157	10	254	3.75	95
2000	18.50	470	8	203	6.31	160	.50	13	6.19	157	8.88	225	3.75	95
2500	20.50	521	8	203	7.31	186	.75	19	6.56	167	8.75	222	4.50	114
3000	20.50	521	8	203	7.31	186	.75	19	6.56	167	8.75	222	4.50	114

Ampere Rating	(Two-Pole)													
	A		B		C		D		E		F		G	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	18.50	470	13	330	6.31	160	.50	13	6.19	157	10	254	2.75	70
1600	18.50	470	13	330	6.31	160	.50	13	6.19	157	10	254	3.75	95
2000	18.50	470	13	330	6.31	160	.50	13	6.19	157	8.88	225	3.75	95
2500	20.50	521	13.50	343	7.31	186	.75	19	6.56	167	8.75	222	4.50	114
3000	20.50	521	13.50	343	7.31	186	.75	19	6.56	167	8.75	222	4.50	114

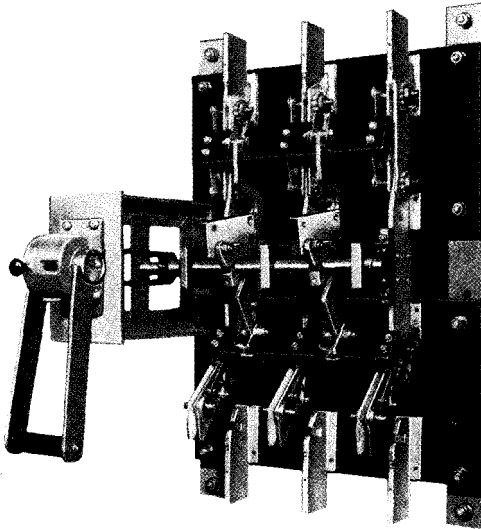
Ampere Rating	(Three-Pole)													
	A		B		C		D		E		F		G	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1200	18.50	470	18	457	6.31	160	.50	13	6.19	157	10	254	2.75	70
1600	18.50	470	18	457	6.31	160	.50	13	6.19	157	10	254	3.75	95
2000	18.50	470	18	457	6.31	160	.50	13	6.19	157	8.88	225	3.75	95
2500	20.50	521	19	483	7.31	186	.75	19	6.56	167	8.75	222	4.50	114
3000	20.50	521	19	483	7.31	186	.75	19	6.56	167	8.75	222	4.50	114

Dual Dimensions **INCHES**  
Millimeters



**TYPE TS DOUBLE THROW SWITCHES**

**DOUBLE-THROW, MANUALLY OPERATED, NON-LOAD BREAK  
OPEN TYPE, NOT FUSIBLE, WITHOUT LUGS**



Type TS double throw switches provide a compact means of selecting either of two loads or two sources of supply.

600 Volts AC/DC, Manually Operated, Non-Load Break				
Poles	Wires	Ampere Rating	Open Type	
			Type	Price
2	2	1200	TSO-26120	<b>\$3297.</b>
		2500	TSO-26250	<b>4471.</b>
		4000	TSO-26400	<b>8857.</b>
3	3	1200	TSO-36120	<b>\$ 3646.</b>
		2500	TSO-36250	<b>4973.</b>
		4000	TSO-36400	<b>11,421</b>

**MODIFICATIONS AND SPECIAL FEATURES**

Item	Form Letter	Description	Price
1.		Auxiliary switch, 10 ampere continuous, with 1-N.O. and 1-N.C. contact. Electrical ratings are the same as Class 9007, Type B switch.	
	X1	One auxiliary switch added only to one throw (Specify top or bottom contact location) .....	<b>\$172.</b>
	X2	Two auxiliary switches, one added to each throw .....	<b>344.</b>
2.		Key Interlock on Manually Operated Switch:	
	K	Provisions for (Without lock) .....	<b>188.</b>
	K1	With lock mounted (specify locking sequence) .....	<b>362.</b>

Refer all inquiries and orders, for Type TS Double Throw Switches, with the following modifications or special features to the local assembly plant.

1. Bus duct terminations.
2. Provisions for current transformers and metering.
3. Fuse provisions

**ORDERING INFORMATION REQUIRED**

1. Class, Type number and Form letters (if any) of switch.
2. Number of poles.
3. Voltage and ampere rating.
4. If special features (other than listed on this page) are desired, contact the factory through the local Square D Field Office.

Prices subject to change without notice

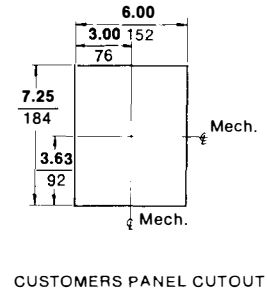
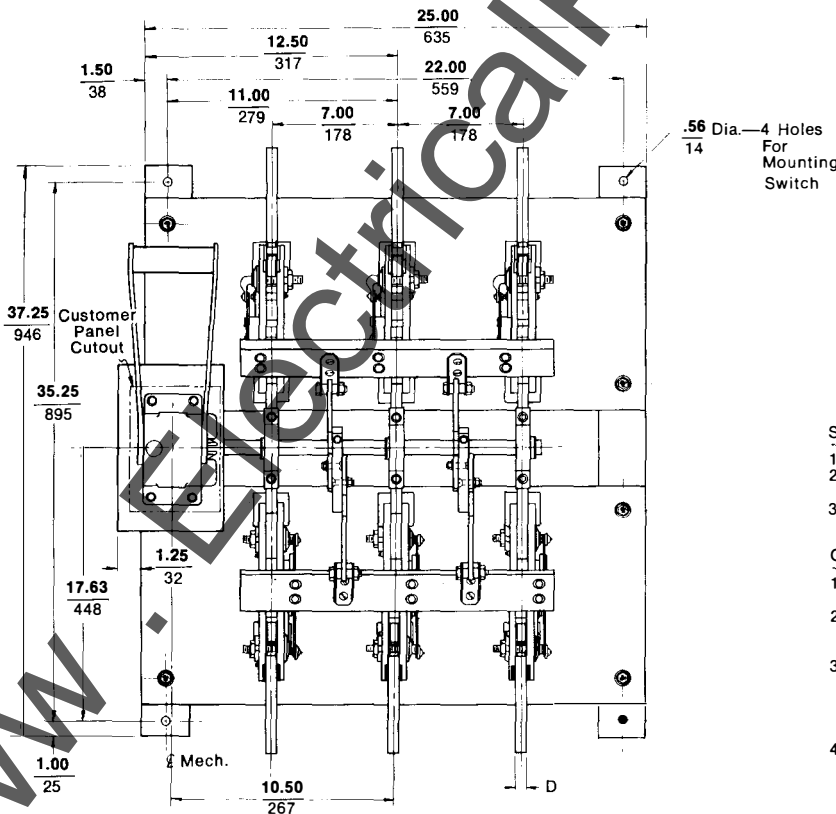
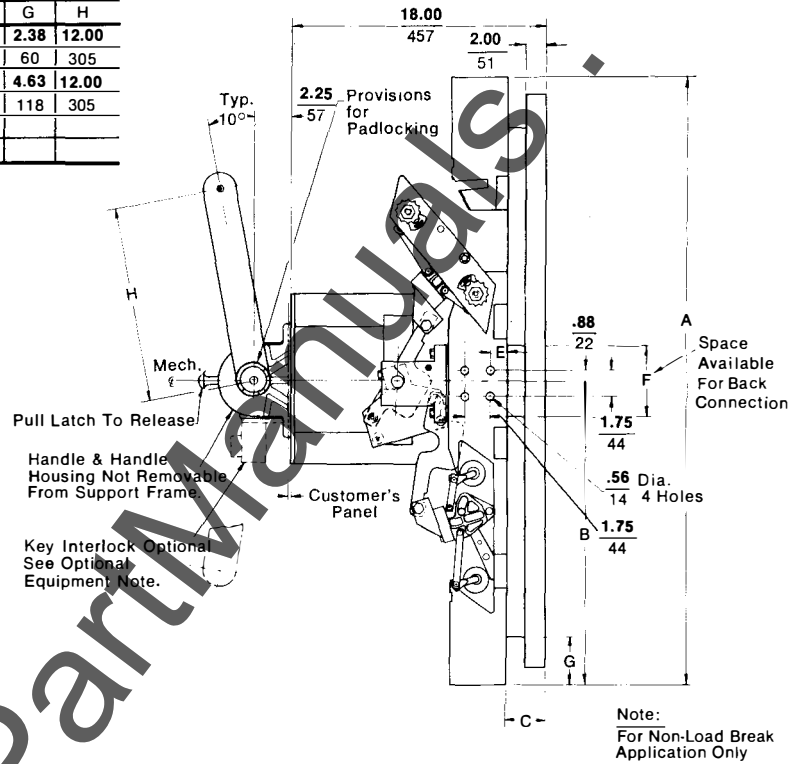
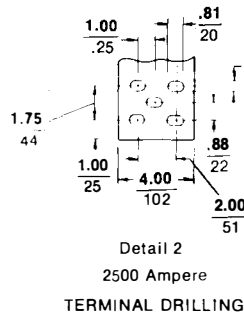
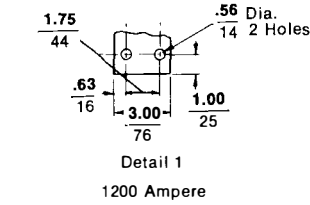


# TYPE TS DOUBLE THROW SWITCH

CLASS  
9810

## APPROXIMATE DIMENSIONS

AMP	TERMINAL DRILLING	A	B	C	D	E	F	G	H	
1200	Detail #1	IN	36.38	18.19	2.88	.375	.63	4.63	2.38	12.00
1200	Detail #1	MM	924	462	73	9	16	118	60	305
2500	Detail #2	IN	41.75	20.88	2.63	.750	1.13	5.00	4.63	12.00
2500	Detail #2	MM	1060	530	67	19	29	127	118	305
4000			CONSULT FACTORY							
4000										



### Standard Equipment

1. All current carrying parts silver plated.
2. Handle is latched in L1, Off, and L2 positions.
3. Padlocking holes in center off position only.

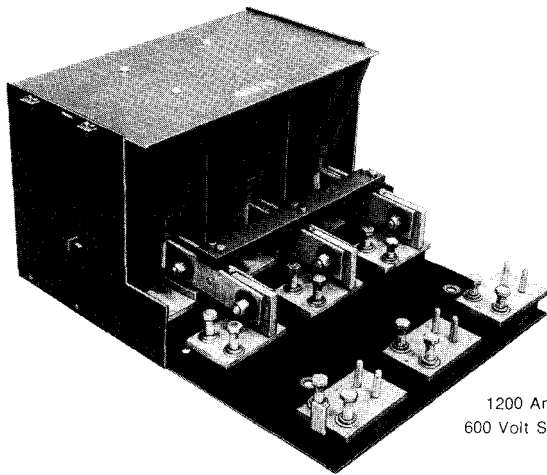
### Optional Equipment

1. Switch is normally supplied without provisions for Key interlocks.
2. Switch can be supplied with provisions for 1 or 2 type SB key interlocks if required.
3. Switch can be supplied with 1 or 2 type SB key interlocks with 5/8" dia. bolt, 1.50" bolt projection when bolt is withdrawn, .69" travel, key removable when bolt is extended.
4. Locking arrangements to be specified on orders.

Dual Dimensions **INCHES**  
Millimeters



**SINGLE-THROW, LOAD-BREAK, DEAD FRONT**



1200 Ampere  
600 Volt Switch

make, quick-break operators are listed by the Underwriters' Laboratories.

The Type AV switch is an economical load break device which incorporates the proven reliability of the Square D safety switch with the high fault capacity of the Square D BOLT-LOC® switch. Type AV switches are particularly suited for use as service entrance or circuit protecting equipment.

**Construction Details:** Type AV switches are front connected. All current-carrying parts are assembled with high-conductivity copper which is silver-plated before assembly.

Multiple plate type arc-quenchers and replaceable high temperature melting alloy arc-tips are supplied on the 600-volt versions of the switch. Unique elongated construction of the expendable blades of the 240-volt switch confines pitting and burning to the non-current-carrying ends of the blades. Phase barriers are made of flame-retardant, glass-polyester material.

Fusible switches are supplied with provisions for NEMA Class L fuses. Fuse mounting bolts are supplied with each fusible switch.

Switches are supplied without lugs.

**Ratings:** Type AV switches are available in current ratings of 800 and 1200 amperes at 240 and 600 volts AC. When equipped with NEMA Class L fuses these switches are 80% rated and are suitable for use on systems with fault capacity of 200,000 amperes at 240 VAC and at 600 VAC. Fusible Type AV switches with quick-

**OPEN TYPE SWITCHES WITHOUT LUGS**

Volts	Ampere Rating	2 Pole—2 Wire			2 Pole—3 Wire*			3 Pole—3 Wire		
		Type	Price	Weight	Type	Price	Weight	Type	Price	Weight
<b>FUSIBLE (PRICES DO NOT INCLUDE FUSES)</b>										
240 VAC	800	AVO-22080	\$669.	45	AVO-22080-N	\$ 852.	50	AVO-32080	\$ 910.	55
	1200	AVO-22120	801.	50	AVO-22120-N	1080.	55	AVO-32120	1174.	60
600 VAC	800	AVO-26080	\$860.	55	AVO-26080-N	\$1042.	60	AVO-36080	\$1261.	65
	1200	AVO-26120	1033.	60	AVO-26120-N	1312.	65	AVO-36120	1521.	70
<b>NOT-FUSIBLE</b>										
240 VAC	800	AVO-22080-U	\$618.	40	AVO-22080-NU	\$ 780.	45	AVO-32080-U	\$ 834.	50
	1200	AVO-22120-U	734.	45	AVO-22120-NU	887.	48	AVO-32120-U	1069.	50
600 VAC	800	AVO-26080-U	\$799.	50	AVO-26080-NU	\$ 961.	55	AVO-36080-U	\$1174.	60
	1200	AVO-26120-U	961.	55	AVO-26120-NU	1183.	60	AVO-36120-U	1388.	65

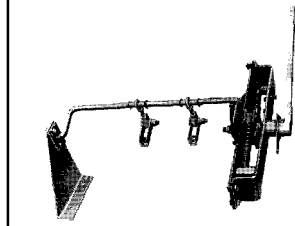
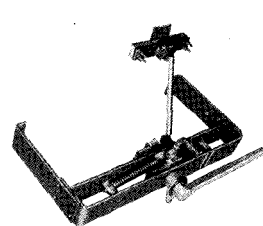
\*Suitable for use on 240-volt, three-phase, three-wire grounded "B" phase systems. Underwriters' Laboratories do not list 600-volt, two pole, three wire switches for use on single-phase, three-wire or three-phase, three-wire grounded "B" phase systems. Three-pole, three-wire switches must be used on these applications.

**Operators:** To provide the maximum of inventory flexibility, basic switches and two types of operators are listed as separate items. Both operators have provisions for padlocking the switch in the open position.

**ORDERING INFORMATION REQUIRED**

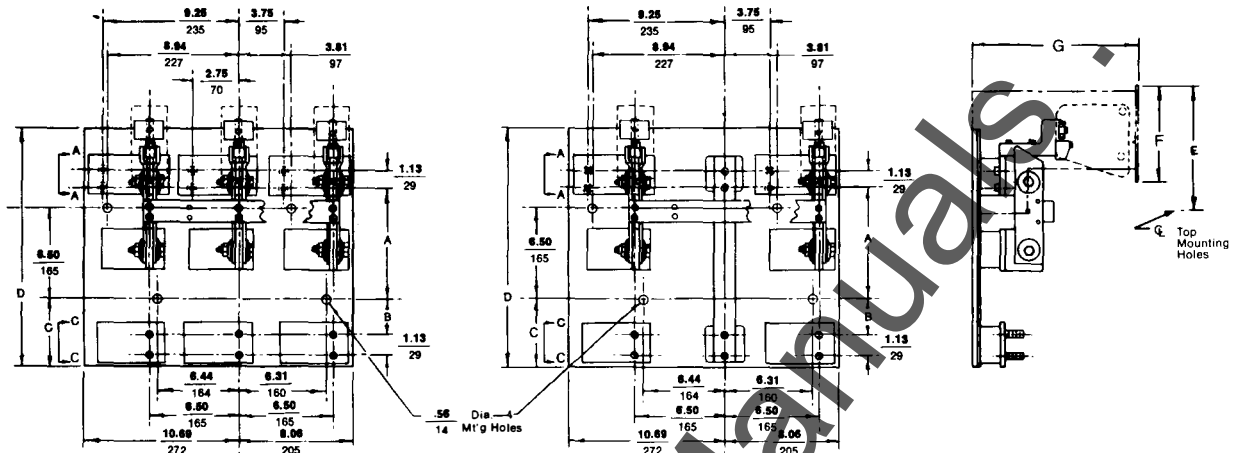
- 1—Class and type number of switch.
- 2—Number of poles and wires.
- 3—Voltage and ampere rating.
- 4—Class and type number of operator.

Quick-Make—Quick-Break Operators					
Front			Side		
Type	Price	Weight	Type	Price	Weight
AVFQ-1	\$575.	30	AVSQ-1	\$575.	30



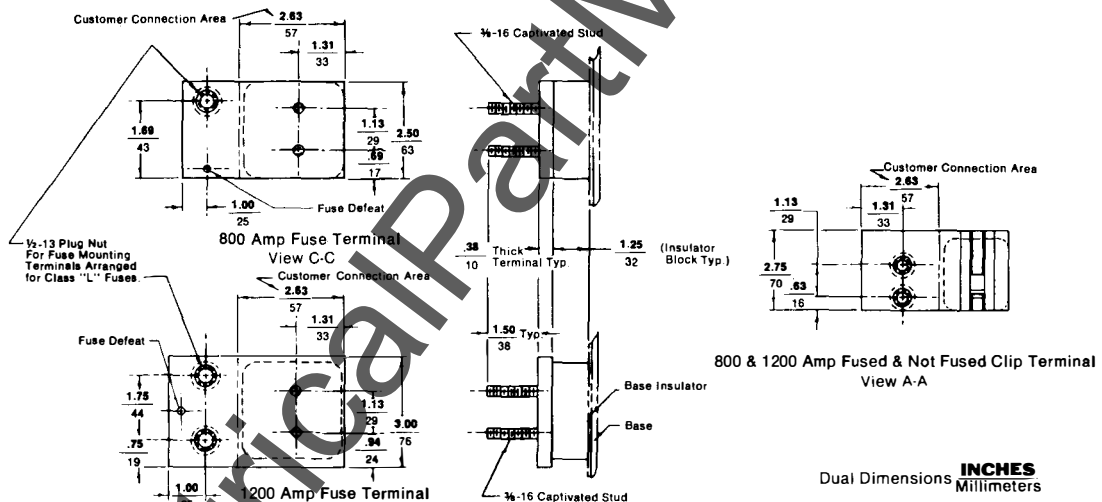
SINGLE-THROW, LOAD-BREAK, DEAD FRONT  
DIMENSIONS

NOT FOR CONSTRUCTION UNLESS ENDORSED



800 Amp; 3 Pole; 3 Wire; Fusible AV Switch  
1200 Amp; 3 Pole; 3 Wire; Fusible AV Switch  
(See Chart)

800 Amp; 2 Pole; 3 Wire; Fusible AV Switch  
1200 Amp; 2 Pole; 3 Wire; Fusible AV Switch  
(See Chart)



Dual Dimensions INCHES  
Millimeters

FUSIBLE FOR CLASS L FUSES

Ampere Rating	Pole & Wire	Volts	Type	A	B	C	D	E 240	E 600	F 240	F 600	G 240	G 600
800	*2 P—2 W	240 AC	AVO-22080	8.38 213	2.06 52	4.25 108	16.50 419	8.38 213	12.38 314	7.00 178	11.00 279	11.25 286	12.31 313
		600 AC	AVO-26080										
	*2 P—3 W	240 AC	AVO-22080-N										
		600 AC	AVO-26080-N										
	3 P—3 W	240 AC	AVO-32080										
		600 AC	AVO-36080										
1200	*2 P—2 W	240 AC	AVO-22120	8.38 213	3.19 95	5.25 133	17.50 444	8.38 213	12.38 314	7.00 178	11.00 279	11.25 286	12.31 313
		600 AC	AVO-26120										
	*2 P—3 W	240 AC	AVO-22120-N										
		600 AC	AVO-26120-N										
	3 P—3 W	240 AC	AVO-32120										
		600 AC	AVO-36120										

\*Two-pole—3-wire switches have center pole omitted.

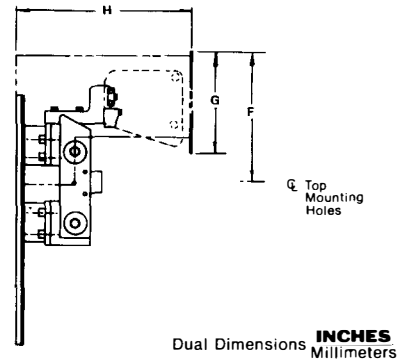
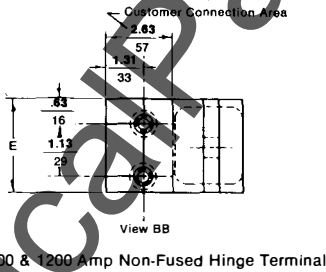
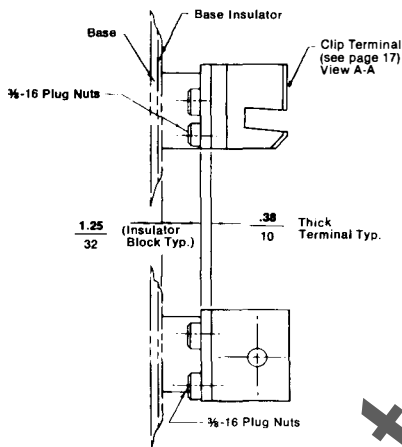
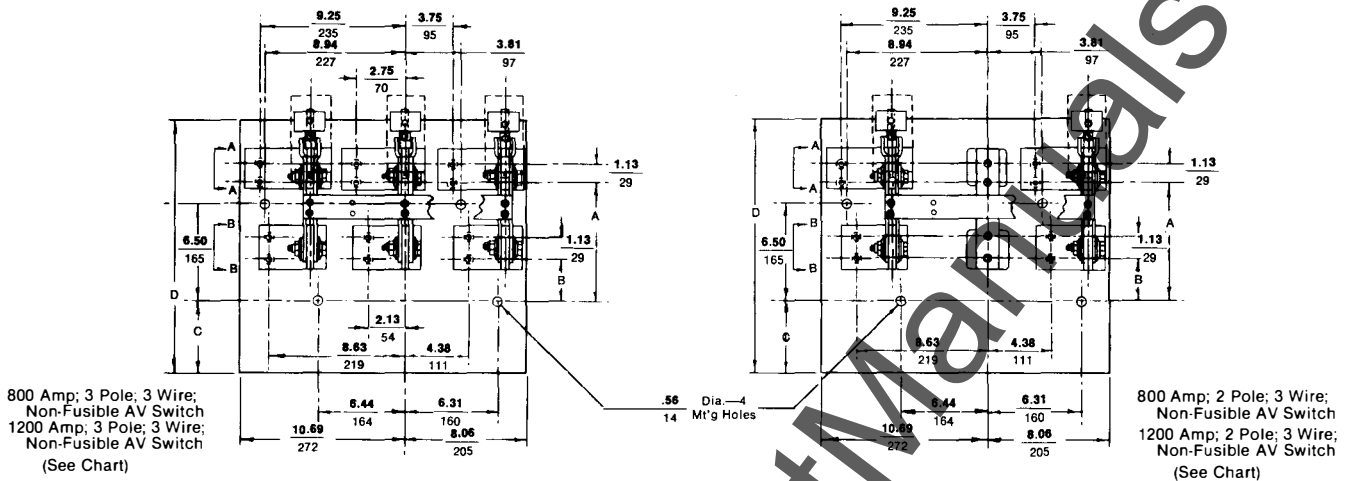
†Two-pole—3-wire switches have neutral in place of center pole and are suitable for use on 240-volt, three phase, three-wire grounded "B" phase systems.



SINGLE-THROW, LOAD-BREAK, DEAD FRONT

DIMENSIONS

NOT FOR CONSTRUCTION UNLESS ENDORSED



NOT-FUSIBLE

Ampere Rating	Pole & Wire	Volts	Type	A	B	C	D	E	F 240	F 600	G 240	G 600	H 240	H 600
				213	89	108	419	64	213	314	178	279	286	313
800	*2 P—2 W	240 AC	AVO-22080-U											
		600 AC	AVO-26080-U											
	*2 P—3 W	240 AC	AVO-22080-NU	8.38	3.50	4.25	16.50	2.50	8.38	12.38	7.00	11.00	11.25	12.31
		600 AC	AVO-26080-NU	213	89	108	419	64	213	314	178	279	286	313
	3 P—3 W	240 AC	AVO-32080-U											
		600 AC	AVO-36080-U											
1200	*2 P—2 W	240 AC	AVO-22120-U											
		600 AC	AVO-26120-U											
	*2 P—3 W	240 AC	AVO-22120-NU	8.38	3.75	5.25	17.50	3.00	8.38	12.38	7.00	11.00	11.25	12.31
		600 AC	AVO-26120-NU	213	95	133	444	76	213	314	178	279	286	313
	3 P—3 W	240 AC	AVO-32120-U											
		600 AC	AVO-36120-U											

\*Two-pole—3-wire switches have center pole omitted.

▲Two-pole—3-wire switches have neutral in place of center pole as noted and are suitable for use on 240-volt, three phase, three-wire grounded "B" phase systems.



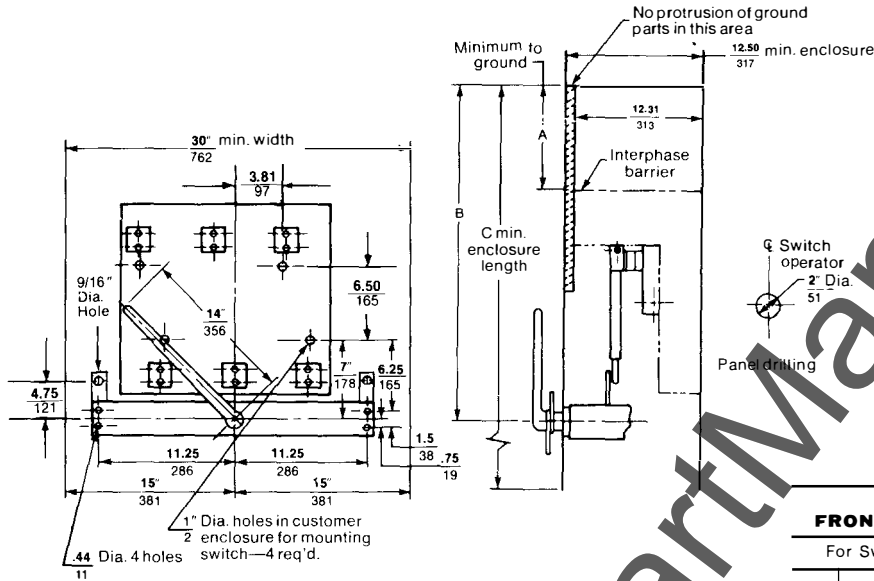
# TYPE AV SWITCHES

CLASS  
9820

## SINGLE-THROW, LOAD-BREAK, DEAD FRONT

### DIMENSIONS

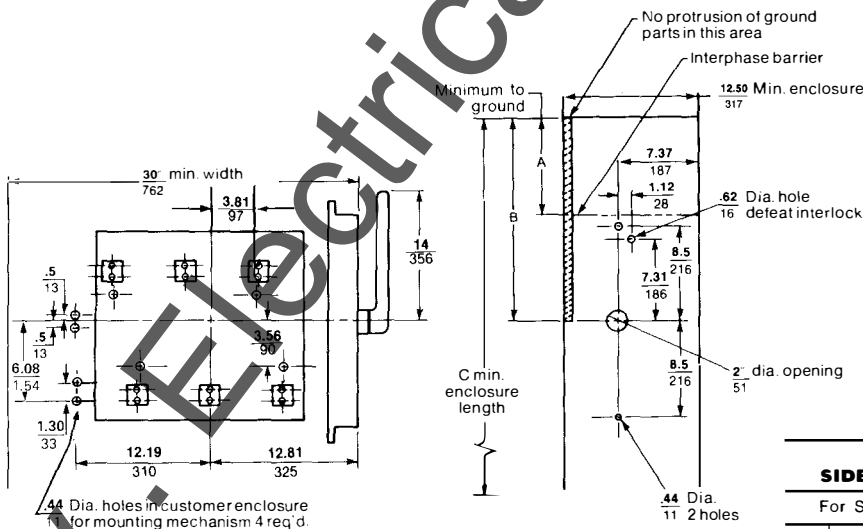
NOT FOR CONSTRUCTION UNLESS ENDORSED



**TYPE AVFQ-1  
FRONT OPERATOR, QUICK-MAKE, QUICK-BREAK**

For Switchboard Mounting				For Safety Switch Mounting			
A	B	C	Min. louver opening in door	A	B	C	Min. louver opening
7.5	27.5	30	40 sq. inches	9	29	48	Not required
190	698	762	258 CM <sup>2</sup>	229	737	1219	

NOTE: See Pages 17 & 18 for Switch Dimensions



**TYPE AVSQ-1  
SIDE OPERATOR, QUICK-MAKE, QUICK-BREAK**

For Switchboard Mounting				For Safety Switch Mounting			
A	B	C	Min. louver opening in door	A	B	C	Min. louver opening
7.5	17.0	30	40 sq. inches	9	18.5	48	Not required
190	432	762	258 CM <sup>2</sup>	229	470	1219	

Dual Dimensions **INCHES**  
Millimeters



SINGLE THROW, LOAD-BREAK, DEAD FRONT

SUGGESTED SPECIFICATIONS

1. Switches shall be of the visible blade type.
2. Fusible switches shall be arranged for NEMA Class L current-limiting fuses and shall be capable of withstanding the effects of a 200,000 ampere fault at 240 VAC or at 600 VAC.
3. All current-carrying parts shall be of high-conductivity copper which is silver-plated.
4. Switches with butt type contacts will not be acceptable.
5. A mechanical interlock shall be provided to prevent opening the compartment door or fuse access door when the switch is closed.
6. Switches shall be equipped with (choose one of the following):  
Front operated, quick-make, quick-break operator  
Side-operated, quick-make, quick-break operator
7. Switches shall be manufactured and tested, in accordance with UL standards when applicable and shall be Type AV as manufactured by the Square D Company.

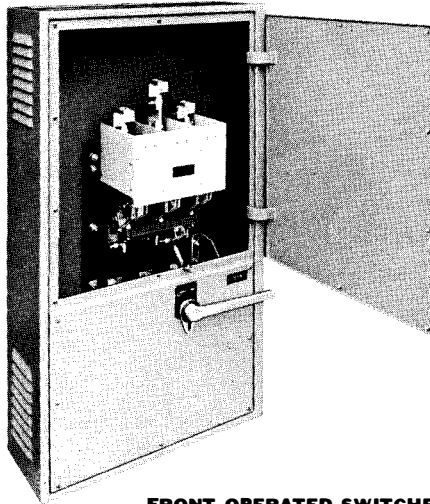






CLASS	<b>9810</b>
PAGE	<b>1</b>
<b>DECEMBER, 1968</b>	

## ENCLOSED BOLT-LOC SWITCHES Single-Throw, Bolted-Contact



Class 9810 Bolt-Loc switches are heavy-duty, bolted contact switches designed for load-break operation in commercial and industrial applications. Fusible switches are furnished with provisions for NEMA standard Class L fuses. They are available for both AC and DC installations. The listing shown below covers front-operated switches for general-purpose AC installations. Side-operated switches for mill applications are listed on Page 2.

### FRONT-OPERATED SWITCHES IN GENERAL PURPOSE (NEMA 1) ENCLOSURES

Volts	Ampere Rating	2-Pole—2-Wire		2-Pole—3-Wire *		3-Pole—3-Wire		3-Pole—4-Wire	
		Type	Price	Type	Price	Type	Price	Type	Price

#### FUSIBLE —(Prices do not include fuses)

240V. AC	800	BLG-22080	<b>\$1477.</b>	BLG-22080-N	<b>\$1617.</b>	BLG-32080	<b>\$1641.</b>	BLG-32080-N	<b>\$1760.</b>
	1200	BLG-22120	<b>1572.</b>	BLG-22120-N	<b>1737.</b>	BLG-32120	<b>1766.</b>	BLG-32120-N	<b>1911.</b>
	1600	BLG-22160	<b>1752.</b>	BLG-22160-N	<b>1945.</b>	BLG-32160	<b>1967.</b>	BLG-32160-N	<b>2160.</b>
	2000	BLG-22200	<b>1819.</b>	BLG-22200-N	<b>2049.</b>	BLG-32200	<b>2083.</b>	BLG-32200-N	<b>2313.</b>
	2500	BLG-22250	<b>2053.</b>	BLG-22250-N	<b>2354.</b>	BLG-32250	<b>2399.</b>	BLG-32250-N	<b>2700.</b>
	3000	BLG-22300	<b>2845.</b>	BLG-22300-N	<b>3221.</b>	BLG-32300	<b>3296.</b>	BLG-32300-N	<b>3672.</b>
	4000	BLG-22400	<b>3430.</b>	BLG-22400-N	<b>3897.</b>	BLG-32400	<b>4437.</b>	BLG-32400-N	<b>4903.</b>
480V. AC	800	BLG-24080	<b>1477.</b>	BLG-24080-N	<b>1617.</b>	BLG-34080	<b>1641.</b>	BLG-34080-N	<b>1760.</b>
	1200	BLG-24120	<b>1767.</b>	BLG-24120-N	<b>1931.</b>	BLG-34120	<b>1960.</b>	BLG-34120-N	<b>2105.</b>
	1600	BLG-24160	<b>1929.</b>	BLG-24160-N	<b>2122.</b>	BLG-34160	<b>2161.</b>	BLG-34160-N	<b>2289.</b>
	2000	BLG-24200	<b>1977.</b>	BLG-24200-N	<b>2208.</b>	BLG-34200	<b>2278.</b>	BLG-34200-N	<b>2508.</b>
	2500	BLG-24250	<b>2211.</b>	BLG-24250-N	<b>2512.</b>	BLG-34250	<b>2593.</b>	BLG-34250-N	<b>2894.</b>
	3000	BLG-24300	<b>3018.</b>	BLG-24300-N	<b>3392.</b>	BLG-34300	<b>3486.</b>	BLG-34300-N	<b>3861.</b>
	4000	BLG-24400	<b>3569.</b>	BLG-24400-N	<b>4036.</b>	BLG-34400	<b>4631.</b>	BLG-34400-N	<b>5098.</b>

#### NOT-FUSIBLE

240V. AC	800	BLG-22080-U	<b>\$1439.</b>	BLG-22080-NU	<b>\$1578.</b>	BLG-32080-U	<b>\$1582.</b>	BLG-32080-NU	<b>\$1702.</b>
	1200	BLG-22120-U	<b>1534.</b>	BLG-22120-NU	<b>1698.</b>	BLG-32120-U	<b>1707.</b>	BLG-32120-NU	<b>1852.</b>
	1600	BLG-22160-U	<b>1713.</b>	BLG-22160-NU	<b>1906.</b>	BLG-32160-U	<b>1908.</b>	BLG-32160-NU	<b>2102.</b>
	2000	BLG-22200-U	<b>1780.</b>	BLG-22200-NU	<b>2010.</b>	BLG-32200-U	<b>2025.</b>	BLG-32200-NU	<b>2255.</b>
	2500	BLG-22250-U	<b>2014.</b>	BLG-22250-NU	<b>2316.</b>	BLG-32250-U	<b>2340.</b>	BLG-32250-NU	<b>2642.</b>
	3000	BLG-22300-U	<b>2741.</b>	BLG-22300-NU	<b>3182.</b>	BLG-32300-U	<b>3238.</b>	BLG-32300-NU	<b>3614.</b>
	4000	BLG-22400-U	<b>3391.</b>	BLG-22400-NU	<b>3858.</b>	BLG-32400-U	<b>4378.</b>	BLG-32400-NU	<b>4845.</b>
480V. AC	800	BLG-24080-U	<b>1439.</b>	BLG-24080-NU	<b>1578.</b>	BLG-34080-U	<b>1582.</b>	BLG-34080-NU	<b>1702.</b>
	1200	BLG-24120-U	<b>1728.</b>	BLG-24120-NU	<b>1892.</b>	BLG-34120-U	<b>1902.</b>	BLG-34120-NU	<b>2047.</b>
	1600	BLG-24160-U	<b>1890.</b>	BLG-24160-NU	<b>2083.</b>	BLG-34160-U	<b>2103.</b>	BLG-34160-NU	<b>2296.</b>
	2000	BLG-24200-U	<b>1939.</b>	BLG-24200-NU	<b>2169.</b>	BLG-34200-U	<b>2219.</b>	BLG-34200-NU	<b>2449.</b>
	2500	BLG-24250-U	<b>2172.</b>	BLG-24250-NU	<b>2473.</b>	BLG-34250-U	<b>2535.</b>	BLG-34250-NU	<b>2836.</b>
	3000	BLG-24300-U	<b>2979.</b>	BLG-24300-NU	<b>3353.</b>	BLG-34300-U	<b>3428.</b>	BLG-34300-NU	<b>3803.</b>
	4000	BLG-24400-U	<b>3531.</b>	BLG-24400-NU	<b>3997.</b>	BLG-34400-U	<b>4573.</b>	BLG-34400-NU	<b>5039.</b>

\*NOTE: Do not use for three-phase, two-wire, grounded "B" phase circuits.

Switch Ampere Rating	Standard Adjustable Lugs Per Phase and Neutral†	
	Quantity	Wire Size
800	3	#2 to 600 MCM†
1200	4	#2 to 600 MCM†
1600	5	#2 to 600 MCM†
2000	6	#2 to 600 MCM†
2500	▲	▲
3000	▲	▲
4000	▲	▲

†Lugs are suitable for use with either aluminum or copper conductors.  
▲2500-4000A switches will be equipped with lugs when size and quantity are specified on order.

#### ORDERING INFORMATION REQUIRED

1. Class and Type number of switch.
2. Number of poles and wires.
3. Voltage and ampere rating.
4. Type of cable, lug sizes and quantity required.
5. Type of enclosure.
6. If special features are required order as "Class 9810, similar to Type \_\_\_\_\_," and clearly describe the features required.



## ENCLOSED BOLT-LOC SWITCHES Single-Throw, Bolted-Contact

Side-operated switches as shown in the illustration on the right are designed to meet the rigorous environmental conditions found in steel mills, foundries and cement mills. Enclosures are gasketed and have a safety-glass viewing window to determine the position of the switch blades. Non-hinged covers are supplied on the 250-volt DC, non-fusible switches. All other switches are supplied with a hinged door that is interlocked to prevent opening the door, unless the switch is in the OFF position.



### SIDE-OPERATED SWITCHES IN DUST-TIGHT INDUSTRIAL USE (NEMA 12) ENCLOSURES

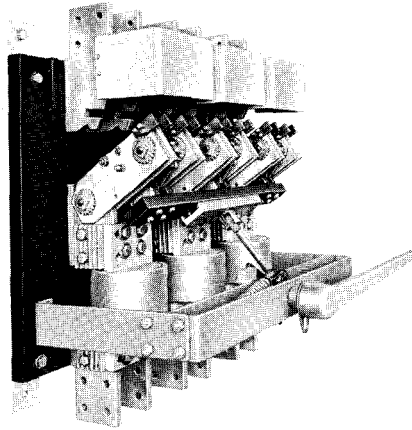
Volts and Poles	Ampere Rating	Fusible		Not -Fusible	
		Type	Price	Type	Price
<b>DC SIDE-OPERATED SWITCHES</b>					
250V. DC  2-Pole— 2-Wire	800	BLD-23080	<b>\$1675.</b>	BLD-23080-U	<b>\$1617.</b>
	1200	BLD-23120	<b>1707.</b>	BLD-23120-U	<b>1649.</b>
	1600	BLD-23160	<b>1872.</b>	BLD-23160-U	<b>1813.</b>
	2000	BLD-23200	<b>1959.</b>	BLD-23200-U	<b>1901.</b>
	2500	BLD-23250	<b>2229.</b>	BLD-23250-U	<b>2171.</b>
	3000	BLD-23300	<b>2901.</b>	BLD-23300-U	<b>2795.</b>
	4000	BLD-23400	<b>3670.</b>	BLD-23400-U	<b>3612.</b>
<b>AC SIDE-OPERATED SWITCHES</b>					
240V. AC  3-Pole— 3-Wire	800	BLD-32080	<b>\$1766.</b>	BLD-32080-U	<b>\$1704.</b>
	1200	BLD-32120	<b>1896.</b>	BLD-32120-U	<b>1836.</b>
	1600	BLD-32160	<b>2107.</b>	BLD-32160-U	<b>2046.</b>
	2000	BLD-32200	<b>2229.</b>	BLD-32200-U	<b>2168.</b>
	2500	BLD-32250	<b>2555.</b>	BLD-32250-U	<b>2494.</b>
	3000	BLD-32300	<b>3499.</b>	BLD-32300-U	<b>3434.</b>
	4000	BLD-32400	<b>4707.</b>	BLD-32400-U	<b>4644.</b>
480V. AC  3-Pole— 3-Wire	800	BLD-34080	<b>1766.</b>	BLD-34080-U	<b>1704.</b>
	1200	BLD-34120	<b>2104.</b>	BLD-34120-U	<b>2042.</b>
	1600	BLD-34160	<b>2314.</b>	BLD-34160-U	<b>2253.</b>
	2000	BLD-34200	<b>2435.</b>	BLD-34200-U	<b>2374.</b>
	2500	BLD-34250	<b>2763.</b>	BLD-34250-U	<b>2700.</b>
	3000	BLD-34300	<b>3701.</b>	BLD-34300-U	<b>3636.</b>
	4000	BLD-34400	<b>4914.</b>	BLD-34400-U	<b>4852.</b>

NOTE: See page 1 for standard lug arrangements and ordering instructions.



## BOLT-LOC®-BOLTED PRESSURE CONTACT SWITCHES

### Open Type—Single Throw—Without Terminal Lugs



Open type, manually front operated Bolt-Loc switches are load break devices designed for switchboard and control apparatus installations. Fusible switches are furnished with provisions for NEMA Class L fuses. Switches are supplied without terminal lugs.

#### FRONT-OPERATED SWITCHES

Volts	Ampere Rating	2-Pole—2-Wire		2-Pole—3-Wire*		3-Pole—3-Wire		3-Pole—4-Wire	
		Type	Price	Type	Price	Type	Price	Type	Price
<b>FUSIBLE—(Prices do not include fuses)</b>									
240 V. AC 60 Hz	800	BLO-22080	\$ 415.	BLO-22080-N	\$464.	BLO-32080	\$ 483.	BLO-32080-N	\$ 538.
	1200	BLO-22120	452.	BLO-22120-N	512.	BLO-32120	533.	BLO-32120-N	595.
	1600	BLO-22160	484.	BLO-22160-N	556.	BLO-32160	577.	BLO-32160-N	650.
	2000	BLO-22200	520.	.....	.....	BLO-32200	622.	BLO-32200-N	704.
	2500	BLO-22250	634.	.....	.....	BLO-32250	746.	BLO-32250-N	855.
	3000	BLO-22300	903.	.....	.....	BLO-32300	1040.	BLO-32300-N	1171.
480 V. AC 60 Hz	4000	BLO-22400	1359.	.....	.....	BLO-32400	1703.	BLO-32400-N	1846.
	800	BLO-24080	468.	.....	.....	BLO-34080	533.	BLO-34080-N	588.
	1200	BLO-24120	532.	.....	.....	BLO-34120	588.	BLO-34120-N	651.
	1600	BLO-24160	566.	.....	.....	BLO-34160	632.	BLO-34160-N	710.
	2000	BLO-24200	610.	.....	.....	BLO-34200	676.	BLO-34200-N	755.
	2500	BLO-24250	721.	.....	.....	BLO-34250	802.	BLO-34250-N	905.
4000	3000	BLO-24300	1023.	.....	.....	BLO-34300	1173.	BLO-34300-N	1304.
	4000	BLO-24400	1476.	.....	.....	BLO-34400	1841.	BLO-34400-N	1983.
	5000	BLO-24500	2700.	.....	.....	BLO-34500	3400.	BLO-34500-N	3600.

**NOTE:** All Fusible Switches are UL Listed except 5000 Ampere.

#### NOT FUSIBLE

240 V. AC 60 Hz	800	BLO-22080-U	\$ 395.	.....	.....	BLO-32080-U	\$ 453.	.....	.....
	1200	BLO-22120-U	432.	.....	.....	BLO-32123-U	503.	.....	.....
	1600	BLO-22160-U	464.	.....	.....	BLO-32160-U	547.	.....	.....
	2000	BLO-22200-U	500.	.....	.....	BLO-32200-U	592.	.....	.....
	2500	BLO-22250-U	614.	.....	.....	BLO-32250-U	716.	.....	.....
	3000	BLO-22300-U	883.	.....	.....	BLO-32300-U	1010.	.....	.....
480 V. AC 60 Hz	4000	BLO-22400-U	1339.	.....	.....	BLO-32400-U	1673.	.....	.....
	800	BLO-24080-U	468.	.....	.....	BLO-34080-U	503.	.....	.....
	1200	BLO-24120-U	512.	.....	.....	BLO-34120-U	558.	.....	.....
	1600	BLO-24160-U	546.	.....	.....	BLO-34160-U	602.	.....	.....
	2000	BLO-24200-U	590.	.....	.....	BLO-34200-U	646.	.....	.....
	2500	BLO-24250-U	701.	.....	.....	BLO-34250-U	772.	.....	.....
4000	3000	BLO-24300-U	1003.	.....	.....	BLO-34300-U	1143.	.....	.....
	4000	BLO-24400-U	1458.	.....	.....	BLO-34400-U	1811.	.....	.....
	5000	BLO-24500-U	2700.	.....	.....	BLO-34500-U	3370.	.....	.....

**\*NOTE:** Do not use for three-phase, two-wire grounded "B" phase circuits.

#### Approx. Weight (Lbs)

Ampere Rating	2P.		Ampere Rating	3P.	
	2P.	3P.		2P.	3P.
800	110	125	2500	215	260
1200	115	135	3000	300	350
1600	120	150	4000	325	520
2000	200	250			

#### ORDERING INFORMATION REQUIRED

1. Class, Type number and Form letters (if any) of switch.
2. Number of poles and wires.
3. Voltage and ampere rating.
4. If special features (other than listed) are desired, order as Class 9810, Type \_\_\_\_\_, Form \_\_\_\_\_, except (clearly describe special feature, see page 2 for modifications which are available).

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PAGE	<b>2</b>
MAY, 1971	

**SUPERSEDES:**  
Class 9810  
Page 2  
December, 1968



**BOLT-LOC®—BOLTED PRESSURE CONTACT SWITCHES**  
**Open Type—Single Throw—Bolted Contact**

**MODIFICATIONS AND SPECIAL FEATURES**

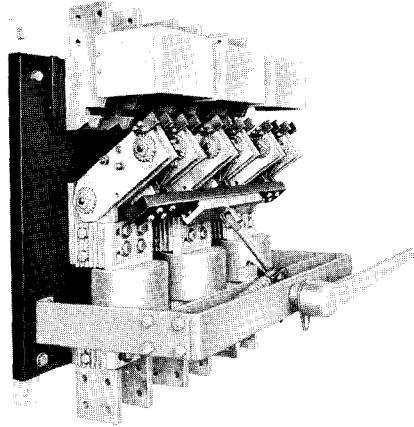
Item	Form Letter	Description	Price
1	M5	Motor Operator (motor close-motor open). Motor is rated 115 volts, single phase 60 cycle. Prices do not include pushbuttons, pilot lights or transformer for 115 volt power. Add to price of manually operated, open type switch. 800-2500 Ampere..... 3000-4000 Ampere.....	<b>\$742.</b> <b>848.</b>
2	M6	Motor Operator (manual close-motor open). Motor is rated 115 volts, single phase 60 cycle. Prices do not include pushbutton, pilot light or transformer for 115 volt power. Add to price of manually operated, open type switch. 800-2500 Ampere..... 3000-4000 Ampere.....	<b>583.</b> <b>689.</b>
3	P2	<b>Padlock Attachment.</b> To lock switch in open position. Prevents both manual and motor operation.....	<b>106.</b>
4	K	<b>Kirk Key Interlock.</b> To lock switch both manually and electrically. Provisions for Kirk Key interlock on manual switch or manually operated switch with electric trip.....	<b>61.</b>
	K1	With lock mounted for Kirk Key interlock on manual switch or manually operated switch with electric trip. (specify locking sequence).....	<b>117.</b>
	K2	Provisions for Kirk Key interlock on motor operated switch to lock switch both manually and electrically (without lock).....	<b>130.</b>
	K3	With lock mounted for Kirk Key interlock on motor operated switch to lock switch both manually and electrically. (specify locking sequence).....	<b>192.</b>
5	X	Auxiliary electrical switch, 10 ampere, with 1-N.O. and 1-N.C. contact. Electrical ratings are the same as Class 9007, Type B switch.....	<b>55.</b>
6	B	<b>Blown Main Fuse Detector Installed and Wired to Motor Operator.</b> Provides a signal to the electrical operator to automatically open the switch when any one of the main fuses blow. Consists of a plunger-type switch actuated by trigger type fuses in parallel with main fuses. One operating set plus one spare Bussman Type KAZ trigger fuse is supplied with each detector. Motor operator must be specified and priced as separate item.....	<b>150.</b>
7	B1	<b>Blown Main Fuse Detector Installed and Wired to Electric Trip Mechanism.</b> Electric trip mechanism must be specified and priced as a separate item..	<b>150.</b>
8	B2	<b>Blown Main Fuse Detector Installed and Wired to Terminals.....</b>	<b>150.</b>
9	S	<b>Electric Trip Mechanism Installed</b> on manually operated switch.....	<b>247.</b>

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<b>APRIL, 1973</b>	



## BOLT-LOC®-BOLTED PRESSURE CONTACT SWITCHES

### Open Type—Single Throw—Without Terminal Lugs



Open type, manually front operated Bolt-Loc switches are load break devices designed for switchboard and control apparatus installations. Fusible switches are furnished with provisions for NEMA Class L fuses. Switches are supplied without terminal lugs.

#### FRONT-OPERATED SWITCHES

Volts	Ampere Rating	2-Pole—2-Wire		2-Pole—3-Wire		3-Pole—3-Wire		3-Pole—4-Wire	
		Type	Price	Type	Price	Type	Price	Type	Price
<b>FUSIBLE—(Prices do not include fuses)</b>									
240 V. AC 60 Hz	800	BLO-22080	\$ 444.	BLO-22080-N	\$487.	BLO-32080	\$ 517.	BLO-32080-N	\$ 576.
	1200	BLO-22120	484.	BLO-22120-N	548.	BLO-32120	570.	BLO-32120-N	637.
	1600	BLO-22160	518.	BLO-22160-N	595.	BLO-32160	617.	BLO-32160-N	696.
	2000	BLO-22200	556.	.....	.....	BLO-32200	666.	BLO-32200-N	753.
	2500	BLO-22250	678.	.....	.....	BLO-32250	798.	BLO-32250-N	915.
480 V. AC 60 Hz	3000	BLO-22300	966.	.....	.....	BLO-32300	1113.	BLO-32300-N	1253.
	4000	BLO-22400	1454.	.....	.....	BLO-32400	1822.	BLO-32400-N	1975.
	800	BLO-24080	522.	.....	.....	BLO-34080	570.	BLO-34080-N	629.
	1200	BLO-24120	569.	.....	.....	BLO-34120	629.	BLO-34120-N	697.
	1600	BLO-24160	606.	.....	.....	BLO-34160	676.	BLO-34160-N	760.
480 V. AC 60 Hz	2000	BLO-24200	653.	.....	.....	BLO-34200	723.	BLO-34200-N	808.
	2500	BLO-24250	772.	.....	.....	BLO-34250	858.	BLO-34250-N	968.
	3000	BLO-24300	1095.	.....	.....	BLO-34300	1255.	BLO-34300-N	1395.
	4000	BLO-24400	1582.	.....	.....	BLO-34400	1970.	BLO-34400-N	2122.
	5000	BLO-24500	2910.	.....	.....	BLO-34500	3638.	BLO-34500-N	3852.

**NOTE:** All Fusible Switches are UL Listed except 5000 Ampere.

#### NOT FUSIBLE

240 V. AC 60 Hz	800	BLO-22080-U	\$ 423.	.....	.....	BLO-32080-U	\$ 485.	.....	.....
	1200	BLO-22120-U	462.	.....	.....	BLO-32123-U	538.	.....	.....
	1600	BLO-22160-U	497.	.....	.....	BLO-32160-U	585.	.....	.....
	2000	BLO-22200-U	535.	.....	.....	BLO-32200-U	633.	.....	.....
	2500	BLO-22250-U	657.	.....	.....	BLO-32250-U	766.	.....	.....
480 V. AC 60 Hz	3000	BLO-22300-U	945.	.....	.....	BLO-32300-U	1081.	.....	.....
	4000	BLO-22400-U	1433.	.....	.....	BLO-32400-U	1790.	.....	.....
	800	BLO-24080-U	501.	.....	.....	BLO-34080-U	538.	.....	.....
	1200	BLO-24120-U	548.	.....	.....	BLO-34120-U	597.	.....	.....
	1600	BLO-24160-U	584.	.....	.....	BLO-34160-U	644.	.....	.....
480 V. AC 60 Hz	2000	BLO-24200-U	631.	.....	.....	BLO-34200-U	691.	.....	.....
	2500	BLO-24250-U	750.	.....	.....	BLO-34250-U	826.	.....	.....
	3000	BLO-24300-U	1073.	.....	.....	BLO-34300-U	1223.	.....	.....
	4000	BLO-24400-U	1560.	.....	.....	BLO-34400-U	1938.	.....	.....
	5000	BLO-24500-U	2889.	.....	.....	BLO-34500-U	3606.	.....	.....

**\*NOTE:** Do not use for three-phase, two-wire grounded "B" phase circuits.

#### Approx. Weight (Lbs)

Ampere Rating	2P.		3P.	
	2P.	3P.	2P.	3P.
800	110	125	2500	215
1200	115	135	3000	300
1600	120	150	4000	325
2000	200	250	5000	345

#### ORDERING INFORMATION REQUIRED

1. Class, Type number and Form letters (if any) of switch.
2. Number of poles and wires.
3. Voltage and ampere rating.
4. If special features (other than listed) are desired, order as Class 9810, Type \_\_\_\_\_, Form \_\_\_\_\_, except (clearly describe special feature, see page 2 for modifications which are available).

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PAGE	<b>2</b>
<b>APRIL, 1973</b>	

**SUPERSEDES:**  
Class 9810  
Page 2  
April, 1972



**BOLT-LOC®—BOLTED PRESSURE CONTACT SWITCHES**  
**Open Type—Single Throw—Bolted Contact**

**MODIFICATIONS AND SPECIAL FEATURES**

Item	Form Letter	Description	Price
1	M5	Motor Operator (motor close-motor open). Motor is rated 115 volts, single phase 60 cycle. Prices do not include pushbuttons, pilot lights or transformer for 115 volt power. Add to price of manually operated, open type switch.  800-2500 Ampere..... 3000-4000 Ampere.....	  <b>\$794.</b> <b>907.</b>
2	P2	<b>Padlock Attachment.</b> To lock in open position. Prevents both manual and motor operation.....	<b>113.</b>
3	K	<b>Kirk Key Interlock.</b> Provisions for Kirk Key interlock on manual switch.....	<b>65.</b>
	K1	With lock mounted for Kirk Key interlock on manual switch. (specify locking sequence).....	<b>125.</b>
	K2	Provisions for Kirk Key interlock on motor operated switch to lock switch both manually and electrically (without lock).....	<b>139.</b>
	K3	With lock mounted for Kirk Key interlock on motor operated switch to lock switch both manually and electrically. (specify locking sequence).....	<b>205.</b>
4	X	Auxiliary electrical switch, 10 ampere, with 1-N.O. and 1-N.C. contact. Electrical ratings are the same as Class 9007, Type B switch.....	<b>59.</b>
5	B	<b>Blown Main Fuse Detector Installed and Wired to Motor Operator.</b> Provides a signal to the motor operator to automatically open the switch when any one of the main fuses blow. Consists of a plunger-type switch actuated by trigger type fuses in parallel with main fuses. One operating set plus one spare Bussman Type KAZ trigger fuse is supplied with each detector. Motor operator must be specified and priced as separate item.....	<b>161.</b>
6	B1	<b>Blown Main Fuse Detector Installed and Wired to Electric Trip Mechanism.</b> Electric trip mechanism must be specified and priced as a separate item.....	<b>161.</b>
7	B2	<b>Blown Main Fuse Detector Installed and Wired to Terminals.</b> .....	<b>161.</b>
8	S	<b>Electric Trip Mechanism Installed</b> on manually operated switch. Available only on 3 pole, 3 wire or 3 pole, 4 wire 480 volt rated switches (Not available on 5000 A. switches).....	<b>363.</b>
9		Ground Fault Protection (includes sensor, solid state relay and control transformer as separate items). Electric trip mechanism must be specified and priced as a separate item.  G3▲ Sensor having 11" x 14" conductor window GT 1518 ..... G4▲ Sensor having 11" x 20" conductor window GT 1524 ..... G5▲ Sensor having 11" x 26" conductor window GT 1530 .....	  <b>459.</b> <b>482.</b> <b>508.</b>

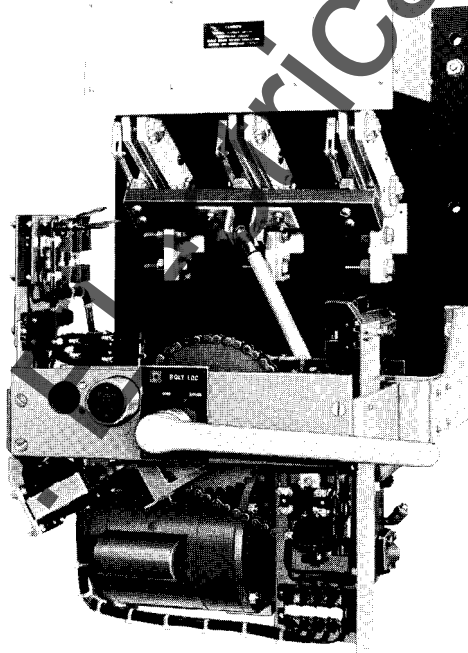
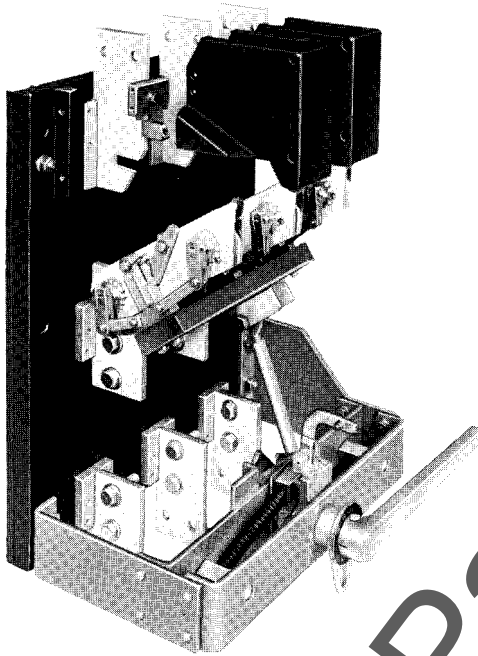
▲Complete the form letter designation by adding appropriate ground fault relay number 1, 2, 3 or 5 for desired time delay as described below:

- 1=.1 Sec. Delay
- 2=.2 Sec. Delay
- 3=.3 Sec. Delay
- 5=.5 Sec. Delay

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## **BOLT-LOC<sup>®</sup>—BOLTED PRESSURE CONTACT SWITCHES** **Open Type—Single Throw—Bolted Contact**



### **Manually Operated Switches**

**Rating:** Fusible Bolt-Loc switches are capable of carrying 100% rated current without exceeding a temperature rise of 60° C on the line and load terminals.

**Performance Testing:** Fusible Bolt-Loc switches, rated 800 through 4000 amperes have been tested in accordance with Underwriters' Subject 977—Requirements for Fused Power Circuit Devices, Bolted Pressure Contact Switches and are labelled accordingly. Ratings for the 5000 ampere switch have been established to correspond with this same UL publication but do not carry the UL label because 4000 amperes is the present maximum of the UL requirements. For complete details of tests contact your local Square D office.

**Production Testing:** Production testing of all Bolt-Loc switches includes complete mechanical inspection plus a unique "Ducter" test which assures proper contact adjustment by checking the resistance from line to hinge point of each pole of the switch and a high potential test. Fuse terminals on fusible switches are checked for alignment. All switches are functionally tested for proper operation.

### **Manually Operated Switches**

**With Electric Trip Modification:** All front operated Bolt-Loc switches can be supplied with a stored energy electric trip modification. This modification makes it possible to utilize the Bolt-Loc switch for applications which require remote tripping, ground fault protection and other types of protection features.

The electric trip mechanism is powered by a solenoid which is nominally rated 120 volt 60 hertz. Characteristics of the solenoid are such that the electric trip mechanism will operate at 58% of its nominal voltage rating. Operating time from energization of the solenoid coil to complete opening is approximately 0.112 seconds (7 cycles on a basis of a 60 hertz system).

A 1000 VA control transformer is recommended if tripping power is taken from the line side of the switch. The primary of the control transformer should be connected between two lines and not from one line to the neutral. This method of connection insures at least 58% voltage at the primary of the control transformer in the event of a ground fault on one line.

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## BOLT-LOC®—BOLTED PRESSURE CONTACT SWITCHES Open Type—Single Throw—Bolted Contact

### Motor Operated Switches

Standard motor-operated assemblies are available for all front-operated Bolt-Loc switches. The illustration shown below graphically demonstrates the simplicity of combining these two units. Motor-operated switches require approximately eight inches more cabinet depth than the corresponding manually-operated switch.

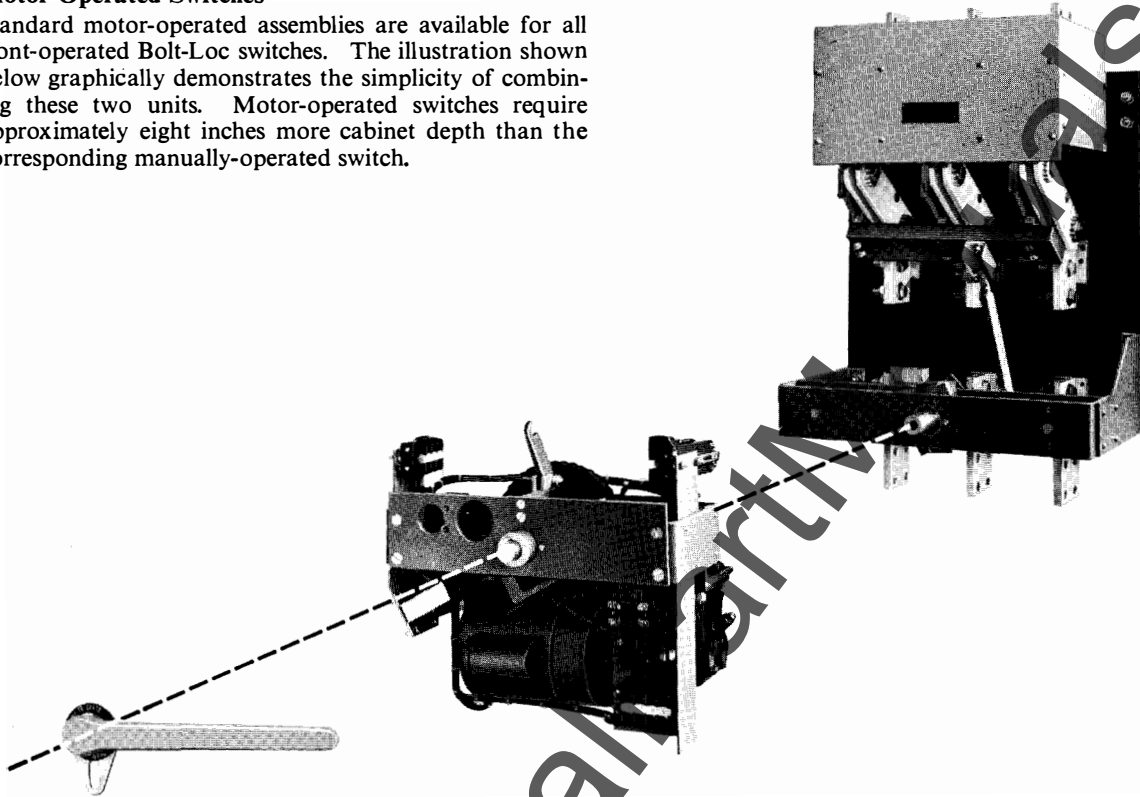
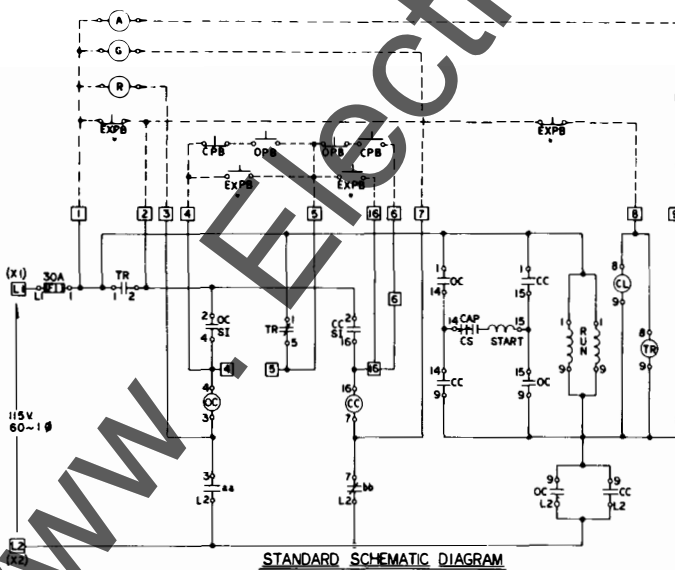


Diagram shown below illustrates the control circuit of a motor-operated Bolt-Loc switch.



**LEGEND—**

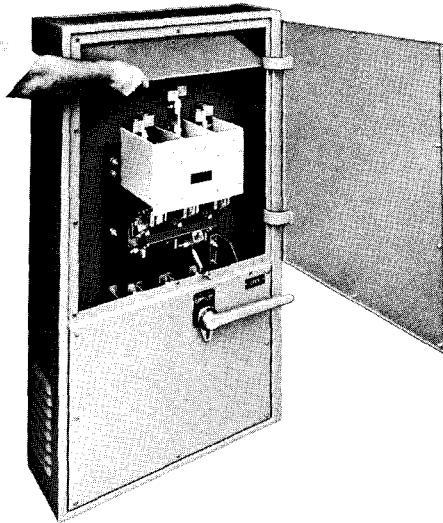
- aa—Auxiliary switch contact mechanism. Closed when switch is closed.
- bb—Auxiliary switch contact mechanism. Closed when switch is open.
- cc—Closing coil/contacts.
- EXPB—Exercise push-button (momentary contact).
- CS—Motor centrifugal switch—opens at 80% of normal speed.
- P.I.—Padlock Interlock.
- OC—Opening coil/contacts.
- TR—Timing relay coil/contacts—Time delay of approximately 3 seconds after coil is de-energized.
- BMFD—Blown Main Fuse Detector.
- FI—Fuse.
- CAP—Motor start capacitor.
- CL—Clutch solenoid coil.



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## ENCLOSED BOLT-LOC SWITCHES Single-Throw, Bolted-Contact



**Rating:** Fusible Bolt-Loc switches in NEMA 1 ventilated enclosures are capable of carrying 100% rated current with a maximum rise of 60°C above ambient.

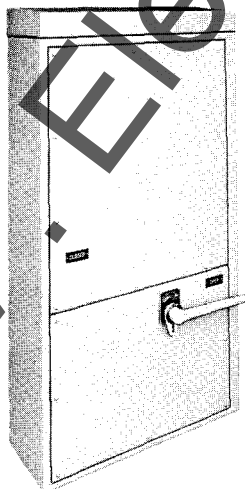
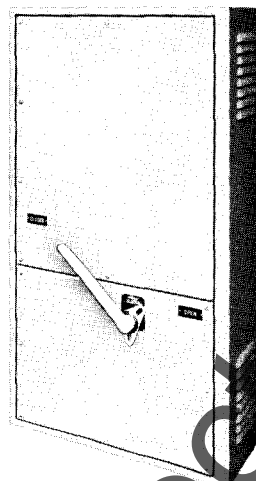
**Testing:** Bolt-Loc switches have been tested under the observation of UL personnel in accordance with UL proposed standard for bolted-contact switches. For complete details of tests contact your local Square D office.

Production testing of all Bolt-Loc switches includes complete mechanical inspection plus a unique "Ducter" test which assures proper contact adjustment by checking the resistance from line to hinge point of each pole of the switch and a high potential test.

**Enclosures:** NEMA 1 ventilated enclosures are supplied with removable conduit plates for line connections at the top and load connections at the bottom. Contact the local Square D office for information on switches suitable for other combinations of line and load connections. For further description see the enclosure paragraphs of the suggested specification.

Non-fusible, side-operated, two-pole switches in NEMA 12 enclosures are supplied with "screw-on" covers to make them suitable for mounting in restricted space such as on cranes, etc. Fusible two-pole, three-pole, and non-fusible three pole NEMA 12 switches are supplied with hinged doors similar to those shown in the illustration of the NEMA 1 enclosure.

NEMA 3R enclosures are available for Bolt-Loc switches. Contact your local Square D office for construction details and prices.



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## ENCLOSED BOLT-LOC SWITCHES Single-Throw, Bolted-Contact

### Motor Operated Switches

Standard motor-operated assemblies are available for all front-operated Bolt-Loc switches. The illustration shown below graphically demonstrates the simplicity of combining these two units. Motor operators can be added to switches in the field if sufficient depth is available in the enclosure. Motor-operated switches require approximately eight inches more cabinet depth than the corresponding manually-operated switch.

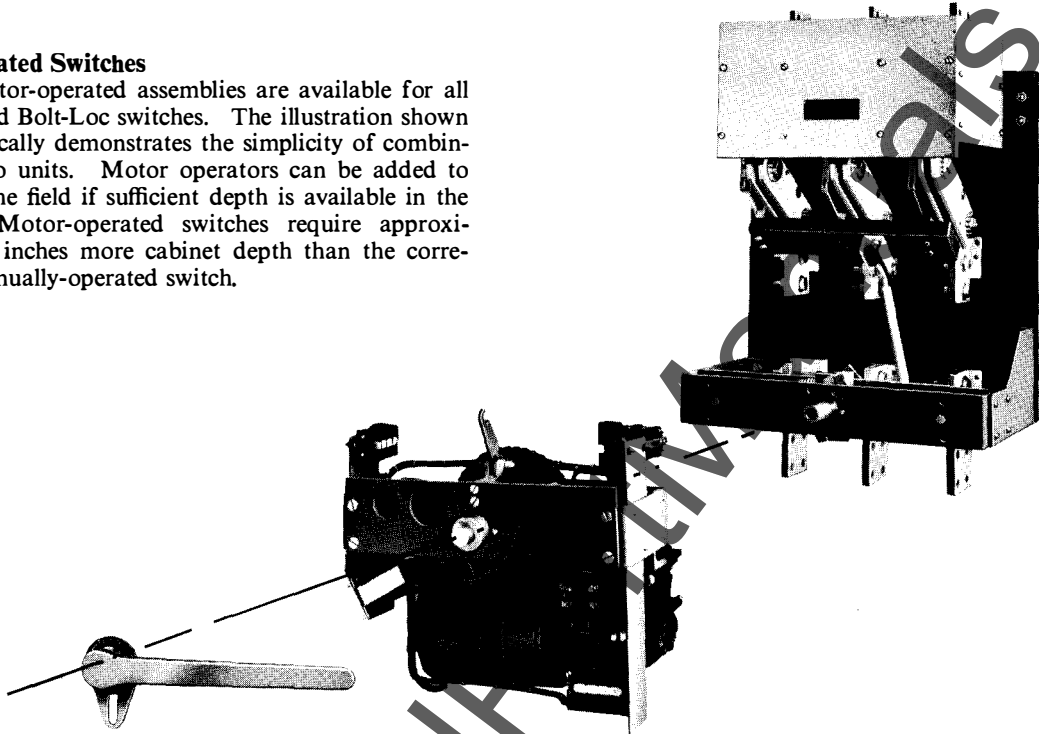
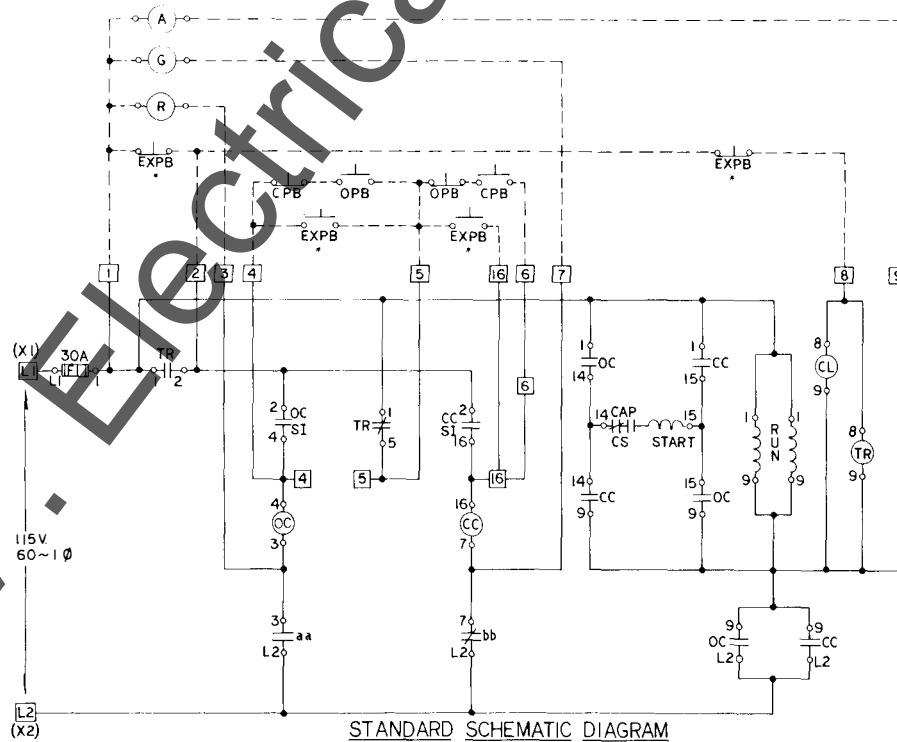


Diagram shown below illustrates the control circuit of a motor-operated Bolt-Loc switch.



# SQUARE D COMPANY

ELECTRICAL AND ADVANCED TECHNOLOGY PRODUCTS

MIDDLETOWN PLANT

513--424-1601



P. O. BOX 558

MIDDLETOWN, OHIO 45042

December 29, 1986

Attached is a new bulletin for your reference and information describing our BOLT-LOC Switch product line.

BOLT-LOC Switches have a long tradition of outstanding service in electrical power distribution systems. From the smallest restaurant to the largest high-rise or industrial plant, BOLT-LOC Switches are on the job today, everywhere, providing safe, economical circuit protection. They are ideally suited to meet today's needs for quality fusible switchboards.

These 100% rated fused power circuit devices are versatile. They come in a range of configurations through 4,000 amperes.

BOLT-LOC Switches undergo rigorous testing at the factory. They meet UL Standard 977 (for Fused Power Circuit Devices) and bear the UL Label. And because of their simple, time-tested design, they provide good performance, economy and longevity for the user.

So, please take a few moments to look over the bulletin enclosed in more detail. It could be time well spent for you. And should you have any questions about BOLT-LOC Switches, please feel free to contact your Square D distributor or field sales representative today. They will be more than happy to assist you in any way.

Thank you for your time.

Yours truly,

Bruce F. Lindholm,  
Manager, Low Voltage Switchgear &  
Substation Marketing

BFL/mla

Enclosure: BOLT-LOC Switch Bulletin MT-26

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