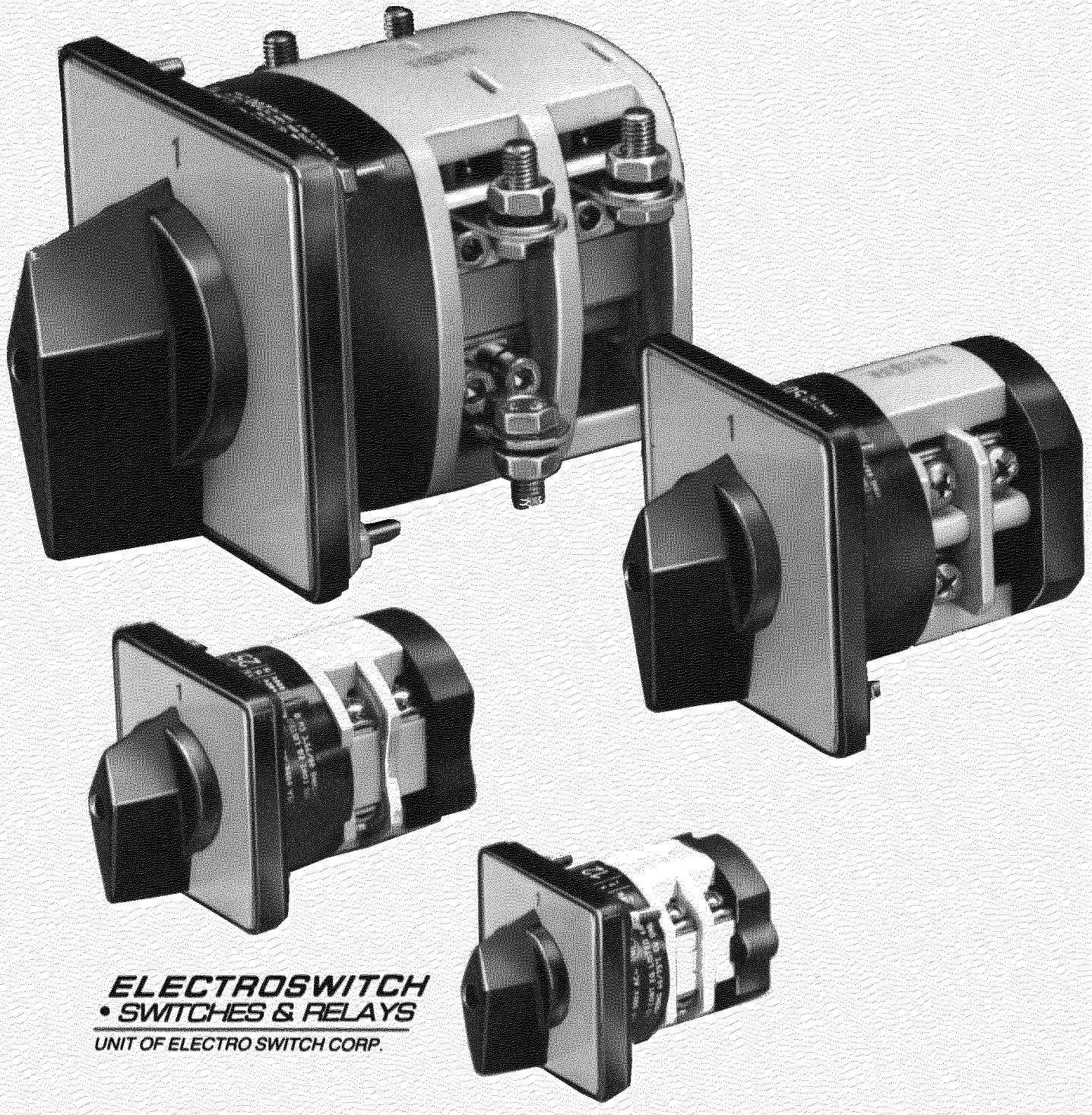
CAM-1 CATALOG

ROTARY CAM-ACTION SWITCHES for INDUSTRIAL APPLICATIONS



ELECTROSWITCH
• SWITCHES & RELAYS
UNIT OF ELECTRO SWITCH CORP.

An Introduction...

Electroswitch is an acknowledged leader in the electrical industry. Nearly 50 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, Snap and Cam-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 323-1984, 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.

Printed in U.S.A.

LO196/10M

CAM-ACTION SWITCHES

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ELECTROSWITCH

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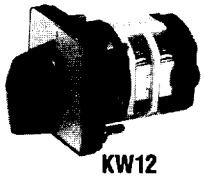
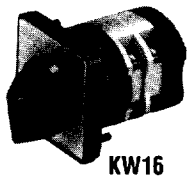
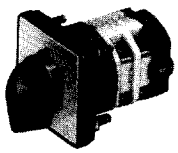
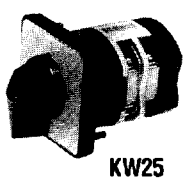
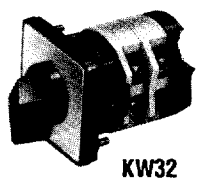
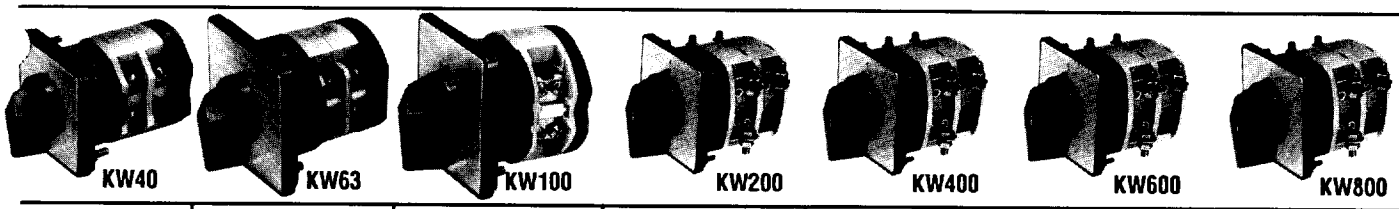
CAM-ACTION

CHARACTERISTICS	 KW12	 KW16	 KW20	 KW25	 KW32
SECTIONS	1-12	1-12	1-12	1-12	1-12
POLES	1-24	1-24	1-24	1-24	1-24
POSITIONS	2-12	2-12	2-12	2-12	2-12
DETENTING ANGLE	30, 45, 60, 90	30, 45, 60, 90	30, 45, 60, 90	30, 45, 60, 90	30, 45, 60, 90
ELECTRICAL RATINGS					
Continuous Rating	20A-240VAC	25A-600VAC	25A-240VAC	32A-600VAC	40A-600VAC
Interrupting Current					
120VAC	12A	16A	20A	25A	32A
240VAC	12A	16A	20A	25A	32A
600VAC		16A		25A	32A
24VDC	12A	16A	20A	25A	32A
Momentary Current 1 second	275A	550A	407A	690A	725A
Overload Current (50 operations)					
240VAC	40.8A		91.2A	132A	168A
600VAC		91.2A		102A	132A
Dielectric Strength	1500VRMS	2200VRMS	1500VRMS	2200VRMS	2200VRMS
Insulation Resistance	100 megohms	100 megohms	100 megohms	100 megohms	100 megohms
Contact Resistance	30 milliohms	30 milliohms	30 milliohms	30 milliohms	30 milliohms
HORSEPOWER RATINGS					
3-phase ratings - Reduce by ½ for 1-phase					
220/240VAC	2 HP	5 HP	5 HP	7.5 HP	10 HP
440/480VAC		10 HP		15 HP	20 HP
550/600VAC		10 HP		15 HP	20 HP
MOUNTINGS					
Single-Hole	Yes	Yes	Yes	Yes	Yes
2-Hole	Yes	Yes	Yes	Yes	Yes
4-Hole	Yes	Yes	Yes	Yes	Yes
Base-mount	Yes	Yes	Yes	Yes	Yes
Waterproof-mount	Yes	Yes	Yes	Yes	Yes
Door-mount	Yes	Yes	Yes	Yes	Yes
LOCKING FEATURES					
Key-interlock	Yes	Yes	Yes	Yes	Yes
Padlock	Yes	Yes	Yes	Yes	Yes
SPECIAL DRIVES					
Key-operated	Yes	Yes	Yes	Yes	Yes
Ganged Gear-operated	Yes	Yes	Yes	Yes	Yes
Spring Return	Yes	Yes	Yes	Yes	Yes
APPROVALS	Listed	Listed	Listed	Listed	Listed
U/L Listed	Yes	Yes	Yes	Yes	Yes
CSA Certified	Yes	Yes	Yes	Yes	Yes

Features • Up to 12 positions, up to 24 poles • Up to 800 amps continuous • Excellent horsepower ratings for motor load • Double break silver alloy contacts • UL Listed, CSA Certified • Making & breaking takes place in fully enclosed contacts

SWITCHES

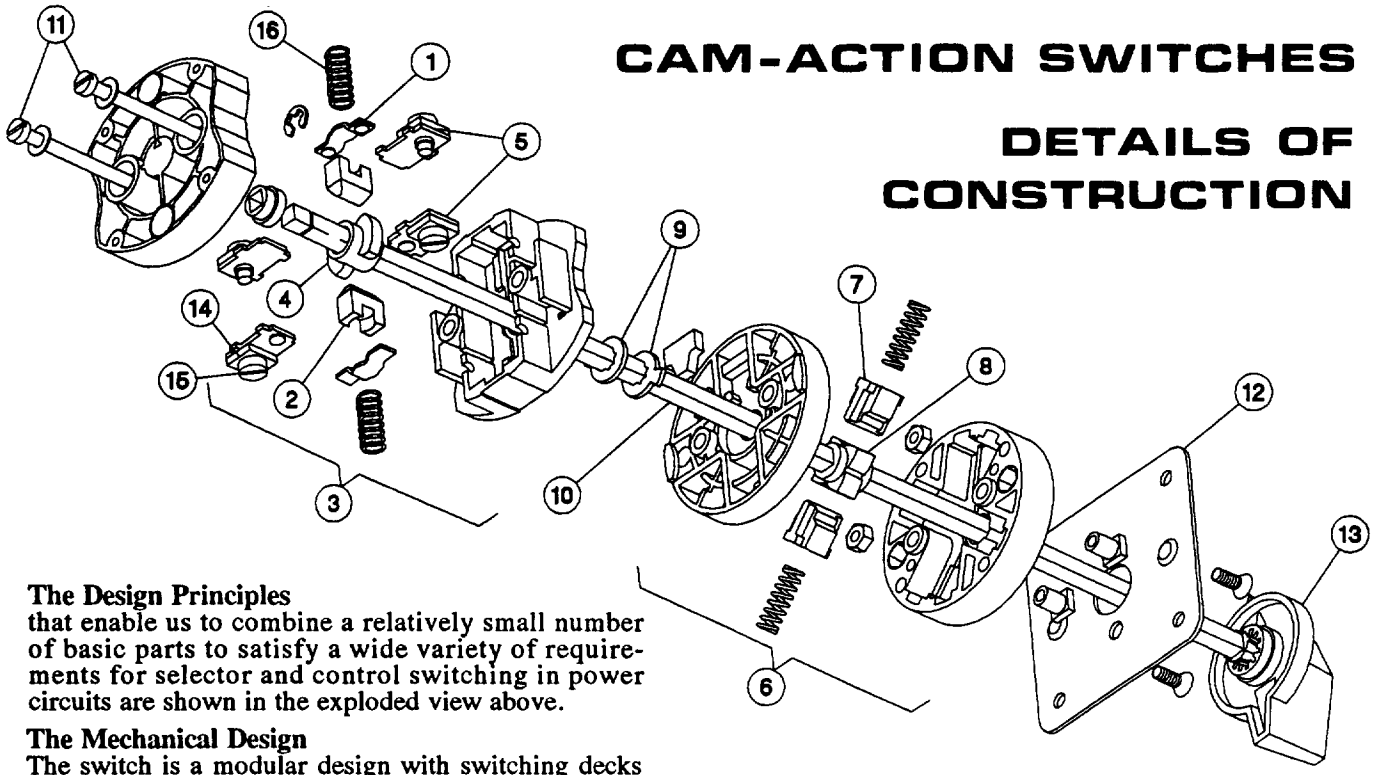


KW40	KW63	KW100	KW200	KW400	KW600	KW800
1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	2-12 1-12 2-12 30, 45, 60, 90	3-12 1-8 2-8 30, 45, 60, 90	4-12 1-6 2-6 30, 45, 60, 90
50A-600VAC 40A 40A 40A 40A	80A-600VAC 63A 63A 63A 63A	125A-600VAC 100A 100A 100A 100A	200A-600VAC 200A 200A 200A 200A	400A-600VAC	600A-600VAC	800A-600VAC
914A	2500A	3000A	4400A	4400A	4400A	4400A
252A 168A	324A 252A	480A 312A	924A 372A	924A 372A	924A 372A	924A 372A
2200VRMS 100 megohms 10 milliohms	2200VRMS 100 megohms 10 milliohms	2200VRMS 100 megohms 5 milliohms	2200VRMS 100 megohms 5 milliohms	2200VRMS 100 megohms 5 milliohms	2200VRMS 100 megohms 5 milliohms	2200VRMS 100 megohms 5 milliohms
15 HP 25 HP 25 HP	20 HP 40 HP 40 HP	30 HP 50 HP 50 HP	60 HP 75 HP 60 HP			
Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes
Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Yes Yes Yes	Yes	Yes	Yes	Yes	Yes	Yes
Listed Yes Yes	Listed Yes Yes	Listed Yes Yes	Recognized Yes Yes			

- Most are available with the following features:
  - Key Operated • Key Interlock • Spring Return • Base Mounting • Padlockable
  - Waterproof Mounting • Gear Operated • Single-hole Mount • Door Mount

CAM-ACTION SWITCHES

DETAILS OF CONSTRUCTION



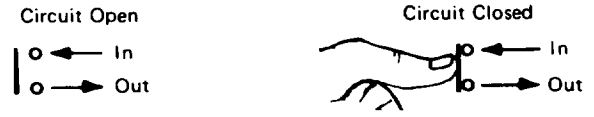
The Design Principles
that enable us to combine a relatively small number of basic parts to satisfy a wide variety of requirements for selector and control switching in power circuits are shown in the exploded view above.

The Mechanical Design
The switch is a modular design with switching decks (3) stacked with a detent mechanism deck (6), a mounting plate (12), and a handle (13). A steel shaft (10) couples the handle to the operating parts. Two steel securing rods (11) are used to bolt the whole mechanism rigidly together. The basic Parts and assemblies are shown above.

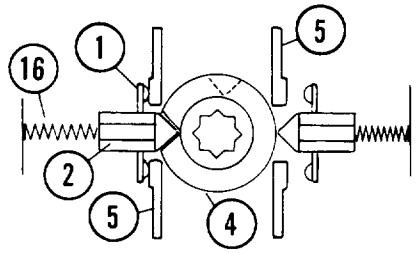
The Detent Assembly
The detent assembly (6) consists of a spring-loaded detent block (7) with a roller coming into contact with a notched detent wheel (8). By the choice of this detent wheel, the detent provides the standard 45° detenting as well as optional 30°, 60°, or 90° detenting. The stop arms (9) are located under the mounting plate. These limit the angular rotation to the desired number and locations of positions.

The Contact Assembly
The contact assembly (3) consists of the rigid thermosetting plastic housing, two sets of stationary contacts (5), and two spring-loaded (16) movable contacts (1) held in cam-followers (2). Floating on the shaft and held within the contacting chamber are the two independent cams (4). The cams are notched to provide the contact "close" angles desired. The contacts are spring-loaded closed and mechanically opened by the cam action to avoid sticking. The terminal screw (15) and pressure clamp (14) are designed to accommodate stranded wire with lugs or solid wire, either with or without lugs, compatible with switch size.

Contact Operation
The contacting consists simply of shunting two isolated contacts to make a circuit as illustrated below.

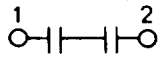


Using this simple principle, two independent sets of contacts are placed in each deck. The moving portion is spring-loaded to close the contact. A notch on the cam that is affixed to the operating shaft allows the moving contact to spring closed, bridging the stationary contacts. This action is illustrated below.



As illustrated, the movable contact (1) is spring-loaded (16) and held by the cam follower (2). It makes a circuit with the two stationary contacts (5) when the cam follower enters the notch in the cam (4).

Identically, the same thing is happening with the contact set on the right. This circuit is held open by the cam and will close when the notch on the second independent cam is rotated around and comes in proximity to its cam follower (the second cam notch is illustrated by the dotted lines — the cam is underneath the other one).

Pictorially, we show the contacts as 

to agree with the way you make up your detailed schematics and wiring plans. This simple system makes the switch contact arrangement, performance and location independent of the switching action required. The switching action is varied and controlled by the shape of the cams...allowing a virtually infinite number of combinations using a few standard parts. This simplicity and flexibility makes it easy for you to design your own switch...using contact language you are familiar with. You eliminate the worry, long deliveries, high costs, etc. normally associated with special switches.

Note that the terminal numbering consists of individual numbers for each terminal for positive instructions.

ALL ABOUT TESTING

OF CAM-ACTION SWITCHES

Switches are tested in many different ways to prove their capabilities and reliability in many customer application situations. Electro Switch uses two basic methods of testing cam-actuated switches.

1. Mechanical cycling to prove ruggedness and durability. Cam switches operate for a minimum of 1,250,000 operations.
2. Testing under applications oriented specifications – that simulate actual operating conditions such as environment, overloads, surges, etc. UL508 on INDUSTRIAL CONTROL EQUIPMENT and CSA C22.2 on INDUSTRIAL CONTROL EQUIPMENT for use in Ordinary (Non-Hazardous) Locations are two such specifications. The table below shows results of testing to the requirements of these specifications.

Both UL and CSA testing consists of two parts:

1. Full testing to the specifications.
2. Follow-up service by UL and CSA personnel at the factory checking and spot testing to insure that the quality and reliability is maintained.

If all conditions are met, the switches are considered "certified electrical equipment" by CSA and "recognized or listed components" by UL and the applications are subject to review by these agencies to assure suitability.

There are conditions on how these tests are run. More data is available upon request.

Tests include:

1. Spacings (between live parts or live parts to ground).

	through air		over surfaces	
Voltage	UL508	CSA C22.2	UL508	CSA C22.2
51-150 V	1/8 in.*	.12 in.	1/4 in.	.25 in.
151-300 V	1/4 in.	.25 in.	3/8 in.	.37 in.
301-600 V	3/8 in.	.37 in.	1/2 in.	.50 in.

*restrictions to 1/4 in. if adjacent contacts have voltages of opposite polarity.

2. Overload (50 cycles of operation)
   a. general – 150% rated current at .75 to .8 pf for AC (resistive load for DC)
   b. horsepower – 6 times full load current at .4 to .5 pf for AC.
3. Endurance (6 operations per minute – general, 60 operations per minute for HP).
   a. general – 6000 operations (DC resistive, .7 to .8 pf for AC).
   b. horsepower (AC) – 1000 operations at twice full-load rating at .4 to .5 pf.
4. Temperature rise of contacts – 50°C max. at maximum continuous rating
5. Dielectric Voltage Withstand – twice rated plus 1000 VRMS.

TEST RESULTS (AC ratings are 60 Hz)

Switch Type	Test Specifications	AC MOTOR HORSEPOWER RATINGS				GENERAL RATINGS		
		220/240 1Ø	220/240 3Ø	440/480 3Ø	550/600 3Ø	240 VAC	600 VAC	24 VDC
KW12	UL 508 CSA C22.2	1 HP	2 HP			12A		12A
KW 16	UL 508 CSA C22.2	2½ HP	5 HP	10 HP	10 HP		16A	16A
KW 20	UL 508 CSA C22.2	2½ HP	5 HP			20A		20A
KW 25	UL 508 CSA C22.2	3 HP	7½ HP	15 HP	15 HP		25A	25A
KW 32	UL 508 CSA C22.2	5 HP	10 HP	20 HP	20 HP		32A	32A
KW 40	UL 508 CSA C22.2	7½ HP	15 HP	25 HP	25 HP		40A	40A
KW 63	UL 508 CSA C22.2	10 HP	20 HP	40 HP	40 HP		63A	63A
KW 100	UL 508 CSA C22.2	15 HP	30 HP	50 HP	50 HP		100A	100A
KW 200	UL 508 CSA C22.2	30 HP	60 HP	75 HP	60 HP		200A	200A

Please contact factory for Test Data on the KW400, KW600 and KW800.

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HOW TO ORDER

Cam-action Switches

BASIC NUMBERING SYSTEM

STANDARD SWITCHES:
Each catalog number identifies a specific switch that is furnished with the contact arrangement shown on the next two pages and handles shown on page 21.
Nameplates, engraving, jumpers, and other accessories are ordered separately.

KW12 - 22 0 8 C4

- C4 — Number of positions and angle of Handle travel (see table at right)
- 8 — Number of Poles
- 0 — 0 denotes WITH AN OFF position; 5 denotes WITHOUT AN OFF position
- 22 — Type of Contacting
- KW12 — Series Designation

STANDARD SWITCH DIAGRAMS

KW12 - 1

- KW12 — Standard Catalog Circuit Numbers
- - 1 — Minor deviations from Standards. Dash number sequentially assigned.

KW12 - 904 A8 TBA BY FACTORY

- 904 A8 TBA — Special contact arrangements

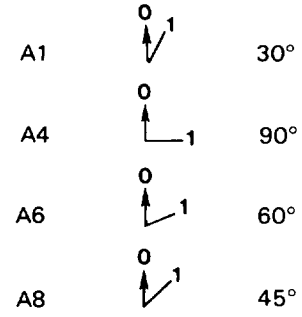
Special-purpose switches

Flexibility that meets practically any service-requirement is inherent in the modular design of ELECTRO switches. When you need a switch that's just a little different—or even a whole lot different—from any of those shown here, here's what to do.

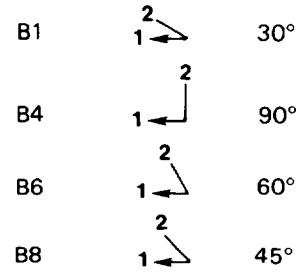
1. Tell us what you want the switch to do.
2. Send us a contact diagram of the switch ("X" chart).
3. Indicate maximum continuous current and maximum make and break current.
4. Indicate maximum voltages and state whether ac or dc.
5. Specify any unusual requirements, such as: overload, contact resistance, ambient temperature or other environmental conditions.
6. Tell us the kind of handle you prefer.
7. Specify optional features required, such as those shown on page 22.

OPTIONAL HANDLE POSITIONING AND INDEXING

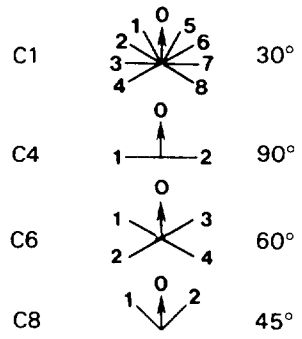
A 1st position 0° next position clockwise



B 1st position 270° next position clockwise

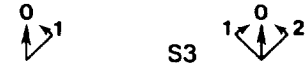


C For 3, 5, 7, and 9 positions.
Switch's only rotation is across the top.
Center position is at 0°.



D 2 positions only, 330° and 30°

S Spring Return 30° only



S9 Combination Spring-return and maintained positions

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OFF-ON, Tap and Selector Switches

Assembled jumpers supplied as shown on circuits below

"X" CHARTS AND WIRING	CIRCUIT NUMBER	STANDARD HANDLE POSITIONS	SWITCH TYPES AND MAXIMUM NUMBER OF POLES: POLES	DECKS	KW12 – KW200
SINGLE-THROW (OFF-ON)	1 pole 1101 2 pole 1102	B4 90°	1	1	1101
			2	1	1102
			3	2	1103
			4	2	1104
			5	3	1105
			6	3	1106
			8	4	1108
			10	5	1110
			12	6	1112
			14	7	1114
			16	8	1116
			18	9	1118
			20	10	1120
			22	11	1122
			24	12	1124
DOUBLE-THROW (NO OFF)	1 pole 2251	D6 60°	1	1	2251
			2	2	2252
			3	3	2253
			4	4	2254
			5	5	2255
			6	6	2256
			7	7	2257
			8	8	2258
			9	9	2259
			10	10	2260
			11	11	2261
			12	12	2262
DOUBLE-THROW (WITH OFF)	1 pole 2201	C6 60°	1	1	2201
			2	2	2202
			3	3	2203
			4	4	2204
			5	5	2205
			6	6	2206
			7	7	2207
			8	8	2208
			9	9	2209
			10	10	2210
			11	11	2211
			12	12	2212
TRIPLE-THROW (WITH OFF)	1 pole 2301	B8 45°	1	2	2301
			2	3	2302
			3	5	2303
			4	6	2304
			5	8	2305
			6	9	2306
			7	11	2307
			8	12	2308
4-THROW (WITH OFF)	1 pole 2401	B1 30°	1	2	2401
			2	4	2402
			3	6	2403
			4	8	2404
			5	10	2405
			6	12	2406
5-THROW (WITH OFF)	1 pole 2501	B1 30°	1	3	2501
			2	5	2502
			3	9	2503
			4	10	2504

(Continued on next page)

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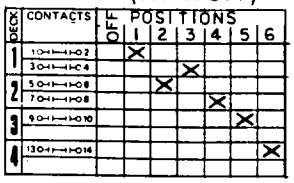
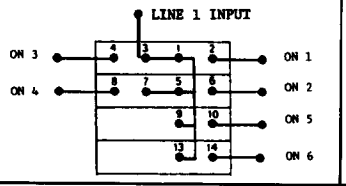
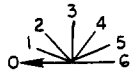
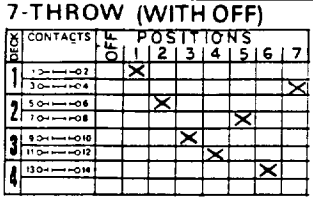
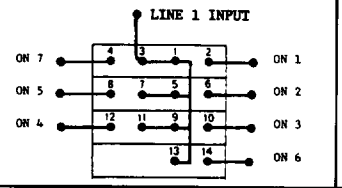
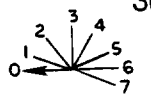
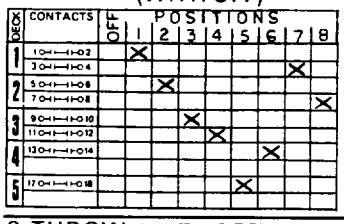
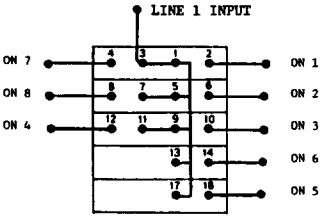
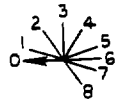
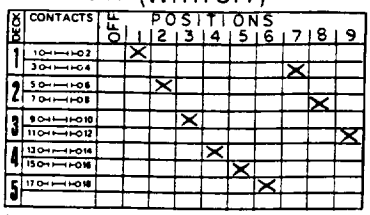
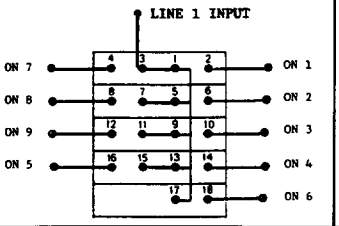
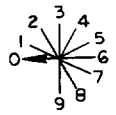
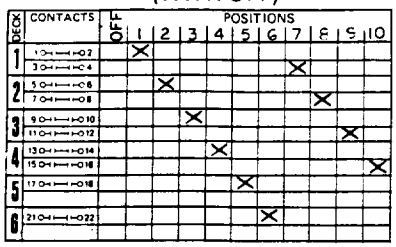
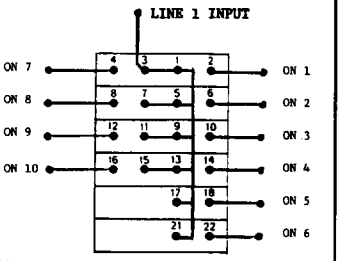
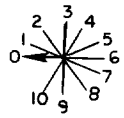
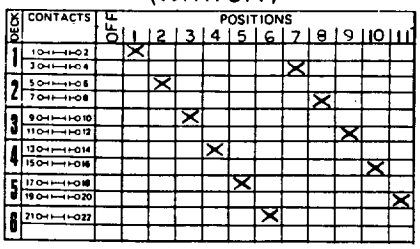
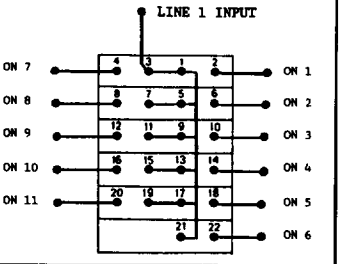
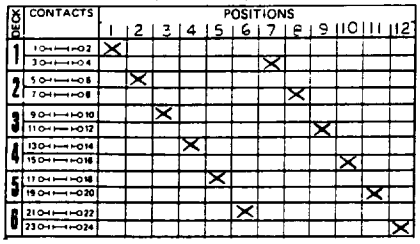
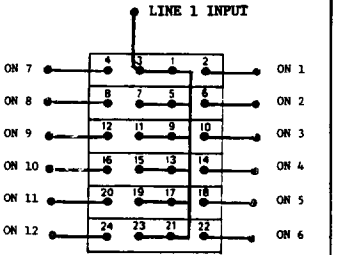
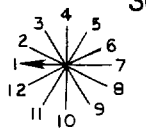
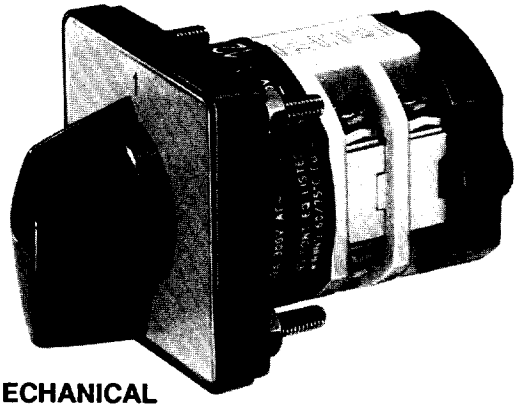
"X" CHARTS AND WIRING	CIRCUIT NUMBER	STANDARD HANDLE POSITIONS	SWITCH TYPES AND MAXIMUM NUMBER OF POLES: POLES	DECKS	KW12 – KW200
6-THROW (WITH OFF)  	1 pole 2601	B1 30° 	1 2 3	4 7 12	2601 2602 2603
7-THROW (WITH OFF)  	1 pole 2701	B1 30° 	1 2 3	4 8 12	2701 2702 2703
8-THROW (WITH OFF)  	1 pole 2801	B1 30° 	1 2	5 9	2801 2802
9-THROW (WITH OFF)  	1 pole 2901	B1 30° 	1 2	5 10	2901 2902
10-THROW (WITH OFF)  	1 pole 4001	B1 30° 	1 2	6 11	4001 4002
11-THROW (WITH OFF)  	1 pole 4101	B1 30° 	1 2	6 12	4101 4102
12-THROW (NO OFF)  	1 pole 4251	B1 30° 	1 2	6 12	4251 4252

KW12

20A/240VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
20 amperes 240 volts
Interrupting Current:
12 amperes 120 volts ac
12 amperes 240 volts ac
12 amperes 24 volts dc
Momentary Current 275 amperes 1 second
Overload Current: 50 operations
41 amperes 240 volts ac
Dielectric Strength: 1500VRMS
Insulation resistance: 100 megohms
Contact resistance: 30 milliohms

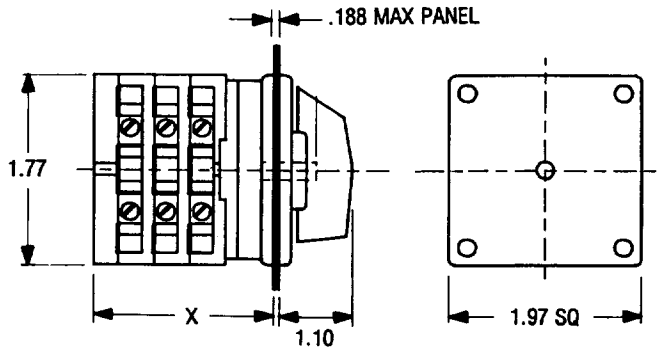
HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
2 hp 220/240 volts ac
Normal Operating Temperature: -20°C - +70°C

MECHANICAL

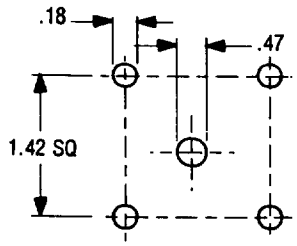
Sections: 1 to 12 **Poles:** 1 to 24
Positions: 2-12
Detenting Angle: 30°, 45°, 60°, 90°
Contacts: Double break silver contacts
Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount
Locking Features: Key-interlock
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

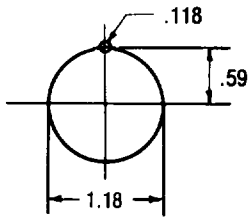


PANEL DRILLING DIMENSIONS

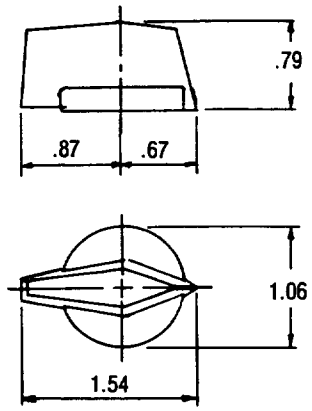
PANEL MOUNT



SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW12
1	1.48
2	1.93
3	2.38
4	2.83
5	3.28
6	3.74
7	4.19
8	4.65
9	5.10
10	5.55
11	6.00
12	6.45

Increase the dimensions above for the following optional features

Single-hole mount	.12
Key-operation	.75

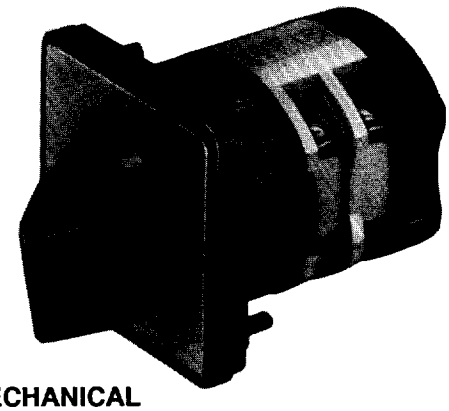
ELECTROSWITCH
UNIT OF ELECTRO SWITCH CORP. • Weymouth, Massachusetts 02188 • Telephone: 617/335/5200 • FAX: 617/335/4253

KW16

25A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
25 amperes 600 volts
Interrupting Current:
16 amperes 120 volts ac
16 amperes 240 volts ac
16 amperes 600 volts ac
16 amperes 24 volts dc
Momentary Current 550 amperes 1 second
Overload Current: 50 operations
91.2 amperes 600 volts ac
Dielectric Strength: 2200VRMS
Insulation resistance: 100 megohms
Contact resistance: 30 milliohms

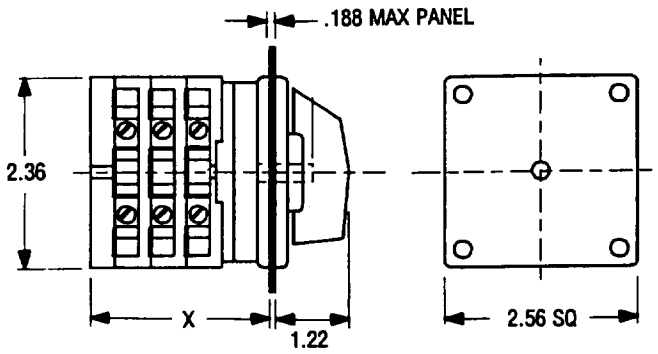
HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
5 hp 220/240 volts ac
10 hp 440/480 volts ac
10 hp 550/600 volts ac
Normal Operating Temperature: -20°C - +70°C

MECHANICAL

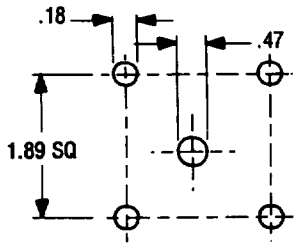
Sections: 1 to 12 **Poles:** 1 to 24
Positions: 2-12
Detenting Angle: 30°, 45°, 60°, 90°
Contacts: Double break silver contacts
Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount
Locking Features: Key-interlock
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

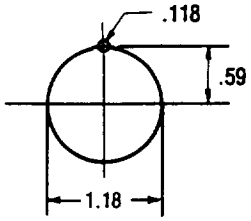


PANEL DRILLING DIMENSIONS

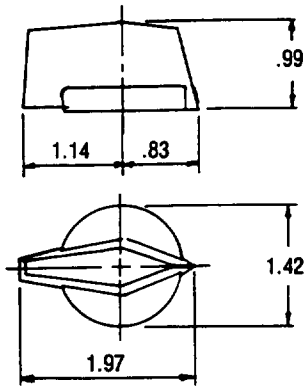
PANEL MOUNT



SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE

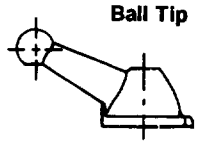


STANDARD HANDLE FLUSH POINTER



Optional Handles
See page 21

Ball Tip



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 16
1	1.95
2	2.51
3	3.07
4	3.63
5	4.19
6	4.75
7	5.31
8	5.86
9	6.43
10	6.98
11	7.54
12	8.10

Increase the dimensions above for the following optional features

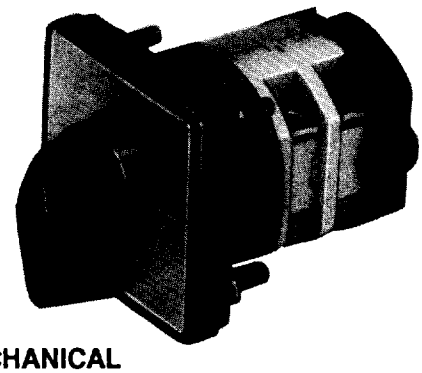
Single-hole mount	.52
Key-operation	1.20

KW20

25A/240VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
25 amperes 240 volts
Interrupting Current:
20 amperes 120 volts ac
20 amperes 240 volts ac
20 amperes 24 volts dc
Momentary Current 407 amperes 1 second
Overload Current: 50 operations
91 amperes 240 volts ac
Dielectric Strength: 1500VRMS
Insulation resistance: 100 megohms
Contact resistance: 30 milliohms

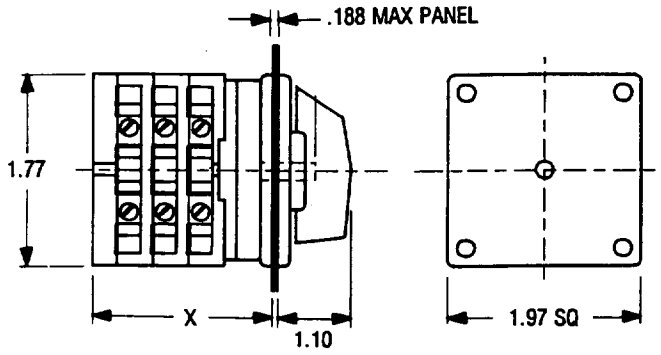
HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
5 hp 220/240 volts ac
Normal Operating Temperature: -20°C - +70°C

MECHANICAL

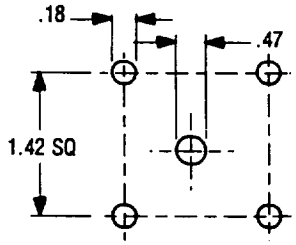
Sections: 1 to 12 **Poles:** 1 to 24
Positions: 2-12
Detenting Angle: 30°, 45°, 60°, 90°
Contacts: Double break silver contacts
Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount
Locking Features: Key-interlock
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

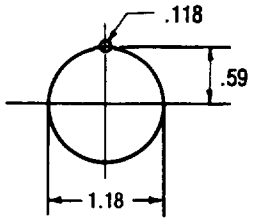


PANEL DRILLING DIMENSIONS

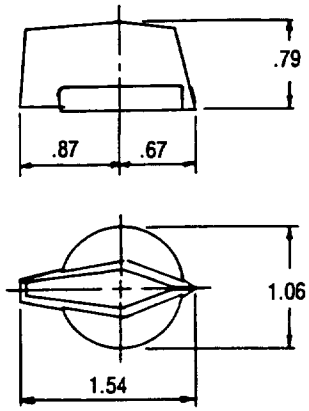
PANEL MOUNT



SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 20
1	1.48
2	1.93
3	2.38
4	2.83
5	3.28
6	3.74
7	4.19
8	4.65
9	5.10
10	5.55
11	6.00
12	6.45

Increase the dimensions above for the following optional features

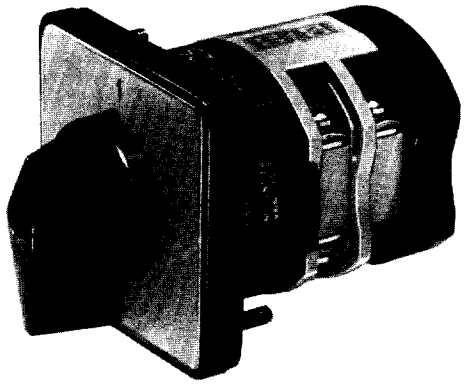
Single-hole mount	.12
Key-operation	.75

KW25

32A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
32 amperes 600 volts

Interrupting Current:
25 amperes 120 volts ac
25 amperes 240 volts ac
25 amperes 600 volts ac
25 amperes 24 volts dc

Momentary Current 690 amperes 1 second

Overload Current: 50 operations
132 amperes 240 volts ac
102 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 30 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
7.5 hp 220/240 volts ac
15 hp 440/480 volts ac
15 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

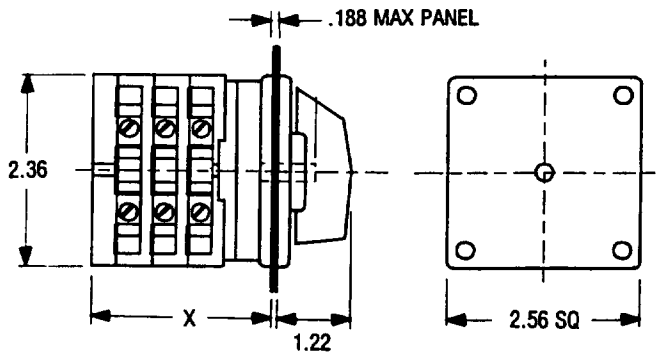
Contacts: Double break silver contacts

Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount

Locking Features: Key-interlock

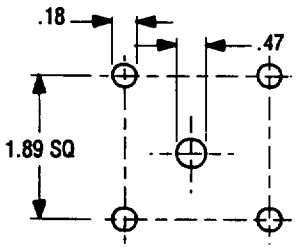
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

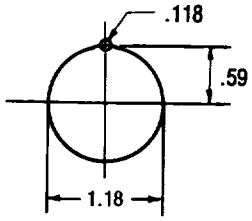


PANEL DRILLING DIMENSIONS

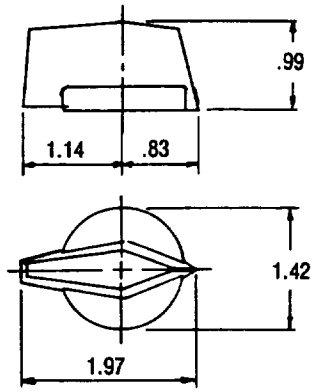
PANEL MOUNT



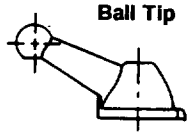
SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



Optional Handles
See page 21



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 25
1	1.95
2	2.51
3	3.07
4	3.63
5	4.19
6	4.75
7	5.31
8	5.86
9	6.43
10	6.98
11	7.54
12	8.10

Increase the dimensions above for the following optional features

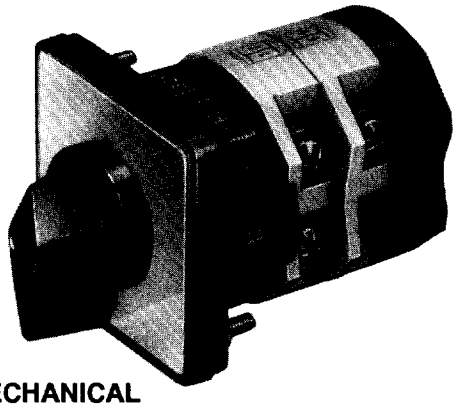
Single-hole mount	.52
Key-operation	1.20

KW32

40A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
40 amperes 600 volts

Interrupting Current:
32 amperes 120 volts ac
32 amperes 240 volts ac
32 amperes 600 volts ac
32 amperes 24 volts dc

Momentary Current 725 amperes 1 second

Overload Current: 50 operations
168 amperes 240 volts ac
132 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 30 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
10 hp 220/240 volts ac
20 hp 440/480 volts ac
20 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

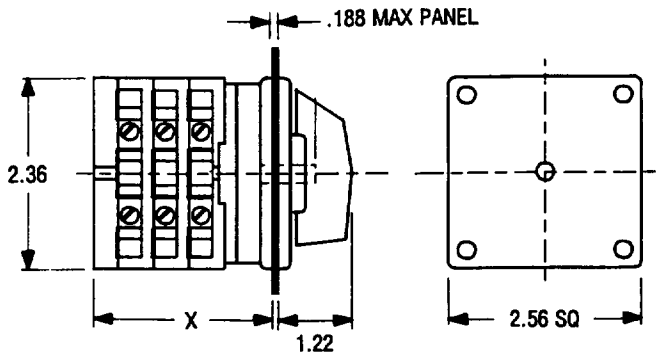
Contacts: Double break silver contacts

Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount

Locking Features: Key-interlock

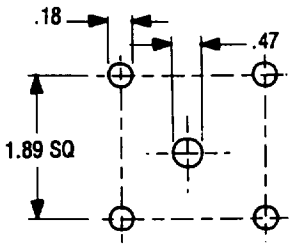
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

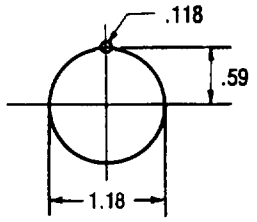


PANEL DRILLING DIMENSIONS

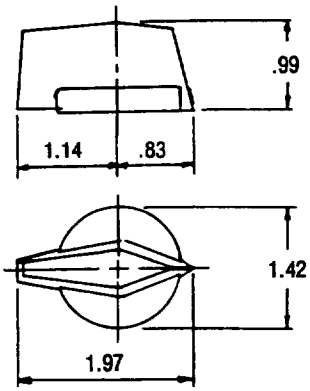
PANEL MOUNT



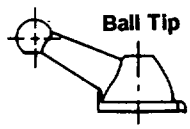
SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



Optional Handles
See page 21



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 32
1	2.09
2	2.78
3	3.46
4	4.15
5	4.84
6	5.53
7	6.22
8	6.91
9	7.60
10	8.29
11	8.98
12	9.67

Increase the dimensions above for the following optional features

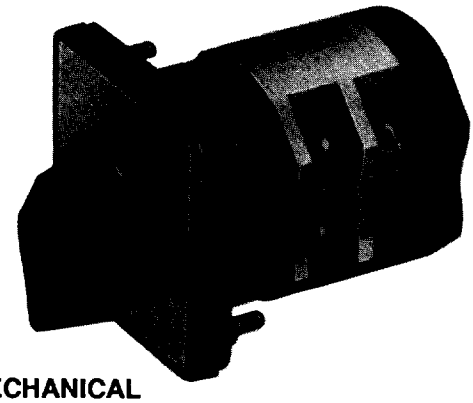
Single-hole mount	.52
Key-operation	1.20

KW40

63A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
63 amperes 600 volts

Interrupting Current:
40 amperes 120 volts ac
40 amperes 240 volts ac
40 amperes 600 volts ac
40 amperes 24 volts dc

Momentary Current 914 amperes 1 second

Overload Current: 50 operations
252 amperes 240 volts ac
168 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 10 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
15 hp 220/240 volts ac
25 hp 440/480 volts ac
25 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

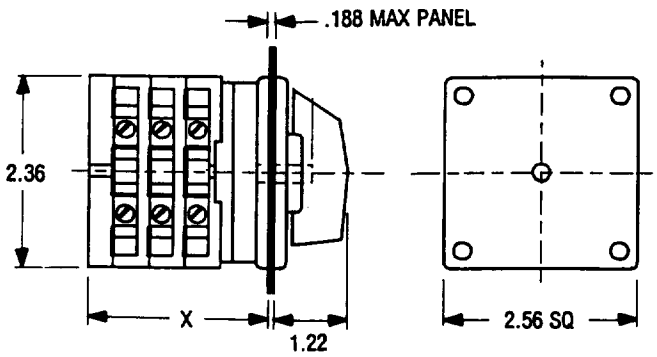
Contacts: Double break silver contacts

Mountings:
Single-hole
Two-hole
Base-mount
Waterproof-mount
Door-mount

Locking Features: Key-interlock

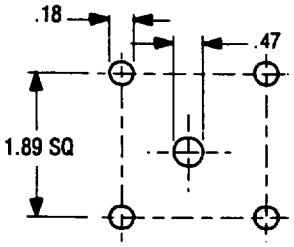
Special Drives:
Key-operated
Ganged gear-operated
Spring-return

PANEL MOUNTED

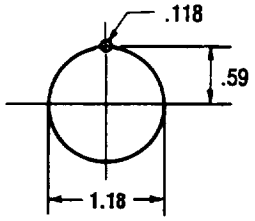


PANEL DRILLING DIMENSIONS

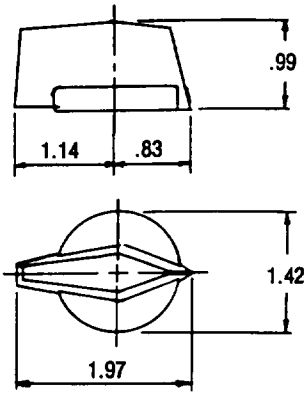
PANEL MOUNT



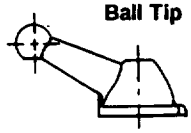
SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



Optional Handles
See page 21



DEPTH BEHIND PANEL

DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 40
1	2.09
2	2.78
3	3.46
4	4.15
5	4.84
6	5.53
7	6.22
8	6.91
9	7.60
10	8.29
11	8.98
12	9.67

Increase the dimensions above for the following optional features

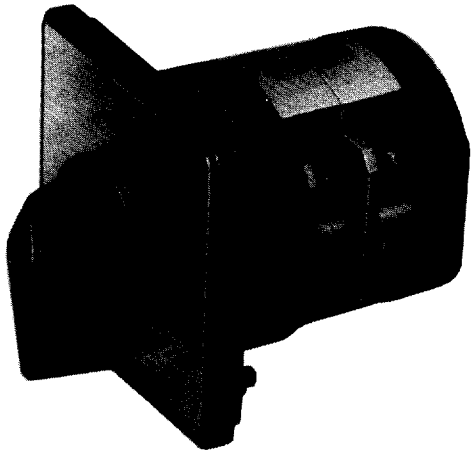
Single-hole mount	.52
Key-operation	1.20

KW63

80A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
80 amperes 600 volts

Interrupting Current:
63 amperes 120 volts ac
63 amperes 240 volts ac
63 amperes 600 volts ac
63 amperes 24 volts dc

Momentary Current 2500 amperes 1 second

Overload Current: 50 operations
324 amperes 240 volts ac
252 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 10 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
20 hp 220/240 volts ac
40 hp 440/480 volts ac
40 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

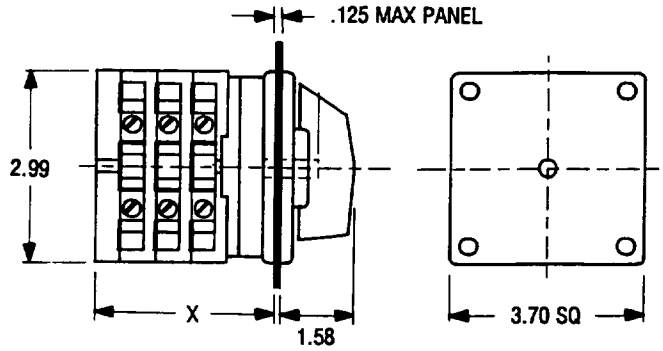
Contacts: Double break silver contacts

Mountings:
Two-hole
Base-mount
Waterproof-mount
Door-mount

Locking Features: Key-interlock

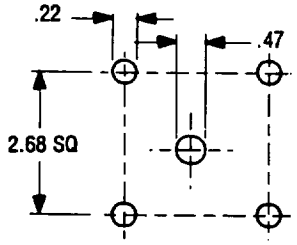
Special Drives:
Ganged gear-operated

PANEL MOUNTED

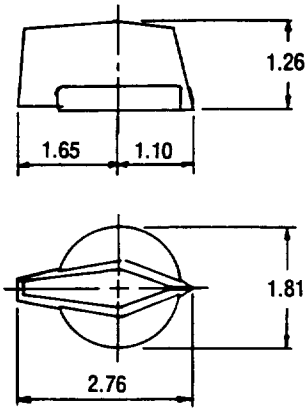


PANEL DRILLING DIMENSIONS

PANEL MOUNT



STANDARD HANDLE
FLUSH POINTER



DEPTH BEHIND PANEL
DIMENSION "X" (INCHES)
NOMINAL

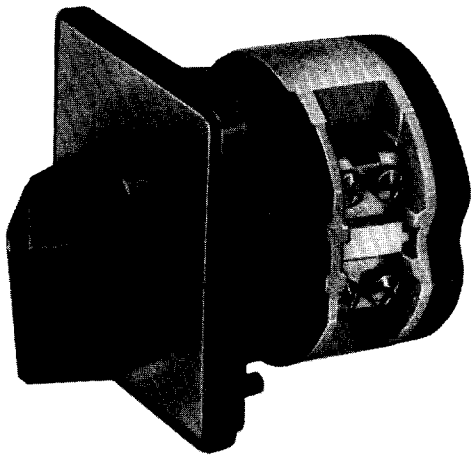
DECKS	KW 63
1	2.43
2	3.22
3	4.00
4	4.79
5	5.58
6	6.37
7	7.15
8	7.94
9	8.73
10	9.52
11	10.30
12	11.09

KW100

125A/600VAC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
125 amperes 600 volts

Interrupting Current:
100 amperes 120 volts ac
100 amperes 240 volts ac
100 amperes 600 volts ac
100 amperes 24 volts dc

Momentary Current 3000 amperes 1 second

Overload Current: 50 operations
480 amperes 240 volts ac
312 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 5 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
30 hp 220/240 volts ac
50 hp 440/480 volts ac
50 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

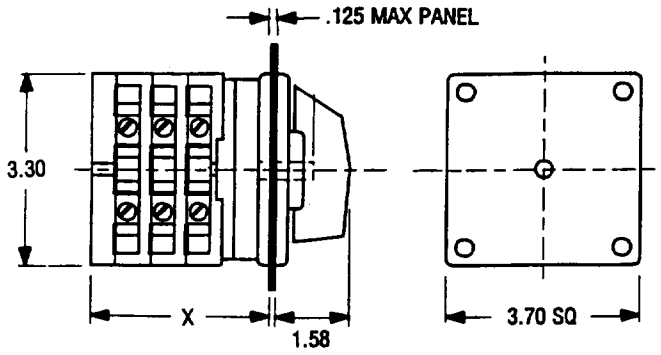
Contacts: Double break silver contacts

Mountings:
Two-hole
Base-mount
Waterproof-mount
Door-mount

Locking Features: Key-interlock

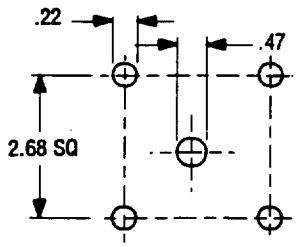
Special Drives:
Ganged gear-operated

PANEL MOUNTED

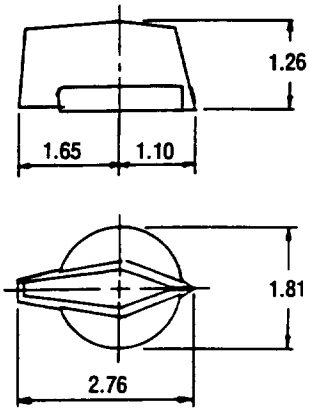


PANEL DRILLING DIMENSIONS

PANEL MOUNT



STANDARD HANDLE
FLUSH POINTER



DEPTH BEHIND PANEL
DIMENSION "X" (INCHES)
NOMINAL

DECKS	KW 100
1	2.80
2	3.86
3	4.92
4	5.96
5	7.01
6	8.07
7	9.10
8	10.16
9	11.22
10	12.26
11	13.31
12	14.37

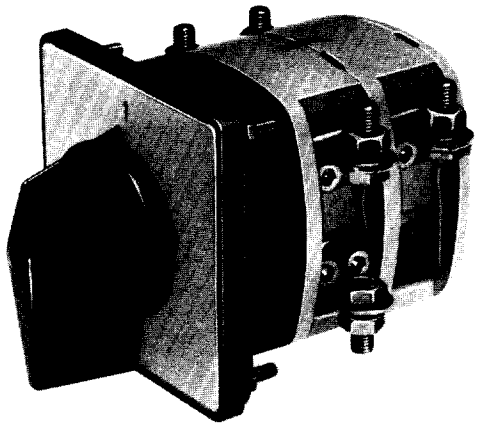
KW200

200A/600VAC

*Ⓡ UL LABS, INC

SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



ELECTRICAL

Continuous Rating:
200 amperes 600 volts

Interrupting Current:
200 amperes 120 volts ac
200 amperes 240 volts ac
200 amperes 600 volts ac
200 amperes 24 volts dc

Momentary Current 4400 amperes 1 second

Overload Current: 50 operations
924 amperes 240 volts ac
372 amperes 600 volts ac

Dielectric Strength: 2200VRMS

Insulation resistance: 100 megohms

Contact resistance: 5 milliohms

HORSEPOWER RATINGS

3-phase ratings - reduce by half for 1-phase
60 hp 220/240 volts ac
75 hp 440/480 volts ac
60 hp 550/600 volts ac

Normal Operating Temperature: -20°C - +70°C

MECHANICAL

Sections: 1 to 12 **Poles:** 1 to 24

Positions: 2-12

Detenting Angle: 30°, 45°, 60°, 90°

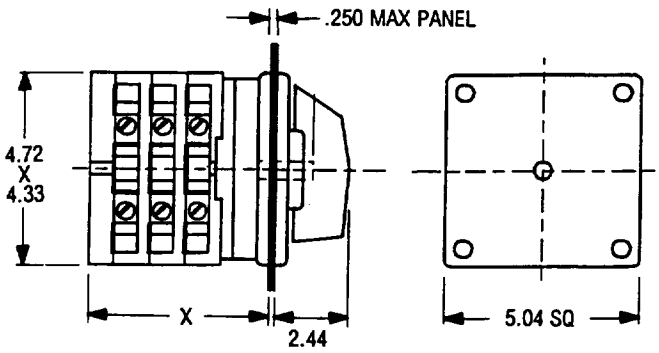
Contacts: Double break silver contacts

Mountings:
4-hole
Base-mount
Door-mount

Locking Features: Key-interlock

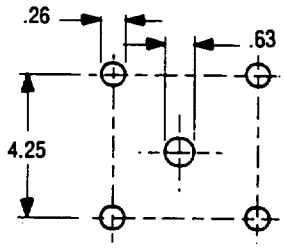
Special Drives:
Ganged gear-operated

PANEL MOUNTED

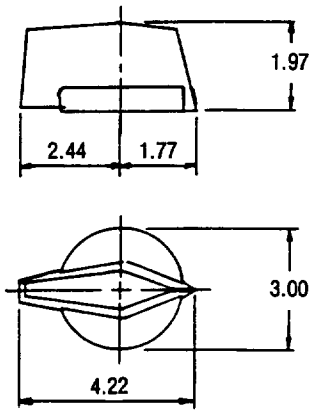


PANEL DRILLING DIMENSIONS

PANEL MOUNT



STANDARD HANDLE FLUSH POINTER



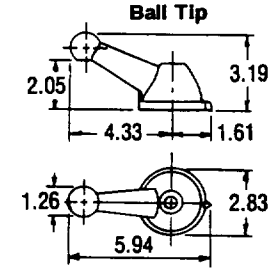
DEPTH BEHIND PANEL DIMENSION "X" (INCHES)

NOMINAL

DECKS	KW 200
1	3.74
2	5.31
3	6.89
4	8.46
5	10.04
6	11.61
7	13.19
8	14.76
9	16.34
10	17.91
11	19.49
12	21.06

OPTIONAL HANDLES

Ball Tip



ELECTROSWITCH
UNIT OF ELECTRO SWITCH CORP. • Weymouth, Massachusetts 02188 • Telephone: 617/335/5200 • FAX: 617/335/4253

KW400

Continuous Rating:
400 amperes 600 volts

KW600

Continuous Rating:
600 amperes 600 volts

KW800

Continuous Rating:
800 amperes 600 volts

Dielectric Strength: 2200 VRMS
Insulation Resistance: 100 megohms
Contact Resistance: 5 milliohms

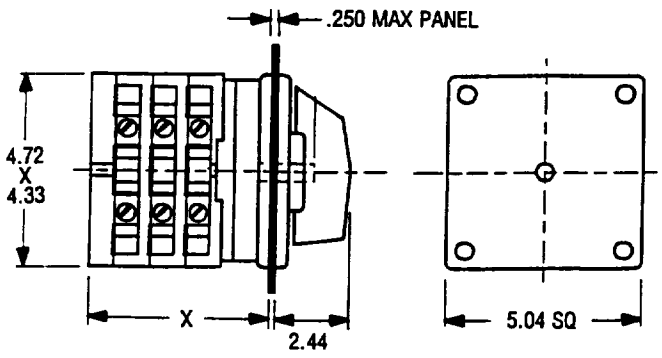
MECHANICAL
Sections: 1 - 12 Positions 2 - 12
Detenting Angle: 30°, 45°, 60°, 90°
Contacts: Double Break Contacts

Mountings: 4-hole,
Base-mount, Door-mount

Locking Features:
Key-interlock, Padlockable

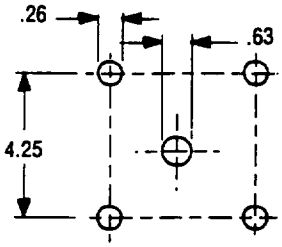
Special Drives:
Ganged, Gear-operated

PANEL MOUNTED

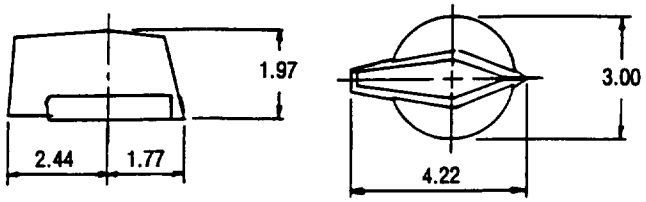


PANEL DRILLING DIMENSIONS

PANEL MOUNT



STANDARD HANDLE
FLUSH POINTER



NOTE: The depth behind panel for a switch is determined by the current rating required and the paralleling of 200A decks. The switch cannot exceed a maximum of 12 decks.

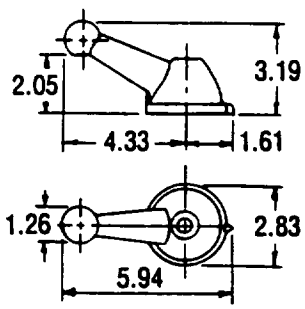
Please contact factory in regard to your application.

DEPTH BEHIND PANEL
DIMENSION "X" (INCHES)
NOMINAL

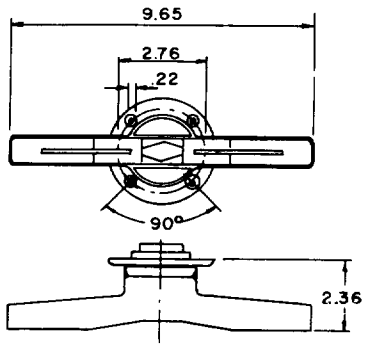
DECKS	
2	5.31
3	6.89
4	8.46
5	10.04
6	11.61
7	13.19
8	14.76
9	16.34
10	17.91
11	19.49
12	21.06

OPTIONAL HANDLES

Ball Tip

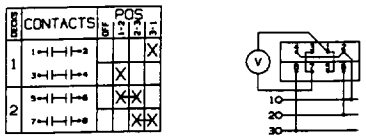
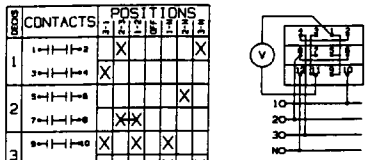
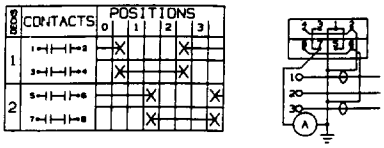
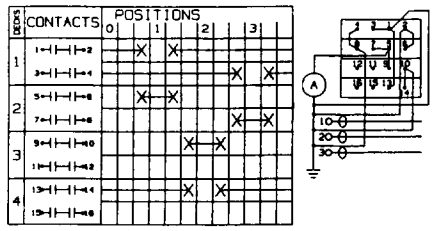
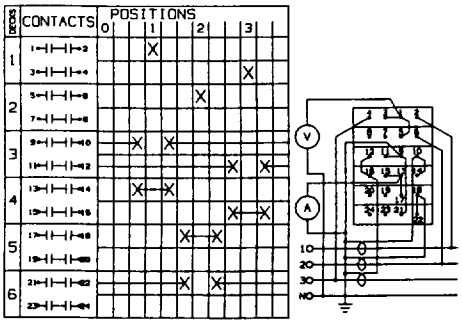
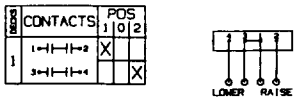


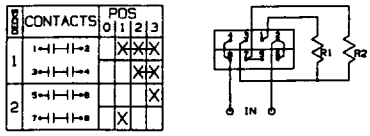
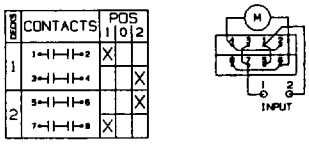
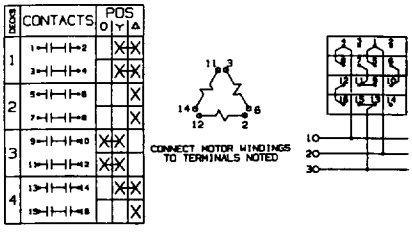
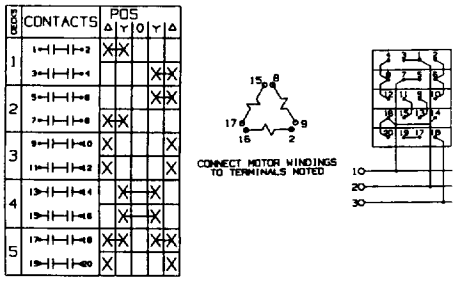
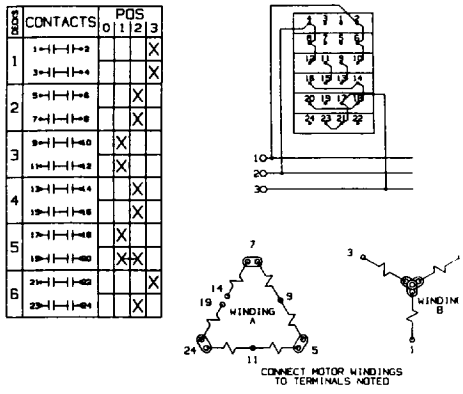
T-Handle



Typical Circuits using Cam-Action Switches

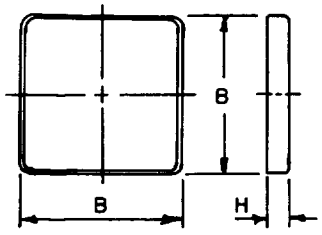
The following metering and motor control circuits are typical applications of CAM-ACTUATED switches. Catalog numbers consist of the switch type, dash, circuit number (e.g. KW12-701). The units consist of standard switch with oval handle. Engraved nameplates ordered separately. *NOTE: All jumpers shown are supplied assembled.*

APPLICATION	"X" CHARTS & WIRING
VOLTMETER TRANSFER SWITCH **CIRCUIT 701** 3ϕ, phase-to-phase 0 · 1-2 · 2-3 · 3-1	
VOLTMETER TRANSFER SWITCH **CIRCUIT 705** 3ϕ, phase-to-phase and phase-to-neutral 0 · 1-2 · 1-N · 2-3 · 2-N · 3-1 · 3-N	
AMMETER TRANSFER SWITCH **CIRCUIT 724** 3ϕ, 2 CT 0 · 1 · 2 · 3	
AMMETER TRANSFER SWITCH **CIRCUIT 731** 3ϕ, 3 CT 0 · 1 · 2 · 3	
AMMETER **VOLTMETER** TRANSFER SWITCH **CIRCUIT 743** 3ϕ, 3 CT volts-phase-to-neutral amps-phase 1 · 2 · 3	
MOTOR CONTROL SWITCH **CIRCUIT 405** Split-Field Motor RAISE (1) · 0 · LOWER (2) spring-return	

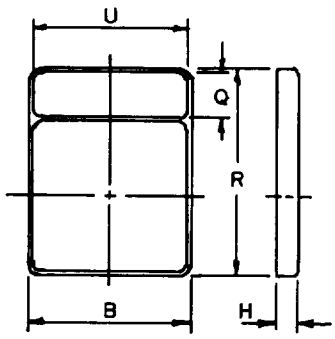
APPLICATION	"X" CHARTS & WIRING
HEATER CONTROL SWITCH **CIRCUIT 614** 0 · 1 · 2 · 3	
MOTOR REVERSING SWITCH **CIRCUIT 101** (switch 2 phases for reversal) 1 · 0 · 2	
MOTOR-STARTING SWITCH **CIRCUIT 300** Y-Δ start single-speed non-reversing O · Y · Δ	
MOTOR-STARTING SWITCH **CIRCUIT 302** Y-Δ start single-speed Forward/Reverse REV · Y · O · Y · Δ · FOR	
MOTOR-STARTING SWITCH **CIRCUIT 372** non-reversing 3-speed (for use with motors with double windings) 1 · 2 · 3 · 0 · OR · $\Delta\Delta$ · YA · YB · 0	

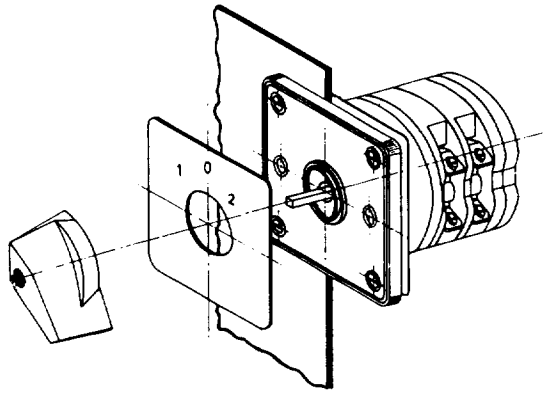
Nameplates

Type PPA



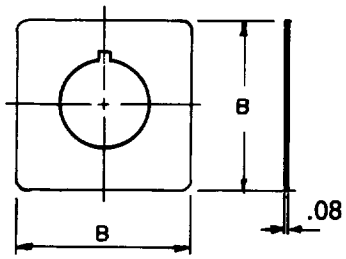
Type PRA



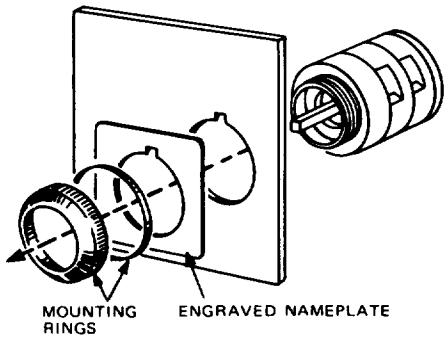


SERIES	CODE PPA	CODE PRA	TITLE ENGRAVING	POSITION ENGRAVING	B	R	H	U	Q
12-20	64	68	15	5	1.97	2.56	0.28	1.85	0.43
16-25-32-40	65	69	13	5	2.56	3.35	0.28	2.40	0.63
63-100	66	70	15	6	3.70	4.61	0.28	3.54	0.75
200	67	71	17	6	5.20	6.18	0.39	4.96	0.83

Type PA

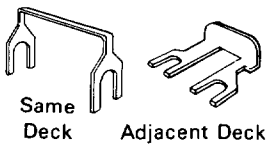


Single hole mount



SERIES	CODE	TITLE ENGRAVING	POSITION ENGRAVING	B
12-16-20 25-32-40	78	15	5	2.48

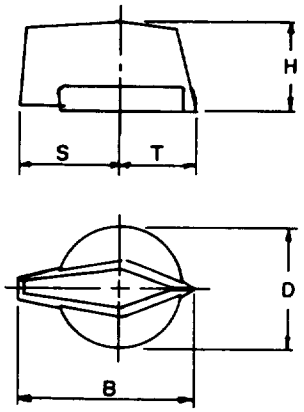
Jumpers



SERIES	12-20	16-25	32-40	63	100	200
JUMPERS						
Adjacent Contact Same Deck	B-05109	B-14901	B-14916	B-24911	B-24915	B-35302
Same Contact Adjacent Deck	B-05110	B-14902	B-14917	B-24912	B-24916	B-35311

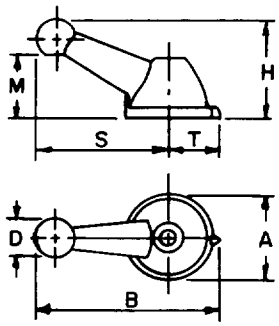
HANDLES

Flush Pointer



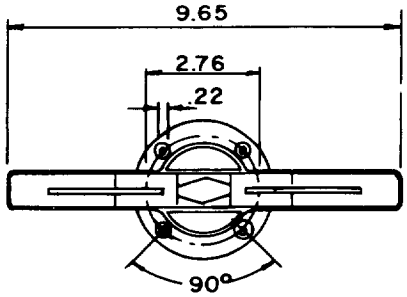
KW-	DIMENSIONS				
	D	H	T	S	B
12 -20	1.06	0.79	0.67	0.87	1.54
16 - 25 - 32 - 40	1.42	0.99	0.83	1.14	1.97
63 - 100	1.81	1.26	1.10	1.65	2.76
200 - 800	3.00	1.97	1.77	2.44	4.22

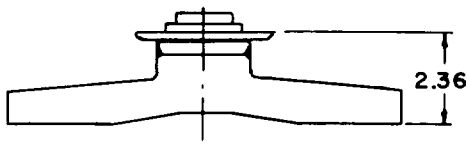
Ball Tip



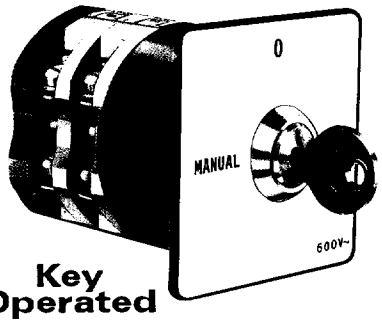
KW-	DIMENSIONS						
	S	T	B	M	H	A	D
16 - 25 - 32 - 40	2.56	0.87	3.43	1.26	1.89	1.46	0.71
63 - 100	NOT AVAILABLE						
200 - 800	4.33	1.61	5.94	2.05	3.19	2.83	1.26

T-Handle, KW200 - 800 ONLY

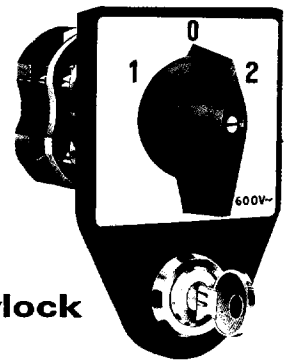




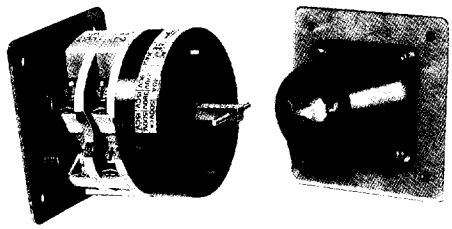
For SPECIAL Requirements



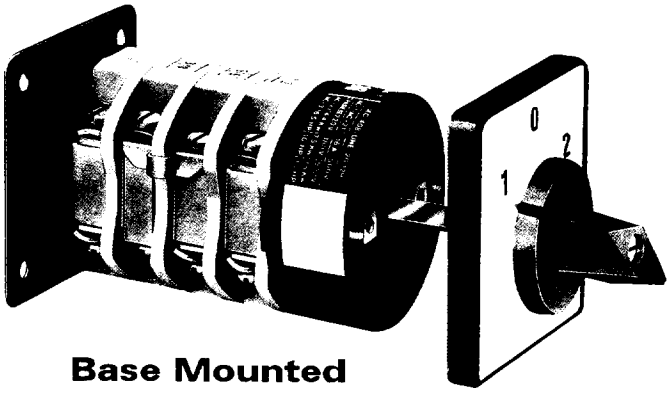
Key Operated



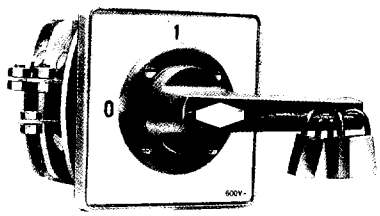
Keylock



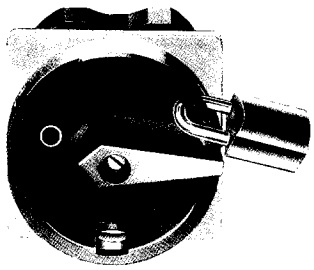
Door Mounted Handle



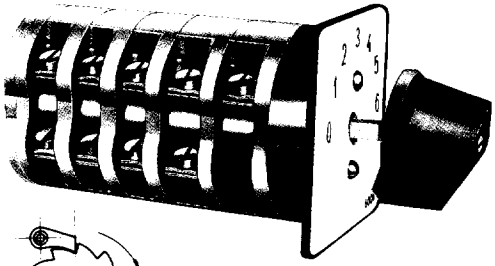
Base Mounted

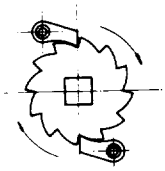


Padlock

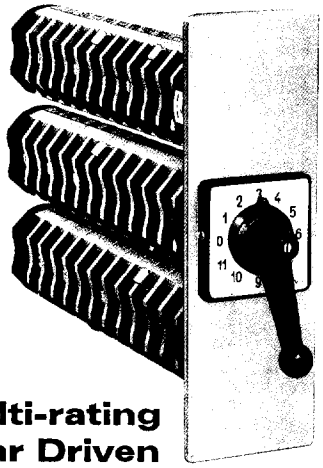


Padlock

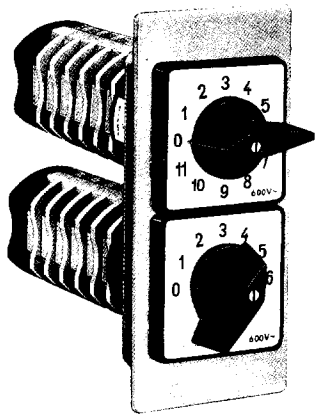




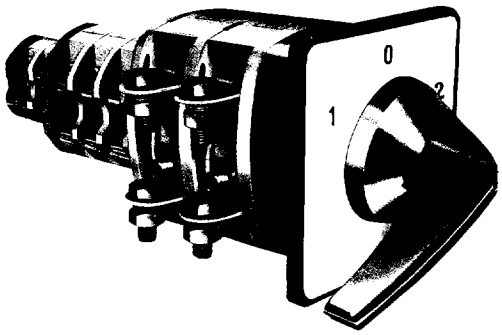
Unidirectional



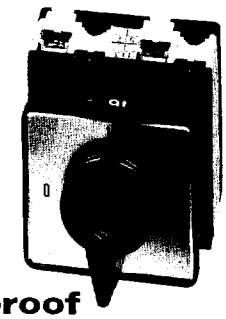
Multi-rating Gear Driven



Special Gear Driven



Tandem Switches
with common drive-shaft; other special combinations to meet your needs.



Finger-proof Protected Terminals

Contact Factory for Catalog Numbers

ELECTROSWITCH
UNIT OF ELECTRO SWITCH CORP. • Weymouth, Massachusetts 02188 • Telephone: 617/335/5200 • FAX: 617/335/4253

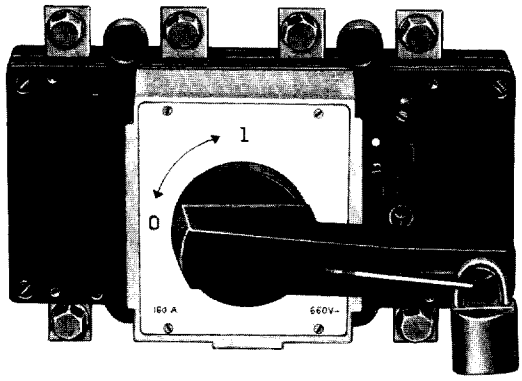
Series 5000 Load Break Switches

Interrupting Current Ranges:

40A, 63A, 80A, 125A, 160A, 200A, 250A,
400A, 630A, 1000A, 1250A, 1600A, 3200A

Mechanical:

Poles: 3 - 4 Positions: 2 -3
Detenting Angle: 90°, 180°
Mountings: Contact Factory
Locking Features: Padlock Standard
Special Features: Auxiliary Contacts, Door Mount, Fused



GENERAL DESCRIPTION

Series 5000 Switches are available with 3 and 4 poles. The operating mechanism is quick-make, quick-break and is rated up to 3200 amps. The contact group has been arranged inside a cavity formed by two overlapping insulated components whose task is to act as a support and housing for the contact assembly. This protects them against dust and foreign bodies as well as isolating them from the operating mechanism.

The fixed contacts, one end of which act as the terminals outside of the insulated switch body, are attached to the base by flush fitting locking screws. They are designed to act in two ways of operation. Firstly, to assure satisfactory making and breaking; and secondly, to carry current once the switch is fully closed in the On position. Operational conditions and extended switch life is assured by this arrangement.

OPERATING MECHANISM:

Turning the handle in either direction winds a powerful coil spring. At a specific moment it discharges the stored energy on to the moving contacts system causing it to change position. The springs only operate while the control goes from one position to another, transmitting the higher accumulated energy to ensure that the device makes or breaks quickly.

MOVING CONTACTS:

Each moving contact involves two silver plated copper blades which are held in alignment under spring pressure, guaranteeing a safe and efficient contact.

All moving contacts make a single group, being rigidly joined and assuring simultaneous action in travel, either when opening or closing.

The arrangement of moving contacts with regard to the fixed contacts assures a good connection, compensating the repulsion stresses that may arise in the contacts, either under normal operation or when the device is subject to high electrodynamic forces.

The components of each pole are housed in separate anti-arc chambers which extinguish any arc that may appear.

On-Off Position Indication:

There are three point indications when the switch is OFF or ON:

- On the handle
- On the marked legend plate on the switch
- On the directly driven indicator connected to the moving contact carriage visible via a window on the switch body.

A.C. Switches:

- Three pole switches
- Three pole + switched neutral switches
- Three pole + solid neutral switches
- Four pole switches
- Three pole change-over switches
- Three pole + switched neutral change-over switches
- Four pole change-over switches

NOTE: Early make neutral poles are standard

For more information, please contact factory

ELECTROSWITCH
UNIT OF ELECTRO SWITCH CORP
Weymouth, Massachusetts 02188
Tel: 617/335/5200 • FAX: 617/335/4253

KW _____

SWITCH NUMBER _____ REV

ENGRAVING CODE _____

HANDLES

- ☐ Flush Pointer
- ☐ Pistol Grip
- ☐ Ball Tip
- ☐ T-Handle 200A-800A ONLY

ACTIONS

- ☐ Maintained
- ☐ Spring-return

- ☒ Non-Shorting Contacts Break Before Make
- ⊠ Shorting Contacts Make Before Break

SPECIAL FEATURES

Panel Thickness _____

Maximum Depth Behind Panel Allowable _____

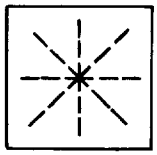
- ☐ Single-Hole Mount
- ☐ Key Operated Removable in _____
- ☐ Key-Interlock
- ☐ Push to Turn
- ☐ Nameplate _____

TITLE ENGRAVING

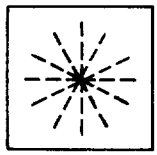
POSITION ENGRAVING

DECK	CONTACTS HANDLE END	POSITIONS 1	2	3	4	5	6	7	8	9	10	11	12
1	1 ⊣⊢ 2												
	3 ⊣⊢ 4												
2	5 ⊣⊢ 6												
	7 ⊣⊢ 8												
3	9 ⊣⊢ 10												
	11 ⊣⊢ 12												
4	13 ⊣⊢ 14												
	15 ⊣⊢ 16												
5	17 ⊣⊢ 18												
	19 ⊣⊢ 20												
6	21 ⊣⊢ 22												
	23 ⊣⊢ 24												
7	25 ⊣⊢ 26												
	27 ⊣⊢ 28												
8	29 ⊣⊢ 30												
	31 ⊣⊢ 32												
9	33 ⊣⊢ 34												
	35 ⊣⊢ 36												
10	37 ⊣⊢ 38												
	39 ⊣⊢ 40												
11	41 ⊣⊢ 42												
	43 ⊣⊢ 44												
12	45 ⊣⊢ 46												
	47 ⊣⊢ 48												

HANDLE POSITIONS



☐45° ☐90°



☐30° ☐60°

4	3	1	2
8	7	5	6
12	11	9	10
16	15	13	14
20	19	17	18
24	23	21	22
28	27	25	26
32	31	29	30
36	35	33	34
40	39	37	38
44	43	41	42
48	47	45	46

*DENOTES MAKE–BEFORE–BREAK CONTACTS

When jumpering from terminal to terminal, please try and prevent from jumpering diagonally or over terminals where possible.

Show only jumpers to be supplied.

REVISIONS:

MADE BY:	DATE:	COMPANY	DWG No.
APPR. BY:	DATE:		SHEET OF

ELECTROSWITCH ROTARY SWITCHES INCLUDE THE FOLLOWING PRODUCT LINES

FOR INDUSTRIAL APPLICATIONS

- DETENT-ACTION SWITCHES
- SNAP-ACTION SWITCHES
- CAM-ACTION SWITCHES
- TAP AND KNIFE

FOR ELECTRICAL UTILITY APPLICATIONS

- INSTRUMENT & CONTROL SWITCHES
- W/W2 CONTROL SWITCHES
- LOCK-OUT RELAYS
- CONTROL SWITCH RELAYS
- SELECTOR & LATCHING SWITCH RELAYS
- TAGGING RELAYS

FOR MILITARY APPLICATIONS

DETENT AND SNAP-ACTION
ROTARY SWITCHES
TO MIL-S SPECIFICATIONS

ELECTROSWITCH
• SWITCHES & RELAYS

UNIT OF ELECTRO SWITCH CORP.
180 King Avenue, Weymouth, Massachusetts 02188

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

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