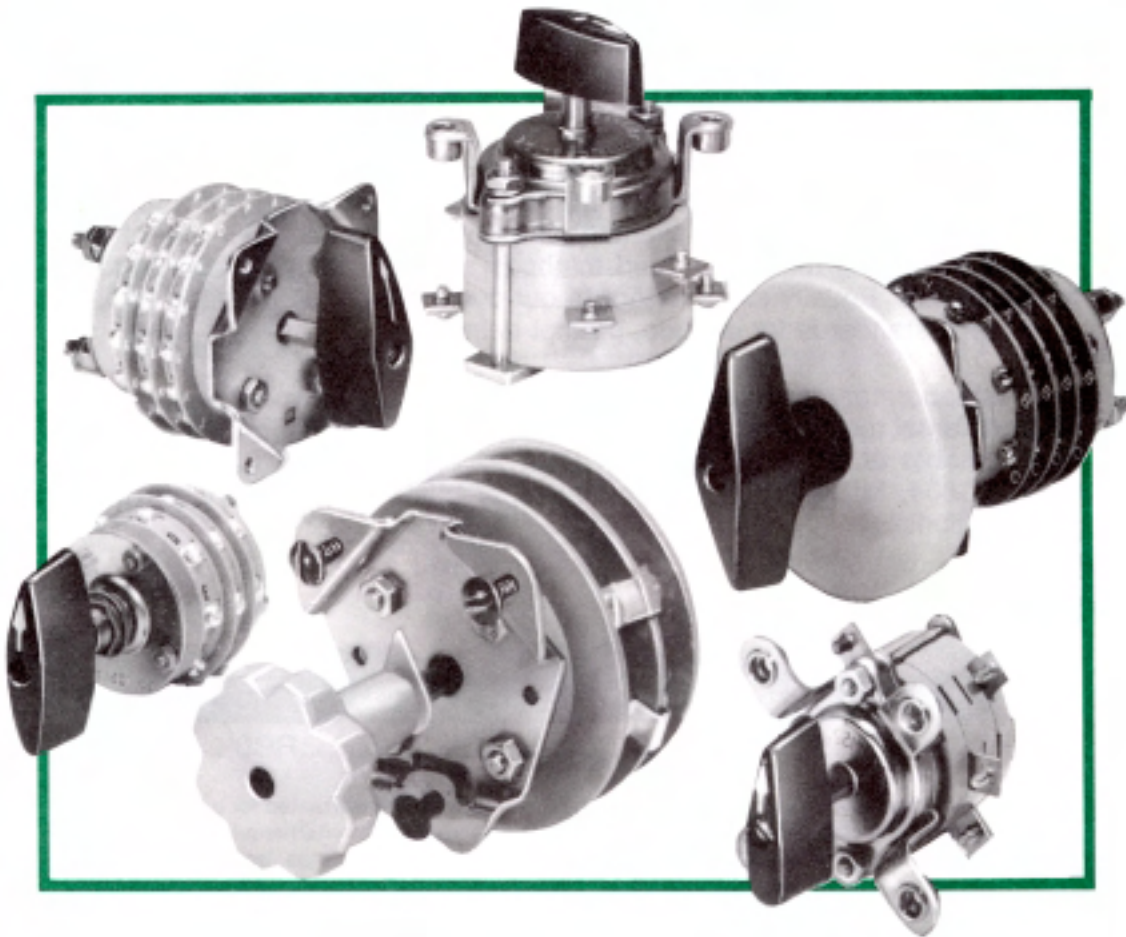


Technical Publication

**MIL-1**

Effective August 1, 1994

# **ROTARY SWITCHES** **for** **MILITARY APPLICATIONS**



**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP.

180 King Avenue, Weymouth, Massachusetts 02188

Telephone: 617/335/5200

FAX: 617/335/4253

## About Electroswitch ...

Electroswitch is an acknowledged leader in the electrical industry. Over 45 years of experience goes into the design and manufacturing of our quality rotary power switches. The application of these switches for control of complex power systems through centralized switchboards and panels has been our speciality in the industrial, electrical utility and military fields.

In addition to being the first choice of electrical utilities, Electroswitch rotary power switches and relays are specified by manufacturers of high quality heavy-duty control systems. These range from hi-shock Naval ship-board and nuclear reactor control to rugged industrial equipment such as locomotives, tractors and other high vibration and hi-shock applications. Their durability and reliability have proved to be the most economical solutions for our customers' most taxing applications. The dependability of our switches is the result of sound design, careful manufacturing and rigid quality control. When a product line is as specialized and as critical in application as ours, we have to do the job right the first time ... and every time ... to support our customers' demands for the highest quality and reliability.

The ability to custom design rotary power switches to precisely fit every application has taken Electroswitch into many unique applications. The opportunity to choose among the distinct families of rotary power switches (Detent and Snap-action) assures our customers that the correct switch is used for their most critical needs.

Economy is inherent in the design of all our rotary power switches. The modular constructions permit literally millions of different rugged and reliable switches to be built from an inventory of a few basic parts. Our use of the latest manufacturing techniques and methods also assures a reliable product ... at lower cost. Equally as important to our customers, Electroswitch traditionally exceeds standards for on-time, prompt deliveries.

Our test laboratory includes the equipment necessary for most endurance and environmental testing and quality assurance. Testing is performed to meet the requirements of UL 1054, UL 508, CSA 22.2, ANSI/IEEE 323, MIL-S-6807, MIL-S-21604, MIL-S-15291 and many other customer, industry and military specifications.



### WARRANTY

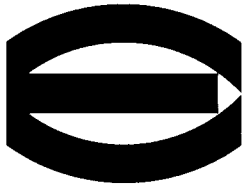
All products and components manufactured by Electroswitch are warranted for a period of one year after date of shipment. All products manufactured by Electroswitch require special tools and fixtures to assure reliable operation of these products. Our ratings, both electrical and mechanical, are maintained only through extensive testing after proper assembly. The independent approvals such as U/L, CSA and various Military Agencies, can only be maintained with complete control over the manufacture of these products. It is the policy of Electroswitch not to sell any internal spare parts. Any field dis-assembly will automatically void the Warranty of the product and Electroswitch will assume no liability for any damage as a result of dis-assembly.

# ROTARY SWITCHES FOR MILITARY APPLICATIONS

## CONTENTS

Military Selector Guide.....	2 - 3
Rotary Multipole & Selector Switches.....	4 - 11
Type AF.....	6
Style SJL.....	7
Style SJR.....	8
Style SJM.....	9
Style SJK.....	10
Series 24G.....	11
Class SR Snap Switches.....	12 - 21
Class 1SR.....	14 - 15
Class 3SR.....	16 - 17
Class 6 SR.....	18 - 19
Class 20SR.....	20 - 21
QPL Listings.....	22 - 27
Optional Handles & Jumpers.....	28

# MILITARY



## MULTIPOLE SELECTOR


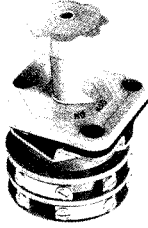
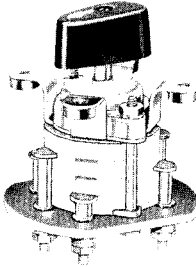
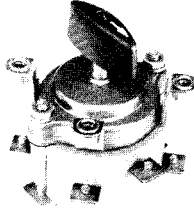
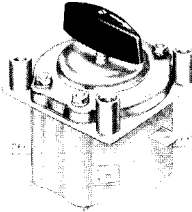
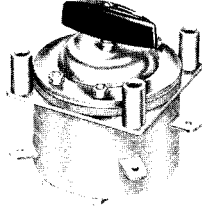
	TYPE AF	STYLE JL	STYLE JR	STYLE JM
<b>CHARACTERISTICS</b>				
<b>MILITARY SPECIFICATION</b>	MIL-S-6807	MIL-S-21604	MIL-S-21604 MIL-S-6807	MIL-S-21604
<b>MILITARY SPECIFICATION SHEETS</b>	MS-25002 MS-21994 MS-21995	MIL-S-21604/3	MIL-S-21604/5 MIL-S-21604/6 MIL-S-21604/7 MS-90547	MIL-S-21604/4
<b>QUALIFIED PRODUCTS LIST (QPL)</b>	QPL-6807	QPL-21604	QPL-21604 QPL-6807	QPL-21604
<b>SECTIONS</b>	1 to 10	1 to 10	1 to 25	1 to 25
<b>POLES</b>	1 to 20	1 to 20	1 to 50	1 to 75
<b>POSITIONS</b>	2 to 8	2 to 8	2 to 8	2 to 12
<b>POSITION ANGLE OF THROW</b>	45°	45°	45°	30°
<b>ELECTRICAL RATINGS (25°C)</b>				
Continuous Rating				
Interrupting Ratings				
115VAC, Resistive	5A			
115VAC, .5 pf	2A			
125VAC, Resistive (Inductive)		5A (.8 pf)	10A (.8 pf)	7.5A (.8 pf)
250VAC, Resistive (Inductive)				
500VAC, Resistive (Inductive)				
1.5VDC Resistive				
28VDC Resistive	5A			
28VDC Inductive	2.5A			
28VDC Lamp Load	2A			
50VDC Resistive				
120VDC Resistive (Inductive)				
250VDC Resistive (Inductive)				
350VDC Resistive (Inductive)				
Overload (50 operations)	30A-28VDC			
Dielectric Strength	1230 VRMS	1200 VRMS	1200 VRMS	1200 VRMS
Insulation Resistance	100 megohms	200 megohms	200 megohms	200 megohms
Contact Resistance	10 milliohms	10 milliohms	10 milliohms	10 milliohms
Life (Electrical operations)	10,000	40,000	40,000	40,000
(plus mechanical operations)	7,500	5,000	5,000	5,000
Thermal EMF (max)				
Capacitance (max)				



**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# SWITCHES

SWITCHES		SNAP-ACTION SWITCHES			
STYLE JK	SERIES 24G	CLASS ISR	CLASS 3SR	CLASS 6SR	CLASS 20SR
					
MIL-S-21604 MIL-S-21604/2  QPL-21604	MIL-S-18396	MIL-S-15291  MIL-S-15291/1 MIL-S-15291/2 MIL-S-15291/3 MIL-S-15291/4 QPL-15291	MIL-S-15291  MIL-S-15291/5 MIL-S-15291/6 MIL-S-15291/7 QPL-15291 QPL-6807	MIL-S-15291  MIL-S-15291/8 MIL-S-15291/9 MIL-S-15291/10 QPL-15291	MIL-S-15291  MIL-S-15291/11 MIL-S-15291/12 MIL-S-15291/13 QPL-15291
1 to 15 1 to 30  2 to 16 22½°	1 to 10 1 to 20  2 to 8 45°	— 1 to 12  2 to 4 90°	— 1 to 12  2 to 4 90°	— 1 to 8  2 to 4 90°	— 1 to 8  2 to 4 90°
5A (.8 pf)   1200 VRMS 200 megohms 10 milliohms 40,000 5,000	20A-500V  20A 10A 5A  .4A (lamp)  7.5A-500VAC 2000 VRMS 100 megohms 10 milliohms 100,000	10A-125V  10A (.75 pf) 10A (.75 pf) 5A (.75 pf)  10A (.24 hy) 5A (.24 hy) 2A (.24 hy)  60A-125VAC 1250 VRMS 200 megohms 20 milliohms 30,000 20,000	30A-500V  30A (.75 pf) 30A (.75 pf) 30A (.75 pf)  30A* 15A*  180A-500VAC 2000 VRMS 200 megohms 10 milliohms 20,000 10,000	60A-500V  60A (.75 pf) 60A (.75 pf) 60A (.75 pf)  60A* 30A*  2000 VRMS 200 megohms 5 milliohms 6,000 4,000	200A-500V  200A (.75 pf) 200A (.75 pf) 200A (.75 pf)  200A* 200A*  2000 VRMS 200 megohms 1.5 milliohms 6,000 4,000
		* Reduced Life (see MIL-S-15291)			



**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# ROTARY MULTIPOLE AND SELECTOR SWITCHES

# Details of Construction

## Electroswitch Detent Switches

are heavy-duty switches of a very versatile design that enables standard units to satisfy a great variety of complex switching applications. They are modular in design whereby several subassemblies are stacked together to form a rigid device. Figure 1 shows a cut-away view exposing the basic components.

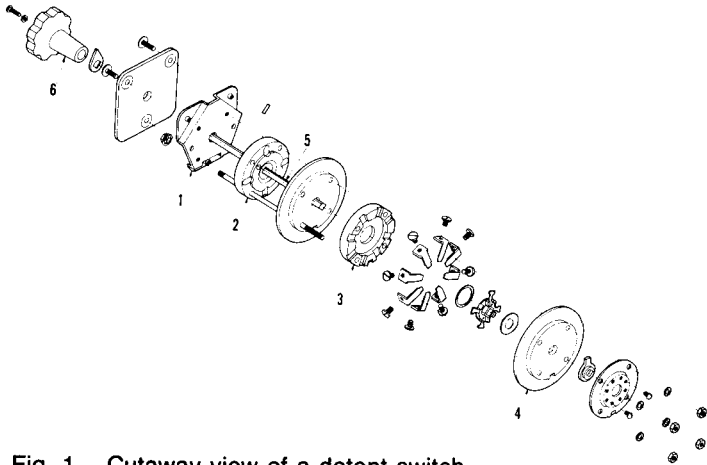


Fig. 1. Cutaway view of a detent switch

The mounting plate (1) connects a detent assembly (2) to one or more contact decks (3) and finally a position limiting stop plate (4). These assemblies are bolted together along with a steel shaft (5) and a handle (6).

### The Electrical Design

The Detent Switch contacts operate on the original, reliable principle of knife switches — double-sided, double-wiping, spring-wiper blades closing on both sides of a terminal. This design is shock-proof and virtually bounce-proof. Figure 2 shows a typical contacting arrangement.

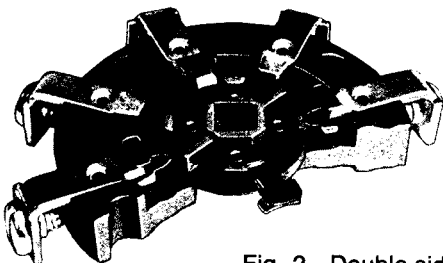


Fig. 2 Double-sided, double-wiping knife-type contact configuration

### The Detent Assembly

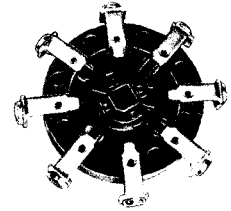
The detent assembly contains a specially designed star-wheel and up to four spring-loaded ball bearings providing clean, positive indexing. Spring-return switches use a coil spring in place of the star-wheel/spring/ball bearing arrangement.



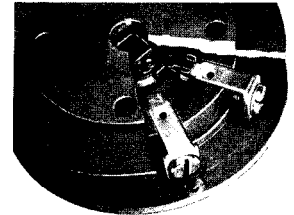
## Details of Construction

### The Contact Deck Assembly

The electrical parts are contained within sturdy glass alkyd moldings that provide individual insulated compartments where all switching takes place.



An insulating barrier completes the contact deck assembly. The barrier not only separates one contact assembly from another but also provides a tight insulating compartment.



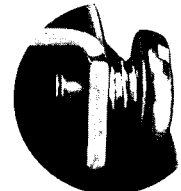
Positive reliable maintenance free operation results from the double-sided, double-wiping, self-cleaning knife-blade moveable contacts.



The barrier next to the stationary terminals is clearly marked with letters for Style SJL, SJR, SJM and SJK and numerals for Series 24G, that correspond with the wiring diagrams. The type AF is marked numerically on the decks.



Terminal screws secure the external wiring to the terminals.



Jumpering may be done right on the switch providing a simple and neat arrangement. Silver-plated brass strap jumpers are available for adjacent contacts — either between adjacent contacts on the same deck or the same terminal location on adjacent decks. Wire and lug jumpers are also available. Jumpers are already supplied assembled on the typical instrument switches.



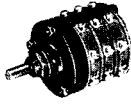





### The Stop Plate

The steel stop plate assembly includes a steel stop arm that is connected to the shaft and a steel stop plate that contains tapped holes. Stop screws are inserted in the field to limit the positions to the number and location desired. This externally adjustable position limiting feature allows the use of standard switches for many customized applications. The limit screws are supplied unassembled, except Series 24G, Instrument and Control Switches.



# ROTARY MULTIPOLE AND SELECTOR SWITCHES

## Detent Action

ROTARY MULTIPOLE AND SELECTOR SWITCHES						
CHARACTERISTICS	TYPE AF 	STYLE SJL 	STYLE SJR 	STYLE SJM 	STYLE SJK 	SERIES 24G 
<b>MILITARY SPECIFICATION</b>	MIL-S-6807	MIL-S-21604	MIL-S-21604 MIL-S-6807	MIL-S-21604	MIL-S-21604	MIL-S-18396
<b>MILITARY SPECIFICATION SHEETS</b>	MS-25002 MS-21994 MS-21995	MIL-S-21604/3	MIL-S-21604/5 MIL-S-21604/6 MIL-S-21604/7	MIL-S-21604/4	MIL-S-21604/2	
<b>QUALIFIED PRODUCTS LIST (QPL)</b>	QPL-6807	QPL-21604	QPL-21604 QPL-6807	QPL-21604	QPL-21604	
<b>SECTIONS</b>	1 to 10	1 to 10	1 to 25	1 to 25	1 to 15	1 to 10
<b>POLES</b>	1 to 20	1 to 20	1 to 50	1 to 75	1 to 30	1 to 20
<b>POSITIONS</b>	2 to 8	2 to 8	2 to 8	2 to 12	2 to 16	2 to 8
<b>POSITION ANGLE OF THROW</b>	45°	45°	45°	30°	22½°	45°
<b>ELECTRICAL RATINGS (25°C)</b>						
Continuous Rating	10A-125V	10A-125V				20A-500V
<b>Interrupting Ratings</b>						
115 VAC Resistive	5A					
115 VAC .5 pf	2A					
125 VAC Resistive (Inductive)		5A (.8 pf)	10A (.8 pf)	7.5A (.8 pf)	5A (.8 pf)	20A
250 VAC Resistive (Inductive)						10A
500 VAC Resistive (Inductive)						5A
1.5 VDC Resistive						
28 VDC Resistive	5A					
28 VDC Inductive	2.5A					
28 VDC Lamp Load	2A					
Overload (50 operations)	30A-28VDC					7.5A-500VAC
Dielectric Strength	1230 VRMS	1200 VRMS	1200 VRMS	1200 VRMS	1200 VRMS	2000VRMS
Insulation Resistance	100 megohms	200 megohms	200 megohms	200 megohms	200 megohms	100 megohms
Contact Resistance	10 milliohms	10 milliohms	10 milliohms	10 milliohms	10 milliohms	10 milliohms
Life (Electrical operations)	10,000	40,000	40,000	40,000	40,000	100,000
(plus mechanical operations)	7,500	5,000	5,000	5,000	5,000	

### FEATURES

- Time proven double wiping contacts for low contact resistance even under extreme shock and vibration conditions.
- All making and breaking of contacts take place in the fully enclosed decks.
- Versatile - many special designs are available.
- Available in industrial versions. See Catalog IND-1.

### OPTIONS AVAILABLE

In addition to the standard units manufactured to the specified MIL-SPECS, we can furnish a wide variety of optional equipment, all manufactured in strict accordance with the latest quality control standards.

Among the available options are:

- flush, shank, pistol grip and round knurled handles
- engraved rotary dials
- escutcheon plates (plain or engraved)
- make before break contacts
- combinations of contact assemblies
- special panel thickness
- spring return contacts.

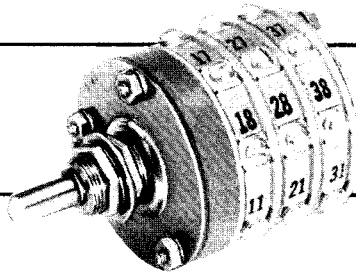


**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# TYPE AF

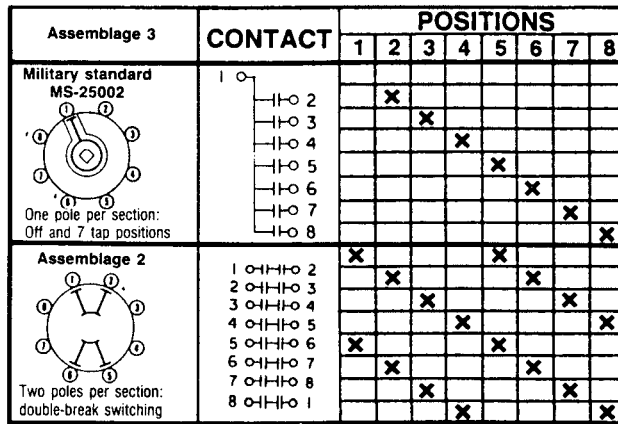
## MIL-S-6807



### General Specifications

<b>Interrupt Ratings:</b>	5 amps @ 115 volts a.c. 60-400 cps 5 amps @ 115 volts a.c. 60-400 cps inductive 5 amps @ 28 volts resistive 2.5 amps @ 28 volts inductive 2 amps @ 28 volts d.c. lamp load	<b>Available Sections:</b>	1 to 10
<b>Continuous Ratings:</b>	10 amps @ 125 volts a.c.	<b>Available Poles:</b>	1 to 20
<b>Overload:</b>	50 cycles at 30 amps 28 volts d.c. resistive	<b>Positions:</b>	8; adjustable stops for 2-8 positions
<b>Dielectric Strength:</b>	1230 vrms minimum	<b>Contact Type:</b>	shorting and non-shorting
<b>Insulation Resistance:</b>	100 megohms minimum	<b>Indexing Angle:</b>	45 degrees positive detent
<b>Contact Resistance:</b>	.01 ohms maximum	<b>Mounting Type:</b>	bushing mount, single hole to .19 inch
<b>Electrical Life:</b>	10,000 operations make and break	<b>Panel Thickness:</b>	to .19 inch
		<b>Rotor (Moveable Contact)</b>	Silver overlay, phosphor bronze
		<b>Terminal (Stationary Contact)</b>	Silver overlay copper with screw type or solder lug terminals
		<b>Spacers:</b>	Glass filled alkyl

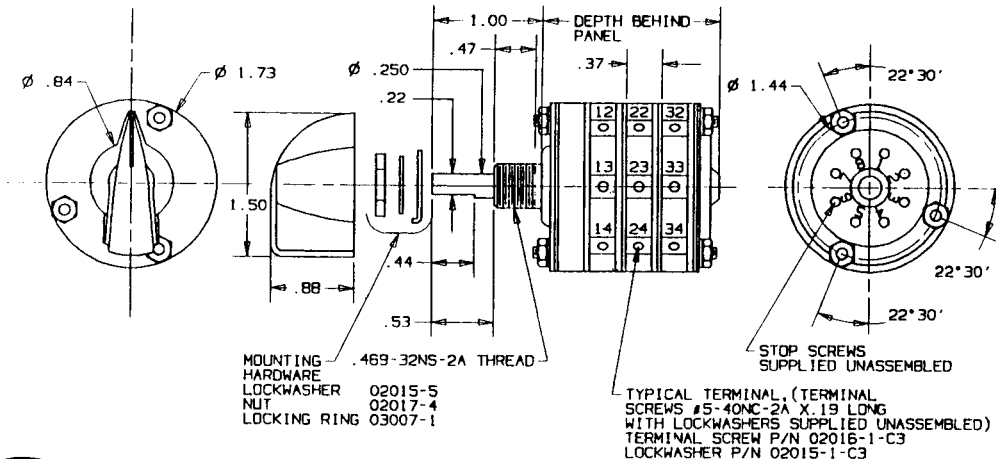
**How to Order**  
 32 2 04 A  
 | | |  
 Assemblage No. of Decks Handle  
 Type AF  
**Option Codes:**  
 76 Spring return



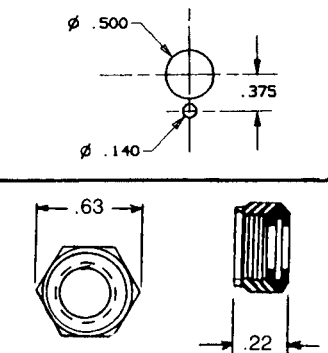
All assemblies are shown in 0° position (12 o'clock)

No. Sec.	Military Standard	Catalog Number	No. Sec.	Catalog Number	No. Sec.	Catalog Number	Weight oz.	Torque lb-in.	Dim. X in.
1	MS-25002-1	32301*	1	32201A	1	32301A	5	6	1 5/8
2	MS-25002-2	32302*	2	32202A	2	32302A	6	7	1 3/4
3	MS-25002-3	32303*	3	32203A	3	32303A	7	8	1 5/8
4	MS-25002-4	32304*	4	32204A	4	32304A	8	9	2 1/8
5	MS-25002-5	32305*	5	32205A	5	32305A	9	10	2 1/4
6	MS-25002-6	32306*	6	32206A	6	32306A	10	11	3 1/4
Other military standards available			7	32207A	7	32307A	12	14	4 1/8
MS-21995, MS-21994			8	32208A	8	32308A	13	15	4 1/2
Contact factory for details.			9	32209A	9	32309A	14	16	4 7/8
			10	32210A	10	32310A	15	17	5 1/2

\* Handle not supplied.



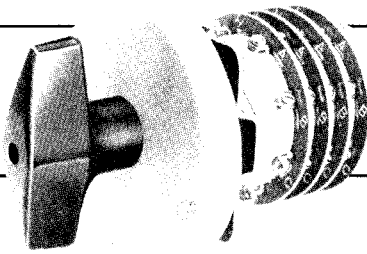
### PANEL DRILLING DIMENSIONS





# STYLE SJR

## MIL-S-21604/5



MIL-S-6807  
MS-90547

### General Specifications

<b>Interrupt Ratings:</b>	10 amps @ 125 volts a.c. 60 cps 10 amps @ 30 volts D.C. resistive	<b>Contact Type:</b>	Shorting and Non-Shorting
<b>Dielectric Strength:</b>	1200 vrms minimum	<b>Indexing Angle:</b>	45 degrees positive detent indexing
<b>Insulation Resistance:</b>	200 megohms	<b>Mounting Type:</b>	Panel mount, (4 holes for #10-24 screws) to .25 (contact factory for larger sizes.)
<b>Contact Resistance:</b>	.010 ohms maximum	<b>Panel Thickness:</b>	
<b>Electrical Life:</b>	40,000 make and break operations	<b>Rotor (Moveable Contact) Terminal (Stationary Contact)</b>	Silver overlay, phosphor bronze Silver overlay copper with screw type terminals
<b>Available Sections:</b>	1 to 30	<b>Spacers:</b>	Glass filled alkyd
<b>Available Poles:</b>	1 to 60		
<b>Positions:</b>	8; adjustable stops 2-8 positions		

<p>Type S2JR Assemblage 2</p>	<table border="1"> <tr><td>H</td><td>O</td><td>I</td><td>I</td><td>O</td><td>A</td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td>A</td><td>O</td><td>I</td><td>I</td><td>O</td><td>B</td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td>B</td><td>O</td><td>I</td><td>I</td><td>O</td><td>C</td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td></tr> <tr><td>C</td><td>O</td><td>I</td><td>I</td><td>O</td><td>D</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td></tr> <tr><td>D</td><td>O</td><td>I</td><td>I</td><td>O</td><td>E</td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td>E</td><td>O</td><td>I</td><td>I</td><td>O</td><td>F</td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td>F</td><td>O</td><td>I</td><td>I</td><td>O</td><td>G</td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td></tr> <tr><td>G</td><td>O</td><td>I</td><td>I</td><td>O</td><td>H</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td></tr> </table>	H	O	I	I	O	A	X				X				A	O	I	I	O	B		X				X			B	O	I	I	O	C			X				X		C	O	I	I	O	D				X				X	D	O	I	I	O	E	X				X				E	O	I	I	O	F		X				X			F	O	I	I	O	G			X				X		G	O	I	I	O	H				X				X	<p>Two poles per section, double break switching.</p> <p>Available in shorting or non-shorting.</p>
H	O	I	I	O	A	X				X																																																																																																								
A	O	I	I	O	B		X				X																																																																																																							
B	O	I	I	O	C			X				X																																																																																																						
C	O	I	I	O	D				X				X																																																																																																					
D	O	I	I	O	E	X				X																																																																																																								
E	O	I	I	O	F		X				X																																																																																																							
F	O	I	I	O	G			X				X																																																																																																						
G	O	I	I	O	H				X				X																																																																																																					
<p>Type S3JR Assemblage 3</p>	<table border="1"> <tr><td>H</td><td>O</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td>O</td><td>I</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	H	O														O	I														O	I														O	I														O	I														O	I														O	I							<p>One pole per section: Off and 7 tap positions</p> <p>Available in shorting or non-shorting.</p>														
H	O																																																																																																																	
	O	I																																																																																																																
		O	I																																																																																																															
			O	I																																																																																																														
				O	I																																																																																																													
					O	I																																																																																																												
						O	I																																																																																																											

**How to Order**

23 2 01 G

Handle  
No. of Decks  
Assemblage

Style SJR

**Option Codes:**

43 Style SJR with Drip Proof Mount \*

71 Style SJR with Spring Return

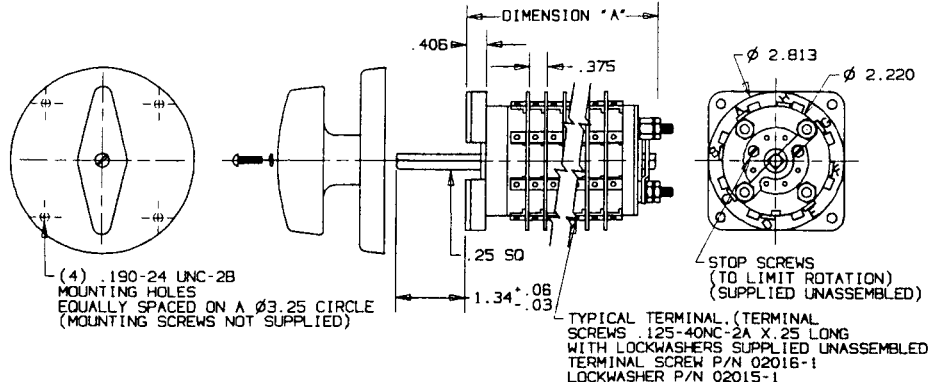
See accessories for Optional Handles.

All contact types are shown with handle in vertical (0°) position (12 o'clock)										Weight lbs	Torque lb-in.	Dim. A in.
No. Sec.	Navy Type	Catalog Number	No. Sec.	Navy Type	Catalog Number	No. Sec.	Navy Type	Catalog No.	Catalog No.			
1	S2JR1	23201G	1	S3JR1	23301G	1	S4JR1	23401G	23401G	1.2	13	2 <sup>7</sup> / <sub>32</sub>
2	S2JR2	23202G	2	S3JR2	23302G	2	S4JR2	23402G	23402G	1.4	14	2 <sup>19</sup> / <sub>32</sub>
3	S2JR3	23203G	3	S3JR3	23303G	3	S4JR3	23403G	23403G	1.5	15	2 <sup>31</sup> / <sub>32</sub>
4	S2JR4	23204G	4	S3JR4	23304G	4	S4JR4	23404G	23404G	1.7	16	3 <sup>11</sup> / <sub>32</sub>
*5	S2JR5	23205G	*5	S3JR5	23305G	*5	S4JR5	23405G	23405G	1.8	17	3 <sup>23</sup> / <sub>32</sub>
6	S2JR6	23206G	6	S3JR6	23306G	6	S4JR6	23406G	23406G	1.9	18	4 <sup>3</sup> / <sub>32</sub>
7	S2JR7	23207G	7	S3JR7	23307G	7	S4JR7	23407G	23407G	2.0	19	4 <sup>15</sup> / <sub>32</sub>
8	S2JR8	23208G	8	S3JR8	23308G	8	S4JR8	23408G	23408G	2.2	20	4 <sup>27</sup> / <sub>32</sub>
9	S2JR9	23209G	9	S3JR9	23309G	9	S4JR9	23409G	23409G	2.3	21	5 <sup>7</sup> / <sub>32</sub>
*10	S2JR10	23210G	*10	S3JR10	23310G	*10	S4JR10	23410G	23410G	2.4	22	5 <sup>19</sup> / <sub>32</sub>
11	S2JR11	23211G	11	S3JR11	23311G	11	S4JR11	23411G	23411G	2.5	23	5 <sup>31</sup> / <sub>32</sub>
12	S2JR12	23212G	12	S3JR12	23312G	12	S4JR12	23412G	23412G	2.6	24	6 <sup>5</sup> / <sub>8</sub>
13	S2JR13	23213G	13	S3JR13	23313G	13	S4JR13	23413G	23413G	2.7	25	6 <sup>3</sup> / <sub>4</sub>
14	S2JR14	23214G	14	S3JR14	23314G	14	S4JR14	23414G	23414G	2.8	26	7 <sup>5</sup> / <sub>32</sub>
*15	S2JR15	23215G	*15	S3JR15	23315G	*15	S4JR15	23415G	23415G	3.0	38	7 <sup>31</sup> / <sub>32</sub>
20	S2JR20	23220G	20	S3JR20	23320G	20	S4JR20	23420G	23420G	3.7	43	9 <sup>15</sup> / <sub>16</sub>
*25	S2JR25	23225G	*25	S3JR25	23325G	*25	S4JR25	23425G	23425G	4.4	48	11 <sup>13</sup> / <sub>16</sub>
30	S2JR30	23230G	30	S3JR30	23330G	30	S4JR30	23430G	23430G	5.4	60	14 <sup>1</sup> / <sub>8</sub>

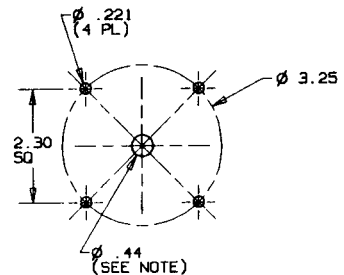
Note: 1/2 securing rod extension supplied on switches of 20 to 30 sections, extra hardware supplied.

\* Standard switches shown on MIL-S-21604/5

Assemblage 4 not shown



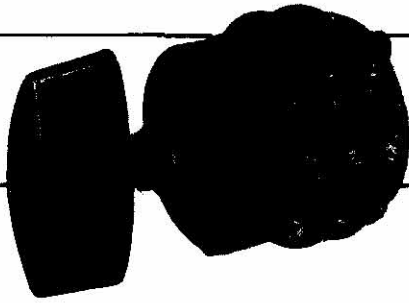
#### PANEL DRILLING DIMENSIONS



NOTE: FOR WATERPROOF MOUNTING \* ø .64 CENTER HOLE ø .201 MOUNTING HOLES (4 PL) DO NOT CHAMFER MOUNTING HOLES. PANEL THICKNESS MUST BE SPECIFIED WHEN ORDERING.

# STYLE SJL

## MIL-S-21604/3



### General Specifications

**Interrupt Ratings:** 5 amps @ 125 volts a.c. 60-400 cps  
 5 amps @ 28 volts d.c. resistive

**Continuous Rating:** 10 amps @ 125 volts a.c.

**Dielectric Strength:** 1200 volts rms minimum

**Insulation Resistance:** 200 megohms

**Contact Resistance:** .01 ohms maximum

**Electrical Life:** 40,000 operations make and break

**Available Sections:** 1 to 10

**Available Poles:** 1 to 20

**Positions:** 8; adjustable stops for 2-8 positions

**Contact Type:** shorting and non-shorting

**Indexing Angle:** 45 degrees positive detent

**Mounting Type:** bushing mount, single hole to .19 inch

**Panel Thickness:** Silver overlay, phosphor bronze

**Rotor (Moveable Contact):** Silver overlay copper with screw type terminals

**Terminal (Stationary Contact):** Silver overlay copper with screw type terminals

**Spacers:** Glass filled alkyl

**How to Order**

33 2 02 A

Handle

No. of Decks

Assemblage

Style SJL

**Option Codes:**

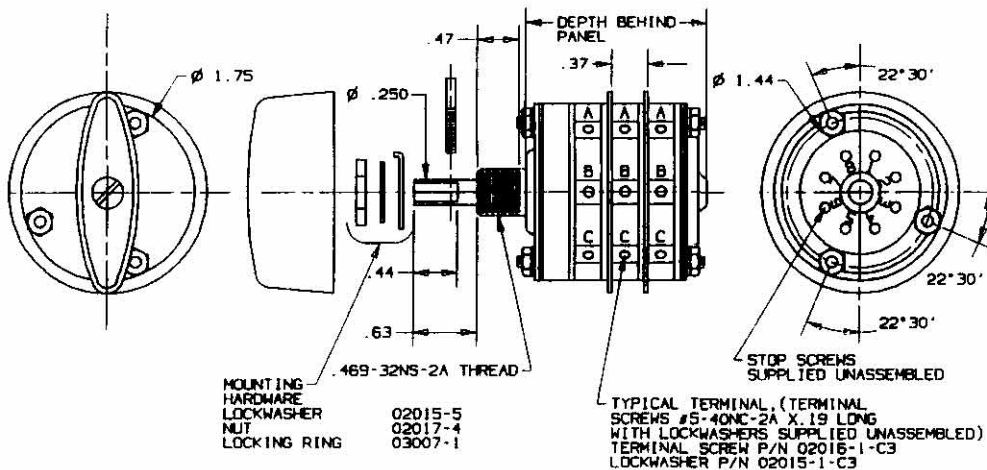
77 Style SJL with Spring Return

Type	Diagram	Terminal Connections	Switch Matrix	Notes																																																																
Type S2JL Assemblage 2		H O---H O A A O---H O B B O---H O C C O---H O D D O---H O E E O---H O F F O---H O G G O---H O H	<table border="1"> <tr><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td></tr> <tr><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td><td></td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td>X</td></tr> </table>	X				X					X				X					X				X					X				X	X				X					X				X					X				X					X				X	Two poles per section, double break switching.  Available in shorting or non-shorting.
X				X																																																																
	X				X																																																															
		X				X																																																														
			X				X																																																													
X				X																																																																
	X				X																																																															
		X				X																																																														
			X				X																																																													
Type S3JL Assemblage 3		H O  ---O A  ---O B  ---O C  ---O D  ---O E  ---O F  ---O G	<table border="1"> <tr><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>		X									X									X									X									X									X									X									One pole per section: Off and 7 tap positions  Available in shorting or non-shorting.
	X																																																																			
		X																																																																		
			X																																																																	
				X																																																																
					X																																																															
						X																																																														
							X																																																													

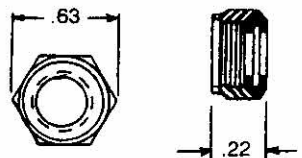
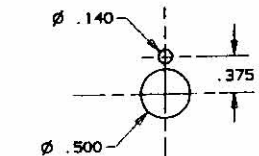
All assemblies are shown with handle in 0° position (12 o'clock)						Weight oz.	Torque lb-in.	Dim. X in.
No. Sec.	Navy Type	Catalog Number	No. Sec.	Navy Type	Catalog Number			
1	S2JL1	33201A	1	S3JL1	33301A	6	6	1 1/2
2	S2JL2	33202A	2	S3JL2	33302A	7	7	1 7/32
*3	S2JL3	33203A	*3	S3JL3	33303A	8	8	1 7/32
4	S2JL4	33204A	4	S3JL4	33304A	9	9	2 1/2
*5	S2JL5	33205A	*5	S3JL5	33305A	10	10	2 11/32
6	S2JL6	33206A	6	S3JL6	33306A	12	13	3 1/4
7	S2JL7	33207A	7	S3JL7	33307A	13	14	4 1/8
8	S2JL8	33208A	8	S3JL8	33308A	14	15	4 17/32
9	S2JL9	33209A	9	S3JL9	33309A	15	16	4 7/32
*10	S2JL10	33210A	*10	S3JL10	33310A	16	17	5 1/2

\* Standard switches are shown on MIL-S-21604/3

Assemblage 4 not shown



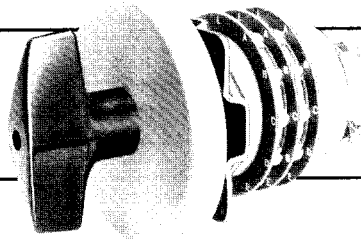
#### PANEL DRILLING DIMENSIONS



**HEX SEAL NUT SUPPLIED FOR ALL DRIP PROOF MOUNTS PART # 02017-8**

# STYLE SJM

## MIL-S-21604/4



### General Specifications

**Interrupt Ratings:** 7.5 amps @ 125 volts a.c. 60 cps  
7.5 amps @ 30 volts d.c. resistive

**Dielectric Strength:** 1200 volts rms min.

**Insulation Resistance:** 200 megohms

**Contact Resistance:** .010 ohms maximum

**Electrical Life:** 40,000 make and break operations

**Available Sections:** 1 to 25

**Available Poles:** 1 to 75

**Positions:** 12; adjustable stops for 2-12 positions

**Contact Type:** Shorting and Non-Shorting

**Indexing Angle:** 30 degrees positive detent

**Mounting Type:** Panel mount, (4 holes for #10-24 screws) to .250 (contact factory for larger sizes.)

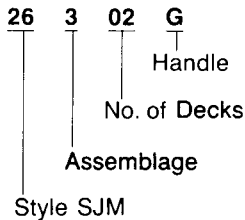
**Panel Thickness:** Silver overlay, phosphor bronze

**Rotor (Moveable Contact):** Silver overlay copper with screw type terminals

**Terminal (Stationary Contact):** Glass filled alkyl

**Spacers:**

#### How to Order



#### Option Codes:

46 Style SJM with Drip Proof Mount \*

72 Style SJM with Spring Return

See accessories for Optional Handles.

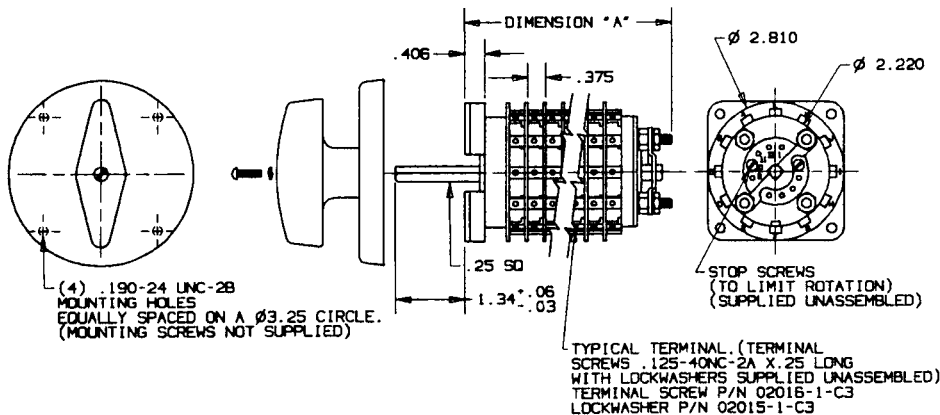
Type S3JM	Lo	To	A	B	C	D	E	F	G	H	I	J	K
Lo													
To													
A													
B													
C													
D													
E													
F													
G													
H													
I													
J													
K													

One pole per section; ON and 11 tap positions.

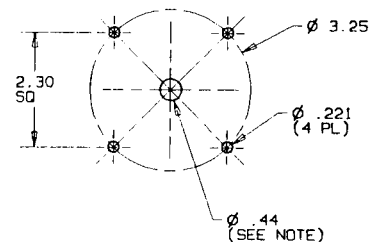
All contact types are shown with handle in vertical (0°) position (12 o'clock)								
No. Sec.	Navy Type	Catalog Number	No. Sec.	Navy Type	Catalog No.	Weight lbs	Torque lb-in.	Dim. A in.
1	S3JM1	26301G	1	S5JM1	26501G	1.2	9	2 <sup>7</sup> / <sub>32</sub>
2	S3JM2	26302G	2	S5JM2	26502G	1.4	10	2 <sup>11</sup> / <sub>32</sub>
3	S3JM3	26303G	3	S5JM3	26503G	1.5	11	3 <sup>1</sup> / <sub>32</sub>
4	S3JM4	26304G	4	S5JM4	26504G	1.7	12	3 <sup>7</sup> / <sub>16</sub>
* 5	S3JM5	26305G	* 5	S5JM5	26505G	1.8	13	3 <sup>11</sup> / <sub>16</sub>
6	S3JM6	26306G	6	S5JM6	26506G	1.9	14	4 <sup>1</sup> / <sub>16</sub>
7	S3JM7	26307G	7	S5JM7	26507G	2.0	15	4 <sup>1</sup> / <sub>32</sub>
8	S3JM8	26308G	8	S5JM8	26508G	2.3	16	4 <sup>3</sup> / <sub>32</sub>
9	S3JM9	26309G	9	S5JM9	26509G	2.5	17	5 <sup>1</sup> / <sub>32</sub>
* 10	S3JM10	26310G	* 10	S5JM10	26510G	2.7	18	5 <sup>1</sup> / <sub>16</sub>
11	S3JM11	26311G	11	S5JM11	26511G	2.9	19	6 <sup>1</sup> / <sub>16</sub>
12	S3JM12	26312G	12	S5JM12	26512G	3.1	20	6 <sup>1</sup> / <sub>2</sub>
13	S3JM13	26313G	13	S5JM13	26513G	3.3	21	6 <sup>7</sup> / <sub>32</sub>
14	S3JM14	26314G	14	S5JM14	26514G	3.5	22	7 <sup>1</sup> / <sub>32</sub>
* 15	S3JM15	26315G	* 15	S5JM15	26515G	3.9	30	8 <sup>1</sup> / <sub>32</sub>
* 20	S3JM20	26320G	* 20	S5JM20	26520G	4.9	35	10 <sup>1</sup> / <sub>32</sub>
* 25	S3JM25	26325G	* 25	S5JM25	26525G	5.8	40	12 <sup>1</sup> / <sub>32</sub>

Note: 1/2 securing rod extension supplied on switches of 20 to 30 sections, extra hardware supplied.

\* Standard switches shown on MIL-S-21604/4



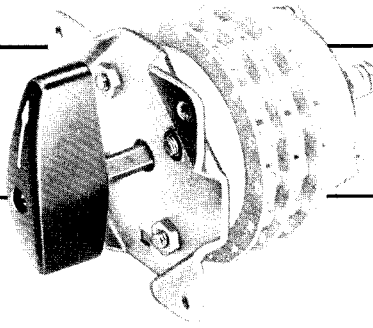
#### PANEL DRILLING DIMENSIONS



NOTE: FOR WATERPROOF MOUNTING \* D .64 CENTER HOLE Ø .201 MOUNTING HOLES (4 PL) DO NOT CHAMFER MOUNTING HOLES PANEL THICKNESS MUST BE SPECIFIED WHEN ORDERING.

# STYLE SJK

## MIL-S-21604/2



### General Specifications

**Interrupt Ratings:** 5 amps @ 125 volts a.c. 60 cps  
 5 amps @ 30 volts D.C. resistive

**Dielectric Strength:** 1200 vrms

**Insulation Resistance:** 200 megohms

**Contact Resistance:** .010 ohms maximum

**Electrical Life:** 40,000 make and break operations

**Available Sections:** 1 to 15

**Available Poles:** 1 to 30

**Positions:** 16; adjustable stops for 2-16 positions

**Contact Type:** break before make (non shorting)

**Indexing Angle:** 22½ degrees

**Mounting Type:** Panel mount, tapped mounting bracket (4 holes for #10-24 screws) to .250 (contact factory for larger sizes.)

**Panel Thickness:** Silver overlay phosphor bronze

**Rotor (Moveable Contact):** Silver overlay phosphor bronze

**Terminal (Stationary Contact):** Silver overlay brass with screw type terminals

**Spacers:** Glass filled alky

**How to Order**

29 3 05 A

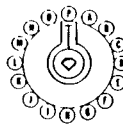
Handle  
 No. of Decks  
 Assemblage

Style SJK

**Option Codes:**

49 Style SJK with Drip Proof Mount\*

See accessories for Optional Handles.



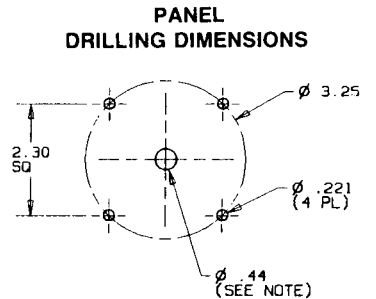
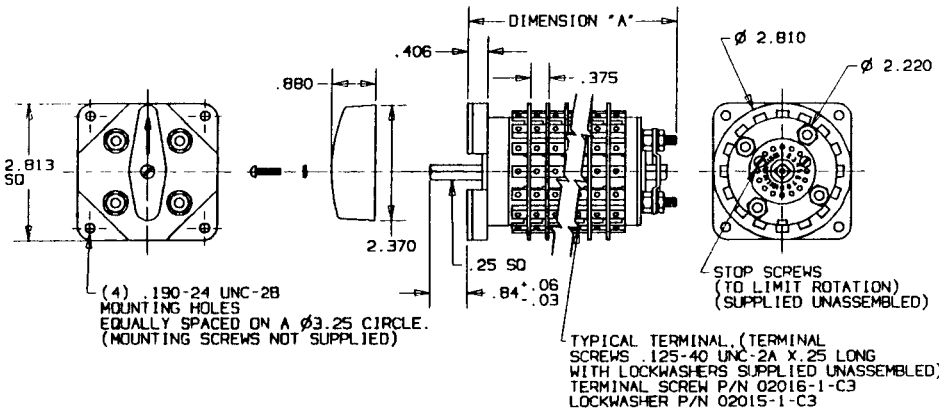
One pole per section. Off and 15 tap positions

CONTACT	POSITIONS															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PO			X													
OA		X														
OB			X													
OC				X												
OD					X											
OE						X										
OF							X									
OG								X								
OH									X							
OI										X						
OJ											X					
OK												X				
OL													X			
OM														X		
ON															X	
OO																X

All contact types are shown with handle in vertical (0°) position (12 o'clock)

No. Sec.	Navy Type	Catalog No.	Weight lbs	Torque lb-in.	Dim. A in.
1	S3JK1	29301A	1.1	9	2 <sup>9</sup> / <sub>32</sub>
2	S3JK2	29302A	1.3	10	2 <sup>11</sup> / <sub>32</sub>
* 3	S3JK3	29303A	1.4	11	3 <sup>1</sup> / <sub>32</sub>
4	S3JK4	29304A	1.6	12	3 <sup>7</sup> / <sub>16</sub>
* 5	S3JK5	29305A	1.7	13	3 <sup>13</sup> / <sub>16</sub>
6	S3JK6	29306A	1.8	14	4 <sup>1</sup> / <sub>16</sub>
7	S3JK7	29307A	2.0	15	4 <sup>17</sup> / <sub>32</sub>
8	S3JK8	29308A	2.2	16	4 <sup>21</sup> / <sub>32</sub>
9	S3JK9	29309A	2.4	17	5 <sup>1</sup> / <sub>32</sub>
* 10	S3JK10	29310A	2.9	25	6 <sup>11</sup> / <sub>32</sub>
11	S3JK11	29311A	3.0	26	6 <sup>7</sup> / <sub>8</sub>
12	S3JK12	29312A	3.1	27	7 <sup>1</sup> / <sub>4</sub>
13	S3JK13	29313A	3.3	28	7 <sup>21</sup> / <sub>32</sub>
14	S3JK14	29314A	3.4	29	8 <sup>5</sup> / <sub>32</sub>
* 15	S3JK15	29315A	3.5	30	8 <sup>1</sup> / <sub>2</sub>

\* Standard switches shown on MIL-S-21604/2

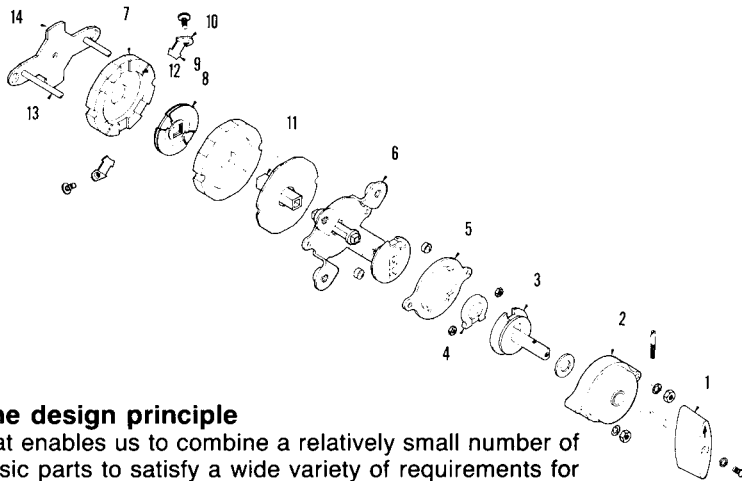


NOTE: FOR WATERPROOF MOUNTING. \* Ø .64 CENTER HOLE Ø .201 MOUNTING HOLES (4 PL) DO NOT CHAMFER MOUNTING HOLES. PANEL THICKNESS MUST BE SPECIFIED WHEN ORDERING.



# CLASS SR SNAP SWITCHES

## Details of Construction



### The design principle

that enables us to combine a relatively small number of basic parts to satisfy a wide variety of requirements for selector and control switching in power circuits is shown by this exploded view. Standard switches built on this principle, in 1SR, 3SR, 6SR, and 20SR ampere capacity, are listed in this section. The catalogued units merely indicate standard switching possibilities; we will gladly recommend other combinations, based on our experience, for specific requirements.

### The electrical system

of the SR switch comprises two or more stationary contacts (9) and one or more sets of movable contacts. These are pairs of spring-metal blades (8) that make high-pressure, low-resistance contact on both faces of the stationary contacts while bridging two or more of these contacts. The stationary contacts fit in radial grooves (12) in the rim of molded insulating disks (7) within which the movable contacts are carried on an insulated shaft (11). All making and breaking of electric circuits takes place within the closed spaces between adjacent disks. Their quick-break action makes these switches particularly suitable for direct-current service. The ends of the stationary contacts extend outside the insulating disks and serve as connecting terminals (10). This one-piece contact/terminal construction minimizes series resistance and heating. Depending on current rating and on wiring requirements, the terminals may have tapped holes for connecting-screws or clearance holes for bolt-connection of cable-lugs.

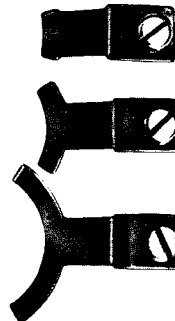
### The mechanical system

of the SR Switch is designed to provide uniform high-speed make and break, regardless of whether the operating handle (1) is turned rapidly or slowly. Turning the handle through about 120° in either direction winds a powerful coil spring (3). When this is fully wound, the indexing plate (4) is momentarily withdrawn from the locking plate (5) by an eccentric cam. The drive-shaft and movable contacts then snap rapidly to the next position, where the indexing plate holds them until the spring-drive mechanism is again operated. Transit time is about ten milliseconds.

### Assembly

The snap-drive mechanism, mechanism-cover (2), locking plate, mounting bracket (6), insulating disks, and back plate (14) are stacked on side securing rods (13) and bolted firmly together to form a rigid assembly. The handle is keyed to the operating shaft and secured by a screw.

### STATIONARY CONTACTS

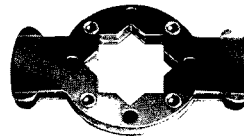


Non-shorting (break-before-make) contacts are standard in all the ratings and circuits shown in this section.

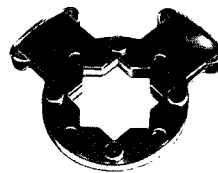
Shorting (make-before-break) contacts, required in some special circuits, are available on order.

The "Sweep" contact maintains the connection with the rotor through consecutive positions.

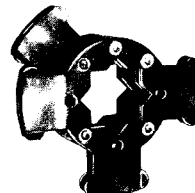
### MOVABLE CONTACTS (rotors)



The simple, straight-across rotor bridges stationary contacts in the same insulating disk. It provides single-throw switching in **Circuit 1** and double-throw switching in **Circuit 6**.



The right-angle-blade rotor provides a double-throw switching, with an intermediate OFF position, in **Circuit 7**.



A multi-fingered blade is combined with a single-contact blade to form a composite (double-deck) rotor that interconnects stationary contacts in adjacent disks. Suitable blade arrangements provide double-throw, triple-throw, or four-throw switching.

### INSULATING DISKS (and circuits)



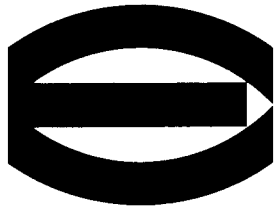
The insulating disks, molded of glass alkyd per MIL-M-14, have three functions. They hold the stationary contacts; they form enclosures that contain all making and breaking contacts; and they provide both mechanical and electrical separation of switching sections. Typical circuits with corresponding schematic diagrams, are shown above.

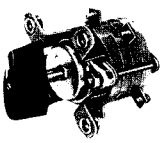
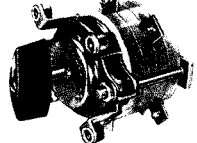
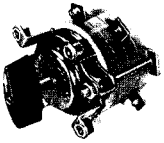
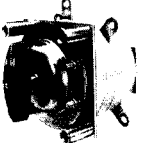


**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# CLASS SR SNAP SWITCHES



	SNAP ACTION SWITCHES			
	CLASS 1SR	CLASS 3SR	CLASS 6SR	CLASS 20SR
				
<b>CHARACTERISTICS</b>				
<b>MILITARY SPECIFICATION</b>	MIL-S-15291	MIL-S-15291	MIL-S-15291	MIL-S-15291
<b>MILITARY SPECIFICATION SHEETS</b>	MIL-S-15291/1 MIL-S-15291/2 MIL-S-15291/3 MIL-S-15291/4	MIL-S-15291/5 MIL-S-15291/6 MIL-S-15291/7	MIL-S-15291/8 MIL-S-15291/9 MIL-S-15291/10	MIL-S-15291/11 MIL-S-15291/12 MIL-S-15291/13
<b>QUALIFIED PRODUCTS LIST</b>	QPL-15291	QPL-15291	QPL-15291	QPL-15291
<b>POLES</b>	1 to 12	1 to 12	1 to 8	1 to 8
<b>POSITIONS</b>	2 to 4	2 to 4	2 to 4	2 to 4
<b>POSITION ANGLE OF THROW</b>	90°	90°	90°	90°
<b>ELECTRICAL RATINGS (25°C)</b>				
Continuous Rating	10A-125V	30A-500V	60A-500V	200A-500V
Interrupting Ratings				
125 VAC Resistive (Inductive)	10A (.75 pf)	30A (.75 pf)	60A (.75 pf)	200A (.75 pf)
250VAC Resistive (Inductive)	10A (.75 pf)	30A (.75 pf)	60A (.75 pf)	200A (.75 pf)
500VAC Resistive (Inductive)	5A (.75 pf)	30A (.75 pf)	60A (.75 pf)	200A (.75 pf)
120VDC Resistive (Inductive)	10A (.24 hy)	30A*	60A*	200A*
250VDC Resistive (Inductive)	5A (.24 hy)	15A*	30A*	200A*
350VDC Resistive (Inductive)	2A (.24 hy)			
Overload (50 operations)	60A-125VAC	180A-500VAC		
Dielectric Strength	1250 VRMS	2000 VRMS	2000 VRMS	2000 VRMS
Insulation Resistance	200 megohms	200 megohms	200 megohms	200 megohms
Contact Resistance	20 milliohms	10 milliohms	5 milliohms	1.5 milliohms
Life (Electrical operations)	30,000	20,000	6,000	6,000
(plus mechanical operations)	20,000	10,000	4,000	4,000

\* Reduced Life (see Specification)

## FEATURES

- Time proven double wiping contact for low contact resistance even under extreme shock and vibration conditions.
- Switching speed not dependant on operator action.
- Quick make and break action. Approximately ten milli-second contact transfer time.
- Excellent for DC as well as AC switching.
- All making and breaking of contact takes place in the fully enclosed decks.
- Versatile - many special designs are available to fit every application.
- Available in commercial versions. See Catalog IND-1.

## OPTIONS AVAILABLE

In addition to the standard units manufactured to the specified MIL-SPECS, we can furnish a wide variety of optional equipment, all manufactured in strict accordance with the latest quality control standards. Among the available options are: escutcheon plates (plain or engraved), silver-plated contacts, combinations of contact schematics, spring-return action (momentary contacts), make-before-break (shorting) contacts, special panel-thicknesses, other handles and 2- or 3-position limited rotation.

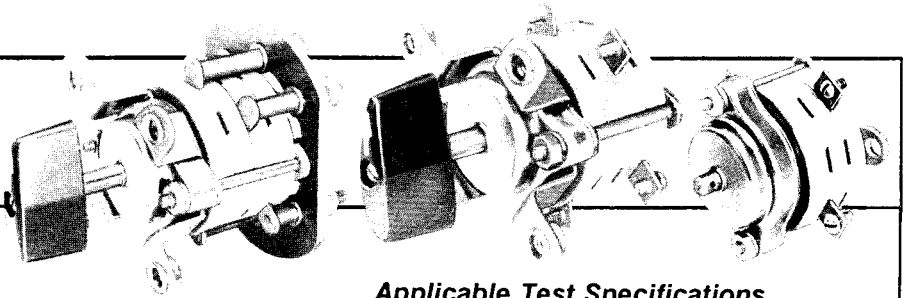


**ELECTROSWITCH • SWITCHES & RELAYS**

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# CLASS 1SR

## MIL-S-15291



### General Specifications

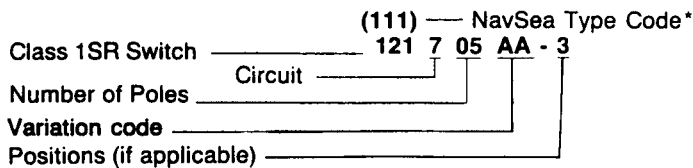
<b>Index Angle of Throw</b>	90 degrees snap action
<b>Contact Material</b>	Moveable: Phosphor Bronze Stationary: Copper
<b>Insulation (Spacers and Decks)</b>	Glass Alkyd, MAI-60 in accordance with MIL-M-14
<b>Stop Strength</b>	30 inch pounds
<b>Insulation Resistance</b>	200 megohms minimum
<b>Contact Resistance</b>	0.02 ohms maximum
<b>Dielectric Strength</b>	1250 vrms
<b>Temperature Rise</b>	50° C
<b>Electrical Endurance **</b>	
10 amps @ 125 volts A.C.	30,000 operations
10 amps @ 120 volts D.C.	20,000 operations

### Applicable Test Specifications

<b>Mil-Std-105</b>	Sampling Procedures and Tables for Inspection by Attributes
<b>Mil-Std-167-1</b>	Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)
<b>Mil-Std-202</b>	Test Methods for Electronic and Electric Component Parts
<b>Mil-Std-454</b>	Standard General Requirements for Electronic Equipment
<b>Mil-S-901</b>	Shock Tests, H.I. (High Impact): Shipboard Machinery, Equip. and Systems

\*\* Endurance values given are based on Group B and Group C Test specifications, extended ratings available by contacting factory.

### How to Order



#### Variation Codes:

**AA** - Panel clearance is .44 from mounting surface to bottom of handle to allow for seal bushing for panels up to .187 thick maximum.

- Oval flush handle.

**LA, LB, etc.** - Factory will assign upon receipt for any deviation from standards.

#### Positions:

All snap switches with variation code may be factory limited to 2 or 3 positions. All other standards are supplied unlimited.

#### Number of Poles:

Circuits 2, 3, and 4 require 2 decks per pole. All other circuits are 1 deck per pole.

#### 111 Series

\*For replacement only, superseded in new designs by 121 Series

### Standard Circuits

NAVSEA switching characteristic in parenthesis

HANDLE POSITIONS	CIRCUIT	CONTACTS HANDLE END	POSITIONS			
			1	2	3	4
	CIRCUIT 1 (A)					
	CIRCUIT 2 (B)			X		
	CIRCUIT 3 (E)			X		X
	CIRCUIT 4 (G)		X			
	CIRCUIT 6 (J)		X		X	
	CIRCUIT 7 (H)		X			X

Alternate shown as dotted line is 3 position double break switching ON 1, ON 2, ON 3.

Handle positions will be 1 \_\_\_ 3

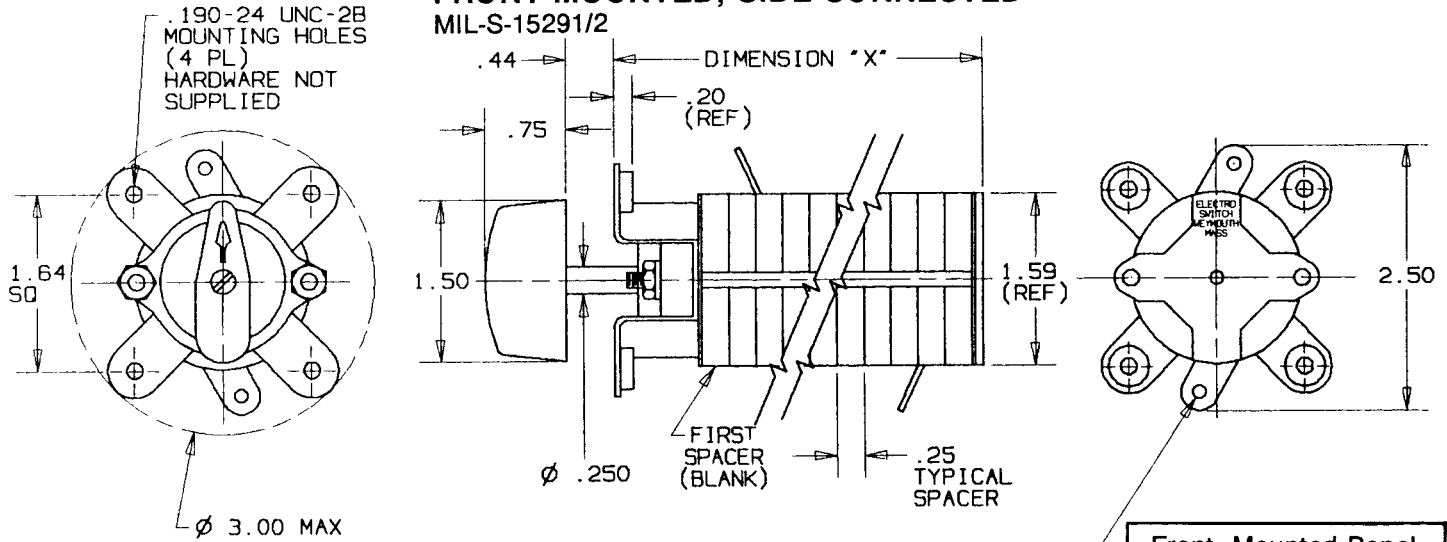
For Circuit (C) and (F) Contact Factory



# CLASS 1SR

## Dimensions/Diagrams and Mounting Dimensions

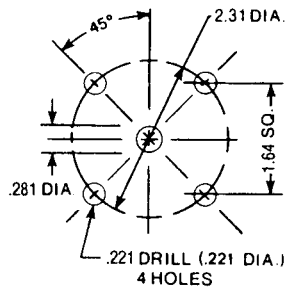
### FRONT MOUNTED, SIDE CONNECTED MIL-S-15291/2



STANDARD HANDLE (SHOWN) P/N 01040-3  
HANDLE HARDWARE  
LOCKWASHER 02015-6  
LEVER SCREW 02016-33  
RETAINING SCREW 02016-9

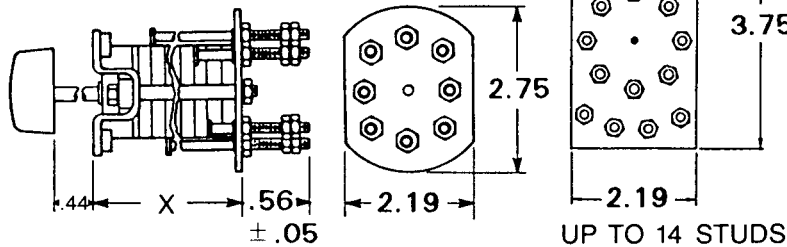
TYPICAL TERMINAL ARRANGEMENT  
BINDING HEAD SCREWS  
.164-32 UNC-2A X .25 LONG  
P/N 02016-25

### Front Mounted Panel Drilling Dimensions

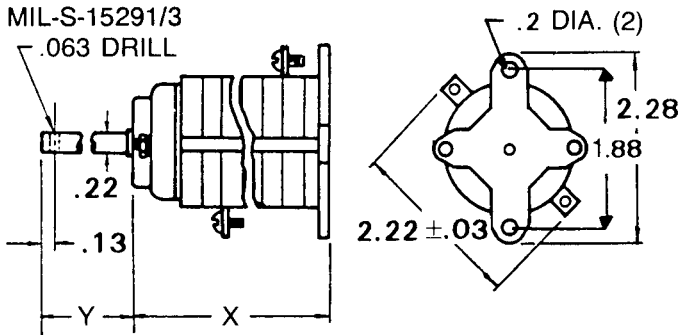


NOTE: FOR WATERPROOF MOUNTINGS:  
THE (4) MOUNTING HOLES S/B .201" DIA.  
THE CENTER HOLE S/B .5" DIA.  
DO NOT CHAMFER MOUNTING HOLES  
1/64 MAX. BREAK PERMISSIBLE

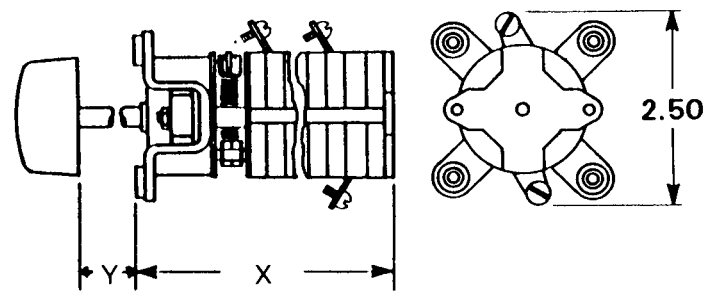
### FRONT MOUNTED, BACK STUD CONNECTED MIL-S-15291/1



### BASE MOUNTED, SIDE CONNECTED MIL-S-15291/3



### CLASS 1SRN MIL-S-15291/4



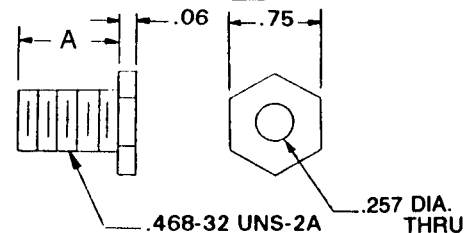
Consult ELECTROSWITCH drawing for "Y" and "X" dimensions

All dimensions are shown in inches.

Drip Proof Kits Available

Cat. Number	Panel	A
001022-1	.06	.16
001022-2	.13	.22
001022-3	.19	.28

Kits include bushing seal (shown) one hex seal nut. and four seal screws with O-rings.

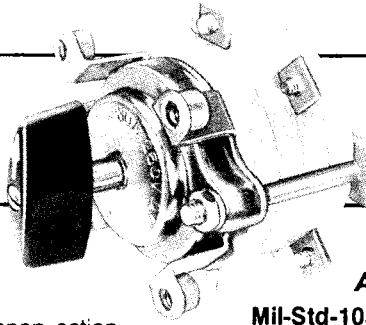


**ELECTROSWITCH** • SWITCHES & RELAYS

UNIT OF ELECTRO SWITCH CORP. • 180 KING AVENUE • WEYMOUTH, MASSACHUSETTS 02188 • TELEPHONE: (617) 335-5200 FAX: (617) 335-4253

# CLASS 3SR

## MIL-S-15291



### General Specifications

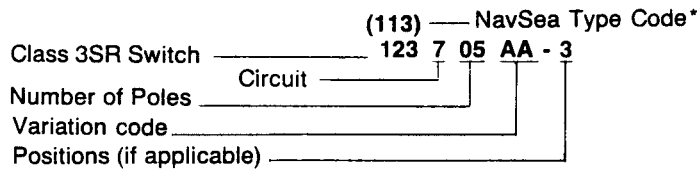
<b>Index Angle of Throw</b>	90 degrees snap action
<b>Contact Material</b>	Moveable: Phosphor Bronze Stationary: Copper
<b>Insulation (Spacers and Decks)</b>	Glass Alkyd, MAI-60 in accordance with MIL-M-14
<b>Stop Strength</b>	100 inch pounds
<b>Insulation Resistance</b>	200 megohms minimum
<b>Contact Resistance</b>	.01 ohms maximum
<b>Dielectric Strength</b>	2000 vrms
<b>Temperature Rise</b>	50° C
<b>Electrical Endurance **</b>	
30 amps @ 500 volts A.C.	20,000 operations
30 amps @ 250 volts D.C.	15,000 operations

### Applicable Test Specifications

<b>Mil-Std-105</b>	Sampling Procedures and Tables for Inspection by Attributes
<b>Mil-Std-167-1</b>	Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)
<b>Mil-Std-202</b>	Test Methods for Electronic and Electric Component Parts
<b>Mil-Std-454</b>	Standard General Requirements for Electronic Equipment
<b>Mil-S-901</b>	Shock Tests, H.I. (High Impact): Shipboard Machinery, Equip. and Systems

\*\* Endurance values given are based on Group B and Group C Test specifications, extended ratings available by contacting factory.

### How to Order



#### Variation Codes:

**AA** - Panel clearance is .44 from mounting surface to bottom of handle to allow for seal bushing for panels up to .187 thick maximum.

- Oval flush handle.

**LA, LB, etc.** - Factory will assign upon receipt for any deviation from standards.

#### Positions:

All snap switches when part number is suffixed by the AA variation code can be ordered limited to the number of positions desired. Numerical sequence can only be -2 or -3. All other standards are supplied unlimited.

#### Number of Poles:

Circuits 2, 3, and 4 require two decks per pole. All other circuits are one deck per pole.

113

\* Use in all new or existing applications, superseded by 123 Series in applications where space is adequate.

### Standard Circuits

NAVSEA switching characteristic in parenthesis

HANDLE POSITIONS	CIRCUIT	CONTACTS HANDLE END	POSITIONS			
			1	2	3	4
	CIRCUIT 1 (A)					
	CIRCUIT 2 (B)			X		
	CIRCUIT 3 (E)			X		
	CIRCUIT 4 (G)			X		
	CIRCUIT 6 (J)			X		
	CIRCUIT 7 (H)				X	

Alternate shown as dotted line is 3 position double break switching ON 1, ON 2, ON 3.

Handle positions will be 1 \_\_\_ 2 \_\_\_ 3

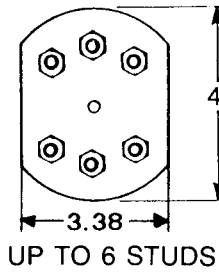
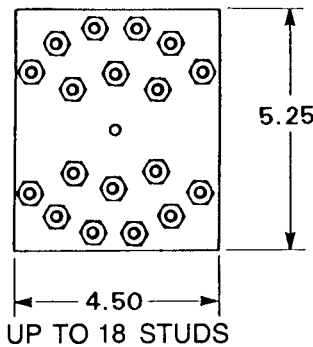
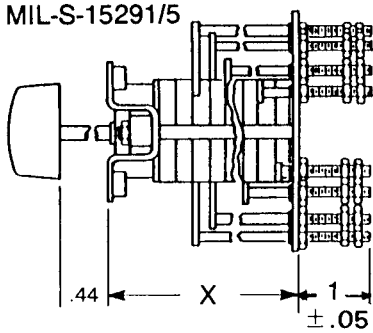
For Circuit (C) and (F) Contact Factory

# CLASS 3SR

## Dimensions/Diagrams and Mounting Dimensions

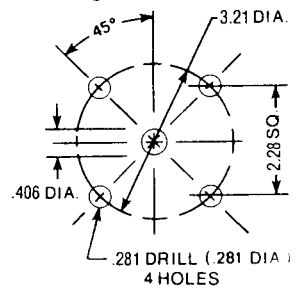
### FRONT MOUNTED, BACK CONNECTED

MIL-S-15291/5



UP TO 6 STUDS  
NOTE: THE SMALLER REAR MOUNTING PLATE USED FOR SWITCHES UP TO 6 STUDS

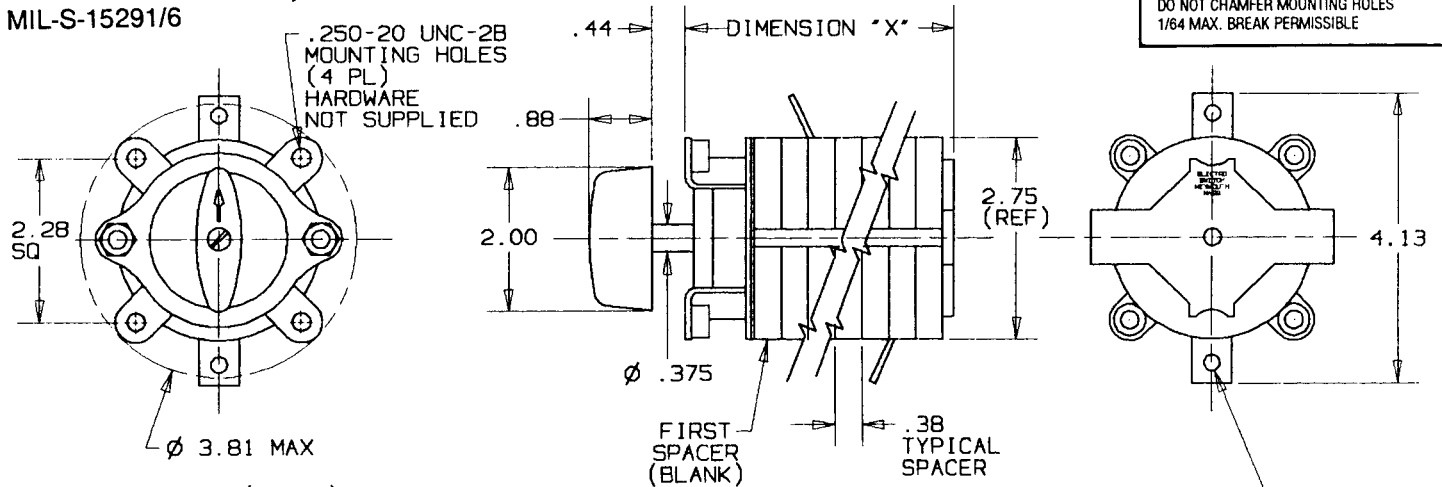
### Front Mounted Panel Drilling Dimensions



NOTE: FOR WATERPROOF MOUNTINGS: THE (4) MOUNTING HOLES S/B .265" DIA. THE CENTER HOLE S/B .64" DIA. DO NOT CHAMFER MOUNTING HOLES 1/64 MAX. BREAK PERMISSIBLE

### FRONT MOUNTED, SIDE CONNECTED

MIL-S-15291/6

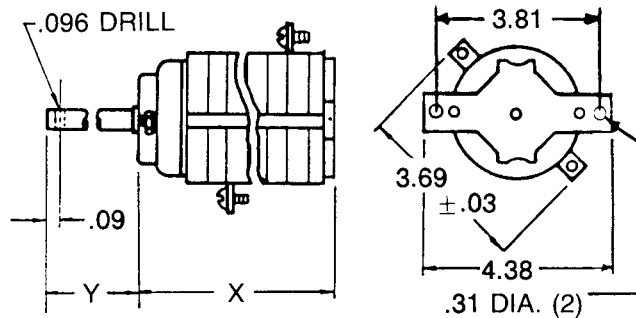


STANDARD HANDLE (SHOWN) P/N 03524-2  
HANDLE HARDWARE  
LOCKWASHER 02015-14  
LEVER SCREW 02016-34  
RETAINING SCREW 02016-27

TYPICAL TERMINAL ARRANGEMENT  
.190-24 UNC X .25 LONG  
TERMINAL SCREWS  
P/N 02016-58

### ENCLOSURE MOUNT WITH COUPLER SHAFT

MIL-S-15291/7



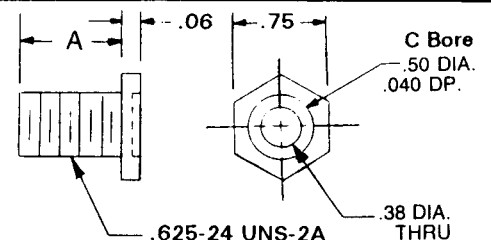
### Drip Proof Kits

Consult ELECTROSWITCH drawing for "Y" and "X" dimensions

All dimensions are shown in inches.

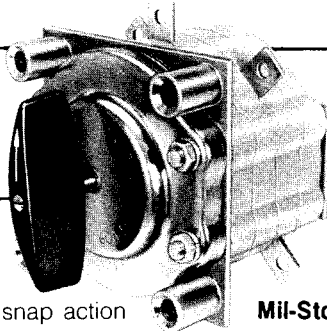
Part Number	Panel	Dim. A
003521-1	.06	.19
003521-2	.13	.25
003521-3	.19	.31

Kits include bushing (shown) seal nut, and four (4) mounting screws with o-rings.



# CLASS 6SR

## MIL-S-15291



### General Specifications

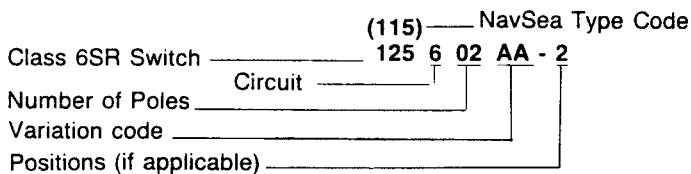
<b>Index Angle of Throw</b>	90 degrees snap action
<b>Contact Material</b>	Moveable: Phosphor Bronze Stationary: Copper
<b>Insulation (Spacers and Decks)</b>	Glass Alkyd, MAI-60 in accordance with MIL-M-14
<b>Stop Strength</b>	100 inch pounds
<b>Insulation Resistance</b>	200 megohms
<b>Contact Resistance</b>	5 milliohms maximum
<b>Dielectric Strength</b>	2000 vrms
<b>Temperature Rise</b>	50° C
<b>Electrical Endurance **</b>	
60 amps @ 500 volts A.C.	6,000 operations
60 amps @ 250 volts D.C.	4,000 operations

### Applicable Test Specifications

<b>Mil-Std-105</b>	Sampling Procedures and Tables for Inspection by Attributes
<b>Mil-Std-167-1</b>	Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)
<b>Mil-Std-202</b>	Test Methods for Electronic and Electric Component Parts
<b>Mil-Std-454</b>	Standard General Requirements for Electronic Equipment
<b>Mil-S-901</b>	Shock Tests, H.I. (High Impact): Shipboard Machinery, Equip. and Systems

\*\* Endurance values given are based on Group B and Group C Test specifications; extended ratings available by contacting factory.

### How to Order



#### Variation Codes:

**AA** - Panel clearance is .44 from mounting surface to bottom of handle to allow for seal bushing for panels up to .187 thick maximum.

**LA, LB, etc.** - Factory will assign upon receipt for any deviations from standards.

#### Positions:

All snap switches in which the part number is suffixed by AA variation code can be ordered limited at the factory to 2 or 3 positions depending on the application. All other standards are supplied unlimited.

#### Number of Poles:

Circuits 2, 3, and 4 require two decks per pole. All other circuits are one deck per pole.

When circuit 6 or 7 is ordered, one extra blank at the top of the switch is required to allow clearance for mounting hardware.

115, 125

Factory designation for Class 6SR.

### Standard Circuits

NAVSEA switching characteristic in parenthesis

HANDLE POSITIONS	CIRCUIT	CONTACTS	POSITIONS			
			1	2	3	4
	CIRCUIT 1 (A)			X		X
	CIRCUIT 2 (B)			X		X
	CIRCUIT 3 (E)			X		X
	CIRCUIT 4 (G)		X	X		X
	CIRCUIT 6 (J)		X	X	X	X
	CIRCUIT 7 (H)		X		X	

Alternate shown as dotted line is 3 position double break switching ON 1, ON 2, ON 3.

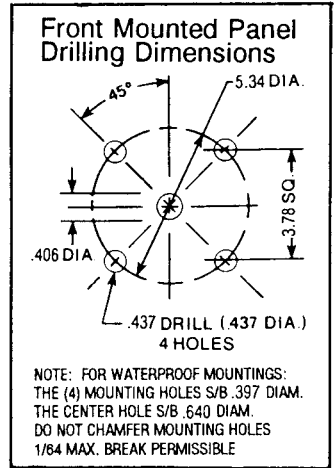
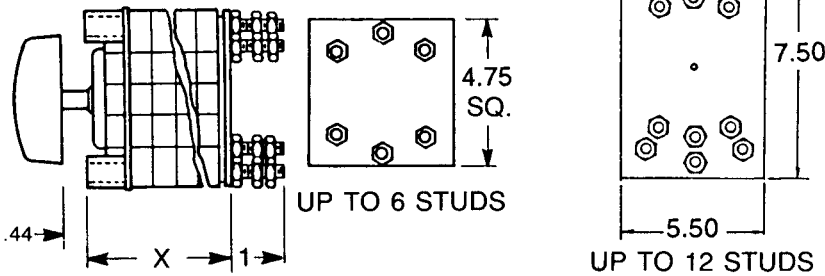
Handle positions will be 1 \_\_\_ 3

For Circuit (C) and (F) Contact Factory

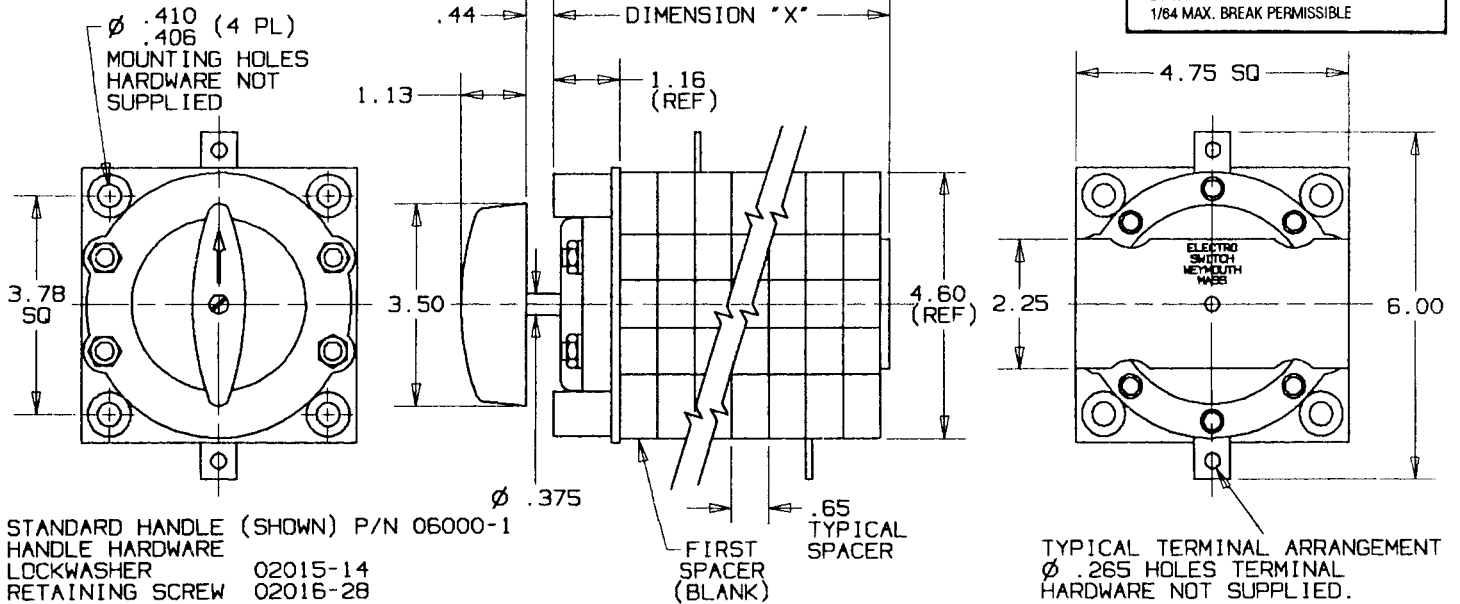
# CLASS 6SR

## Dimensions/Diagrams and Mounting Dimensions

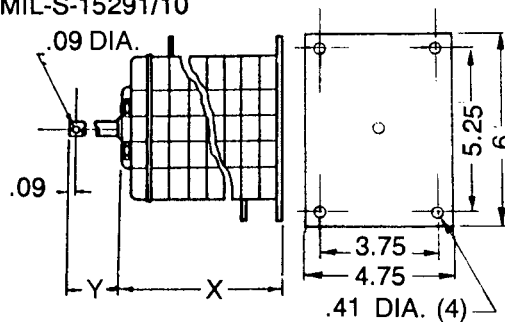
### FRONT MOUNTED, BACK STUD CONNECTED MIL-S-15291/8



### FRONT MOUNTED, SIDE CONNECTED MIL-S-15291/9



### BASE MOUNTED, SIDE CONNECTED MIL-S-15291/10

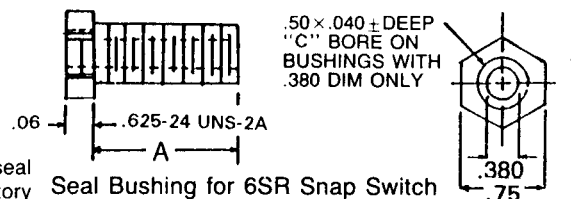


Consult ELECTROSWITCH drawing for "Y" and "X" dimensions

All dimensions are shown in inches.

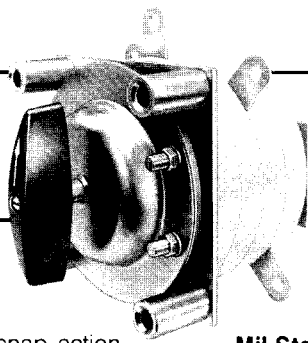
Panel	Dim. A
.06	.19
.13	.25
.19	.31
.25	.38

Drip proof kits include seal bushing, hex seal nut, and four (4) seal bolts with o-rings. For panel thicknesses not shown contact factory for seal kit information.



# CLASS 20SR

## MIL-S-15291



### General Specifications

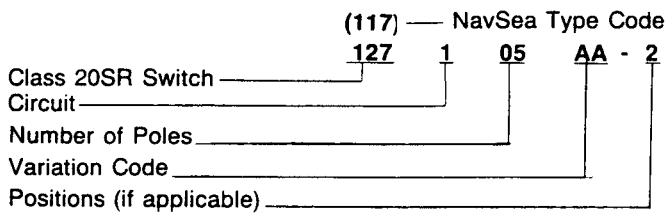
<b>Index Angle of Throw</b>	90 degrees snap action
<b>Contact Material</b>	Moveable: Phosphor Bronze Stationary: Copper
<b>Insulation (Spacers and Decks)</b>	Glass Alkyd, MAI-60 in accordance with MIL-M-14
<b>Stop Strength</b>	100 inch pounds
<b>Insulation Resistance</b>	200 megohms
<b>Contact Resistance</b>	1.5 milliohms maximum
<b>Dielectric Strength</b>	2000 vrms
<b>Temperature Rise</b>	50° C
<b>Electrical Endurance **</b>	
200 amps @ 500 volts A.C.	6,000 operations
200 amps @ 250 volts D.C.	4,000 operations

### Applicable Test Specifications

<b>Mil-Std-105</b>	Sampling Procedures and Tables for Inspection by Attributes
<b>Mil-Std-167-1</b>	Mechanical Vibrations of Shipboard Equipment (Type I - Environmental and Type II - Internally Excited)
<b>Mil-Std-202</b>	Test Methods for Electronic and Electric Component Parts
<b>Mil-Std-454</b>	Standard General Requirements for Electronic Equipment
<b>Mil-S-901</b>	Shock Tests, H.I. (High Impact): Shipboard Machinery, Equip. and Systems

\*\* Endurance values given are based on Group B and Group C Test specifications; extended ratings available by contacting factory.

### How to Order



#### Variation Code

**AA** - Panel clearance is .44 from mounting surface to bottom of handle to allow for seal bushing for panels up to .187 thick maximum.

**LA, LB, etc.** - Factory will assign upon receipt for any deviations from standard.

#### Positions

All snap switches in which the part number is suffixed by AA variations code can be limited at the factory to 2 or 3 positions depending on the application. All other standards are supplied unlimited.

#### Number of Poles

Circuits 2, 3, and 4 require two decks per pole. All other circuits are one deck per pole.

When circuit 6 or 7 is ordered, one extra blank at the top of the switch is required to allow clearance for mounting hardware.

#### 117, 127

Factory designation for Class 20SR.

### Standard Circuits

NAVSEA switching characteristic in parenthesis

HANDLE POSITIONS	CIRCUIT	CONTACTS	POSITIONS			
			1	2	3	4
	CIRCUIT 1 (A)			X	X	
	CIRCUIT 2 (B)			X		X
	CIRCUIT 3 (E)			X	X	X
	CIRCUIT 4 (G)		X	X	X	X
	CIRCUIT 6 (J)		X		X	X
	CIRCUIT 7 (H)				X	

Alternate shown as dotted line is 3 position double break switching ON 1, ON 2, ON 3.

Handle positions will be 1 | 2 | 3

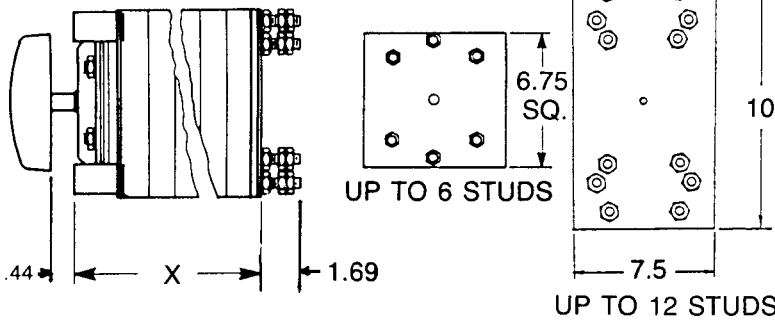
For Circuit (C) and (F) Contact Factory

# CLASS 20SR

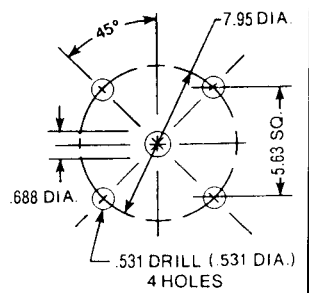
## Dimensions/Diagrams and Mounting Dimensions

### FRONT MOUNTED, BACK STUD CONNECTED

MIL-S-15291/11



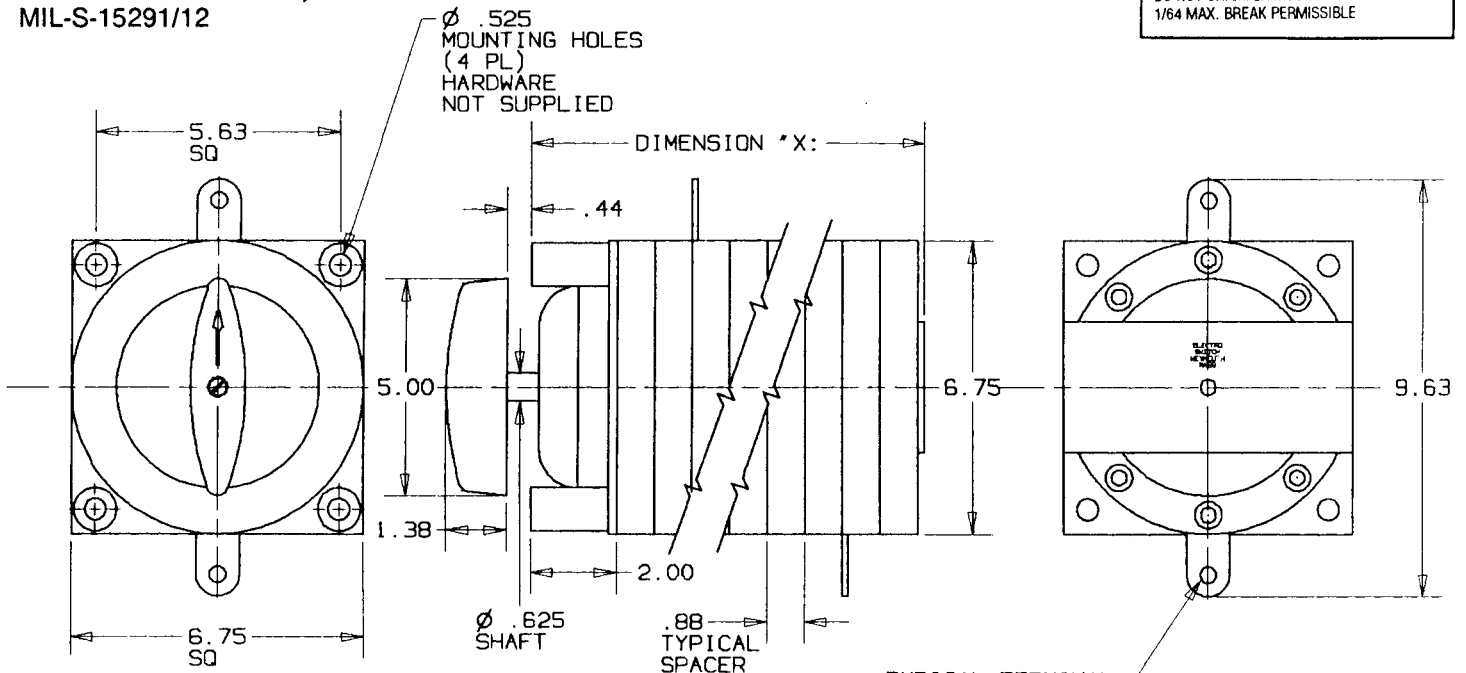
#### Front Mounted Panel Drilling Dimensions



NOTE: FOR WATERPROOF MOUNTINGS THE (4) MOUNTING HOLES S/B .515" DIA. THE CENTER HOLE S/B .765" DIA. DO NOT CHAMFER MOUNTING HOLES 1/64 MAX. BREAK PERMISSIBLE

### FRONT MOUNTED, SIDE CONNECTED

MIL-S-15291/12

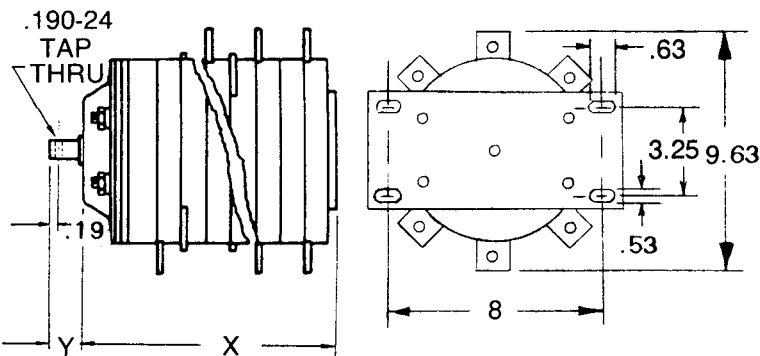


STANDARD HANDLE (SHOWN) P/N 07000-1  
HANDLE HARDWARE  
LOCKWASHER 02015-15  
RETAINING SCREW 02016-29

TYPICAL TERMINAL ARRANGEMENT  
Ø .406 HOLES  
HARDWARE NOT SUPPLIED

### BASE MOUNTED, SIDE CONNECTED

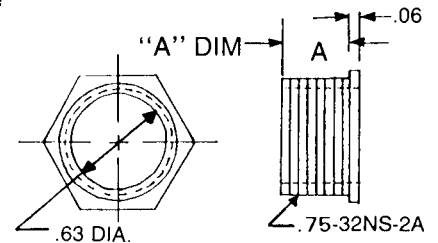
MIL-S-15291/13



#### Consult ELECTROSWITCH drawing for "Y" and "X" dimensions

All dimensions are shown in inches.

Panel	Dim. A
.06	.14
.13	.20
.19	.27
.25	.33



Drip proof kits include a bushing seal, hex seal nut and four (4) seal bolts with o-rings. For panel thicknesses not shown contact factory for seal kit information.

# **QPL**

## **What is QPL...and how to use it**

Electroswitch builds Military Products which appear on the following Qualified Products Listing

**M6807, MS21994, MS21995, MS25002, MS90547**

**M21604 /1,/2,/3,/4,/5,/6,/7**

**M15291 /1,/2,/3,/4,/5,/6,/7,/8,/9,/10,/11,/12,/13**

The above QPL listings have been compiled into the QPL section of this catalog.

Using the Military Dash Number or (Navy Type number) the Electroswitch catalog number can be identified, i.e.

**MS25002-3**

Electroswitch catalog number 32303

**S3JR10**

Electroswitch catalog number 23310G

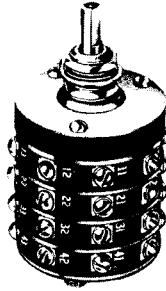
**MS15291/11-003 or 20SR2B1**

Electroswitch catalog number 117202LB

***Remember...*** Many variations of products that are not listed on the QPL List comply with MIL-SPECS requirements.



### TYPE AF



### ROTARY AND SELECTOR POWER SWITCHES

MS21994		
DASH NO.	DECKS	CATALOG NO.
-1	2	32902YA
-2	4	32904YA
-3	8	32908YA

MS21995		
DASH NO.	DECKS	CATALOG NO.
-1	3	32903YB
-2	6	32906YB
-3	12	32912YB

MS25002		
DASH NO.	DECKS	CATALOG NO.
-1	1	32301
-2	2	32302
-3	3	32303
-4	4	32304
-5	5	32305
-6	6	32306

### STYLE JR



MS90547			
DASH	STYLE	DECKS	CAT. NO.
-1	3	1	23301
-2	3	2	23302
-3	3	3	23303
-4	3	4	23304
-5	3	5	23305

MS90547			
DASH	STYLE	DECKS	CAT. NO.
-6	3	6	23306
-7	3	7	23307
-8	3	8	23308
-9	3	9	23309
-10	3	10	23310
-11	3	11	23311
-12	3	12	23312
-13	3	13	23313
-14	3	14	23314
-15	3	15	23315
-16	3	16	23316
-17	3	17	23317
-18	3	18	23318
-19	3	19	23319
-20	3	20	23320
-21	3	21	23321
-22	3	22	23322
-23	3	23	23323
-24	3	24	23324
-25	3	25	23325
-26	2	1	23201
-27	2	2	23202
-28	2	3	23203
-29	2	4	23204
-30	2	5	23205
-31	2	6	23206
-32	2	7	23207
-33	2	8	23208
-34	2	9	23209
-35	2	10	23210
-36	2	11	23211
-37	2	12	23212
-38	2	13	23213
-39	2	14	23214
-40	2	15	23215
-41	2	16	23216
-42	2	17	23217
-43	2	18	23218
-44	2	19	23219
-45	2	20	23220
-46	2	21	23221
-47	2	22	23222
-48	2	23	23223
-49	2	24	23224
-50	2	25	23225



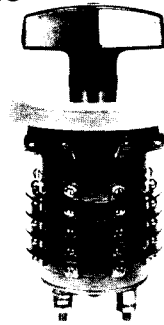
## ROTARY MULTIPOLE AND SELECTOR SWITCHES

STYLE JK



MIL-S-21604/2		
DECKS	TYPE	CAT. NOS.
3	S3JK3	29303A
5	S3JK5	29305A
10	S3JK10	29310A
15	S3JK15	29315A

STYLE JR



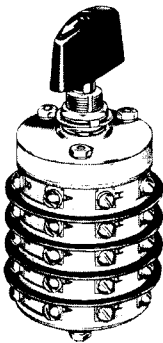
MIL-S-21604/5		
DECKS	TYPE	CAT. NOS.
5	S1JR5	23105G
10	S1JR10	23110G
15	S1JR15	23115G
20	S1JR20	23120G
25	S1JR25	23125G
5	S2JR5	23205G
10	S2JR10	23210G
15	S2JR15	23215G
20	S2JR20	23220G
25	S2JR25	23225G
5	S3JR5	23305G
10	S3JR10	23310G
15	S3JR15	23315G
20	S3JR20	23320G
25	S3JR25	23325G
5	S4JR5	23405G
10	S4JR10	23410G
15	S4JR15	23415G
20	S4JR20	23420G
25	S4JR25	23425G

STYLE JM



MIL-S-21604/4		
DECKS	TYPE	CAT. NOS.
5	S2JM5	26205G
10	S2JM10	26210G
15	S2JM15	26215G
20	S2JM20	26220G
25	S2JM25	26225G
5	S3JM5	26305G
10	S3JM10	26310G
15	S3JM15	26315G
20	S3JM20	26320G
25	S3JM25	26325G
5	S5JM5	26505G
10	S5JM10	26510G
15	S5JM15	26515G
20	S5JM20	26520G
25	S5JM25	26525G

STYLE JL



MIL-S-21604/3		
DECKS	TYPE	CAT. NOS.
3	S2JL3	33203A
5	S2JL5	33205A
10	S2JL10	33210A
3	S3JL3	33303A
5	S3JL5	33305A
10	S3JL10	33310A
3	S4JL3	33403A
5	S4JL5	33405A
10	S4JL10	33410A

STYLES RJR & RJRA

MIL-S-21604/6

DECKS	TYPE	CAT. NOS.
27	S1RJR25	23127YB
27	S2RJR25	23227YB
27	S3RJR25	23327YB
27	S4RJR25	23427YB
27	S2RJRA26	23227YC

STYLES JR304 & JRM 300

MIL-S-21604/7

DECKS	TYPE	CAT. NOS.
3	JR304	23203LM
3	JRM300	71203LM

## SERIES 24G

No specification sheets have been published. Refer to catalog MIL-24G-1 for details



## METER AND CONTROL SWITCHES

SINGLE-THROW (OFF-ON) DOUBLE THROW (1-2 or 1-OFF-2)		
POLES	DECKS	CATALOG NOS.
2	1	24201G
4	2	24202G
6	3	24203G
8	4	24204G
10	5	24205G
12	6	24206G
14	7	24207G
16	8	24208G
18	9	24209G
20	10	24210G
2	1	74201G*
4	2	74202G*
6	3	74203G*

MULTI-POSITION TAP SWITCH 2 to 8 POSITIONS		
POLES	DECKS	CATALOG NOS.
1	1	24301G
2	2	24302G
3	3	24303G
4	4	24304G
5	5	24305G
6	6	24306G
7	7	24307G
8	8	24308G
9	9	24309G
10	10	24310G

\* spring-return (momentary) action

BREAKER CONTROL SWITCHES						
CAT. NO.	NUMBER OF CONTACTS IN POSITIONS SHOWN					
	PULL	TRIP	NAT	N	NAC	CLOSE
2438J	--	1	--	--	--	1
2440J	--	1	--	--	--	2
2441J	--	2	--	--	--	2
2442J	--	1	--	1	2	1
2443J	--	1	--	1	2	2
2444J	--	1	--	2	2	1
2445J	--	1	2	1	2	1
2446J	--	2	--	1	4	1
2450J	1---1,		1-----			1,2
2452J	2--2,		--	2	2	2
2457J	--	2	2	2	2	2
2458J	2	2	2	2	2	2

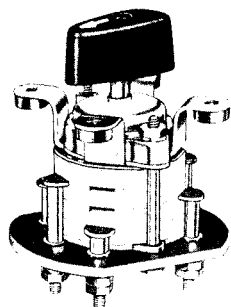
NAT = normal after TRIP

N = normal (vertical position)

NAC = normal after CLOSE

METER SWITCHES	
CAT. NO.	DESCRIPTION
2401H	VM, 2 wire, 1Ø or DC, OFF-ON
2402H	VM, 4 wire, 2Ø or 2DC, 1-OFF-2
2403H	VM, 3Ø, Ø-N, OFF-1-2-3
2404H	VM, 3Ø, Ø-Ø, OFF, 1-2, 2-3, 3-1
2405H	VM, 3Ø, Ø-Ø & Ø-N plus OFF
2406H	VM, 2-3Ø with OFF
2407H	AM, 3Ø, 2CT, no OFF
2408H	AM, 3Ø, 2CT, with OFF
2409H	AM, 3Ø, 3CT, no OFF
2410H	AM, 3Ø, 3CT, with OFF
2411H	AM, 3Ø, 3CT, 3 independ. ckts
2412H	AM, same as 2411H with OFF
2415H	AM/VM 3Ø, Ø to Ø, 3CT, OFF
2419H	WM, 3Ø, 3CT, 3 curr. coils
2420H	WM, 3Ø, 3CT, 3 curr. coils, 3PT
2421H	WM reversing, W-OFF-RVA
2422H	PF, 3Ø, 2CT, 1 or 2 curr. coils
2424K	SYNCH, machine to bus
2427J	MOTOR CONTROL, RAISE-LOWER

### CLASS 1SR AND 1SRN SWITCHES



M15291/1	TYPE	CAT. NO.
-001	1SR2A1	111102LE
-002	1SR3A1	111103LD
-003	1SR4A1	111104LP
-004	1SR5A1	111105LF
-005	1SR3B1	111203LA
-006	1SR4B1	111204LC
-007	1SR4F1	111804LA
-008	1SR6F1	111806LA

M15291/2	TYPE	CAT. NO.
-001	1SR1A2	111101AA
-002*	1SR1A2A	121101AA
-003	1SR2A2	111102AA
-004*	1SR2A2A	121102AA
-005	1SR3A2	111103AA
-006*	1SR3A2A	121103AA
-007	1SR4A2	111104LH
-008*	1SR4A2A	121104AA
-009	1SR5A2	111105LB
-010*	1SR5A2A	121105AA
-011	1SR6A2	111106LF
-012*	1SR6A2A	121106AA
-013	1SR7A2	111107AA
-014*	1SR7A2A	121107AA
-015	1SR8A2	111108LD
-016*	1SR8A2A	121108AA
-017	1SR9A2	111109AA
-018*	1SR9A2A	121109AA
-019	1SR10A2	111110LE
-020*	1SR10A2A	121110AA
-021	1SR1B2	111201AA
-022*	1SR1B2A	121201AA
-023	1SR2B2	111202AA
-024*	1SR2B2A	121202AA
-025	1SR3B2	111203AA
-026*	1SR3B2A	121203AA
-027	1SR4B2	111204AA
-028*	1SR4B2A	121204AA
-029	1SR5B2	111205AA
-030*	1SR5B2A	121205AA

M15291/2	TYPE	CAT. NO.
-031	1SR6B2	111206AA
-032*	1SR6B2A	121206AA
-033	1SR1C2	111601LB
-034	1SR2C2	111602AA
-035	1SR3C2	111603LC
-036	1SR4C2	111604LC
-037	1SR5C2	111605LA
-038	1SR6C2	111606AA
-039	1SR1E2	111301AA
-040*	1SR1E2A	121301AA
-041	1SR2E2	111302AA
-042*	1SR2E2A	121302AA
-043	1SR3E2	111303LB
-044*	1SR3E2A	121303AA
-045	1SR4E2	111304AA
-046*	1SR4E2A	121304AA
-047*	1SR5E2	121305AA
-048*	1SR6E2A	121306AA
-049	1SR2F2	111802AA
-050*	1SR2FA2	121802LA
-051	1SR4F2	111904LF
-052*	1SR4F2A	121804LA
-053	1SR6F2	111906LK
-054*	1SR6F2A	121806LA
-055	1SR1G2	111401AA
-056*	1SRGE2A	121401AA
-057	1SR2G2	111402AA
-058*	1SR2G2A	121402AA
-059	1SR3G2	111403AA
-060*	1SR3G2A	121403AA
-061	1SR4G2	111404AA
-062*	1SR4G2A	121404AA
-063*	1SR5G2	121405AA
-064*	1SR6G2	121406AA
-065*	1SR1H2	121701AA-3
-066*	1SR2H2	121702AA-3
-067*	1SR3H2	121703AA-3
-068*	1SR4H2	121704AA-3
-069*	1SR5H2	121705AA-3
-070*	1SR6H2	121706AA-3
-071*	1SR7H2	121707AA-3
-072*	1SR8H2	121708AA-3
-073*	1SR1J2	121601AA
-074*	1SR2J2	121602AA
-075*	1SR3J2	121603AA
-076*	1SR4J2	121604AA
-077*	1SR5J2	121605AA
-078*	1SR6J2	121606AA
-079*	1SR7J2	121607AA
-080*	1SR8J2	121608AA
-081	1SRSS2	111904LB
-082	1SRSS2A	111904LC

M15291/3	TYPE	CAT. NO.
-001	1SR2A3	<u>1/</u> 111102LL
-002	1SR2A4	111102LC
-003	1SR2A4A	111102LD
-004	1SR3A4	111103LE
-005	1SR4A3	<u>5/</u> 111104LQ
-006	1SR4A4	111104LE
-007	1SR4A4A	111104LF
-008	1SR2B4	<u>2/</u> 111202LA
-009	1SR2B4A	111202LB
-010	1SR3B3A	Use 111203LB
-011	1SR3B4	111203LB
-012	1SR4B4	111204LA
-013	1SR1C4	111601LA
-014	1SR2C3	<u>3/</u> 111602LH
-015	1SR2C4	<u>3/</u> 111602LF
-016	1SR2C4A	111602LB
-017	1SR3C4	111603LA
-018	1SR4C4	111604LB
-019	1SR2E4	111302LC
-020	1SR2F3	<u>4/</u> 111802LB
-021	1SR2F4	111802LA
-022	1SR3F4	111803LA

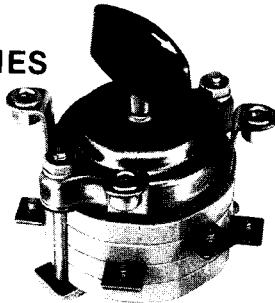
M15291/4	TYPE	CAT. NO.
-001	--	122904LN
-002	--	118903LB
-003	--	118202LE
-004	--	118903LR
-005	--	118903LS
-006	--	118302LC

1/ Use 111102LC in new design  
2/ Use 111202LB in new design  
3/ Use 111602LB in new design  
4/ Use 111802LA in new design  
5/ Use 111104LE in new design

#### DRIP-PROOF MOUNTING KITS (for units shown with asterisk)

PANEL THICKNESS	CAT. NO.
1/16	001022-1
1/8	001022-2

### CLASS 3SR SWITCHES



M15291/5	TYPE	CAT. NO.
-001	3SR2A1	113102LK
-002	3SR3A1	113103LB
-003	3SR4A1	113104LE
-004	3SR2B1	113202LA
-005	3SR3B1	113203LB
-006		113205LA
-007	3SR3E1	113303LC
-008	3SR4F1	113804LA
-009	3SR6F1	113806LA
-010	3SR4S1	113204LA

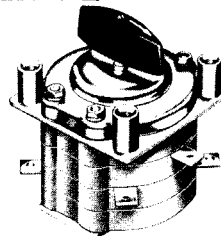
M15291/6	TYPE	CAT. NO.
-001		113101AA
-002		113102AA
-003	3SR3A2	113103AA
-004	3SR4A2	113104LC
-005		113105AA
-006	3SR6A2	113106AA
-007		113107AA
-008	3SR8A2	113108LC
-009	3SR9A2	113109AA
-010		113110AA
-011		113201AA
-012		113202AA
-013	3SR3B2	113203LF
-014	3SR4B2	113204AA
-015		113205AA
-016		113206LD
-017		113601LA
-018		113602LA
-019	3SR3C2	113603LB
-020		113604LE
-021		113605LB
-022		113606LC
-023		113301AA
-024		113302AA
-025	3SR3E2	113303AA
-026		113304AA
-027		113802AA
-028		113904LH
-029		113906LC
-030	3SR8F2	113808LA
-031	3SR10F2	113810LB
-032		113812LE

M15291/7	TYPE	CAT. NO.
-001	3SR2A3	113102LH
-002	3SR2A4	113102LE
-003	3SR2A4A	113102LF
-004	3SR3A3	113103LH
-005	3SR3A4	113103LC
-006		113106LD
-007	3SR2B4	113202LB
-008	3SR3B3	113203LD
-009	3SR3B4	113203LC
-010	3SR4B4	113204LB
-011	3SR2C3	113104LJ
-012	3SR2C4	113104LD
-013	3SR2C4A	113602LB
-014	3SR3C3	113603LA
-015	3SR4C4	113604LB
-016	3SR5C4	113605LA
-017	3SR4D4	113604LC
-018	3SR7S4	113105LE

**DRIP-PROOF MOUNTING KITS**  
(available for M15291/5  
and M15291/6 units)

PANEL THICKNESS	CAT. NO.
1/16	003521-1
1/8	003521-2

### CLASS 6SR SWITCHES



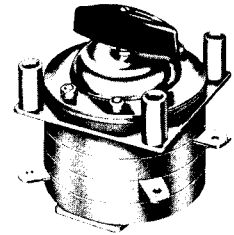
M15291/8	TYPE	CAT. NO.
-001	6SR2A1	115102LA
-002	6SR3A1	115103LC
-003	6SR4A1	115104LB
-004	6SR2B1	115202LB
-005	6SR3B1	115203LB
-006	6SR2E1	115302LA
-007	6SR3E1	115303LB
-008	6SR4F1	115804LA
-009	6SR6F1	115806LA

M15291/9	TYPE	CAT. NO.
-001		125102AA
-002		125103AA
-003		125104AA
-004		125105AA
-005	6SR6A2	125106AA
-006	6SR8A2	125108AA
-007	6SR10A2	125110AA
-008	6SR2B2	125202AA
-009		125203AA
-010		115602LA

M15291/9	TYPE	CAT. NO.
-011		125301AA
-012		125302AA
-013	6SR3E2	115303LC
-014		125304AA
-015		125305AA
-016	6SR4F2	125904LB
-017	6SR6F2	115906LA
-018		115808LA
-019		125702AA-3
-020		125703AA-3
-021		125602AA
-022		125603AA
-023	6SR3S2(a)	125903LC

M15291/10	TYPE	CAT. NO.
-001	6SR2A4	115102LD
-002	6SR3A4	115103LD
-003	6SR3A3A	115103LF
-004	6SR3B4	115203LA
-005	6SR4D4	125904LC

### CLASS 20SR SWITCHES



M15291/11	TYPE	CAT. NO.
-001	20SR2A1	117102LC
-002	20SR3A1	117103LB
-003	20SR2B1	117202LB
-004	20SR3B1	117203LA
-005	20SR2E1	117302LB
-006	20SR3E1	117303LA
-007	20SR4F1	117804LA
-008	20SR6F1	117806LA

M15291/12	TYPE	CAT. NO.
-001		117102AA
-002		117103AA
-003		117202LE
-004	20SR3B2	117203AA
-005		127302A
-006		127303A
-007	20SR4F2	117804LB
-008		117806LB

M15291/13	TYPE	CAT. NO.
-001		117102LB
-002		117104LA
-003	20SR2B4	117202LC
-004	20SR3B4	117203LB
-005	20SR4S3	117904LA



# HANDLES

# JUMPERS

## HANDLES

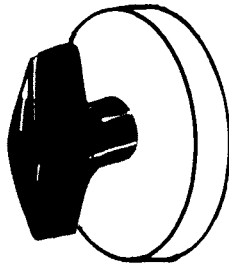
### STYLE SJR, SJM, SJK

Handle "G" is standard for Style SJR, SJM. Oval Flush "A" handle is standard for SJK.

ALL HANDLES IN THIS ROW ARE INTERCHANGEABLE.

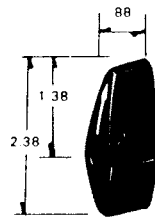
Except with grey dial which requires .5" longer shaft.

OVAL SHANK (G)  
with gray dial



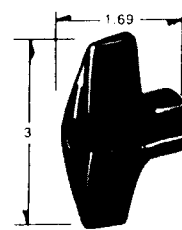
Handle 02000-3-1  
Dial 02001-1B

OVAL FLUSH (A)  
with white arrow



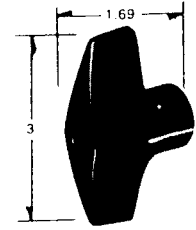
02000-1

OVAL SHANK (C)  
with white arrow



02000-4-1

OVAL SHANK  
without arrow



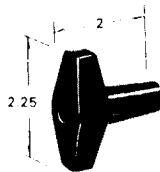
02000-3-1

### SERIES 24G

Handle "G" is standard.

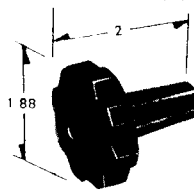
ALL HANDLES IN THIS ROW ARE INTERCHANGEABLE.

OVAL SHANK (G)



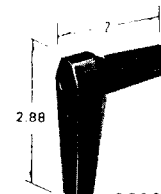
02000-11B

KNURLED (H)



02000-10B

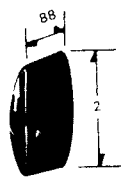
PISTOL GRIP (J)



02000-12B

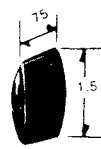
### STYLE SJL

OVAL FLUSH  
Standard 2"



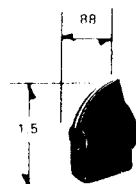
01040-11

OVAL FLUSH  
1.5"



01040-3

### TYPE AF



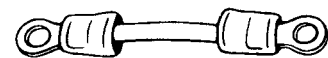
SINGLE HOLE 03029-1

## JUMPERS

	Style SRJ	Style SJM	Style SJK	Type AF Style SJL	Series 24G
Adjacent Contact Same Deck	02011-2-C3	02011-1-C3	02011-3-C3	03057-1-C3	02011-10-C3
Same Contact Adjacent Deck	02011-4-C3	02011-4-C3	02011-4-C3	03059-1-C3	02011-12-C3
2" wire & lugs	00314-1	00314-1	00314-1	00314-1	002012-1
3.4" wire & lugs	00314-3	00314-3	00314-3	00314-3	002012-2
5.3" wire & lugs	00314-4	00314-4	00314-4	00314-4	002012-3

- Style SRJ, SJM, SJK, SJL & Type AF use 14 gauge wire in wire & lug jumpers.
- Series 24G switches use 10 gauge wire in wire & lug jumpers.
- Strap Jumpers: Silver plated brass.

### Wire & Lug Jumpers



Wire jumpers are ordered individually.

### Strap Jumpers

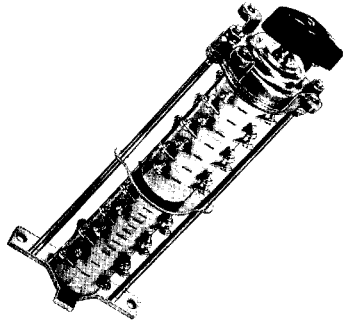


# OPTIONS and SPECIAL CONSTRUCTIONS

## **Extra-long switches**

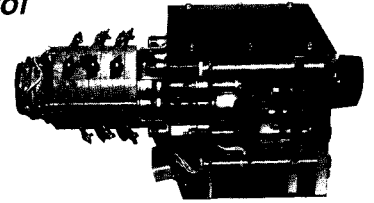
Switches having many more poles than cataloged units can be built with standard parts.

*Contact factory.*



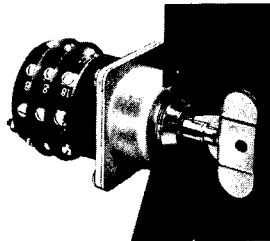
## **Motorized Snap Switches for Computer Control**

Remote (motor driven) two, three and four position rotary type, snap action power switches.



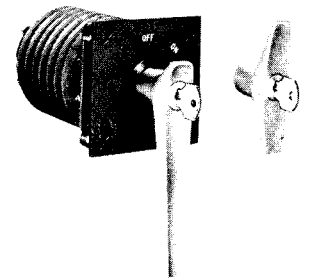
## **Key operation**

Handle of switch can be locked in any or all positions by removable key; prevents unauthorized operation.



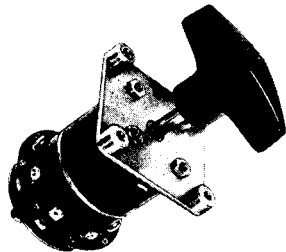
## **Key-locking switch**

Up to 75 poles; can be locked in all positions or in any factory-set combination of positions.



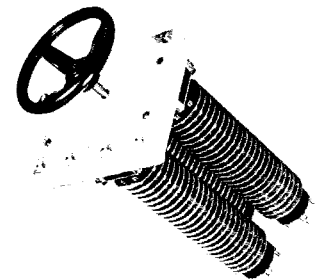
## **Push-to-turn operation**

Switch-handle can be turned only while it is pushed toward panel. Interrupter contacts in push mechanism permit "dead-circuit" operation.



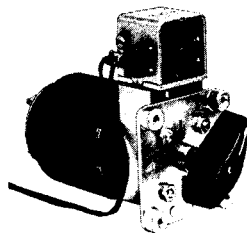
## **Ganged switches**

Geared drive-mechanisms provide single-handle control for hundreds of circuits at once. Built to your requirements for load and circuit arrangements.



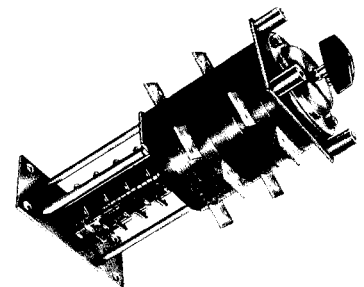
## **Solenoid lock**

Prevents operation of switch unless solenoid is energized; provides safety interlock action.



## **Tandem switches**

200-ampere and 30-ampere multipole switches with common drive-shaft; other special combinations to suit your need.



**CONTACT FACTORY FOR DETAILS**



***ELECTROSWITCH***  
***• SWITCHES & RELAYS***

*UNIT OF ELECTRO SWITCH CORP.*

180 King Avenue, Weymouth, Massachusetts 02188

Telephone: 617/335/5200 • FAX: 617/335/4253