

DISCONNECT SWITCHES



Springer Controls is partnered with **MERZ-PCE**, a world leader in the manufacturing of switch gears. We carry a complete line of UL approved, CSA listed, Disconnect Switches from 16A to 125A. Springer now offers larger disconnect switches rated up to 630 amps (consult factory for part number and pricing of switches greater than 125 amps.) Switches are available as an open type or in a polycarbonate enclosure (see page I-6.) Designed and tested to the most demanding standards, the switches will provide years of satisfied service under rated conditions. Switches meet IEC 947-3, EN60947-3, and DIN VDE Part 107. A complete line of Merz CAM SWITCHES can be found in section J of this catalog.

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DISCONNECT SWITCHES (16 TO 630 amp)

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PRODUCT NUMBERING SYSTEM



Enclosure Type

(No Letter represents "open" switch)

E ... Enclosure

Handle Type

2 ... 2 Padlock

3 ... 3 Padlock

4 ... No Padlock

Handle Color

R Red / Yellow

B Black / Silver

Mounting Style

A ... Front-Mount; 4-Hole

C ... Front-Mount; 22mm Hole

D ... Rear Panel Mount; Door Coupling and Interlock

S ... Rear Panel Mtg.; Extension Rod and Coupling

P ... Rear Panel Mtg.; Din-Rail Mount

Current Rating *

Ø16 amp Ø63 amp

Ø25 amp Ø80 amp

Ø40 amp 125 amp

Switch Model

A104 (16 amp)

ML1 (25 amp)

ML2 (63 amp / 80 amp)

ML3 (125 amp)

*Consult factory for current ratings above 125 amp. (160A, 200A, 250A, 315A, 400A, 500A, 630A, rated switches available.)

Model Ratings



Switch Model			104	ML1	ML1	ML2	ML2	ML3
General Purpose	3-phase	Amps	16	25	40	63	80	125
		Volts	600	600	600	600	600	600
Motor 3-phase	240V	hp	3	7.5	10	15	20	25
	480V	hp	5	10	20	30	40	50
	600V	hp	5	10	20	30	40	50
Motor 1-phase	125V	hp	.5	1	1.5	3	4	6
	240V	hp	1.5	2	3	7.5	10	15

Notes:

A full complement of accessories are available, additional power contacts, ground terminal, neutral terminals and auxiliary contacts. Finger protector terminal covers are available as well as legend plates. The shaft extension kits cover a complete range of panel depth up to 21.7 inches.

HANDLE TYPES / MOUNTING STYLES

Operating Handle Types



Type #2

- Lockout Handle
- 1 or 2 Padlocks
- Red / Yellow
- Black / Silver



Type #3

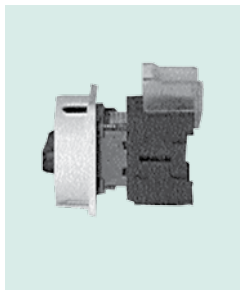
- Lockout Handle
- 3 Padlocks
- Red / Yellow
- Black / Silver



Type #4

- Handle Without Lockout
- Red / Yellow
- Black / Silver

Mounting Styles



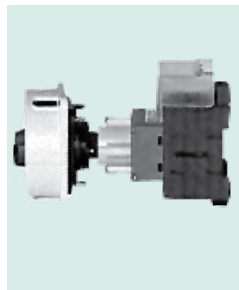
Type A

- 4- Hole Mounting
- Terminal Screws on Rear of Base
- Front Panel Mount



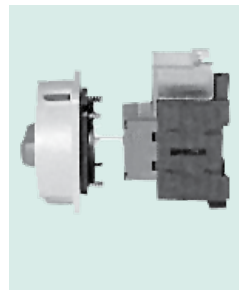
Type C

- 22.5 mm Hole Mounting
- Terminal Screws on Rear of Base
- Front Panel Mount



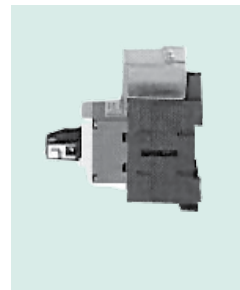
Type D

- Front Panel 4-Hole
- Door Coupling and Door Interlock in "ON" Position
- Terminal Screws on Front of Base
- Rear Panel Din Mount



Type S

- Front Panel 4-Hole
- Shaft Extender Required
- Terminal Screws on Front of Base
- Rear Panel Din Mount



Type P

- Handle Mounted to Base
- Terminal Screws on Front of Base
- Rear Panel Din Mount

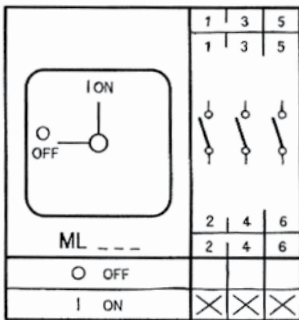
FRONT PANEL MOUNTING DISCONNECTS

Front Panel Mounting (4) Hole mounting "A"



Thermal Rated Current @ 600V	HP					No Padlock Handle IP55	Price	Two Padlock Handle IP55	Price	Three Padlock Handle IP55	Price
	1 phase		3 phase								
	120V	240V	240V	480V	600V						
16A	.5	1.5	3	5	5	A104-016-AB4	\$54.00	A104-016-A*2	\$54.00	A104-016-A*3	\$66.00
25A	1	3	7.5	10	10	ML1-025-AB4	\$64.00	ML1-025-A*2	\$68.00	ML1-025-A*3	\$74.00
40A	1.5	3	10	20	20	ML1-040-AB4	\$104.00	ML1-040-A*2	\$108.00	ML1-040-A*3	\$114.00
63A	3	7.5	15	30	30	ML2-063-AB4	\$124.00	---	---	ML2-063-A*3	\$134.00
80A	4	10	20	40	40	ML2-080-AB4	\$164.00	---	---	ML2-080-A*3	\$198.00
125A	6	15	25	50	50	ML3-125-AB4	\$230.00	---	---	ML3-125-A*3	\$240.00

Contact Diagram 3-Pole



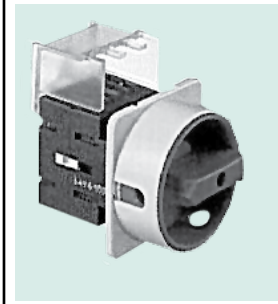
Dimension Fig.9, pg 111



Dimension Fig.1, pg 19



Dimension Fig.2, pg 19



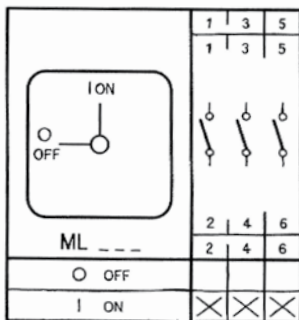
4

Front Panel Mounting (22.5mm) Hole Mounting "C"

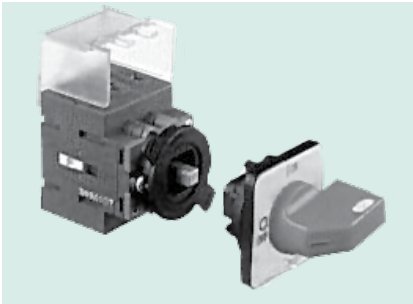


Thermal Rated Current @ 600V	HP					Two Padlock Handle IP65	Price	Three Padlock Handle IP65	Price
	1 phase		3 phase						
	120V	240V	240V	480V	600V				
16A	.5	1.5	3	5	5	A104-016-C*2	\$55.00	A104-016C*3	\$69.00
25A	1	3	7.5	10	10	ML1-025-C*2	\$73.00	ML1-025-C*3	\$76.00
40A	1.5	3	10	20	20	ML1-040-C*2	\$113.00	ML1-040-C*3	\$116.00
63A	3	7.5	15	30	30	---	---	---	---
80A	4	10	20	40	40	---	---	---	---
125A	6	15	25	50	50	---	---	---	---

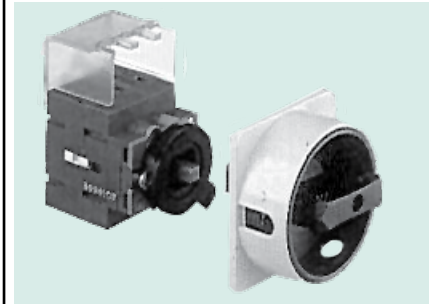
Contact Diagram 3-Pole



Dimension Fig.3, pg 19



Dimension Fig.4, pg 110



* R = Red/Yellow Handle / * B = Black/Silver Handle

Discount Schedule SC-10

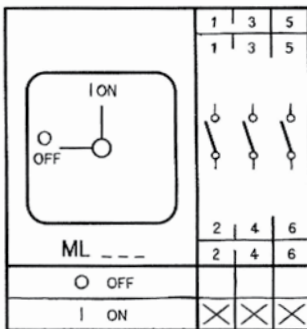
REAR PANEL MOUNTING DISCONNECTS

Rear Panel Mounting, Door Coupling & Interlock (4) Hole Mounting "D"

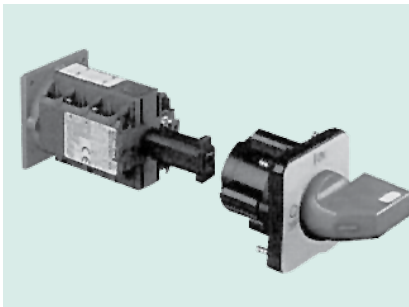


Thermal Rated Current @ 600V	HP					Two Padlock Handle IP55	Price	Three Padlock Handle IP55	Price
	1 phase		3 phase						
	120V	240V	240V	480V	600V				
16A	.5	1.5	3	5	5	A104-016-D*2	\$72.00	A104-016-D*3	\$80.00
25A	1	3	7.5	10	10	ML1-025-D*2	\$86.00	ML1-025-D*3	\$94.00
40A	1.5	3	10	20	20	ML1-040-D*2	\$123.00	ML1-040-D*3	\$125.00
63A	3	7.5	15	30	30	---	---	ML2-063-D*3	\$150.00
80A	4	10	20	40	40	---	---	ML2-080-D*3	\$220.00
125A	6	15	25	50	50	---	---	ML3-125-D*3	\$260.00

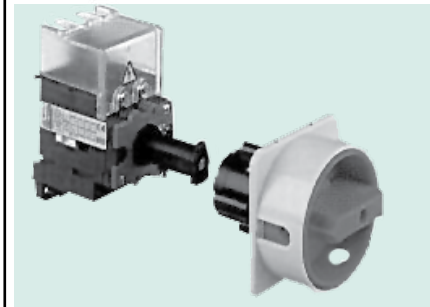
Contact Diagram 3-Pole



Dimension Fig. 5, pg 110



Dimension Fig. 6, pg 110

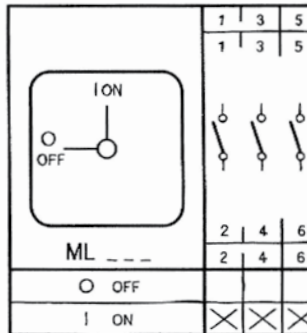


Rear Panel Mounting, Extension Rod & Coupling (4) Hole Mounting "S"

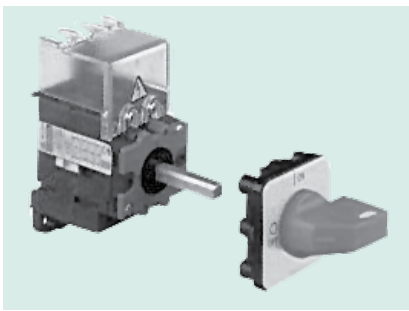


Thermal Rated Current @ 600V	HP					Two Padlock Handle IP55	Price	Three Padlock Handle IP55	Price
	1 phase		3 phase						
	120V	240V	240V	480V	600V				
16A	.5	1.5	3	5	5	A104-016-S*2	\$70.00	A104-016-S*3	\$78.00
25A	1	3	7.5	10	10	ML1-025-S*2	\$86.00	ML1-025-S*3	\$94.00
40A	1.5	3	10	20	20	ML1-040-S*2	\$123.00	ML1-040-S*3	\$123.00
63A	3	7.5	15	30	30	---	---	ML2-063-S*3	\$148.00
80A	4	10	20	40	40	---	---	ML2-080-S*3	\$218.00
125A	6	15	25	50	50	---	---	ML3-125-S*3	\$258.00

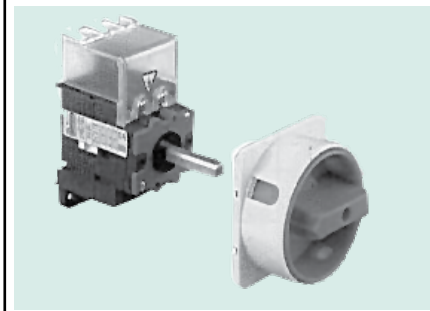
Contact Diagram 3-Pole



Dimension Fig. 7, pg 111



Dimension Fig. 8, pg 111



* R = Red/Yellow Handle / * B = Black/Silver Handle

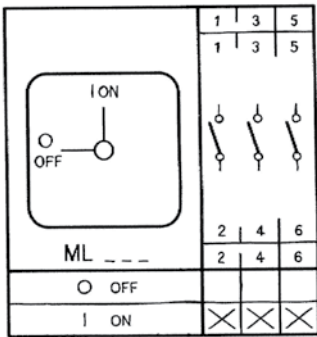
REAR PANEL DISCONNECTS / ENCLOSED DISCONNECTS

Rear Panel Mounting Including Handle Din Rail Mounting "P"

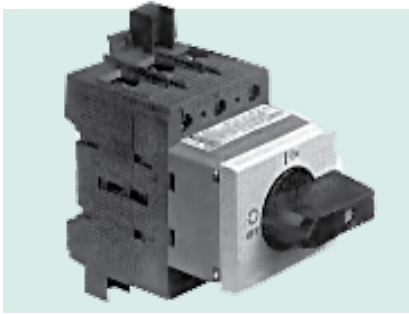


Thermal Rated Current @ 600V	HP					No Padlock Handle IP30	Price	Two Padlock Handle IP30	Price
	1 phase		3 phase						
	120V	240V	240V	480V	600V				
16A	.5	1.5	3	5	5	A104-016-PB4	\$60.00	A104-016-P*2	\$72.00
25A	1	3	7.5	10	10	ML1-025-PB4	\$75.00	ML1-025-P*2	\$82.00
40A	1.5	3	10	20	20	ML1-040-PB4	\$104.00	ML1-040-P*2	\$119.00
63A	3	7.5	15	30	30	ML2-063-PB4	\$125.00	ML2-063-P*2	\$144.00
80A	4	10	20	40	40	ML2-125-PB4	\$172.00	ML2-080-P*2	\$214.00
125A	6	15	25	50	50	ML3-125-PB4	\$241.00	ML3-125-P*2	\$254.00

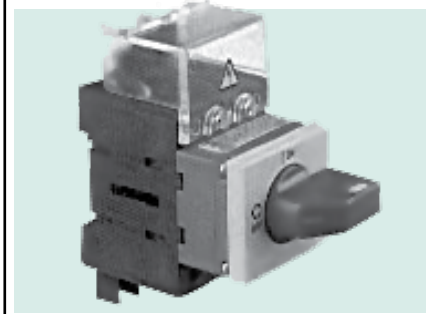
Contact Diagram 3-Pole



Dimension Fig.10, pg 112



Dimension Fig.11, pg 112



16

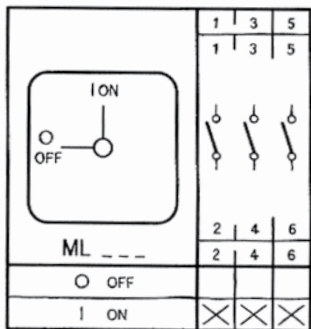
Enclosed Disconnect Switches



Thermal Rated Current @ 600V	HP					Three Padlock Handle IP65	Price	Enclosure Size	Protection Class
	1 phase		3 phase						
	120V	240V	240V	480V	600V				
16A	.5	1.5	3	5	5	A105-016-A*3E	\$104.00	C12B	IP55
25A	1	3	7.5	10	10	ML1-025-A*3E	\$141.00	E2	IP65
32A	1.5	3	10	20	20	ML1-040-A*3E	\$209.00	E3	IP65
50A	3	7.5	15	30	30	ML2-063-A*3E	\$237.00	E4	IP65
63A	4	10	20	40	40	ML2-080-A*3E	\$294.00	E5	IP65
100A	6	15	25	50	50	ML3-125-A*3E ¹	\$338.00	I7	IP65

See Page I13 for Encl. Dimensions

Contact Diagram 3-Pole



Dimension Fig.12, pg 112



- Extra poles and auxiliaries available; consult factory.
- * R = Red/Yellow Handle / * B = Black/Silver Handle
- ¹ ML3 - 125 - A*3E comes with a transparent front cover (Enclosure #I7)

Discount Schedule SC-10

Extra Poles & Terminals

Type	Front Mount	Din Base Mount	Switching Norm Open	Price	Ground Terminal	Price	Neutral Terminal	Price	Neutral Contact Early Make	Price
ML1-025, ML1-040	X		SK1-E	\$35.00	PE1-E	\$23.00	N1-E	\$23.00	NV1-E	\$35.00
ML1-025P, ML1-040P		X	SK1-V	\$35.00	PE1-V	\$23.00	N1-V	\$23.00	NV1-V	\$35.00
ML2-063, ML2-080	X		SK2-E	\$50.00	PE2-E	\$31.00	N2-E	\$31.00	NV2-E	\$50.00
ML2-063P, ML2-080P		X	SK2-V	\$50.00	PE2-V	\$31.00	N2-V	\$31.00	NV2-V	\$50.00
ML3-125	X		SK3-E	\$61.00	PE3-E	\$39.00	N3-E	\$39.00	NV3-E	\$60.00
ML3-125P		X	SK3-V	\$61.00	PE3-V	\$39.00	NE-V	\$39.00	NV3-V	\$60.00

The maximum amount of poles and auxiliary contacts used on switches:

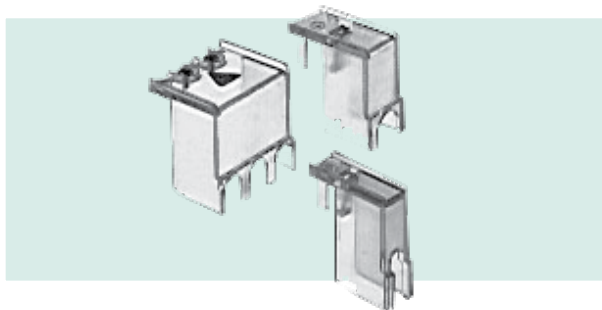
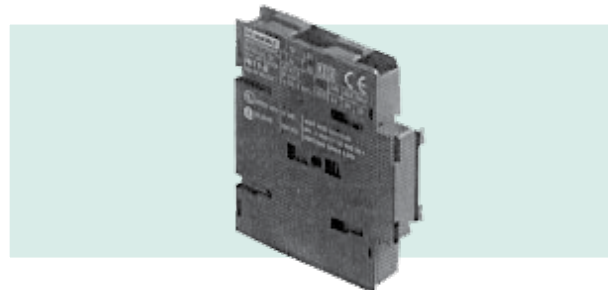
Type	SK or NV	HI 11 (auxiliary)
ML1	2	0
	2	1
	1	2
	2	2
ML 2 / 3	2	0
	2	1
	1	2
	0	3

Auxiliary Contacts

Type	Catalog No.	Price
Front Mount	HI11-E	\$42.00
Din Base Mount	HI11-V	\$42.00

Notes:

- 1 N.O., 1 N.C.
- Max. 3 Auxiliaries
- Snap on left or right side



Terminal Covers

Type	Catalog No.	Price
ML1- 1 Pole	HS1-ML1	\$3.00
ML1- 3 Pole	HS3-ML1	\$7.00
ML2/3 -1 Pole	HS1-ML2/3	\$6.00
ML2- 3 Pole	HS3-ML2	\$9.00
ML3- 3 Pole	HS3-ML3	\$11.00

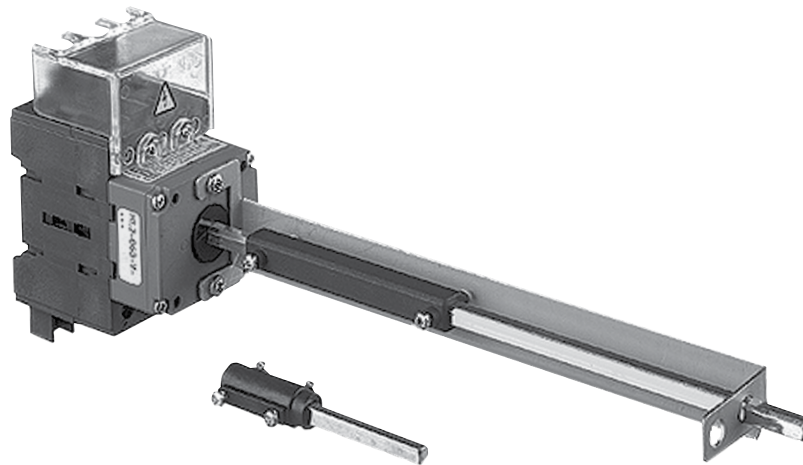
Nameplates

For 3 Padlock Style	Catalog No.	Price
Legend Plate w. Blank Insert	ALP	\$8.00
Legend Plate w. Engraved Insert	ALP-E	\$20.00



Discount Schedule SC-10

ACCESSORIES



Shaft Extension

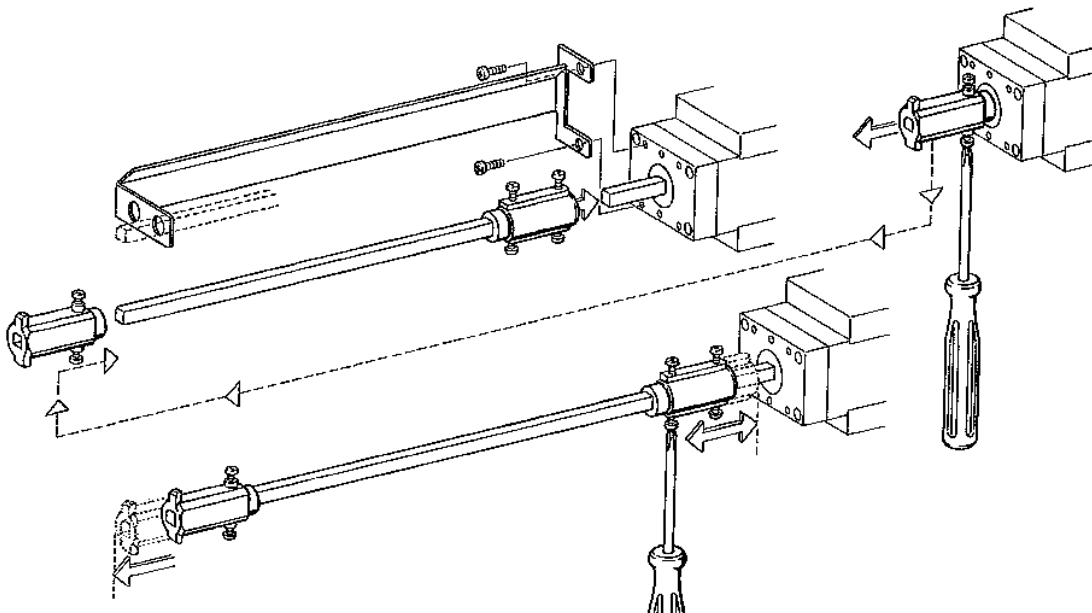
Mounting Depth Required ¹		Shaft Part No. Required	Price
A104 & ML1	ML2 & ML3		
4.13" - 5.31"	4.72" - 5.9"	None - Required	---
6.70" - 8.46"	7.28" - 9.06"	AL-65	\$25.00
10.43" - 13.19"	11.02" - 13.78"	AL-165	\$25.00
14.47" - 17.13"	14.96" - 17.72"	AL-265 ^{1, 2}	\$58.00
13.31" - 21.06"	18.90" - 21.65"	AL-365 ^{1, 2}	\$60.00
Extended Shaft Support Bracket		ALSS	\$60.00

Notes:

¹ Mounting depth is from outside of door to disconnect mounting plate. Shaft extension can be easily cut to size in the field.

² Shaft support ALSS required for AL-265 and AL-365

Shaft Extension Diagram



Discount Schedule SC-10

DIMENSIONS; DISCONNECT SWITCHES

Figure 1

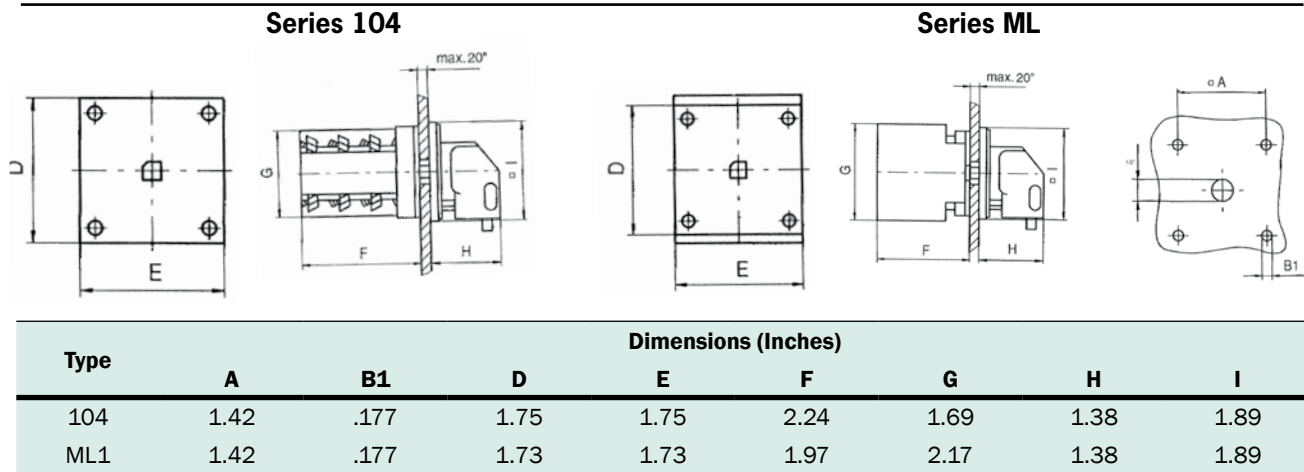


Figure 2

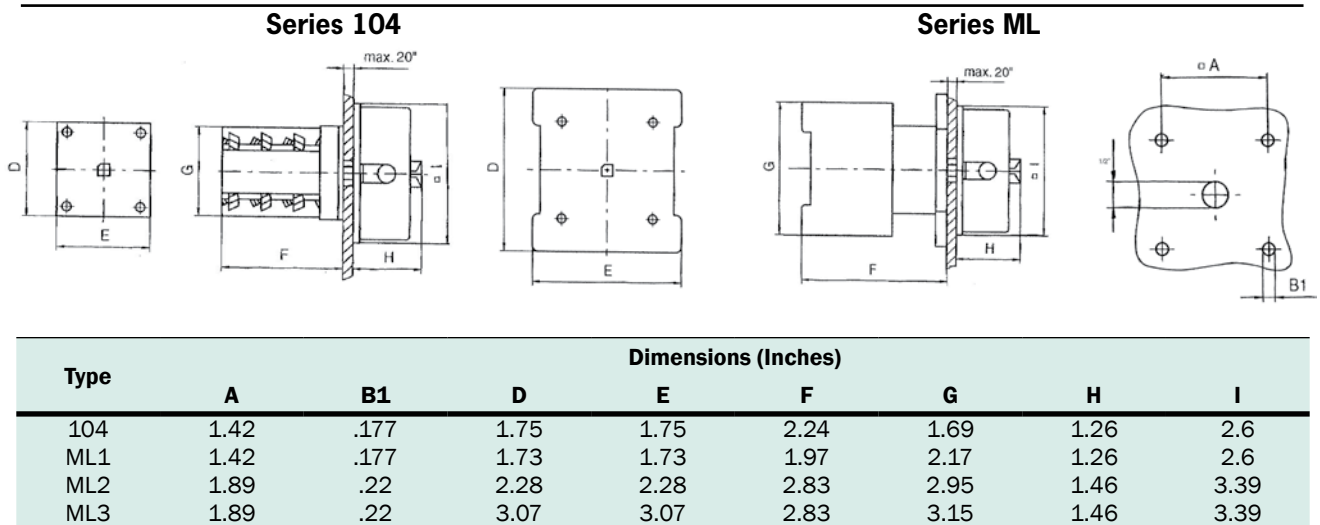
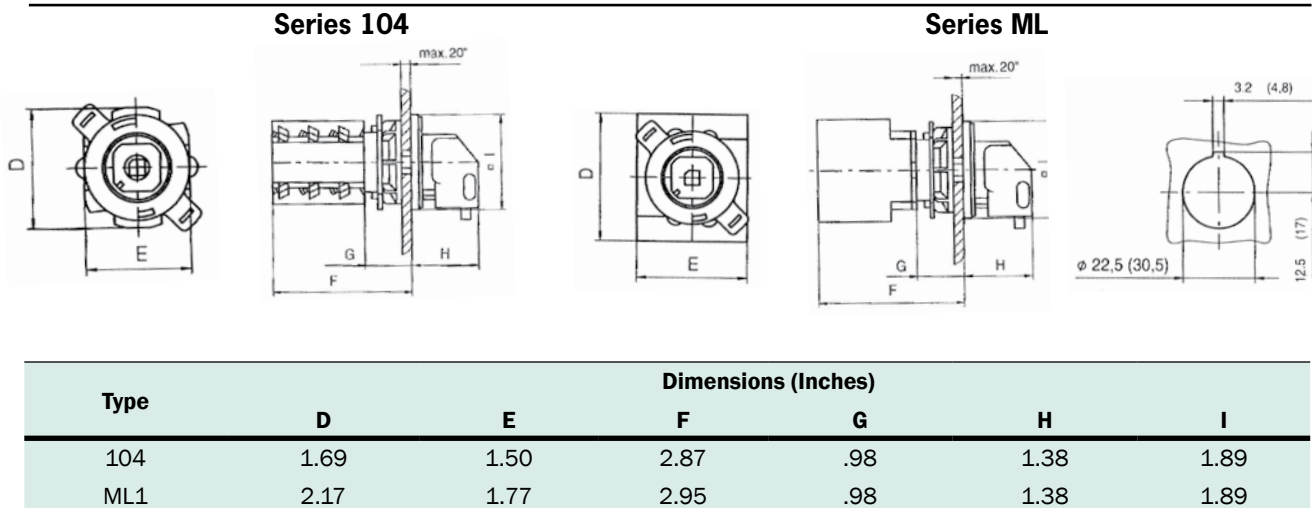
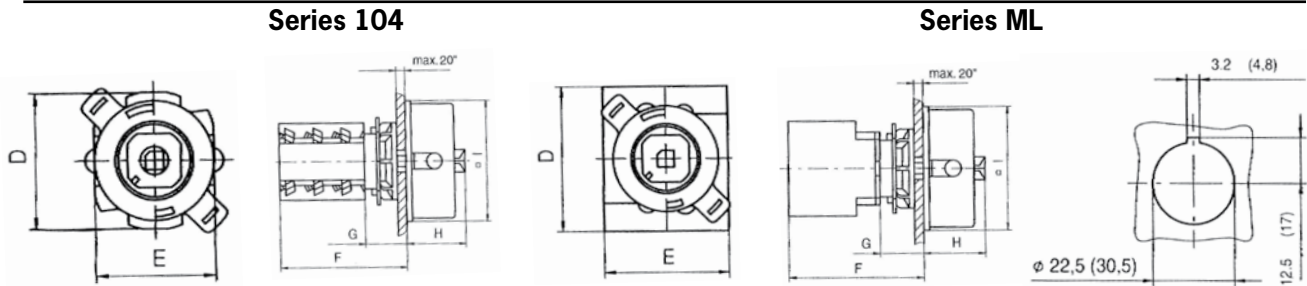


Figure 3



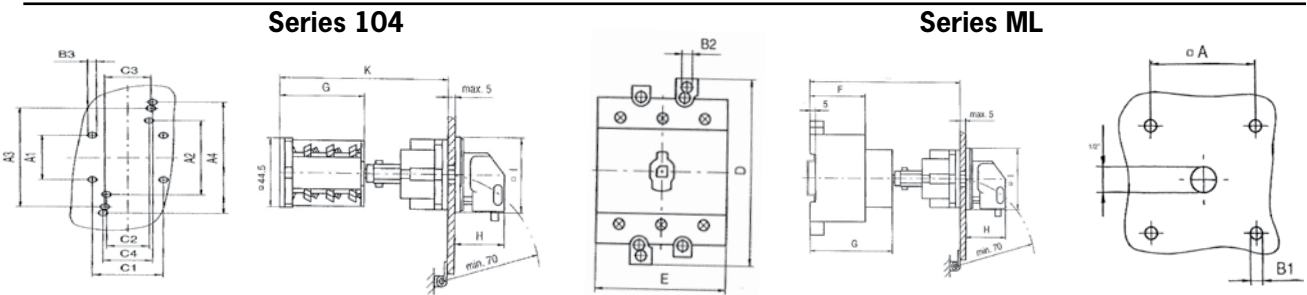
DIMENSIONS; DISCONNECT SWITCHES

Figure 4



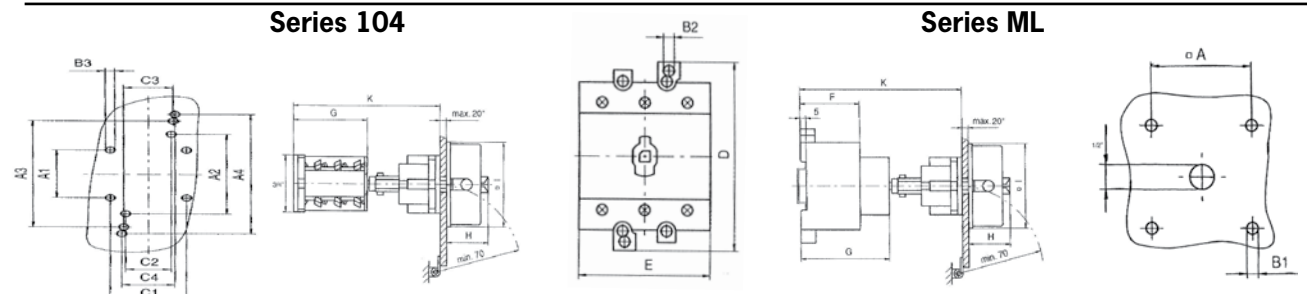
Type	Dimensions (Inches)					
	D	E	F	G	H	I
104	1.69	1.50	2.87	.98	1.26	2.60
ML1	2.17	1.77	2.95	.98	1.26	2.60

Figure 5



Type	Dimensions (Inches)																
	A	A1	A2	A3	A4	B1	C1	C2	C3	C4	D	E	F	G	H	I	K
104	1.42	1.42	--	--	--	.18	1.42	--	--	--	--	--	--	2.32	1.38	1.89	4.45-5.63
ML1	1.42	--	2.36	2.56	2.76	.18	--	.87	1.18	.98	3.07	1.77	1.65	2.17	1.38	1.89	4.13-5.31

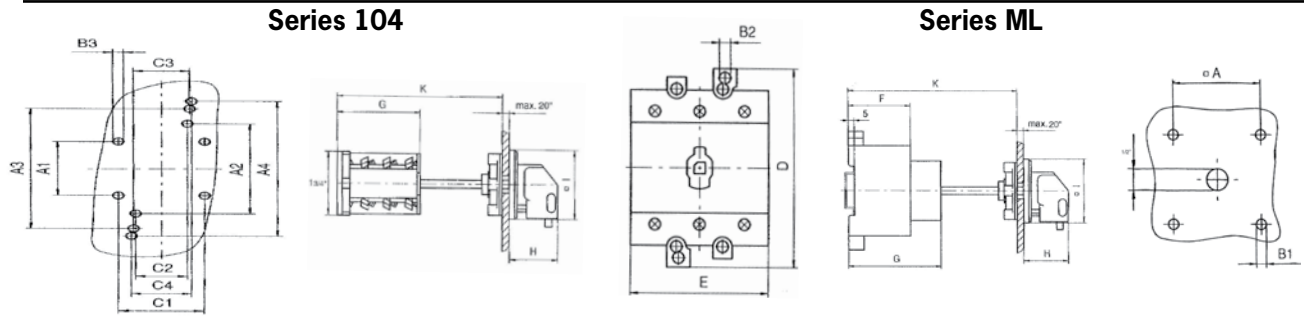
Figure 6



Type	Dimensions (Inches)																
	A	A1	A2	A3	A4	B1	C1	C2	C3	C4	D	E	F	G	H	I	K
104	1.42	1.42	--	--	--	.18	1.42	--	--	--	--	--	--	2.32	1.26	2.60	4.45-5.63
ML1	1.42	--	2.36	2.56	2.76	.18	--	.87	1.18	.98	3.07	1.77	1.65	2.17	1.26	2.60	4.13-5.31
ML2	1.89	--	--	3.15	3.54	.22	--	--	.93	.98	3.94	2.11	1.93	2.83	1.46	3.39	4.72-5.91
ML3	1.89	--	--	3.15	3.54	.22	--	--	.93	.98	3.94	2.76	1.93	2.83	1.46	3.39	4.72-5.91

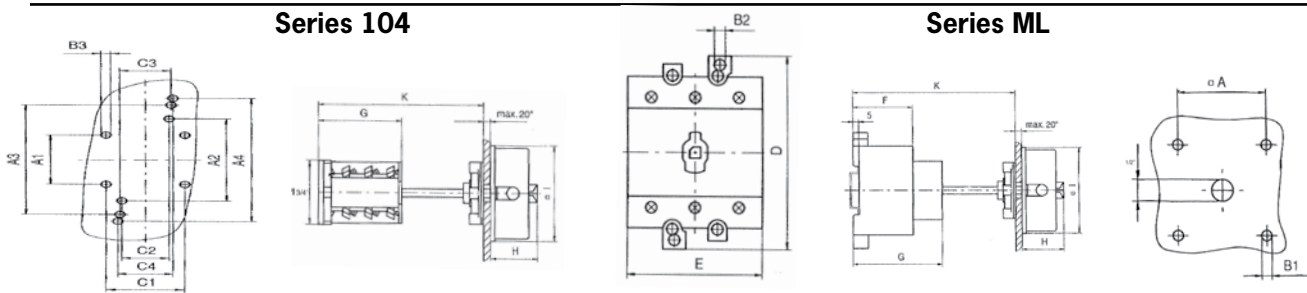
DIMENSIONS; DISCONNECT SWITCHES

Figure 7



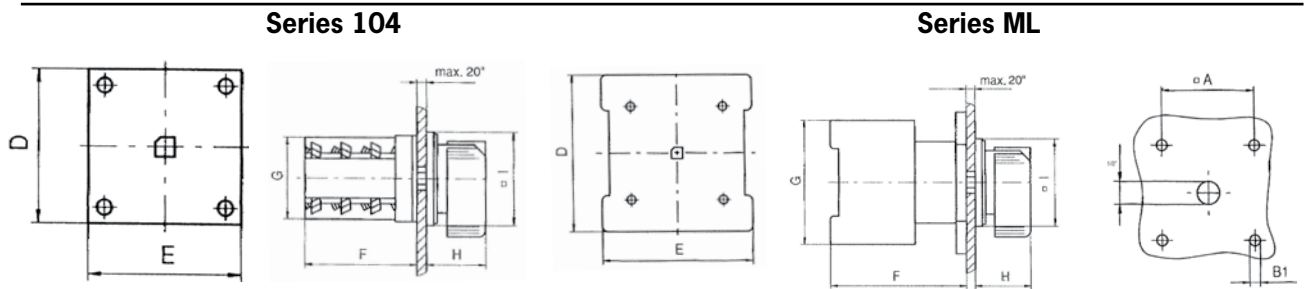
Type	Dimensions (Inches)																	
	A	A1	A2	A3	A4	B1	C1	C2	C3	C4	D	E	F	G	H	I	K	
104	1.42	1.42	--	--	--	.18	1.42	--	--	--	--	--	--	2.32	1.38	1.89	3.46 - 3.86	
ML1	1.42	--	2.36	2.56	2.76	.18	--	.87	1.18	.98	3.07	1.77	1.65	2.17	1.38	1.89	3.46 - 3.86	

Figure 8



Type	Dimensions (Inches)																	
	A	A1	A2	A3	A4	B1	C1	C2	C3	C4	D	E	F	G	H	I	K	
104	1.42	1.42	--	--	--	.18	1.42	--	--	--	--	--	--	2.32	1.26	2.60	3.46 - 3.86	
ML1	1.42	--	2.36	2.56	2.76	.18	--	.87	1.18	.98	3.07	1.77	1.65	2.17	1.26	2.60	3.46 - 3.86	
-ML2	1.89	--	--	3.54	3.54	.22	--	--	.93	.98	3.94	2.11	1.93	2.83	1.54	3.39	4.06 - 4.45	
ML3	1.89	--	--	3.54	3.54	.22	--	--	.93	.98	3.94	2.76	1.93	2.83	1.54	3.39	4.06 - 4.45	

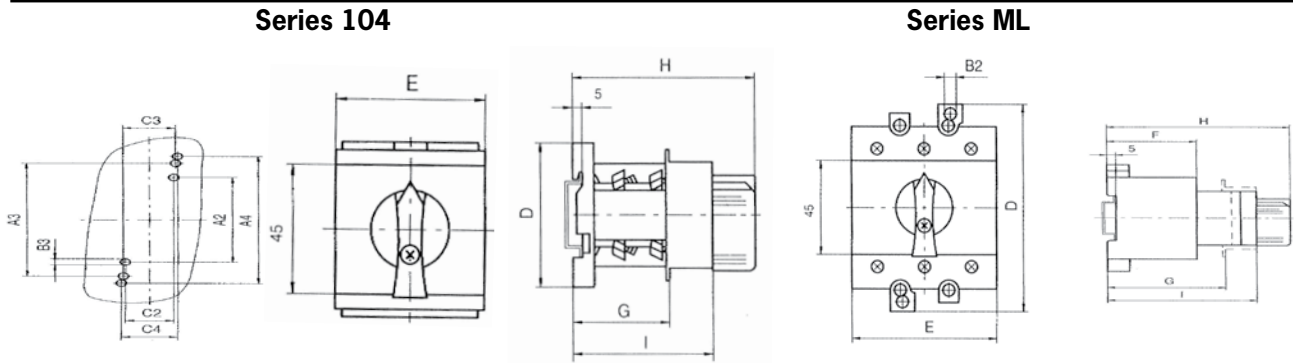
Figure 9



Type	Dimensions (Inches)							
	A	B1	D	E	F	G	H	I
104	1.42	.18	1.75	1.75	2.24	1.69	1.14	1.89
ML1	1.42	.18	1.73	1.73	1.97	2.17	1.14	1.89
ML2	1.89	.22	2.28	2.28	2.83	2.95	1.30	2.52
ML3	2.68	.22	3.07	3.07	2.83	3.15	1.38	3.46

DIMENSIONS; DISCONNECT SWITCHES

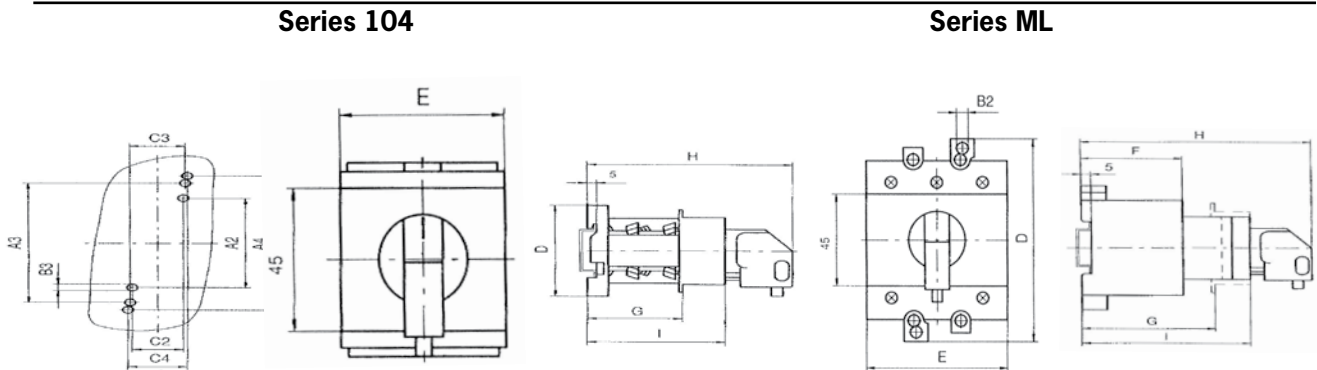
Figure 10



Type	Dimensions (Inches)												
	A2	A3	A4	B3	C2	C3	C4	D	E	F	G	H	I
104	—	—	—	—	—	—	—	2.36	2.07	—	1.85	3.39	2.6
ML1	2.36	2.56	2.76	.15	.87	1.18	.98	3.07	2.07	1.65	1.91	3.44	2.66
ML2	—	3.15	3.54	.20	—	.93	.98	3.94	2.11	1.93	—	3.94	3.11
ML3	—	3.15	3.54	.20	—	.93	.98	3.94	2.76	1.93	—	3.94	3.11

12

Figure 11



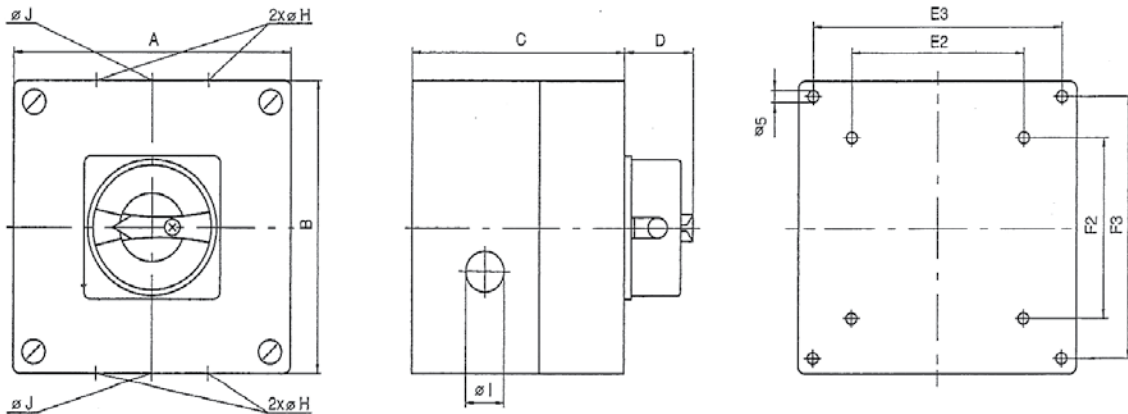
Type	Dimensions (Inches)												
	A2	A3	A4	B3	C2	C3	C4	D	E	F	G	H	I
104	—	—	—	—	—	—	—	2.36	2.07	—	1.85	3.54	2.60
ML1	2.36	2.56	2.76	.15	.87	1.18	.98	3.07	2.07	1.65	1.91	3.60	2.66
ML2	—	3.15	3.54	.20	—	.93	.98	3.94	2.11	1.93	—	4.09	3.11
ML3	—	3.15	3.54	.20	—	.93	.98	3.94	2.76	1.93	—	4.09	3.11

DIMENSIONS; ENCLOSURES

Enclosed Switches



Figure 12



Type	Dimensions (Inches)							
	A	B	C	D	E2	E3	F2	F3
C12B	3.39	—	2.87	1.38	—	2.68	—	—
E2	3.70	5.12	3.19	1.26	—	3.11	—	4.53
E3	5.12	5.12	3.90	1.26	—	4.53	—	4.53
E4	4.33	7.09	4.37	1.26	1.97	3.74	4.72	6.50
E5	7.09	7.17	4.37	1.46	4.72	6.50	4.72	6.57
E6	7.09	10.00	4.37	1.46	4.72	6.50	7.76	9.41
I7	12.00	12.00	6.75	1.46	—	—	—	—

Notes: I7 enclosure comes with a transparent front cover (see above photo #ML3-125-AR3E)



NOTES

CAM SWITCHES



Springer Controls is partnered with **MERZ-PCE**, a world leader in the manufacturing of switch gears. We offer complete line of Cam Switches with as many as 24 switch contacts. Each contact has two fixed terminals and a moving contact bridge. All switches are designed with four switching angles, finger proof construction, captive screws and cable end stops, along with quality construction and excellent engineered design that surpasses the industry standards. UL, CSA, and VDE 0660 part 107 approvals as well as meeting IEC 947-3, EN60947-3 and CE all verify the excellence of the product. All MERZ products meet ROHS certification as well.

Index

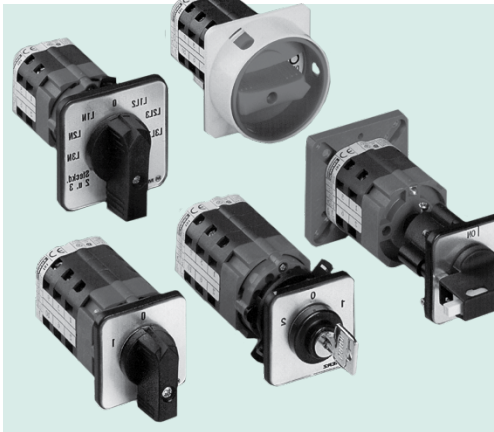
J

CAM SWITCHES

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MODEL AND PRODUCT INFORMATION

Cam Switch Model Ratings



Switch Model			105	151	251	451	656	756
General Purpose 3-phase	A		16	20	25	40	80	100
	V		600	600	600	600	600	600
Motor 3-phase	240V hp		3	5	7.5	10	25	30
	480V hp		5	10	15	20	50	60
	600V hp		5	10	20	30	50	60
Motor 1-phase	120V hp		.5	1	1.5	2	7.5	10
	240V hp		1.5	2.0	3	5.0	15	20

Product Numbering System



Special Options

Mounting Code (pg. J39)

- 3 Types:
 - 4-Hole Front Mount
 - Base Mount
 - Central Mount (22.5 or 30.5mm)
- Black lever handle standard on all cam switches. Consult factory for custom handle style

Contact Arrangement

Factory Assigned: Up to 4 digits

Switch Model

105 (16 amp)	451 (40 amp)
151 (20 amp)	656 (80 amp)
251 (25 amp)	756 (100 amp)

Type

- | | |
|-----------------------------------|---|
| A = On-Off Switches | W = Reversing Switches or Drum Switches |
| Z = By-Pass or Transfer Switches | P = Multi-Speed Switches |
| V = Step Switches | S = Wye-Delta Switches |
| V = Voltmeter or Ammeter Switches | E = Single Phase Starter Switches |


Example: Reversing Switch; 25amp, 3-pole maintained, 4-hole, front mount handle = Part# W251/3-AB

Technical Data acc. to IEC 947-3, EN 60947-3 (DIN VDE 0660 part 107), UL and CSA

Series Type			105	151	251	451	656*	756*
Rated Uninterrupted current (by max. cross section)								
I_U open - 1_{th}	A		20	32	40	63	80*	125*
I_{the} encapsulated	A		16	25	40	63	80*	125*
Rated insulation voltage U_i (III/3)	V		690	690	690	690	690	690
Rated impulse with stand. voltage U_{imp} (III/3)	kV		6	6	6	6	6	6
Rated operational current I_e AC-21 A	A		16	25	32	50	80*	125*
Rated operational voltage U_e	A		690	690	690	690	690	690
Making / Breaking capacity Utilization category AC-3								
	3 x 230V	kW	3	5,5	7,5	11	22	22
Motor switches	3 x 400V	kW	5,5	7,5	11	18,5	37	45
for operational switching	3 x 690V	kW	5,5	11	15	22	45	45
Single phase motor	1 x 230V	kW	2,2	3	4	5,5	11	11
	1 x 400V	kW	3	4	5,5	7,5	15	18,5
Utilization category AC-23 A								
Motor switches (Main Switches	3 x 230V	kW	4	7,5	11	15	22	37
Maintenance Switches)	3 x 400V	kW	7,5	11	15	22	37	45
	3 x 690V	kW	7,5	15	18,5	30	45	45
Rated breaking capacity	3 x 230V	A	150	255	370	520	750	930
AC-23 A	3 x 400V	A	150	230	300	430	700	850
	3 x 690V	A	90	170	210	330	490	490
Utilization category AC-15								
Control Switches	230V	A	6	10	12	16	20	20
Rated operational current L_e	400V	A	4	6	10	12	16	16
Short-circuit capacity								
Max. fuse rating (gl-Char.)		A	25	35	50	63	125	160
Rated conditional short-circuit current		kA_{eff}	4	6	6	6	-	-
Rated short-circuit making capacity I_{cm}		kA	-	-	-	-	3,4	3,4
Rated short-time withstand I_{cw} (1-s-current)		A_{eff}	240	30	400	60	1200	1550
Isolating characteristics up to		V	500	500	690	690	690	690
Mechanical life – Operating cycles			10^6	10^6	10^6	10^6	10^6	10^6
Terminal screws (Pozidrive)			M3	M3,5	M4	M5	M8	2 x M4
Screwdriver: Pozidrive		Size	1	2	2	2	2	2
Torque terminal screws		Nm	0,8	1,0	1,8	2,2	3,5	3,5
Cable cross section		min. mm ²	1,0	1,0	1,0	1,5	1,5	1,5
Solid or multi-stranded		min. mm ²	4,0	4,0	6,0	10,0	25,0	35,0
Flexible with ferrule		min. mm ²	1,0	1,0	1,0	1,5	1,5	1,5
(DIN 46228)		max. mm ²	2,5	2,5	4,0	6,0	16,0	35,0

*656 = 100 A, 756 = 160 A with usage of extension terminals. (non-UL rating)

UL Ratings:

	General Purpose 3-Phase	A	16	20	25	40	80	100	
		V	600	600	600	600	600	600	
	Motor 3-Phase	240V	hp	3	5	7,5	10	25	30
		480V	hp	5	10	15	20	50	60
	Motor 1-Phase (2 pole)	600V	hp	5	10	20	30	50	60
		120V	hp	0,5	1,0	1,5	2,0	7,5	10,0
		240V	hp	1,5	3,0	3,0	5,0	15,0	20,0
	Cable cross section	AWG-No		16-10	16-10	14-8	14-6	14-4	14-1

TYPE: ON-OFF SWITCHES

ON-OFF SWITCHES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	A105/1 -	XX	\$38.00	
	20	A151/1 -	XX	\$45.00	
	25	A251/1 -	XX	\$61.00	
	40	A451/1 -	XX	\$81.00	
	80	A656/1 -	XX	\$119.00	
	100	A756/1 -	XX	\$168.00	
2 Pole	16	A105/2 -	XX	\$46.00	
	20	A151/2 -	XX	\$55.00	
	25	A251/2 -	XX	\$79.00	
	40	A451/2 -	XX	\$110.00	
	80	A656/2 -	XX	\$161.00	
	100	A756/2 -	XX	\$220.00	
3 Pole	16	A105/3 -	XX	\$54.00	
	20	A151/3 -	XX	\$72.00	
	25	A251/3 -	XX	\$104.00	
	40	A451/3 -	XX	\$149.00	
	80	A656/3 -	XX	\$224.00	
	100	A756/3 -	XX	\$277.00	
4 Pole	16	A105/4 -	XX	\$62.00	
	20	A151/4 -	XX	\$80.00	
	25	A251/4 -	XX	\$117.00	
	40	A451/4 -	XX	\$172.00	
	80	A656/4 -	XX	\$266.00	
	100	A756/4 -	XX	\$334.00	
1 Pole	16	A105/62 -	XX	\$38.00	
	20	A151/62 -	XX	\$45.00	
	25	A251/62 -	XX	\$61.00	
	40	A451/62 -	XX	\$81.00	
	80	A656/62 -	XX	\$119.00	
	100	A756/62 -	XX	\$168.00	

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

J4

TYPE: ON-OFF SWITCHES

ON-OFF SWITCHES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
2 Pole	16	A105/50 -	XX	\$46.00	
	20	A151/50 -	XX	\$55.00	
	25	A251/50 -	XX	\$79.00	
	40	A451/50 -	XX	\$110.00	
	80	A656/50 -	XX	\$161.00	
	100	A756/50 -	XX	\$220.00	
3 Pole	16	A105/6 -	XX	\$54.00	
	20	A151/6 -	XX	\$72.00	
	25	A251/6 -	XX	\$104.00	
	40	A451/6 -	XX	\$149.00	
	80	A656/6 -	XX	\$224.00	
	100	A756/6 -	XX	\$277.00	
4 Pole 1-contact priority	16	A105/22 -	XX	\$62.00	
	20	A151/22 -	XX	\$80.00	
	25	A251/22 -	XX	\$117.00	
	40	A451/22 -	XX	\$172.00	
	80	A656/22 -	XX	\$266.00	
	100	A756/22 -	XX	\$334.00	
5 Pole	16	A105/96 -	XX	\$75.00	
	20	A151/96 -	XX	\$98.00	
	25	A251/96 -	XX	\$142.00	
	40	A451/96 -	XX	\$209.00	
	80	A656/96 -	XX	\$330.00	
	100	A756/96 -	XX	\$405.00	
6 Pole	16	A105/10 -	XX	\$86.00	
	20	A151/10 -	XX	\$106.00	
	25	A251/10 -	XX	\$151.00	
	40	A451/10 -	XX	\$224.00	
	80	A656/10 -	XX	\$363.00	
	100	A756/10 -	XX	\$448.00	

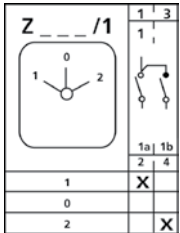
J5

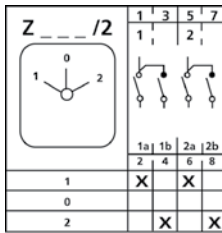
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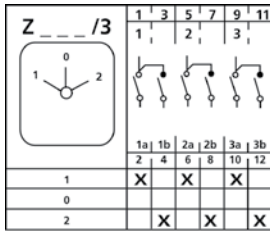
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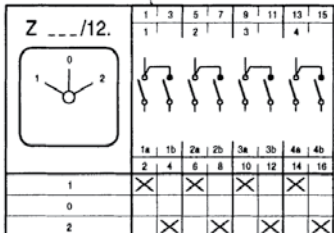
TYPE: CHANGE-OVER SWITCHES WITH O-POSITION

CHANGE-OVER SWITCHES WITH O-POSITION

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole Maintained	16	Z105/1 -	XX	\$43.00	
	20	Z151/1 -	XX	\$55.00	
	25	Z251/1 -	XX	\$79.00	
	40	Z451/1 -	XX	\$110.00	
	80	Z656/1 -	XX	\$161.00	
	100	Z756/1 -	XX	\$220.00	

2 Pole Maintained	16	Z105/2 -	XX	\$53.00	
	20	Z151/2 -	XX	\$80.00	
	25	Z251/2 -	XX	\$117.00	
	40	Z451/2 -	XX	\$172.00	
	80	Z656/2 -	XX	\$266.00	
	100	Z756/2 -	XX	\$334.00	

3 Pole Maintained	16	Z105/3 -	XX	\$74.00	
	20	Z151/3 -	XX	\$106.00	
	25	Z251/3 -	XX	\$151.00	
	40	Z451/3 -	XX	\$224.00	
	80	Z656/3 -	XX	\$363.00	
	100	Z756/3 -	XX	\$448.00	

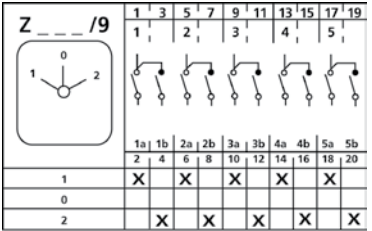
4 Pole Maintained	16	Z105/12 -	XX	\$83.00	
	20	Z151/12 -	XX	\$132.00	
	25	Z251/12 -	XX	\$184.00	
	40	Z451/12 -	XX	\$272.00	
	80	Z656/12 -	XX	\$448.00	
	100	Z756/12 -	XX	\$563.00	

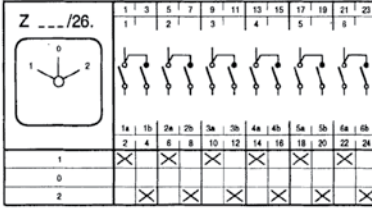
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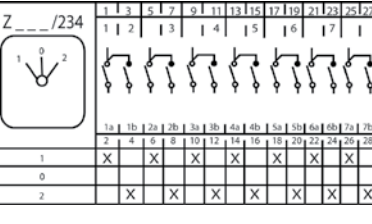
Discount Schedule SC-10

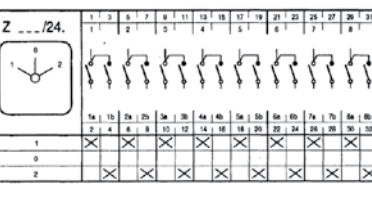
TYPE: CHANGE-OVER SWITCHES WITH O-POSITION

CHANGE-OVER SWITCHES WITH O-POSITION

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Font Plate / Contact Diagram
5 Pole Maintained	16	Z105/9 -	XX	\$108.00	
	20	Z151/9 -	XX	\$160.00	
	25	Z251/9 -	XX	\$219.00	
	40	Z451/9 -	XX	\$318.00	
	80	Z656/9 -	XX	\$534.00	
	100	Z756/9 -	XX	\$673.00	

6 Pole Maintained	16	Z105/26 -	XX	\$125.00	
	20	Z151/26 -	XX	\$186.00	
	25	Z251/26 -	XX	\$252.00	
	40	Z451/26 -	XX	\$368.00	
	80	Z656/26 -	XX	\$620.00	
	100	Z756/26 -	XX	\$790.00	

7 Pole Maintained	16	Z105/234 -	XX	\$135.00	
	20	Z151/234 -	XX	\$212.00	
	25	Z251/234 -	XX	\$286.00	
	40	Z451/234 -	XX	\$415.00	
	80	Z656/234 -	XX	\$707.00	
	100	Z756/234 -	XX	\$908.00	

8 Pole Maintained	16	Z105/24 -	XX	\$145.00	
	20	Z151/24 -	XX	\$238.00	
	25	Z251/24 -	XX	\$320.00	
	40	Z451/24 -	XX	\$466.00	
	80	Z656/24 -	XX	\$794.00	
	100	Z756/24 -	XX	\$1025.00	

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

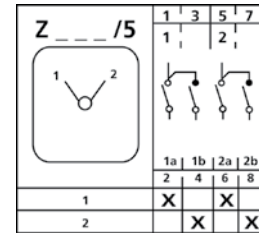
J7

TYPE: CHANGE-OVER SWITCHES WITH NO O-POSITION

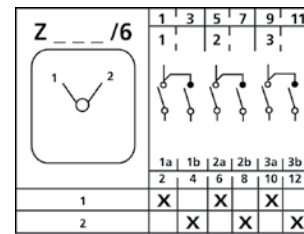
CHANGE-OVER SWITCHES WITH NO O-POSITION

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole Maintained	16	Z105/4 -	XX	\$43.00	
	20	Z151/4 -	XX	\$55.00	
	25	Z251/4 -	XX	\$79.00	
	40	Z451/4 -	XX	\$110.00	
	80	Z656/4 -	XX	\$161.00	
	100	Z756/4 -	XX	\$220.00	

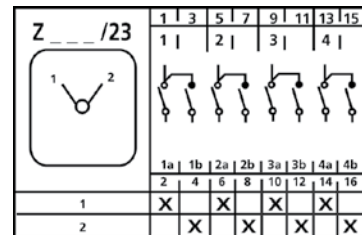
2 Pole Maintained	16	Z105/5 -	XX	\$53.00
	20	Z151/5 -	XX	\$80.00
	25	Z251/5 -	XX	\$117.00
	40	Z451/5 -	XX	\$172.00
	80	Z656/5 -	XX	\$266.00
	100	Z756/5 -	XX	\$334.00



3 Pole Maintained	16	Z105/6 -	XX	\$74.00
	20	Z151/6 -	XX	\$106.00
	25	Z251/6 -	XX	\$151.00
	40	Z451/6 -	XX	\$224.00
	80	Z656/6 -	XX	\$363.00
	100	Z756/6 -	XX	\$448.00



4 Pole Maintained	16	Z105/23 -	XX	\$83.00
	20	Z151/23 -	XX	\$132.00
	25	Z251/23 -	XX	\$184.00
	40	Z451/23 -	XX	\$292.00
	80	Z656/23 -	XX	\$448.00
	100	Z756/23 -	XX	\$563.00



XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: CHANGE-OVER SWITCHES WITH NO O-POSITION

CHANGE-OVER SWITCHES WITH NO O-POSITION

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
5 Pole Maintained	16	Z105/30 -	XX	\$108.00	
	20	Z151/30 -	XX	\$159.00	
	25	Z251/30 -	XX	\$219.00	
	40	Z451/30 -	XX	\$238.00	
	80	Z656/30 -	XX	\$534.00	
	100	Z756/30 -	XX	\$673.00	

6 Pole Maintained	16	Z105/46 -	XX	\$125.00	
	20	Z151/46 -	XX	\$186.00	
	25	Z251/46 -	XX	\$252.00	
	40	Z451/46 -	XX	\$368.00	
	80	Z656/46 -	XX	\$620.00	
	100	Z756/46 -	XX	\$790.00	

7 Pole Maintained	16	Z105/27 -	XX	\$135.00	
	20	Z151/27 -	XX	\$212.00	
	25	Z251/27 -	XX	\$286.00	
	40	Z451/27 -	XX	\$417.00	
	80	Z656/27 -	XX	\$707.00	
	100	Z756/27 -	XX	\$908.00	

8 Pole Maintained	16	Z105/15 -	XX	\$145.00	
	20	Z151/15 -	XX	\$238.00	
	25	Z251/15 -	XX	\$320.00	
	40	Z451/15 -	XX	\$466.00	
	80	Z656/15 -	XX	\$794.00	
	100	Z756/15 -	XX	\$1025.00	

XX - Replace with Handle Suffix from page J39.

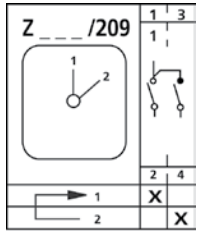
Discount Schedule SC-10

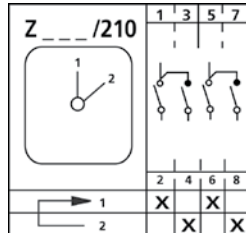
J9

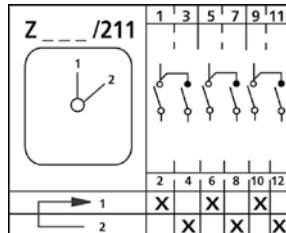
TYPE: CHANGE-OVER SWITCHES WITH NO O-POSITION

CHANGE-OVER SWITCHES WITH NO O-POSITION

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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1 Pole Spring Return	16	Z105/209 -	XX	\$43.00	
	20	Z151/209 -	XX	\$56.00	
	25	Z251/209 -	XX	\$79.00	
	40	Z451/209 -	XX	\$110.00	
	80	Z656/209 -	XX	\$161.00	
	100	Z756/209 -	XX	\$220.00	

2 Pole Spring Return	16	Z105/210 -	XX	\$53.00	
	20	Z151/210 -	XX	\$81.00	
	25	Z251/210 -	XX	\$117.00	
	40	Z451/210 -	XX	\$172.00	
	80	Z656/210 -	XX	\$266.00	
	100	Z756/210 -	XX	\$334.00	

3 Pole Spring Return	16	Z105/211 -	XX	\$74.00	
	20	Z151/211 -	XX	\$107.00	
	25	Z251/211 -	XX	\$151.00	
	40	Z451/211 -	XX	\$224.00	
	80	Z656/211 -	XX	\$361.00	
	100	Z756/211 -	XX	\$448.00	

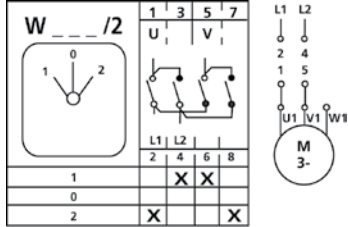
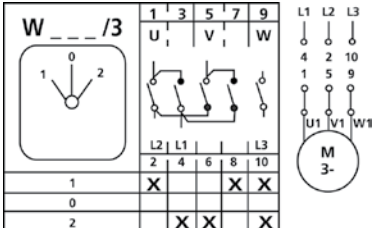
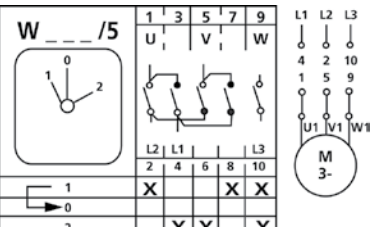
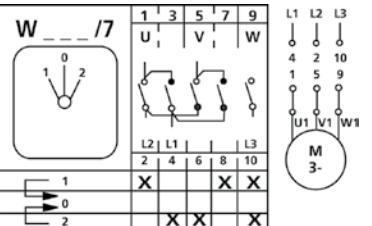
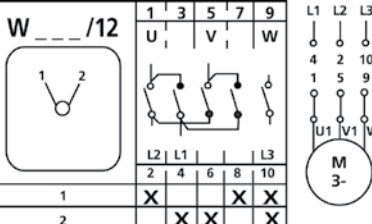
XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

J10

TYPE: REVERSING SWITCHES

REVERSING SWITCHES

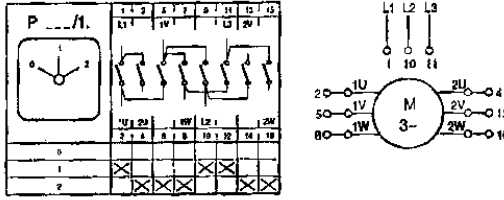
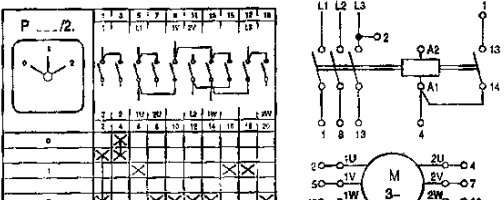
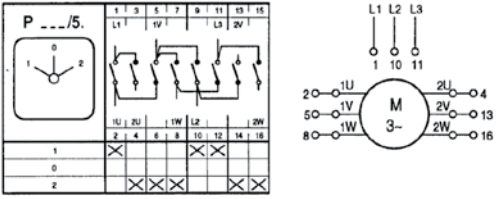
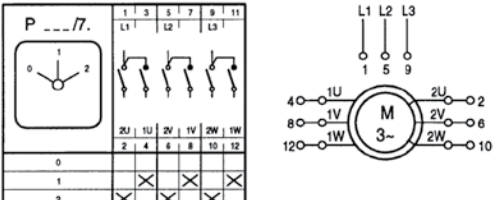
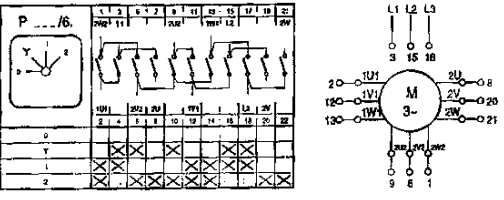
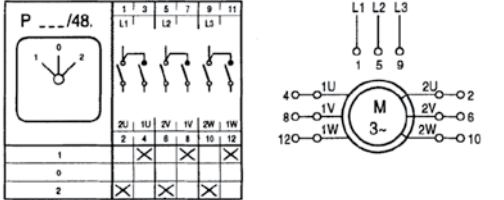
Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
2 Pole Maintained	16	W105/2 -	XX	\$53.00	
	20	W151/2 -	XX	\$80.00	
	25	W251/2 -	XX	\$117.00	
	40	W451/2 -	XX	\$172.00	
	80	W656/2 -	XX	\$266.00	
	100	W756/2 -	XX	\$334.00	
3 Pole Maintained	16	W105/3 -	XX	\$63.00	
	20	W151/3 -	XX	\$98.00	
	25	W251/3 -	XX	\$142.00	
	40	W451/3 -	XX	\$209.00	
	80	W656/3 -	XX	\$329.00	
	100	W756/3 -	XX	\$405.00	
3 Pole with spring return from 1 - 0	16	W105/5 -	XX	\$63.00	
	20	W151/5 -	XX	\$98.00	
	25	W251/5 -	XX	\$142.00	
	40	W451/5 -	XX	\$209.00	
	80	W656/5 -	XX	\$329.00	
	100	W756/5 -	XX	\$405.00	
3 Pole with spring return both sides	16	W105/7 -	XX	\$63.00	
	20	W151/7 -	XX	\$98.00	
	25	W251/7 -	XX	\$142.00	
	40	W451/7 -	XX	\$209.00	
	80	W656/7 -	XX	\$329.00	
	100	W756/7 -	XX	\$405.00	
3 Pole without 0-Position Maintained	16	W105/12 -	XX	\$63.00	
	20	W151/12 -	XX	\$98.00	
	25	W251/12 -	XX	\$142.00	
	40	W451/12 -	XX	\$209.00	
	80	W656/12 -	XX	\$329.00	
	100	W756/12 -	XX	\$405.00	

J11

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: MULTI-SPEED SWITCHES

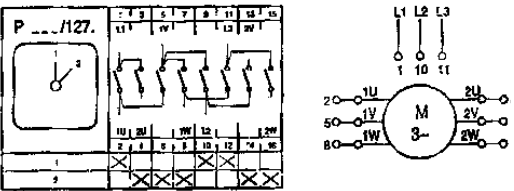
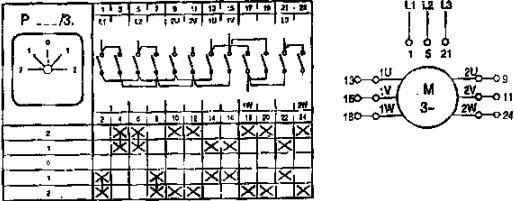
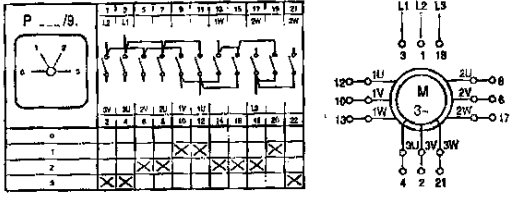
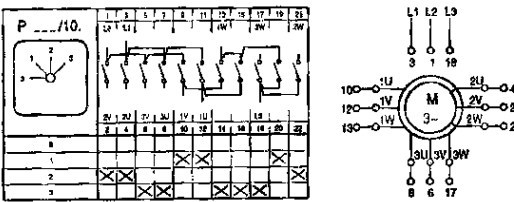
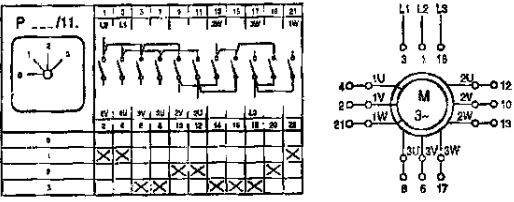
Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
2-Speed Switches Tapped Windings	16	P105/1 -	XX	\$83.00	
	20	P151/1 -	XX	\$132.00	
	25	P251/1 -	XX	\$184.00	
	40	P451/1 -	XX	\$272.00	
	80	P656/1 -	XX	\$448.00	
	100	P756/1 -	XX	\$563.00	
2-Speed Switches Tapped Windings with 1 Contact	16	P105/2 -	XX	\$107.00	
	20	P151/2 -	XX	\$159.00	
	25	P251/2 -	XX	\$218.00	
	40	P451/2 -	XX	\$320.00	
	80	P656/2 -	XX	\$534.00	
	100	P756/2 -	XX	\$677.00	
2-Speed Switches Tapped Windings 0 Middle	16	P105/5 -	XX	\$83.00	
	20	P151/5 -	XX	\$132.00	
	25	P251/5 -	XX	\$184.00	
	40	P451/5 -	XX	\$272.00	
	80	P656/5 -	XX	\$448.00	
	100	P756/5 -	XX	\$563.00	
2-Speed Switches 2 Separate Windings	16	P105/7 -	XX	\$74.00	
	20	P151/7 -	XX	\$106.00	
	25	P251/7 -	XX	\$151.00	
	40	P451/7 -	XX	\$224.00	
	80	P656/7 -	XX	\$363.00	
	100	P756/7 -	XX	\$448.00	
2-Speed Switches With Starting Position	16	P105/6 -	XX	\$118.00	
	20	P151/6 -	XX	\$176.00	
	25	P251/6 -	XX	\$240.00	
	40	P451/6 -	XX	\$352.00	
	80	P656/6 -	XX	\$590.00	
	100	P756/6 -	XX	\$747.00	
2-Speed Switches 2 Separate Windings	16	P105/48 -	XX	\$74.00	
	20	P151/48 -	XX	\$106.00	
	25	P251/48 -	XX	\$151.00	
	40	P451/48 -	XX	\$224.00	
	80	P656/48 -	XX	\$363.00	
	100	P756/48 -	XX	\$448.00	

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: MULTI-SPEED SWITCHES

MULTI-SPEED SWITCHES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
2-Speed Switches Tapped Windings Without 0 Position	16	P105/127 -	XX	\$83.00	
	20	P151/127 -	XX	\$132.00	
	25	P251/127 -	XX	\$184.00	
	40	P451/127 -	XX	\$272.00	
	80	P656/127 -	XX	\$448.00	
100	P756/127 -	XX	\$563.00		
2-Speed Switches Tapped Windings 2 Reversing	16	P105/3 -	XX	\$127.00	
	20	P151/3 -	XX	\$186.00	
	25	P251/3 -	XX	\$251.00	
	40	P451/3 -	XX	\$368.00	
	80	P656/3 -	XX	\$620.00	
100	P756/3 -	XX	\$791.00		
3-Speed Tapped Windings 1 and 2	16	P105/9 -	XX	\$118.00	
	20	P151/9 -	XX	\$176.00	
	25	P251/9 -	XX	\$240.00	
	40	P451/9 -	XX	\$352.00	
	80	P656/9 -	XX	\$590.00	
100	P756/9 -	XX	\$747.00		
3-Speed Switches Tapped Windings 1 and 3	16	P105/10 -	XX	\$118.00	
	20	P151/10 -	XX	\$176.00	
	25	P251/10 -	XX	\$240.00	
	40	P451/10 -	XX	\$352.00	
	80	P656/10 -	XX	\$590.00	
100	P756/10 -	XX	\$747.00		
3-Speed Switches Tapped Windings 2 and 3	16	P105/11 -	XX	\$118.00	
	20	P151/11 -	XX	\$176.00	
	25	P251/11 -	XX	\$240.00	
	40	P451/11 -	XX	\$352.00	
	80	P656/11 -	XX	\$590.00	
100	P756/11 -	XX	\$747.00		

J13

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

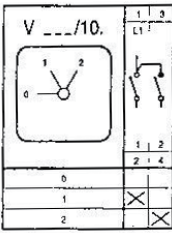
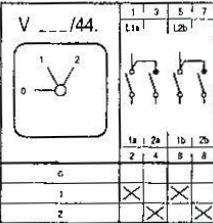
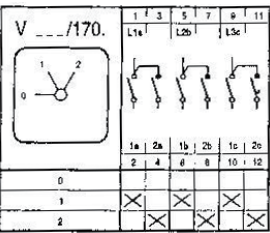
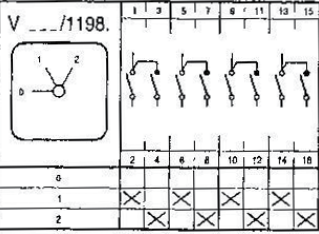
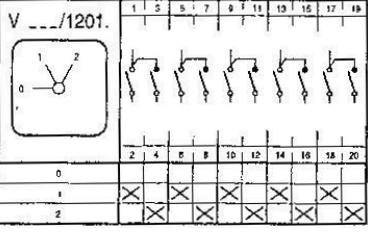
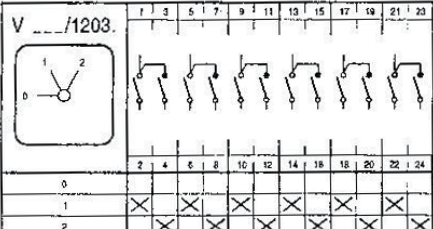
TYPE: WYE-DELTA SWITCHES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
Standard	16	S105/1 -	XX	\$83.00	
	20	S151/1 -	XX	\$132.00	
	25	S251/1 -	XX	\$184.00	
	40	S451/1 -	XX	\$272.00	
	80	S656/1 -	XX	\$448.00	
	100	S756/1 -	XX	\$563.00	
With 1 Contact without Main Contacts	16	S105/2 -	XX	\$80.00	
	20	S151/2 -	XX	\$124.00	
	25	S251/2 -	XX	\$174.00	
	40	S451/2 -	XX	\$257.00	
	80	S656/2 -	XX	\$418.00	
	100	S756/2 -	XX	\$519.00	
With 1 Contact	16	S105/26 -	XX	\$107.00	
	20	S151/26 -	XX	\$159.00	
	25	S251/26 -	XX	\$218.00	
	40	S451/26 -	XX	\$320.00	
	80	S656/26 -	XX	\$534.00	
	100	S756/26 -	XX	\$677.00	
For Individually Compensated Motors	16	S105/5 -	XX	\$83.00	
	20	S151/5 -	XX	\$132.00	
	25	S251/5 -	XX	\$184.00	
	40	S451/5 -	XX	\$272.00	
	80	S656/5 -	XX	\$448.00	
	100	S756/5 -	XX	\$563.00	
2 Reversing	16	S105/3 -	XX	\$107.00	
	20	S151/3 -	XX	\$159.00	
	25	S251/3 -	XX	\$218.00	
	40	S451/3 -	XX	\$320.00	
	80	S656/3 -	XX	\$534.00	
	100	S756/3 -	XX	\$677.00	
2 Reversing With Contact	16	S105/16 -	XX	\$125.00	
	20	S151/16 -	XX	\$186.00	
	25	S251/16 -	XX	\$251.00	
	40	S451/16 -	XX	\$368.00	
	80	S656/16 -	XX	\$620.00	
	100	S756/16 -	XX	\$791.00	
2 Reversing for Individually Compensated Motors	16	S105/27 -	XX	\$107.00	
	20	S151/27 -	XX	\$159.00	
	25	S251/27 -	XX	\$218.00	
	40	S451/27 -	XX	\$320.00	
	80	S656/27 -	XX	\$534.00	
	100	S756/27 -	XX	\$677.00	

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: STEP SWITCHES WITH 0-POSITION 2 STEPS

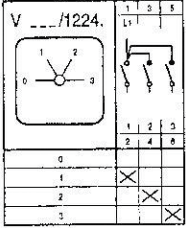
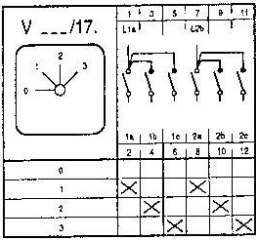
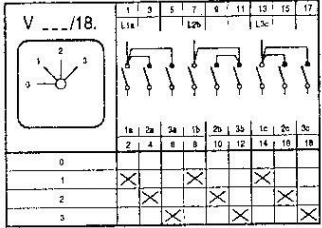
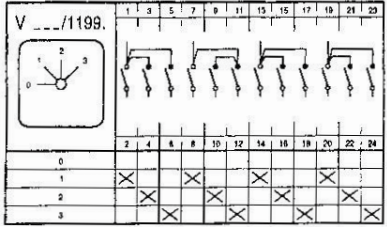
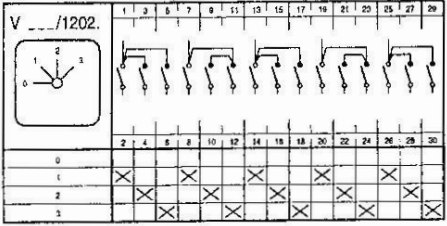
Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/10 -	XX	\$43.00	
	20	V151/10 -	XX	\$56.00	
	25	V251/10 -	XX	\$80.00	
	40	V451/10 -	XX	\$111.00	
	80	V656/10 -	XX	\$161.00	
	100	V756/10 -	XX	\$220.00	
2 Pole	16	V105/44 -	XX	\$53.00	
	20	V151/44 -	XX	\$80.00	
	25	V251/44 -	XX	\$117.00	
	40	V451/44 -	XX	\$172.00	
	80	V656/44 -	XX	\$266.00	
	100	V756/44 -	XX	\$334.00	
3 Pole	16	V105/170 -	XX	\$74.00	
	20	V151/170 -	XX	\$106.00	
	25	V251/170 -	XX	\$151.00	
	40	V451/170 -	XX	\$224.00	
	80	V656/170 -	XX	\$363.00	
	100	V756/170 -	XX	\$448.00	
4 Pole	16	V105/1198 -	XX	\$84.00	
	20	V151/1198 -	XX	\$132.00	
	25	V251/1198 -	XX	\$185.00	
	40	V451/1198 -	XX	\$271.00	
	80	V656/1198 -	XX	\$448.00	
	100	V756/1198 -	XX	\$563.00	
5 Pole	16	V105/1201 -	XX	\$108.00	
	20	V151/1201 -	XX	\$159.00	
	25	V251/1201 -	XX	\$218.00	
	40	V451/1201 -	XX	\$317.00	
	80	V656/1201 -	XX	\$534.00	
	100	V756/1201 -	XX	\$677.00	
6 Pole	16	V105/1203 -	XX	\$124.00	
	20	V151/1203 -	XX	\$185.00	
	25	V251/1203 -	XX	\$252.00	
	40	V451/1203 -	XX	\$366.00	
	80	V656/1203 -	XX	\$620.00	
	100	V756/1203 -	XX	\$791.00	

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: STEP SWITCHES WITH 0-POSITION 3 STEPS

STEP SWITCHES WITH 0-POSITION 3 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/1224 -	XX	\$48.00	
	20	V151/1224 -	XX	\$72.00	
	25	V251/1224 -	XX	\$104.00	
	40	V451/1224 -	XX	\$149.00	
	80	V656/1224 -	XX	\$224.00	
	100	V756/1224 -	XX	\$277.00	
2 Pole	16	V105/17 -	XX	\$74.00	
	20	V151/17 -	XX	\$107.00	
	25	V251/17 -	XX	\$152.00	
	40	V451/17 -	XX	\$224.00	
	80	V656/17 -	XX	\$363.00	
	100	V756/17 -	XX	\$448.00	
3 Pole	16	V105/18 -	XX	\$102.00	
	20	V151/18 -	XX	\$150.00	
	25	V251/18 -	XX	\$208.00	
	40	V451/18 -	XX	\$305.00	
	80	V656/18 -	XX	\$502.00	
	100	V756/18 -	XX	\$633.00	
4 Pole	16	V105/1199 -	XX	\$124.00	
	20	V151/1199 -	XX	\$185.00	
	25	V251/1199 -	XX	\$252.00	
	40	V451/1199 -	XX	\$366.00	
	80	V656/1199 -	XX	\$620.00	
	100	V756/1199 -	XX	\$791.00	
5 Pole	16	V105/1202 -	XX	\$140.00	
	20	V151/1202 -	XX	\$229.00	
	25	V251/1202 -	XX	\$308.00	
	40	V451/1202 -	XX	\$449.00	
	80	V656/1202 -	XX	\$761.00	
	100	V756/1202 -	XX	\$978.00	

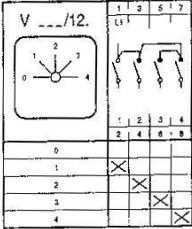
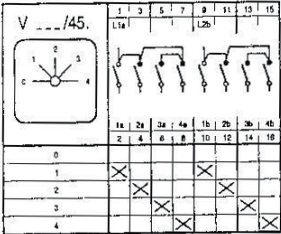
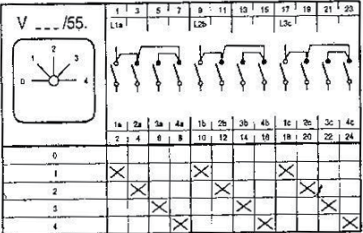
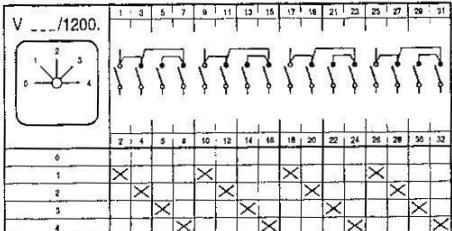
XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

J16

TYPE: STEP SWITCHES WITH 0-POSITION 4 STEPS

STEP SWITCHES WITH 0-POSITION 4 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/12 -	XX	\$53.00	
	20	V151/12 -	XX	\$81.00	
	25	V251/12 -	XX	\$117.00	
	40	V451/12 -	XX	\$172.00	
	80	V656/12 -	XX	\$266.00	
	100	V756/12 -	XX	\$334.00	
2 Pole	16	V105/45 -	XX	\$84.00	
	20	V151/45 -	XX	\$132.00	
	25	V251/45 -	XX	\$185.00	
	40	V451/45 -	XX	\$271.00	
	80	V656/45 -	XX	\$448.00	
	100	V756/45 -	XX	\$563.00	
3 Pole	16	V105/55 -	XX	\$124.00	
	20	V151/55 -	XX	\$185.00	
	25	V251/55 -	XX	\$252.00	
	40	V451/55 -	XX	\$366.00	
	80	V656/55 -	XX	\$620.00	
	100	V756/55 -	XX	\$791.00	
4 Pole	16	V105/1200 -	XX	\$144.00	
	20	V151/1200 -	XX	\$237.00	
	25	V251/1200 -	XX	\$318.00	
	40	V451/1200 -	XX	\$465.00	
	80	V656/1200 -	XX	\$791.00	
	100	V756/1200 -	XX	\$1021.00	

XX - Replace with Handle Suffix from page J39.

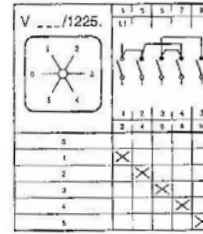
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH 0-POSITION 5 STEPS

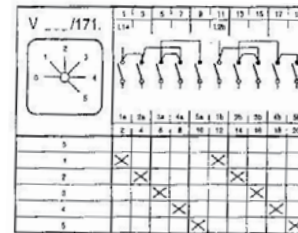
STEP SWITCHES WITH 0-POSITION 5 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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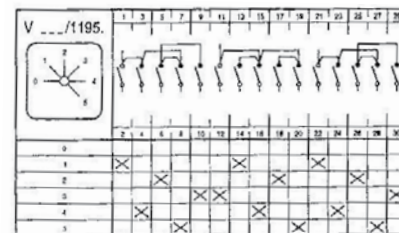
1 Pole	16	V105/1225 -	XX	\$70.00
	20	V151/1225 -	XX	\$98.00
	25	V251/1225 -	XX	\$141.00
	40	V451/1225 -	XX	\$208.00
	80	V656/1225 -	XX	\$329.00
	100	V756/1225 -	XX	\$403.00



2 Pole	16	V105/171 -	XX	\$108.00
	20	V151/171 -	XX	\$159.00
	25	V251/171 -	XX	\$218.00
	40	V451/171 -	XX	\$317.00
	80	V656/171 -	XX	\$620.00
	100	V756/171 -	XX	\$677.00



3 Pole	16	V105/1195 -	XX	\$140.00
	20	V151/1195 -	XX	\$229.00
	25	V251/1195 -	XX	\$308.00
	40	V451/1195 -	XX	\$449.00
	80	V656/1195 -	XX	\$761.00
	100	V756/1195 -	XX	\$978.00



J18

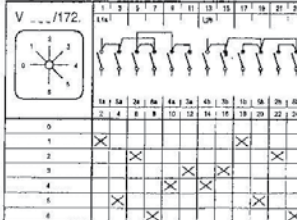
XX - Replace with Handle Suffix from page J39.

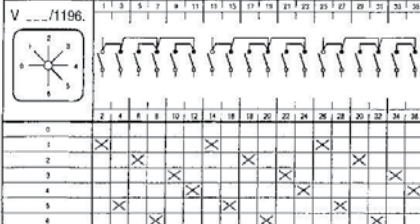
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH 0-POSITION 6 STEPS

STEP SWITCHES WITH 0-POSITION 6 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/60 -	XX	\$74.00	
	20	V151/60 -	XX	\$106.00	
	25	V251/60 -	XX	\$151.00	
	40	V451/60 -	XX	\$224.00	
	80	V656/60 -	XX	\$363.00	
	100	V756/60 -	XX	\$448.00	

2 Pole	16	V105/172 -	XX	\$125.00	
	20	V151/172 -	XX	\$186.00	
	25	V251/172 -	XX	\$251.00	
	40	V451/172 -	XX	\$368.00	
	80	V656/172 -	XX	\$620.00	
	100	V756/172 -	XX	\$791.00	

3 Pole	16	V105/1196 -	XX	\$155.00	
	20	V151/1196 -	XX	\$264.00	
	25	V251/1196 -	XX	\$352.00	
	40	V451/1196 -	XX	\$513.00	
	80	V656/1196 -	XX	\$877.00	
	100	V756/1196 -	XX	\$1138.00	

J19

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

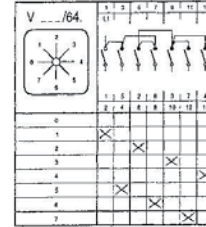
TYPE: STEP SWITCHES WITH 0-POSITION 7/8/9 STEPS

STEP SWITCHES WITH 0-POSITION 7/8/9 STEPS

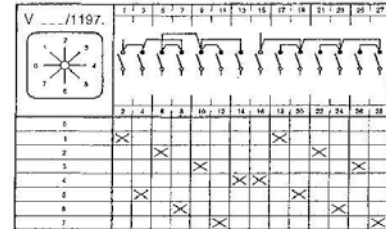
Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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Step switches with 0-Position - 7 steps

1 Pole	16	V105/64 -	XX	\$80.00
	20	V151/64 -	XX	\$124.00
	25	V251/64 -	XX	\$174.00
	40	V451/64 -	XX	\$257.00
	80	V656/64 -	XX	\$418.00
	100	V756/64 -	XX	\$517.00



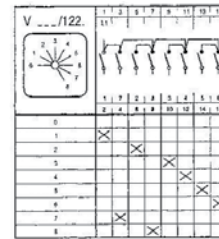
2 Pole	16	V105/1197 -	XX	\$135.00
	20	V151/1197 -	XX	\$211.00
	25	V251/1197 -	XX	\$285.00
	40	V451/1197 -	XX	\$415.00
	80	V656/1197 -	XX	\$705.00
	100	V756/1197 -	XX	\$905.00



J20

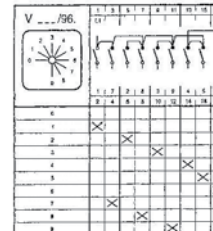
Step switches with 0-Position - 8 steps

1 Pole	16	V105/122 -	XX	\$83.00
	20	V151/122 -	XX	\$132.00
	25	V251/122 -	XX	\$184.00
	40	V451/122 -	XX	\$272.00
	80	V656/122 -	XX	\$448.00
	100	V756/122 -	XX	\$563.00



Step switches with 0-Position - 9 steps

1 Pole	16	V105/96 -	XX	\$102.00
	20	V151/96 -	XX	\$150.00
	25	V251/96 -	XX	\$207.00
	40	V451/96 -	XX	\$305.00
	80	V656/96 -	XX	\$504.00
	100	V756/96 -	XX	\$633.00

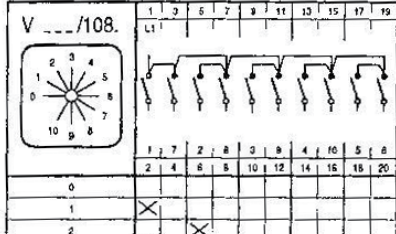


XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

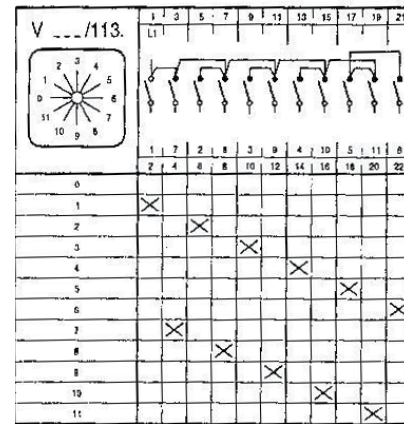
TYPE: STEP SWITCHES WITH 0-POSITION 10/11 STEPS

STEP SWITCHES WITH 0-POSITION 10/11 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
Step switches with 0-Position - 10 steps					
1 Pole	16	V105/108 -	XX	\$107.00	
	20	V151/108 -	XX	\$159.00	
	25	V251/108 -	XX	\$218.00	
	40	V451/108 -	XX	\$320.00	
	80	V656/108 -	XX	\$534.00	
	100	V756/108 -	XX	\$677.00	

Step switches with 0-Position - 11 steps

2 Pole	16	V105/113 -	XX	\$118.00
	20	V151/113 -	XX	\$176.00
	25	V251/113 -	XX	\$240.00
	40	V451/113 -	XX	\$352.00
	80	V656/113 -	XX	\$590.00
	100	V756/113 -	XX	\$747.00



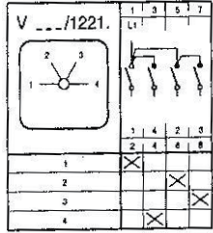
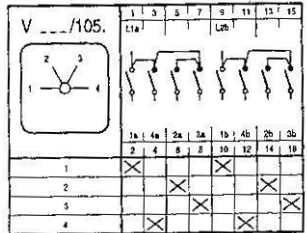
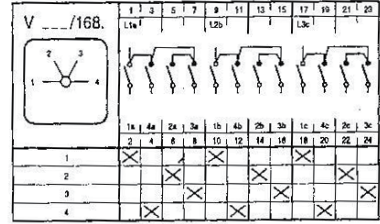
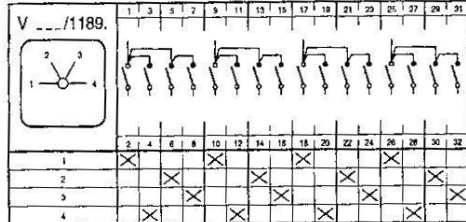
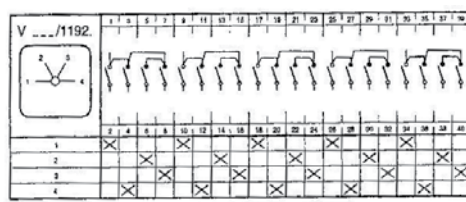
J21

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: STEP SWITCHES WITH NO 0-POSITION 4 STEPS

STEP SWITCHES WITH NO 0-POSITION 4 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/1221 -	XX	\$53.00	
	20	V151/1221 -	XX	\$80.00	
	25	V251/1221 -	XX	\$117.00	
	40	V451/1221 -	XX	\$172.00	
	80	V656/1221 -	XX	\$266.00	
	100	V756/1221 -	XX	\$332.00	
2 Pole	16	V105/105 -	XX	\$83.00	
	20	V151/105 -	XX	\$132.00	
	25	V251/105 -	XX	\$184.00	
	40	V451/105 -	XX	\$272.00	
	80	V656/105 -	XX	\$448.00	
	100	V756/105 -	XX	\$563.00	
3 Pole	16	V105/168 -	XX	\$125.00	
	20	V151/168 -	XX	\$186.00	
	25	V251/168 -	XX	\$251.00	
	40	V451/168 -	XX	\$368.00	
	80	V656/168 -	XX	\$620.00	
	100	V756/168 -	XX	\$791.00	
4 Pole	16	V105/1189 -	XX	\$144.00	
	20	V151/1189 -	XX	\$237.00	
	25	V251/1189 -	XX	\$318.00	
	40	V451/1189 -	XX	\$465.00	
	80	V656/1189 -	XX	\$791.00	
	100	V756/1189 -	XX	\$1021.00	
5 Pole	16	V105/1192 -	XX	\$165.00	
	20	V151/1192 -	XX	\$290.00	
	25	V251/1192 -	XX	\$386.00	
	40	V451/1192 -	XX	\$563.00	
	80	V656/1192 -	XX	\$964.00	
	100	V756/1192 -	XX	\$1255.00	

XX - Replace with Handle Suffix from page J39.

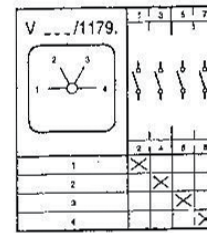
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH NO 0-POSITION 4 STEPS

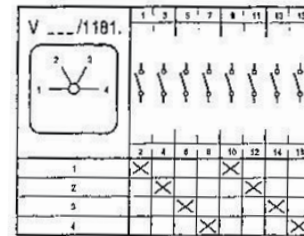
STEP SWITCHES WITH NO 0-POSITION 4 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
6 Pole	16	V105/1194 -	XX	\$205.00	
	20	V151/1194 -	XX	\$342.00	
	25	V251/1194 -	XX	\$452.00	
	40	V451/1194 -	XX	\$658.00	
	80	V656/1194 -	XX	\$1136.00	
	100	V756/1194 -	XX	\$1482.00	

1 Pole Separate Contacts	16	V105/1179 -	XX	\$53.00
	20	V151/1179 -	XX	\$81.00
	25	V251/1179 -	XX	\$117.00
	40	V451/1179 -	XX	\$172.00
	80	V656/1179 -	XX	\$266.00
	100	V756/1179 -	XX	\$332.00



2 Pole Separate Contacts	16	V105/1181 -	XX	\$83.00
	20	V151/1181 -	XX	\$132.00
	25	V251/1181 -	XX	\$185.00
	40	V451/1181 -	XX	\$271.00
	80	V656/1181 -	XX	\$448.00
	100	V756/1181 -	XX	\$563.00



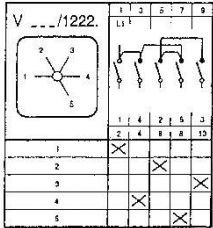
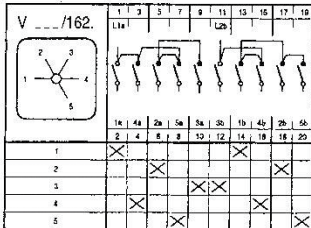
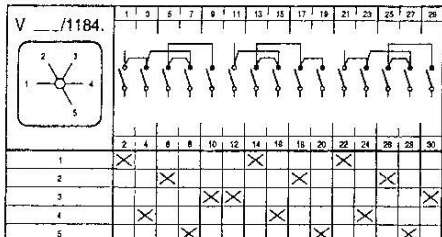
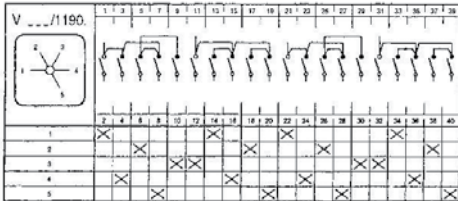
XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

J23

TYPE: STEP SWITCHES WITH NO 0-POSITION 5 STEPS

STEP SWITCHES WITH NO 0-POSITION 5 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/1222 -	XX	\$70.00	
	20	V151/1222 -	XX	\$98.00	
	25	V251/1222 -	XX	\$142.00	
	40	V451/1222 -	XX	\$209.00	
	80	V656/1222 -	XX	\$329.00	
	100	V756/1222 -	XX	\$403.00	
2 Pole	16	V105/162 -	XX	\$107.00	
	20	V151/162 -	XX	\$159.00	
	25	V251/162 -	XX	\$218.00	
	40	V451/162 -	XX	\$320.00	
	80	V656/162 -	XX	\$532.00	
	100	V756/162 -	XX	\$677.00	
3 Pole	16	V105/1184 -	XX	\$140.00	
	20	V151/1184 -	XX	\$229.00	
	25	V251/1184 -	XX	\$308.00	
	40	V451/1184 -	XX	\$449.00	
	80	V656/1184 -	XX	\$761.00	
	100	V756/1184 -	XX	\$978.00	
4 Pole	16	V105/1190 -	XX	\$165.00	
	20	V151/1190 -	XX	\$290.00	
	25	V251/1190 -	XX	\$386.00	
	40	V451/1190 -	XX	\$563.00	
	80	V656/1190 -	XX	\$964.00	
	100	V756/1190 -	XX	\$1255.00	

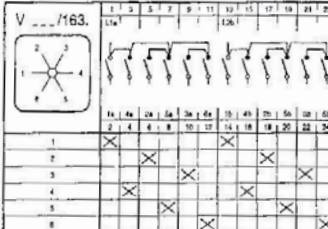
XX - Replace with Handle Suffix from page J39.

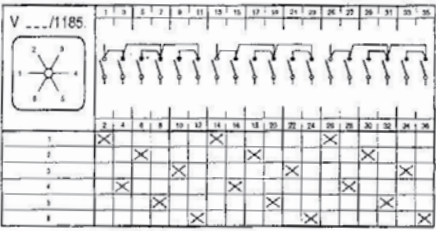
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH NO 0-POSITION 6 STEPS

STEP SWITCHES WITH NO 0-POSITION 6 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/1223 -	XX	\$74.00	
	20	V151/1223 -	XX	\$106.00	
	25	V251/1223 -	XX	\$151.00	
	40	V451/1223 -	XX	\$224.00	
	80	V656/1223 -	XX	\$361.00	
	100	V756/1223 -	XX	\$448.00	

2 Pole	16	V105/163 -	XX	\$125.00	
	20	V151/163 -	XX	\$186.00	
	25	V251/163 -	XX	\$251.00	
	40	V451/163 -	XX	\$368.00	
	80	V656/163 -	XX	\$620.00	
	100	V756/163 -	XX	\$791.00	

3 Pole	16	V105/1185 -	XX	\$155.00	
	20	V151/1185 -	XX	\$264.00	
	25	V251/1185 -	XX	\$352.00	
	40	V451/1185 -	XX	\$513.00	
	80	V656/1185 -	XX	\$877.00	
	100	V756/1185 -	XX	\$1138.00	

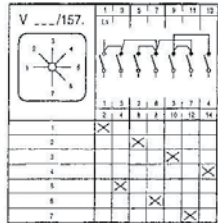
J25

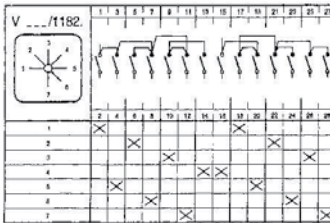
XX - Replace with Handle Suffix from page J39.

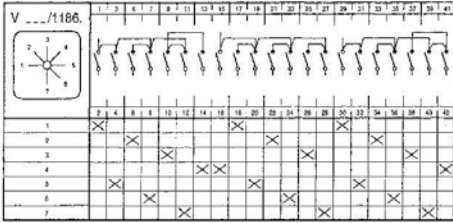
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH NO 0-POSITION 7 STEPS

STEP SWITCHES WITH NO 0-POSITION 7 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/157-	XX	\$80.00	
	20	V151/157 -	XX	\$124.00	
	25	V251/157 -	XX	\$174.00	
	40	V451/157 -	XX	\$257.00	
	80	V656/157 -	XX	\$418.00	
	100	V756/157 -	XX	\$517.00	

2 Pole	16	V105/1182 -	XX	\$135.00	
	20	V151/1182 -	XX	\$211.00	
	25	V251/1182 -	XX	\$285.00	
	40	V451/1182 -	XX	\$415.00	
	80	V656/1182 -	XX	\$705.00	
	100	V756/1182 -	XX	\$908.00	

3 Pole	16	V105/1186 -	XX	\$171.00	
	20	V151/1186 -	XX	\$299.00	
	25	V251/1186 -	XX	\$419.00	
	40	V451/1186 -	XX	\$578.00	
	80	V656/1186-	XX	\$994.00	
	100	V756/1186 -	XX	\$1298.00	

J26

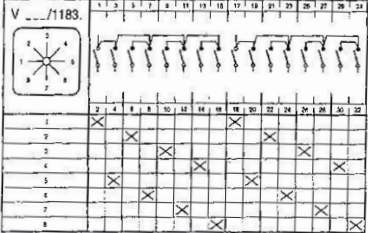
XX - Replace with Handle Suffix from page J39.

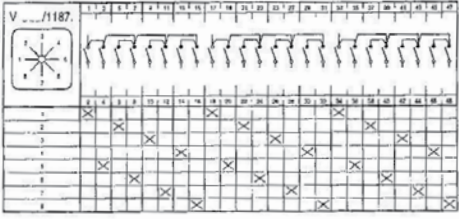
Discount Schedule SC-10

TYPE: STEP SWITCHES WITH NO 0-POSITION 8 STEPS

STEP SWITCHES WITH NO 0-POSITION 8 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/106-	XX	\$83.00	
	20	V151/106 -	XX	\$132.00	
	25	V251/106 -	XX	\$184.00	
	40	V451/106 -	XX	\$272.00	
	80	V656/106 -	XX	\$448.00	
	100	V756/106 -	XX	\$563.00	

2 Pole	16	V105/1183 -	XX	\$144.00	
	20	V151/1183 -	XX	\$237.00	
	25	V251/1183 -	XX	\$318.00	
	40	V451/1183 -	XX	\$464.00	
	80	V656/1183 -	XX	\$791.00	
	100	V756/1183 -	XX	\$1021.00	

3 Pole	16	V105/1187 -	XX	\$205.00	
	20	V151/1187 -	XX	\$342.00	
	25	V251/1187 -	XX	\$452.00	
	40	V451/1187 -	XX	\$658.00	
	80	V656/1187-	XX	\$1136.00	
	100	V756/1187 -	XX	\$1482.00	

J27

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

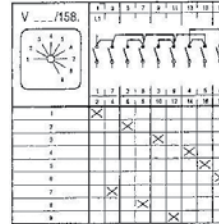
TYPE: STEP SWITCHES WITH NO 0-POSITION 9/10/11 /12 STEPS

STEP SWITCHES WITH NO 0-POSITION 9/10/11/12 STEPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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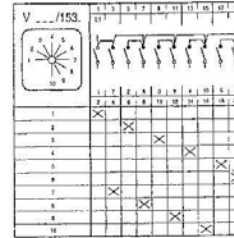
Step Switches without 0-Position - 9 Steps

1 Pole	16	V105/158 -	XX	\$102.00
	20	V151/158 -	XX	\$150.00
	25	V251/158 -	XX	\$207.00
	40	V451/158 -	XX	\$305.00
	80	V656/158 -	XX	\$502.00
	100	V756/158 -	XX	\$633.00



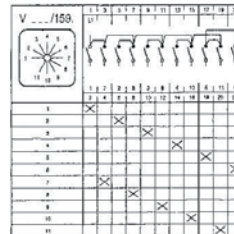
Step Switches without 0-Position - 10 Steps

1 Pole	16	V105/153 -	XX	\$107.00
	20	V151/153 -	XX	\$159.00
	25	V251/153 -	XX	\$218.00
	40	V451/153 -	XX	\$320.00
	80	V656/153 -	XX	\$534.00
	100	V756/153 -	XX	\$677.00



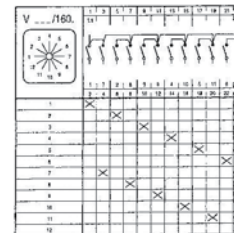
Step Switches without 0-Position - 11 Steps

1 Pole	16	V105/159 -	XX	\$118.00
	20	V151/159 -	XX	\$176.00
	25	V251/159 -	XX	\$240.00
	40	V451/159 -	XX	\$352.00
	80	V656/159 -	XX	\$590.00
	100	V756/159 -	XX	\$747.00



Step Switches without 0-Position - 12 Steps

1 Pole	16	V105/160 -	XX	\$125.00
	20	V151/160 -	XX	\$186.00
	25	V251/160 -	XX	\$251.00
	40	V451/160 -	XX	\$368.00
	80	V656/160 -	XX	\$620.00
	100	V756/160 -	XX	\$791.00

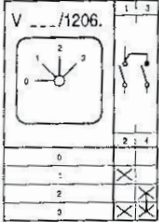


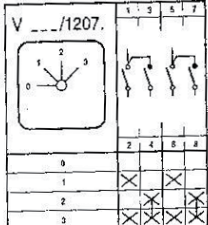
XX - Replace with Handle Suffix from page J39.

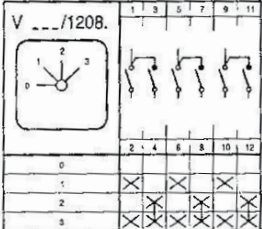
Discount Schedule SC-10

TYPE: GROUP SWITCHES, 2 GROUPS IN SERIES

GROUP SWITCHES, 2 GROUPS IN SERIES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/1206-	XX	\$43.00	
	20	V151/1206 -	XX	\$59.00	
	25	V251/1206 -	XX	\$80.00	
	40	V451/1206 -	XX	\$110.00	
	80	V656/1206 -	XX	\$161.00	
	100	V756/1206 -	XX	\$220.00	

2 Pole	16	V105/1207 -	XX	\$53.00	
	20	V151/1207 -	XX	\$81.00	
	25	V251/1207-	XX	\$117.00	
	40	V451/1207 -	XX	\$172.00	
	80	V656/1207 -	XX	\$266.00	
	100	V756/1207 -	XX	\$334.00	

3 Pole	16	V105/1208 -	XX	\$74.00	
	20	V151/1208 -	XX	\$107.00	
	25	V251/1208 -	XX	\$152.00	
	40	V451/1208 -	XX	\$223.00	
	80	V656/1208-	XX	\$363.00	
	100	V756/1208 -	XX	\$448.00	

J29

XX - Replace with Handle Suffix from page J39.

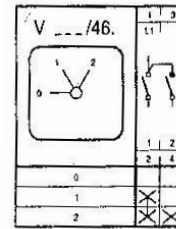
Discount Schedule SC-10

TYPE: GROUP SWITCHES, 2 GROUPS

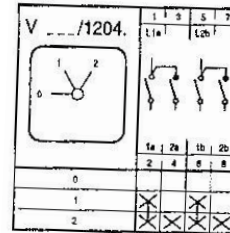
GROUP SWITCHES, 2 GROUPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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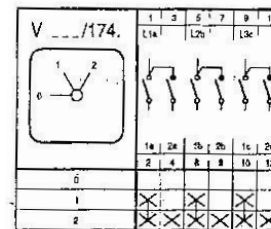
1 Pole	16	V105/46-	XX	\$43.00
	20	V151/46 -	XX	\$55.00
	25	V251/46 -	XX	\$79.00
	40	V451/46 -	XX	\$110.00
	80	V656/46 -	XX	\$161.00
	100	V756/46 -	XX	\$220.00



2 Pole	16	V105/1204 -	XX	\$53.00
	20	V151/1204 -	XX	\$81.00
	25	V251/1204-	XX	\$117.00
	40	V451/1204 -	XX	\$172.00
	80	V656/1204 -	XX	\$266.00
	100	V756/1204 -	XX	\$334.00



3 Pole	16	V105/174-	XX	\$74.00
	20	V151/174 -	XX	\$106.00
	25	V251/174 -	XX	\$151.00
	40	V451/174 -	XX	\$224.00
	80	V656/174-	XX	\$363.00
	100	V756/174 -	XX	\$448.00



XX - Replace with Handle Suffix from page J39.

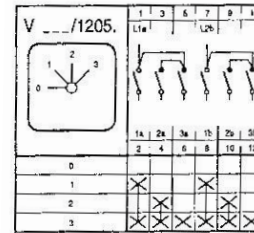
Discount Schedule SC-10

TYPE: GROUP SWITCHES, 3 GROUPS

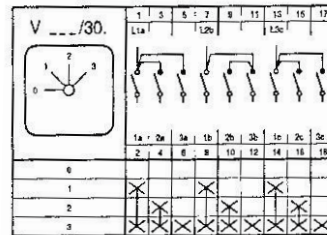
GROUP SWITCHES, 3 GROUPS

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole	16	V105/38-	XX	\$48.00	
	20	V151/38 -	XX	\$72.00	
	25	V251/38 -	XX	\$104.00	
	40	V451/38 -	XX	\$149.00	
	80	V656/38 -	XX	\$224.00	
	100	V756/38 -	XX	\$277.00	

2 Pole	16	V105/1205 -	XX	\$74.00
	20	V151/1205 -	XX	\$107.00
	25	V251/1205-	XX	\$152.00
	40	V451/1205 -	XX	\$223.00
	80	V656/1205 -	XX	\$363.00
	100	V756/1205 -	XX	\$448.00



3 Pole	16	V105/30-	XX	\$102.00
	20	V151/30 -	XX	\$205.00
	25	V251/30 -	XX	\$305.00
	40	V451/30 -	XX	\$353.00
	80	V656/30-	XX	\$504.00
	100	V756/30 -	XX	\$633.00



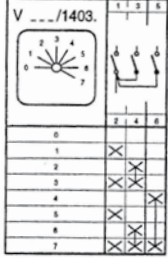
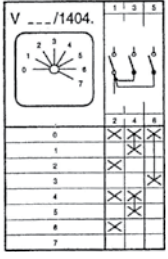
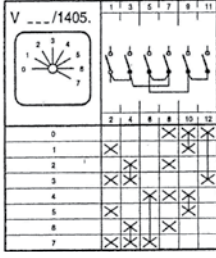
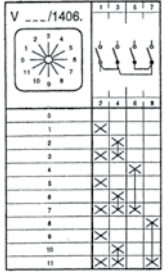
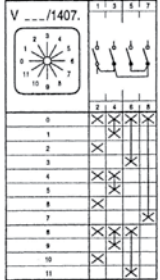
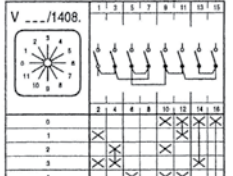
J31

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: CODE SWITCHES, BINARY CODE

CODE SWITCHES, BINARY CODE

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
0-7	16	V105/1403-	XX	\$48.00	
	20	V151/1403 -	XX	\$72.00	
	25	V251/1403 -	XX	\$104.00	
0-7 Compliment	16	V105/1404-	XX	\$48.00	
	20	V151/1404 -	XX	\$72.00	
	25	V251/1404 -	XX	\$104.00	
0-7 + Compliment	16	V105/1405-	XX	\$74.00	
	20	V151/1405 -	XX	\$107.00	
	25	V251/1405 -	XX	\$152.00	
0-11	16	V105/1406-	XX	\$53.00	
	20	V151/1406 -	XX	\$81.00	
	25	V251/1406 -	XX	\$117.00	
0-11 Compliment	16	V105/1407-	XX	\$53.00	
	20	V151/1407 -	XX	\$81.00	
	25	V251/1407 -	XX	\$117.00	
0-11 + Compliment	16	V105/1408-	XX	\$84.00	
	20	V151/1408 -	XX	\$132.00	
	25	V251/1408 -	XX	\$185.00	

XX - Replace with Handle Suffix from page J39.

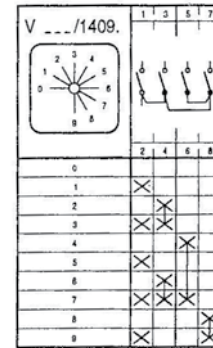
Discount Schedule SC-10

TYPE: CODE SWITCHES, BCD CODE

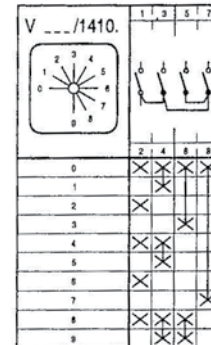
CODE SWITCHES, BCD CODE

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
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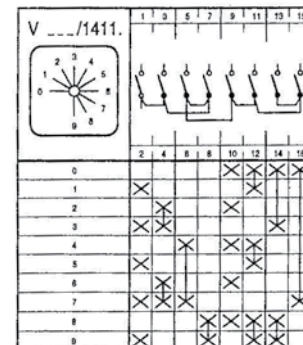
0-9	16	V105/1409-	XX	\$53.00
	20	V151/1409 -	XX	\$81.00
	25	V251/1409 -	XX	\$117.00



0-9 Compliment	16	V105/1410-	XX	\$53.00
	20	V151/1410 -	XX	\$81.00
	25	V251/1410 -	XX	\$117.00



0-9 + Compliment	16	V105/1411-	XX	\$84.00
	20	V151/1411 -	XX	\$132.00
	25	V251/1411 -	XX	\$185.00



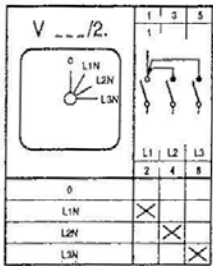
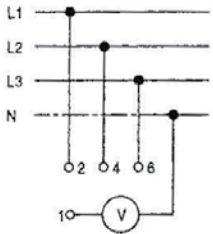
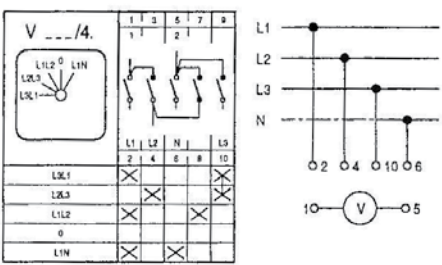
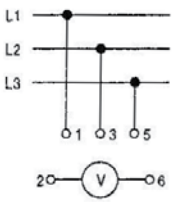
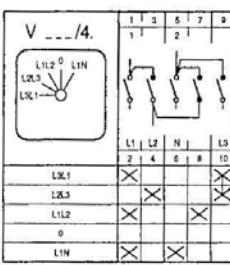
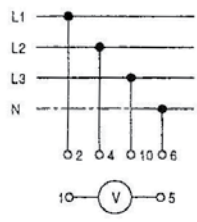
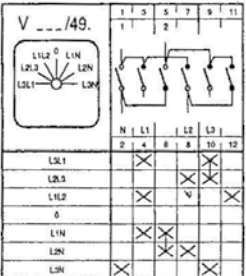
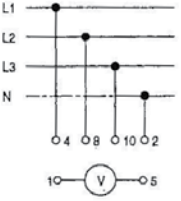
XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

J33

TYPE: VOLTMETER SELECTOR

VOLTMETER SELECTOR

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
3 Phases to N	16	V105/2-	XX	\$48.00	 
3 Line Voltages	16	V105/3-	XX	\$53.00	 
3 Line Voltages 1 Phase to N	16	V105/4-	XX	\$70.00	 
3 Line Voltages 3 Phases to N	16	V105/49-	XX	\$74.00	 

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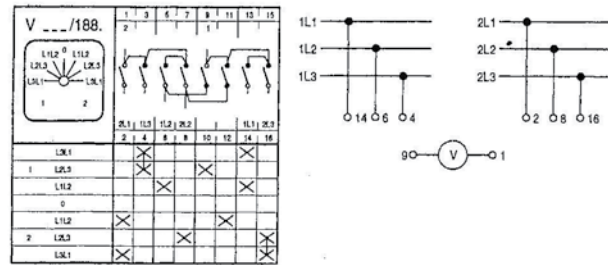
XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

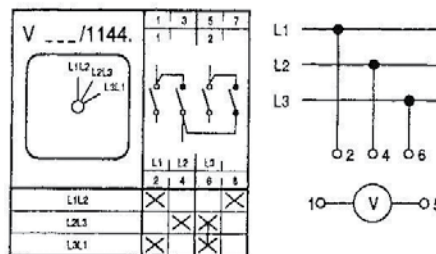
TYPE: VOLTMETER SELECTOR

VOLTMETER SELECTOR

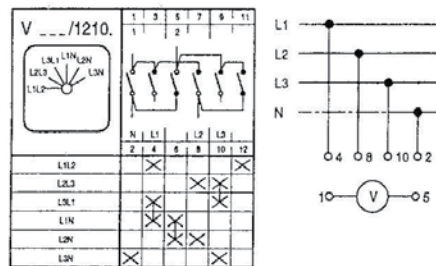
Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
3 Line Voltages for 2 Mains	16	V105/188-	XX	\$83.00	



3 Line Voltages	16	V105/1144-	XX	\$53.00	
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3 Line Voltages 3 Phase to N	16	V105/1210-	XX	\$74.00	
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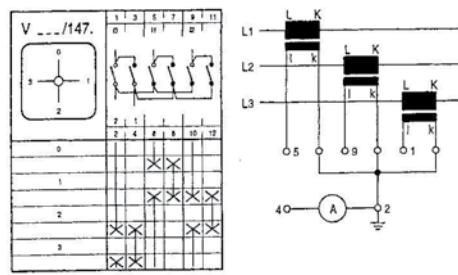
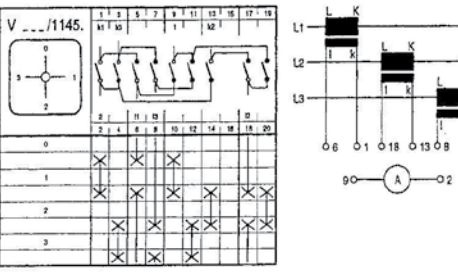
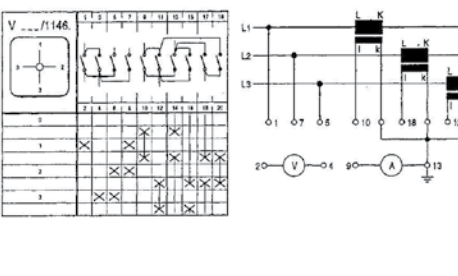
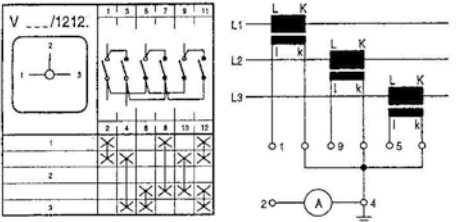


XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: AMMETER SELECTOR

AMMETER SELECTOR

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole 3 Transformer Circuits	16	V105/147-	XX	\$74.00	
2 Pole 3 Transformer Circuits	16	V105/1145-	XX	\$107.00	
3 Voltages 3 Currents	16	V105/1146-	XX	\$107.00	
1 Pole 3 Transformer Circuits	16	V105/1212-	XX	\$74.00	

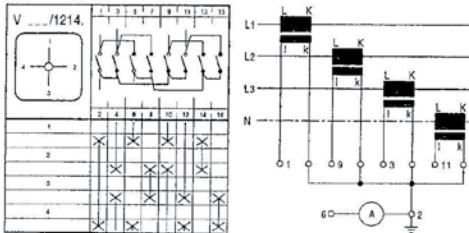
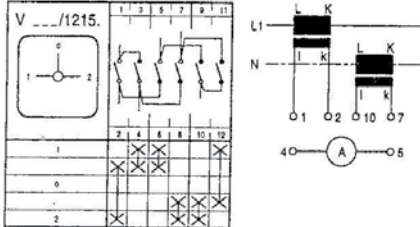
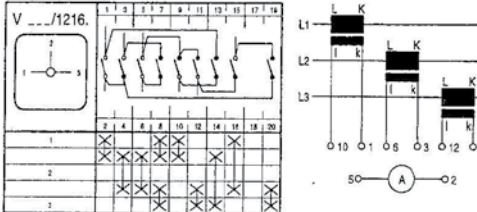
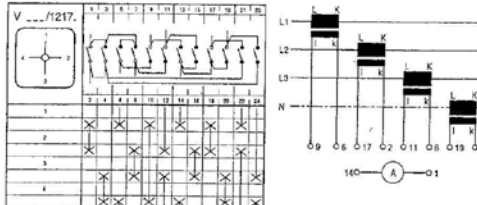
J 36

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: AMMETER SELECTOR

AMMETER SELECTOR

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
1 Pole 4 Transformer Circuits	16	V105/1214-	XX	\$83.00	
2 Pole 2 Transformer Circuits	16	V105/1215-	XX	\$74.00	
2 Pole 3 Transformer Circuit	16	V105/1216-	XX	\$107.00	
2 Pole	16	V105/1217-	XX	\$125.00	

J37

XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

TYPE: SINGLE-PHASE STARTER SWITCHES

SINGLE-PHASE STARTER SWITCHES

Contact Arrangements	AMPS AC3	Model Number	Handle Code (see pg. J39)	Price	Front Plate / Contact Diagram
With Starter Capacitor	16	E105/1-	XX	\$48.00	<p>with starting capacitor</p>
	20	E151/1-	XX	\$72.00	
	25	E251/1-	XX	\$104.00	
With Starter Capacitor	20	E151/2-	XX	\$107.00	<p>with starting capacitor</p>
	25	E251/2-	XX	\$104.00	
2 Reversing	16	E105/3-	XX	\$74.00	<p>with starting capacitor</p>
	20	E151/3-	XX	\$106.00	
	25	E251/3-	XX	\$152.00	
2 Reversing	20	E151/4-	XX	\$106.00	<p>with starting capacitor</p>
	25	E251/4-	XX	\$152.00	
With Running Capacitor	16	E105/5-	XX	\$74.00	<p>with starting capacitor</p>
	20	E151/5-	XX	\$106.00	
	25	E251/5-	XX	\$152.00	

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XX - Replace with Handle Suffix from page J39.

Discount Schedule SC-10

HANDLE & MOUNTING CODE - CAM SWITCHES

- 3 mounting styles available for cam switches (see below).
Replace “XX” suffix from cam part number with letter suffix below. (Example: A251/6-AB, Front Mount 4-hole)
- Standard black lever handle used on all cam switches (custom handles are available on request.)
- Price of switch includes handle and mounting style.
- Cam switches available with enclosure; polycarbonate or aluminum. Consult factory.

Front Mount; 4-hole*



Model / Series	Suffix*
105, 151	AA
251, 451	AB
656, 756	AC

Base Mount; Screw Fixing*



Model / Series	Suffix*
105, 151	PB
251, 451	PC
656, 756	PD

Central Mount; 1-Hole (22.5mm or 30.5mm)*

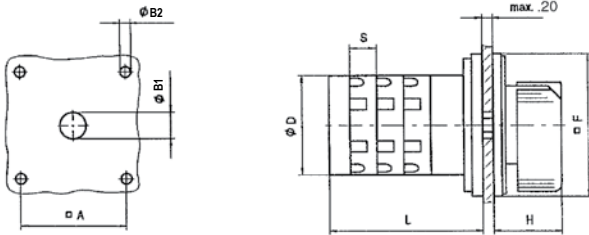


Model / Series	Suffix*
105, 151, 251	CA
451, 656, 756	Not Available

* All cam handles Black/Grey in color. Consult factory for Red/Yellow. See page J40 for dimensions.

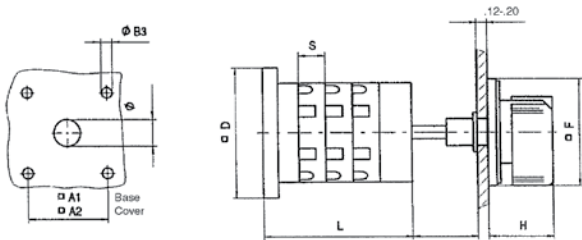
HANDLE & MOUNTING DIMENSIONS

Front Mount; 4-Hole Dimensions



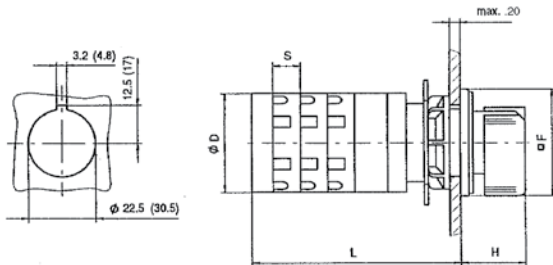
Type	Dimension (Inches)							L By Switch Contacts			
	A	B1	B2	D	F	H	S	1-2	3-4	5-6	7-8
105	1.42	.47	.18	1.73	1.89	1.14	.49	1.34	1.83	2.32	2.81
151	1.42	.47	.18	1.93	1.89	1.14	.49	1.79	2.28	2.78	3.27
251	1.89	.47	.22	2.48	2.52	1.30	.49	1.93	2.42	2.91	3.41
451	1.89	.47	.22	2.83	2.52	1.30	.69	2.13	2.81	3.50	4.19
656	2.68	.59	.22	3.15	3.46	1.38	.63	2.13	2.76	3.39	4.02
756	2.68	.59	.22	3.39	3.46	1.38	1.04	2.52	3.56	4.61	5.65

Base Mount; Screw Fixing Dimensions



Type	Dimension (Inches)							L By Switch Contacts			
	A1	A2	B3	D	F	H	S	1-2	3-4	5-6	7-8
105	1.42	1.42	.18	1.73	1.89	1.14	.49	1.34	1.83	2.32	2.81
151	1.89	1.42	.18	2.40	1.89	1.14	.49	1.71	2.20	2.70	3.19
251	1.89	1.89	.20	2.40	2.52	1.30	.49	1.85	2.34	2.83	3.33
451	2.68	1.89	.20	3.62	2.52	1.30	.69	2.05	2.74	3.43	4.11
656	2.68	2.68	.22	3.62	3.46	1.38	.63	2.05	2.68	3.31	3.94
756	2.68	2.68	.22	3.62	3.46	1.38	1.04	2.44	3.48	4.53	5.57

Central Mount; 1 Hole Dimensions (22.5mm or 30.5mm)



Type	Dimension (Inches)				L By Switch Contacts			
	D	F	H	S	1-2	3-4	5-6	7-8
105	1.73	1.89	1.14	.49	1.89	2.38	2.87	3.37
151	1.93	1.89	1.14	.49	2.70	3.19	3.68	4.17
251	2.48	2.52	1.30	.49	2.83	3.33	3.82	4.31

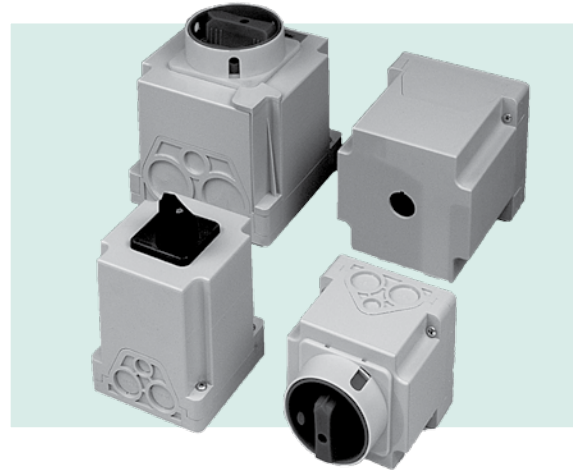
J40

CAM SWITCH ENCLOSURES

All cam switches can be designated to an enclosure. Enclosures are available in polycarbonate or aluminum cast-iron. Consult factory for pricing of a complete enclosed switch.

Dimensional Data

Dimensions are enclosure only; does not include the handle dimension.



Polycarbonate (IP65 rated)

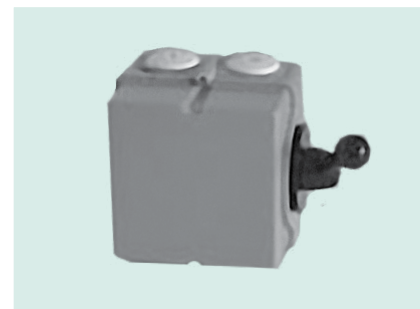
Series	L x W x D (mm)	Mounting Hole to Hole	Enclosure Type
105	90.5 x 90.5 x 73	80 mm	I1 - D - NL4
105	90.5 x 90.5 x 110	80 mm	I1 - D - HL4
151, 251, ML1	115 x 115 x 98	100 mm	I2 - D - NL4
151, 251, ML1	115 x 115 x 125	100 mm	I2 - D - HL4
451, ML2	145 x 145 x 120	130 mm	I3 - D - NL4
451, ML2	145 x 145 x 150	130 mm	I3 - D - HL4
656*, 756*	300 x 300 x 170	271 mm	I7N
656*, 756*	300 x 300 x 214	271 mm	I7H

* Clear polycarbonate cover face

Aluminum Cast-Iron (IP54 rated)

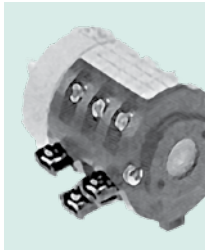
Series	L x W x D (mm)	Mounting Hole to Hole	Enclosure Type
105, 151	105 x 105 x 79	80 mm	A18
151, 251	121 x 121 x 92	80 mm	A19

* Consult factory for additional sizes



CAM SWITCH ACCESSORIES

Extension Terminal



Type	Catalog No.	Price
Extension Terminals	AS	*C.F.

* C.F. - Consult Factory items will vary in price according to switch configuration.

Blade Terminal



Type	Catalog No.	Price
Blade Terminals	F	*C.F.

* C.F. - Consult Factory items will vary in price according to switch configuration.

Auxiliaries



Type	Catalog No.	Price
PE Terminals	PE	\$11
N Terminals	N	\$11

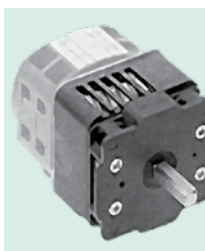
Protection Covers



Type	Catalog No.	Price
Protection Covers	DH	*C.F.

* C.F. - Consult Factory items will vary in price according to switch configuration.

Voltage Release - Loss of Voltage

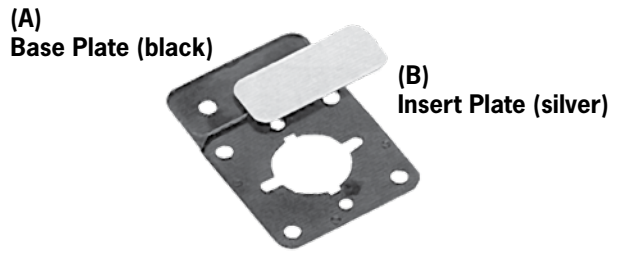


Type	Catalog No.	Price
Voltage Release	U	*C.F.

24V AC, 120V AC, 240V AC

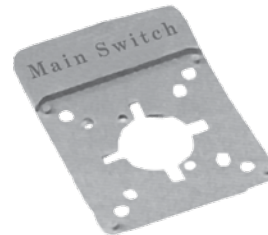
* C.F. - Consult Factory items will vary in price according to switch configuration.

Front Plates For Central 2 & 3 Hole Mounting



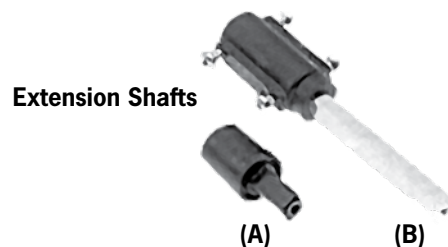
Type	Color	Size	Dimension	Catalog No.	Price
A	Black	0	30 x 51mm	EB91	\$3.00
A	Black	1	48 x 69mm	EB64	\$3.00
B	Silver	0		ES	\$3.00
B	Silver	1		ES1	\$3.00

Front Plates Size 1 & Size 2



Color	Size	Dimension	Catalog No.	Price
Yellow	1	66 x 89mm	MSY	\$8.00
Grey	2	86 x 108mm	MSG	\$8.00

Base & Rear Mounting Up To Series 451



Type	Size	Catalog No.	Price
A	18mm (max. 5 pcs.)	AL18	\$3.00
B	65 - 80mm	AL-65	\$16.00
B	165 - 205mm	AL165	\$19.00
B	265 - 305mm	AL265	\$23.00
B	365 - 405mm	AL365	\$31.00

Discount Schedule SC-10



NOTES

HAZARDOUS LOCATION SWITCHES



SPRINGER
controls company

Springer Controls hazardous location switches, also known as oil immersed switches, are designed to provide dependable, heavy duty performance in indoor or outdoor locations; specifically where atmospheric conditions are dusty, corrosive or hazardous. Their positive action and heavy-duty construction make them suitable for the most rugged application. They are dependable under the most extreme operating conditions.

HAZARDOUS LOCATION / OIL IMMERSED SWITCHES

Description / Features.....	K2
Specifications.....	K3
Model # & Pricing.....	K4, K5
Accessories.....	K6, K7
Dimensions.....	K8

Index
K

DESCRIPTION / FEATURES



2080-ZQ11

Description

Springer Controls hazardous location switches, also known as oil immersed switches, are designed to provide dependable heavy duty performance in indoor or outdoor locations; specifically where atmospheric conditions are dusty, corrosive or hazardous. Their positive action and heavy-duty construction make them suitable for the most rugged application. They are dependable under the most extreme operating conditions.

Features

Typical applications include: oil refineries, chemical plants, textile mills, paper mills, steel mills, food processing and any area where corrosive or hazardous conditions exist.

The standard enclosure consists of heavily constructed cast iron top and tank - a functional design that facilitates installation and provides a dust-tight, weather-resistant lever operator. The top casting has a provision to lock the operating lever in either the "on" or "off" position.

The operating mechanism consists of heavy duty contacts, a molded phenolic mounting panel and push-rod, wing-type cast iron operating lever, monel shaft, stainless steel bushings and washers.

All operator stations are designed with maximum flexibility of contact arrangement and access to operating parts for easy installation, maintenance and inspection.


The control of corrosion from atmospheric conditions and the elimination of exposed arcs are accomplished by the immersion of all operating parts in oil. The Type 675 has the Underwriters Laboratory (UL) approval for Hazardous Location, File #184636.



2080-AF8-1

K2

Specifications

Type 675 	Type 604
Type 675 Hazardous Locations Nema 3R, 7, 8, 9 Class I, Group B, C, D Class II, Group E, F, G	Type 604 Watertight, Corrosion Proof Nema 3, 4, 11, 12 Class I, Group D, Div. 2

Specifications	675 Dim. 1	604 Dim. 1
Approx. Ship wt. Lbs.	18lb	17lb
Oil ¹ Capacity Qts.	1	1
Hub Size (Two / Unit)	3/4"	3/4"
Dia. Mounting Holes	3/8"	3/8"

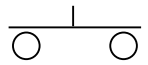
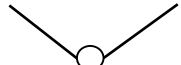
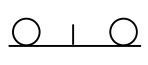
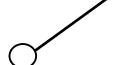
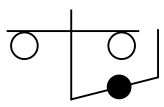
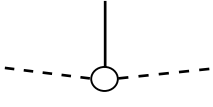
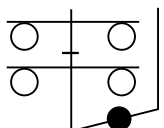
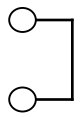
¹ All units shipped less oil

**Contact Rating - AC
Air or Oil - NEMA A600**

6 Amps - 120V 3 Amps - 240V 1.5 Amps - 480V 1.2 Amps - 600V	Recommended switch oil or transformer oil is Chevron "Univolt N61". (Not provided with switch)
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K3

Contact Configuration - Handle Lever Style

	Indicates momentary make; spring return		Indicates common double lever
	Indicates momentary break; spring return		Indicates single lever
	Indicates maintained contact		Indicates 3 position selector
	Indicates maintained contact; two circuit		Indicates removable

MODEL # AND PRICING




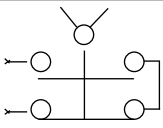
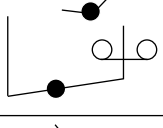
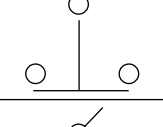
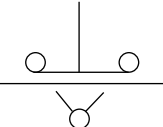
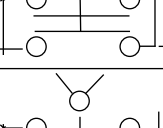
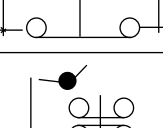
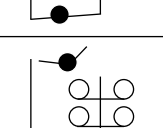
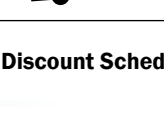
2080-AF8

Springer Controls line of corrosive-hazardous location operators stations offer heavy duty construction and positive contact action. Internal contact assemblies are identical in each type of station.

Approved enclosures for Springer Controls Push Buttons are:
 Type 604 - designed for use in NEMA 3, 4, 11, and 12.
 Type 675 - designed for use in NEMA 3R, 7, 8, and 9.


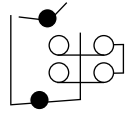
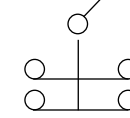
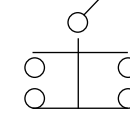
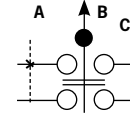
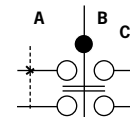
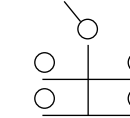
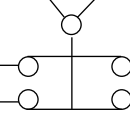
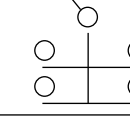
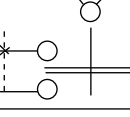
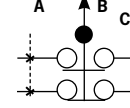
For maximum protection against corrosion and elimination of exposed arcs, switch oil is recommended.

All **Type 675** stations are **UL** Listed and **cUL** Listed

NEMA 3R, 7, 8, 9 Type 675 		NEMA 3, 4, 11, 12 Type 604		Contact Arrangement	
2080-AF8	\$1085.00	2080-AF11	\$879.00	1 N.O. - 1 N.C. Momentary	
2080-B8	\$1062.00	2080-B11	\$856.00	1 N.C. Maintained	
2080C8	\$1104.00	2080-C11	\$903.00	1 N.O. Momentary	
2080-D8	\$1104.00	2080-D11	\$903.00	1 N.C. Momentary	
2080-E8	\$1104.00	2080-E11	\$903.00	2 N.O. Momentary	
2080-F8	\$1104.00	2080-F11	\$903.00	1 N.O. - 1 N.C. Momentary	
2080-I8	\$1104.00	2080-I11	\$903.00	1 N.O. - 1 N.C. Maintained	
2080-J8	\$1104.00	2080-J11	\$903.00	2 N.C. Maintained	

Discount Schedule SC-81

MODEL # AND PRICING

NEMA 3R, 7, 8, 9 Type 675		NEMA 3, 4, 11, 12 Type 604	Contact Arrangement		
2080-R8	\$1197	2080-R11	\$974.00	2 N.C. Maintained	
2080-S8	\$1163.00	2080-S11	\$974.00	2 N.C. Momentary	
2080-T8	\$1146.00	2080-T11	\$940.00	1 N.O. - 1 N.C. Momentary	
2080-TY8 (not UL)	\$1862.00	2080-TY11	\$1159.00	Sel. Sw.; Left Spring Return, Maintained Right	
2080-VV8	\$1293.00	2080-VV11	\$1054.00	Sel. Sw; Maintained Left, Center Right	
2080-WL8	\$1184.00	2080-WL11	\$987.00	2 N.O. Momentary	
2080-WS8	\$1184.00	2080-WS11	\$987.00	2 N.C. Momentary	
2080-Y08	\$1148.00	2080-Y011	\$951.00	2 N.O. Momentary	
2080-YT8	\$1092.00	2080-YT11	\$886.00	2 N.O. Momentary	
2080-ZQ8	\$1104.00	2080-ZQ11	\$903.00	Sel. Sw.; Left Spring Return, Maintained Right	

K5

Discount Schedule SC-81

ACCESSORIES

Springer Controls can help you meet any requirement. Our custom built stations include special maintained and momentary contact arrangements, lever guards and special conduit hubs. Custom nameplate kits available as well.

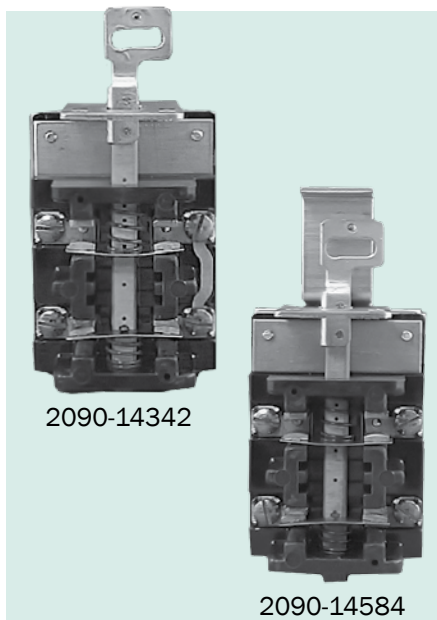
Custom Build - Suffix

Add the "catalog-suffix" to the switch part number to obtain factory built modifications.

ie. 2080-ZQ8-1...
Complete unit with operating lever guard installed

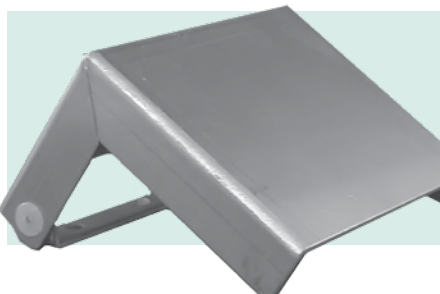
Factory Modification		Cat. Suffix	Price
Operating Lever Guard	LG 1	-1	\$84.00
Optional Hubs	1 Inch	-3	\$105.00
Optional Hubs	1 1/4 Inch	-4	\$168.00

Contact Assemblies (Type 2080-604 & 2080-675)



Replacement Parts	Catalog No.	Price
Switch Rod	2090-14309	\$197.00
Push Button Contact Assembly - AF	2090-14342	\$273.00
Push Button Contact Assembly - B	2090-14440	\$273.00
Push Button Contact Assembly - C	2090-14441	\$273.00
Push Button Contact Assembly - D	2090-14442	\$273.00
Push Button Contact Assembly - I	2090-14567	\$273.00
Push Button Contact Assembly - ZQ	2090-14584	\$394.00
Push Button Contact Assembly - J	2090-14829	\$338.00
Push Button Contact Assembly - VV	2090-17574	\$478.00
Push Button Contact Assembly - TO	2090-24482	\$781.00
Push Button Contact Assembly - TY	2090-14522	\$583.00

Field Kit: Operating Lever Guard



Accessories and Parts	Catalog No.	Price
Lever Guard - Single Tank	2080-LG1	\$84.00

Discount Schedule SC-81

K6

Standard Nameplate Kits *(includes the rivets for field installation)*

● **HANDS-OFF-AUTO** ●

2080-N5

Nameplate specs.

Width: 3/8"

Length: 3.25"

Hole Ø: 1/8" (Two holes)



2080-ZQ11
with 2080-N5 Nameplate

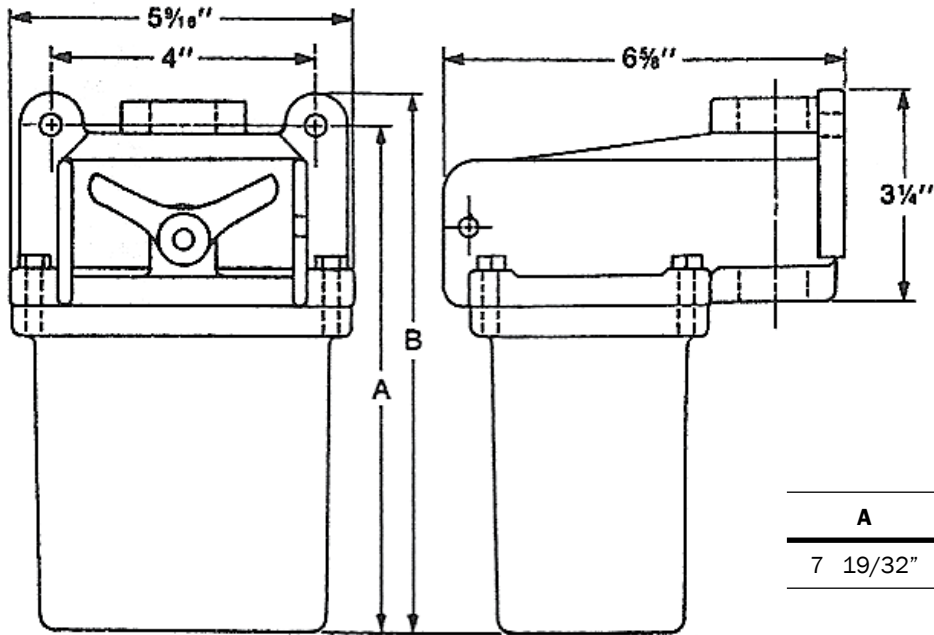
Nameplate	Catalog No.	Price
Nameplate "Start-Stop"	2080-N1	\$29.00
Nameplate "Start"	2080-N2	\$29.00
Nameplate "Stop"	2080-N3	\$29.00
Nameplate "Reset"	2080-N4	\$29.00
Nameplate "Hands-Off-Auto"	2080-N5	\$29.00
Nameplate "Automatic"	2080-N6	\$29.00
Nameplate "Down"	2080-N7	\$29.00
Nameplate "Emergency"	2080-N8	\$29.00
Nameplate "Fast-Off-Slow"	2080-N9	\$29.00
Nameplate "Forward-Off-Reverse"	2080-N10	\$29.00
Nameplate "Hand"	2080-N11	\$29.00
Nameplate "Hand-Auto-Off"	2080-N12	\$29.00
Nameplate "Reset-Stop-Start"	2080-N13	\$29.00
Nameplate "Jog"	2080-N14	\$29.00
Nameplate "Tower"	2080-N15	\$29.00
Nameplate "Off"	2080-N16	\$29.00
Nameplate "On"	2080-N17	\$29.00
Nameplate "Open"	2080-N18	\$29.00
Nameplate "Raise"	2080-N19	\$29.00
Nameplate "Reverse"	2080-N20	\$29.00
Nameplate "Run"	2080-N21	\$29.00
Nameplate "Start-On-Off"	2080-N22	\$29.00
Nameplate "Start-Run-Stop"	2080-N23	\$29.00
Nameplate "Test"	2080-N24	\$29.00
Nameplate "Up"	2080-N25	\$29.00
Nameplate "Trip"	2080-N26	\$29.00
Nameplate "Manual-Off-Auto"	2080-N27	\$29.00
Nameplate "Slow-Fast"	2080-N28	\$29.00
Nameplate "Run-Stop"	2080-N29	\$29.00
Nameplate "ON-Off"	2080-N30	\$29.00
Nameplate "Jog-Auto-Off"	2080-N31	\$29.00
Nameplate "Jog-Off-Auto"	2080-N32	\$29.00
Nameplate "Start-Auto-Off"	2080-N33	\$29.00
Nameplate "Fire-Shunt"	2080-N34	\$29.00

K7

Discount Schedule SC-81

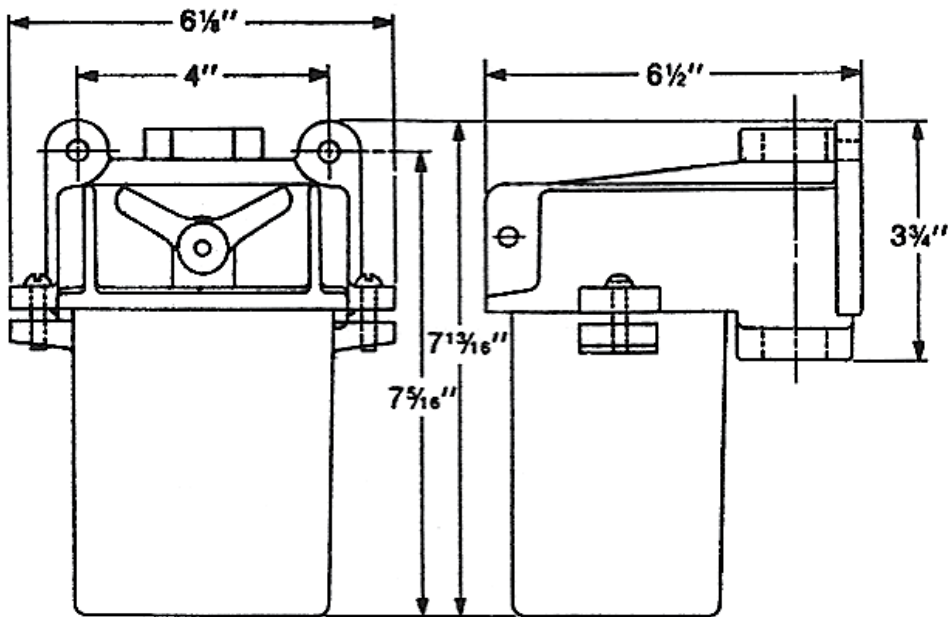
DIMENSIONS

Type 675



K8

Type 604



CIRCUIT BREAKERS



SPRINGER
controls company

Springer Controls carries a complete line of Techna Miniature Circuit Breakers rated from 0.5 amps through 63.0 amps. Applications include usage in UL508A panels, motor group installations, motor disconnects or whenever a circuit breaker is required in power or control circuitry.

CIRCUIT BREAKERS

Jtec UL (Motor Disconnect)

General Information	L2
Trip Curves & Dimensions	L3

Jtec 489 (Branch Circuit Protection)

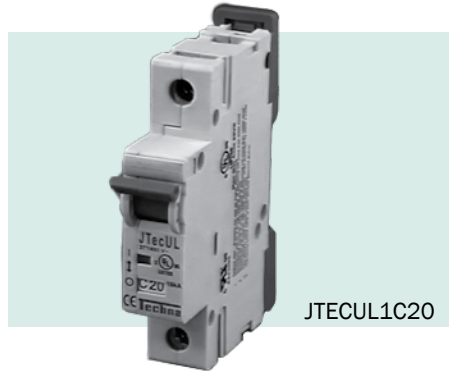
General Information	L4
Trip Curves & Dimensions	L5

Accessories	L6
Technical Data	L7

JtecUL MOTOR DISCONNECT

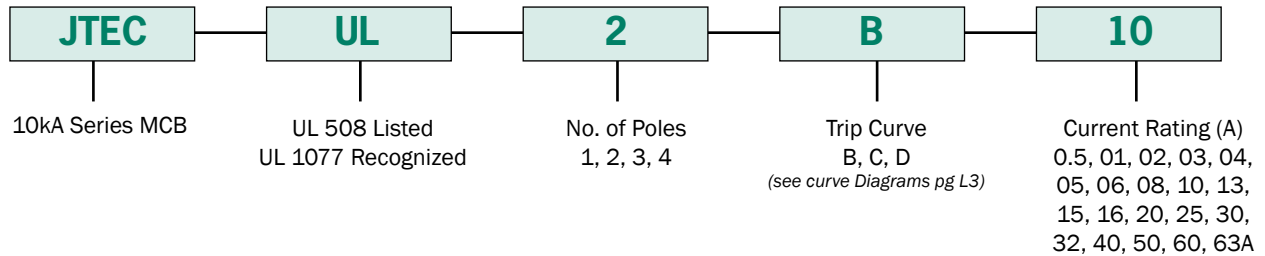
Springer Controls carries a complete line of Techna Miniature Circuit Breakers rated from 0.5 amps through 63.0 amps. Applications include usage in UL508A panels, motor group installations, motor disconnects or whenever a circuit breaker is required in power or control circuitry.

JtecUL - General Information



- 0.5 amp through 63.0 amps
- Rated as a manual motor controller switch suitable for motor disconnect. Separate switch not required.
- UL 1077 recognized, UL 508 listed
- 10kA, 480Y / 277 VAC
- 1,2,3,4 Poles

JtecUL Nomenclature



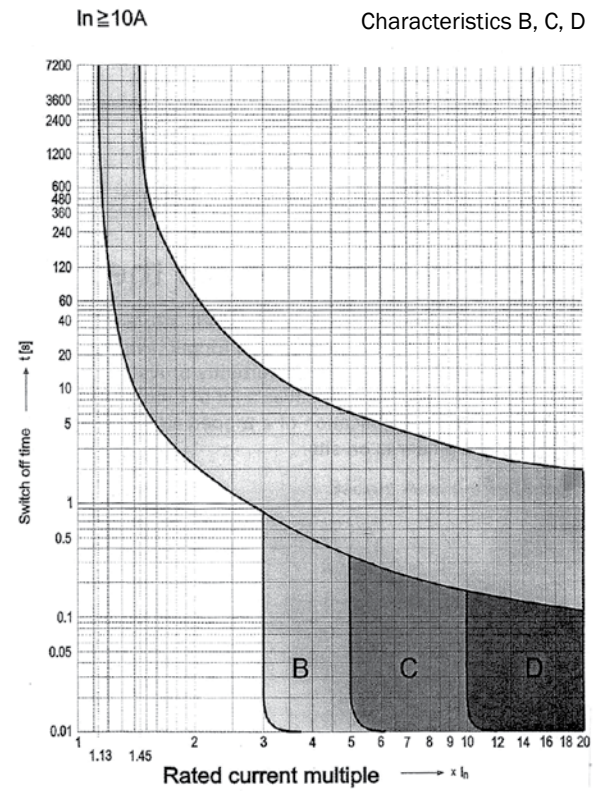
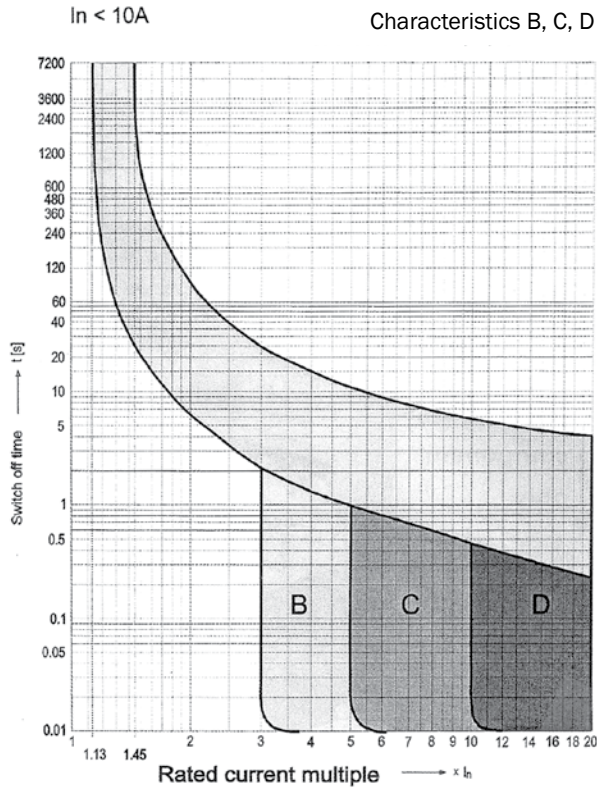
JtecUL Part # and Pricing

		Model No.	0.5 - 32amp Price	40 - 63amp Price
1-Pole	Curve B	JTECUL1B*	\$18.00	\$20.00
	Curve C	JTECUL1C*	\$18.00	\$20.00
	Curve D	JTECUL1D*	\$21.00	\$22.00
2-Pole	Curve B	JTECUL2B*	\$42.00	\$46.00
	Curve C	JTECUL2C*	\$42.00	\$46.00
	Curve D	JTECUL2D*	\$46.00	\$52.00
3-Pole	Curve B	JTECUL3B*	\$67.00	\$72.00
	Curve C	JTECUL3C*	\$67.00	\$72.00
	Curve D	JTECUL3D*	\$74.00	\$78.00
4-Pole	Curve B	JTECUL4B*	\$147.00	\$147.00
	Curve C	JTECUL4C*	\$147.00	\$147.00
	Curve D	JTECUL4D*	\$147.00	\$147.00

* Amps.= 0.5, 1, 2, 3, 4, 5, 6, 8, 10, 13, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63A
(see curve diagram on page L3 for selection)

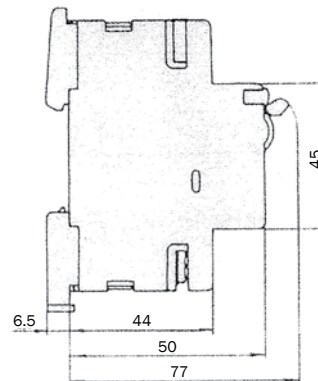
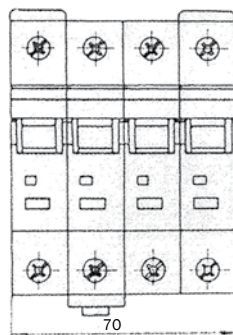
Discount Schedule SC-45

JtecUL Trip Curves



B= Shorter Trip, C= Medium Trip, D= Longer Trip

JtecUL Dimensions (mm)



JTEC 489; BRANCH CIRCUIT PROTECTION

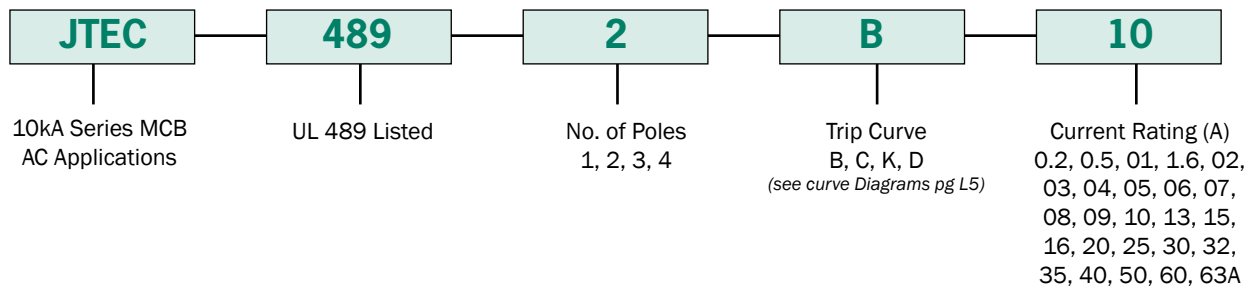
Jtec 489 - General Information



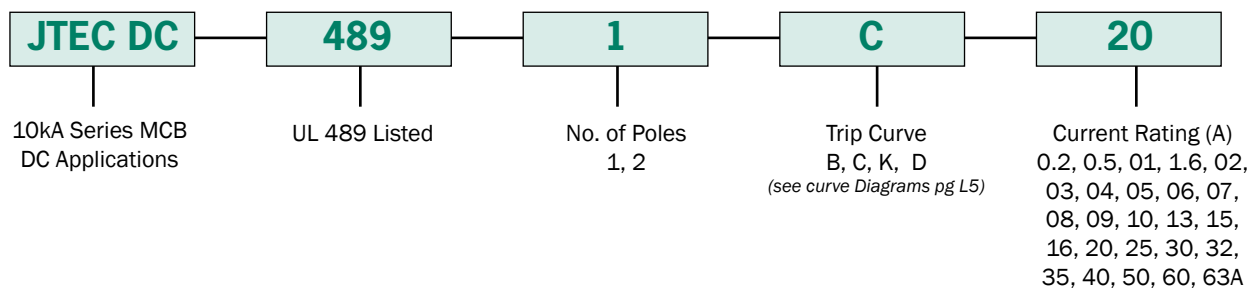
- 0.2 amp through 63.0 amps
- Rated as a branch circuit breaker able to be used to protect a branch circuit without a backup device.
- UL 489 listed
- 10kA, 480Y/277 VAC (up to 32 amps); 240 VAC (33 to 63 amps)
10kA, 125 VDC 1 pole; 250VDC 2 poles
- 1,2,3,4 Poles (AC); 1, 2 Poles (DC)

JTEC 489 Nomenclature

Ordering Code - AC



Ordering Code - DC



* special current ratings available on request

Jtec 489 Part # and Pricing

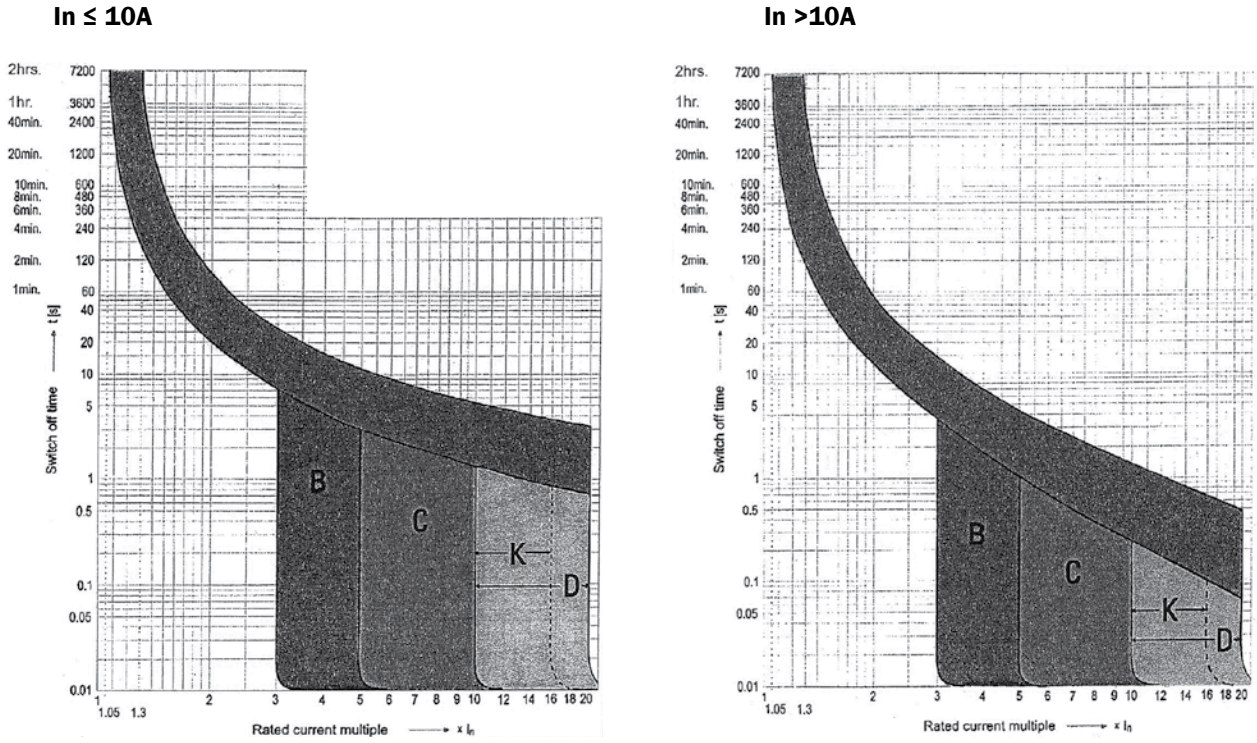
		Model No.	0.5 - 32amp Price	40 - 63amp Price
1-Pole	Curve B, C, K, D	JTEC489-1#*	\$41.00	\$45.00
2-Pole	Curve B, C, K, D	JTEC489-2#*	\$82.00	\$93.00
3-Pole	Curve B, C, K, D	JTEC489-3#*	\$122.00	\$134.00
4-Pole	Curve B, C, K, D	JTEC489-4#*	\$204.00	\$225.00

- Curve = **B** - Quick, **C** - Medium, **K** - Motor, **D** - Long

* Amps.= 0.2, 0.5, 1, 1.6, 2, 3, 4, 5, 6, 8, 10, 13, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63A (see curve diagram on page L5)

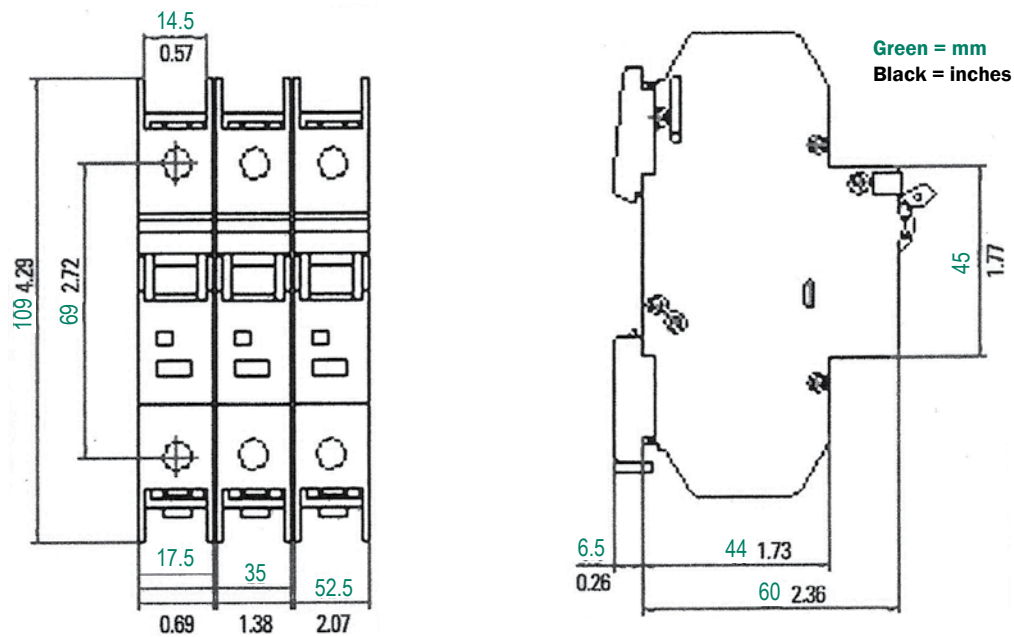
Discount Schedule SC-45

Jtec 489 Trip Curves

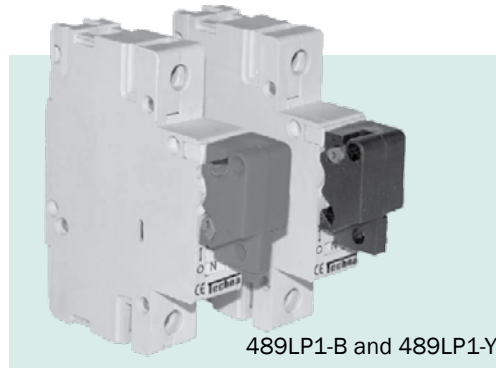
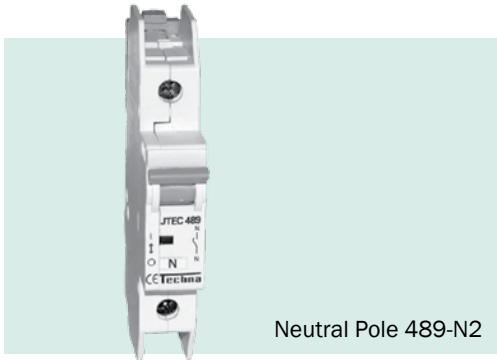


B= Short Trip, C= Medium Trip, K= Motor Trip, D= Longer Trip

Jtec 489 Dimensions



Accessories for JtecUL and Jtec 489



Description	JTEC UL Catalog No.	Price	JTEC 489 Catalog No.	Price
Auxiliary & Single Contacts:				
1 Changeover	JTECULAUX1CO	\$40.00	JTEC489AUX1CO	\$40.00
2 Changeover	JTECULAUX2CO	\$46.00	JTEC489AUX2CO	\$46.00
1 Changeover + 1 Signal Changeover	JTECULAUXSCO	\$48.00	JTEC489AUXSCO	\$48.00
1 Changeover + 1 Signal + Test Button	JTECULAUXSTCO	\$48.00	JTEC489AUXSTCO	\$48.00
Neutral Pole	JTECN2	\$36.00	JTECN2	\$36.00

Shunt - Trip - Release

12V - AC	JTECULST12AC	\$60.00	JTEC489ST12AC	\$60.00
24V - AC	JTECULST24AC	\$60.00	JTEC489ST24AC	\$60.00
48V - AC	JTECULST48AC	\$60.00	JTEC489ST48AC	\$60.00
60V - AC	JTECULST60AC	\$60.00	JTEC489ST60AC	\$60.00
110V - AC	JTECULST110AC	\$60.00	JTEC489ST110AC	\$60.00
120V - AC	JTECULST120AC	\$60.00	JTEC489ST120AC	\$60.00
230V - AC	JTECULST230AC	\$60.00	JTEC489ST230AC	\$60.00
277V - AC	JTECULST277AC	\$60.00	JTEC489ST277AC	\$60.00
400V - AC	JTECULST400AC	\$60.00	JTEC489ST400AC	\$60.00
12V - DC	JTECULST12DC	\$60.00	JTEC489ST12DC	\$60.00
24V - DC	JTECULST24DC	\$60.00	JTEC489ST24DC	\$60.00
48V - DC	JTECULST48DC	\$60.00	JTEC489ST48DC	\$60.00
110V - DC	JTECULST110DC	\$60.00	JTEC489ST110DC	\$60.00

(Consult factory for under voltage release)

Discount Schedule SC-45

Technical Data for JTECUL and JTEC489

	Jtec UL		Jtec 489	
Current Ratings (A)	0.5, 1, 2, 3, 4, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 60, 63A		0.2, 0.5, 1.0, 1.6, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 20, 25, 30, 32, 35, 40, 50, 60, 63A	
Number of Poles	1, 2, 3, 4, I+N, 3+N		1, 2, 3, 4, I+N, 3+N	
Trip Curves	B, C, D		B, C, K, D	
Rated Voltage	230/400V AC 277/480V AC 600V AC	(EN60898) (UL1077/508) (UL1077/508)	230/400V AC 480Y/277V AC 240V AC	(EN60898) (UL489, up to 32A) (UL489, up to 63A)
Rated Frequency	50/60 Hz		50/60 Hz	
Short Circuit Capacity	10kA		10kA	
UL Interrupt Rating	5kA (No back-up) 10kA (With back-up fuse)		10kA	
Electrical Life	6000 cycles on/off		6000 cycles on/off	
Mechanical Life	100,000 cycles on/off		100,000 cycles on/off	
Protection Degree	IP20 at Front		IP20 at Front	
Ambient Temp. Range	-13°F - 140°F		-13°F - 140°F	
Operational Position	In any Plane		In any Plane	
Compliance Standards	UL1077 / UL508 EN60898		UL489 / UL489A EN60898 / EN60947-2	
Vibration Resistance	3g (8 - 50 Hz)		3g (8 - 50 Hz)	
Resistance to Thermal Shocks	284°F		284°F	
Tighting Torque	(min) (max)	13 lb/inch 17.5 lb/inch	13 lb/inch 17.5 lb/inch	

