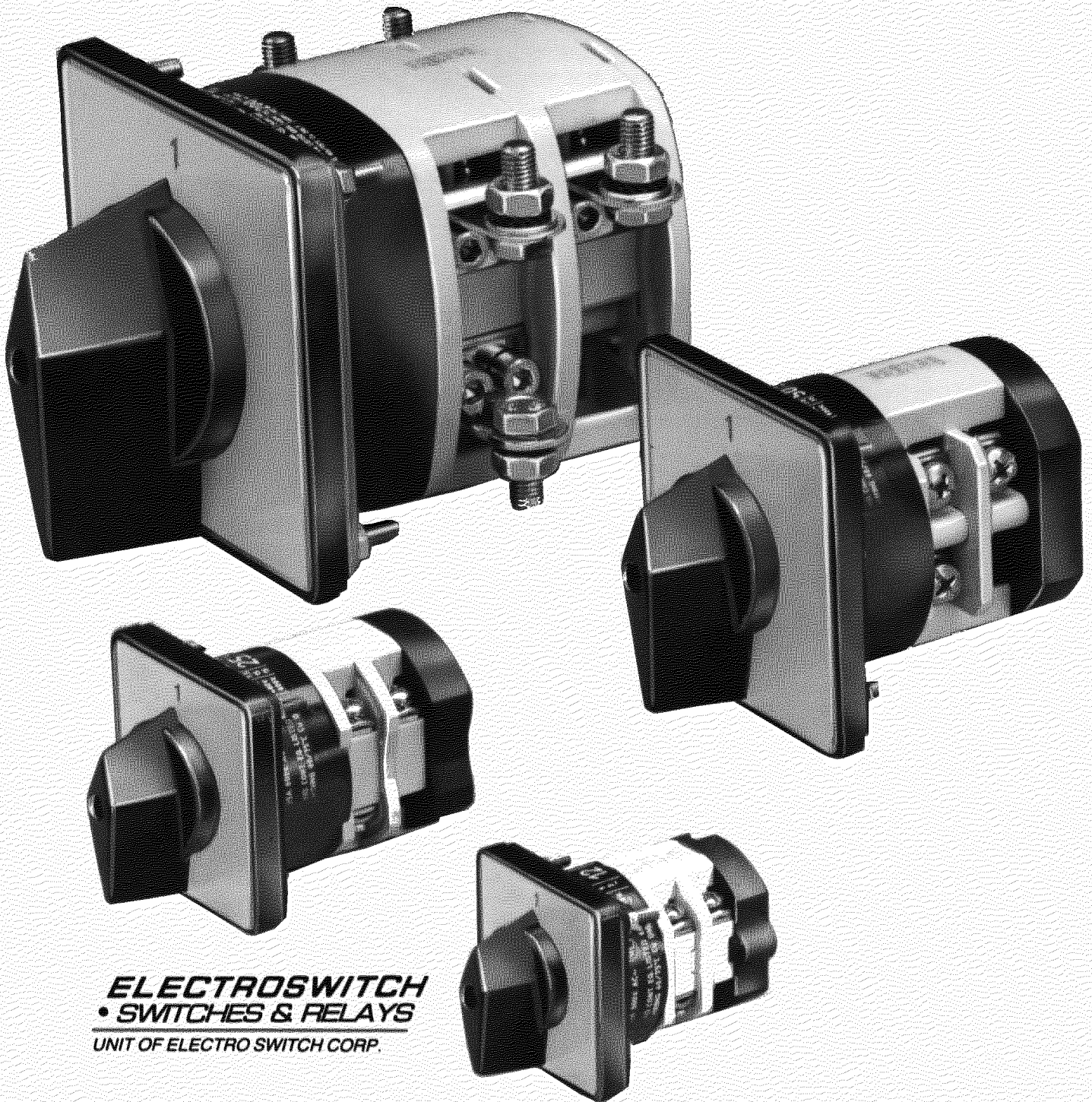


ROTARY CAM-ACTION SWITCHES for INDUSTRIAL APPLICATIONS



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.



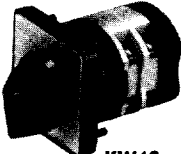
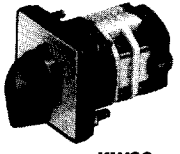
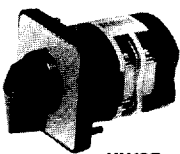
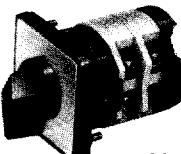
CAM-ACTION SWITCHES

CONTENTS

Basic Specs and Features	Pages 2 - 3
Details of Construction	Page 4
Testing	Page 5
How to Order	Page 6
Off-On Tap and Selector Switches	Pages 7 - 8
KW12	Page 9
KW 16	Page 10
KW 20	Page 11
KW 25	Page 12
KW 32	Page 13
KW 40	Page 14
KW 63	Page 15
KW 100	Page 16
KW 200	Page 17
KW 400, 600, 800	Page 18
Typical Circuits	Page 19
Nameplates & Accessories	Pages 20 - 21
For Special Requirements	Page 22
Load Break Switches	Page 23
Design Guide	Page 24



CAM-ACTION

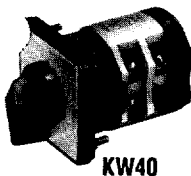
 CHARACTERISTICS	 KW12	 KW16	 KW20	 KW25	 KW32
SECTIONS POLES POSITIONS DETENTING ANGLE	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90	1-12 1-24 2-12 30, 45, 60, 90
ELECTRICAL RATINGS Continuous Rating Interrupting Current 120VAC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



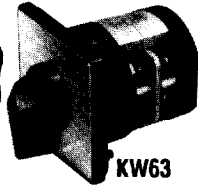
ELECTROSWITCH
 UNIT OF ELECTRO SWITCH CORP.

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

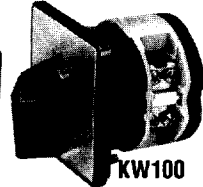
SWITCHES



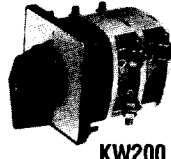
KW40



KW63



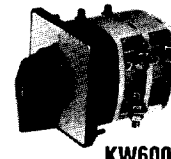
KW100



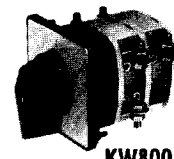
KW200



KW400



KW600



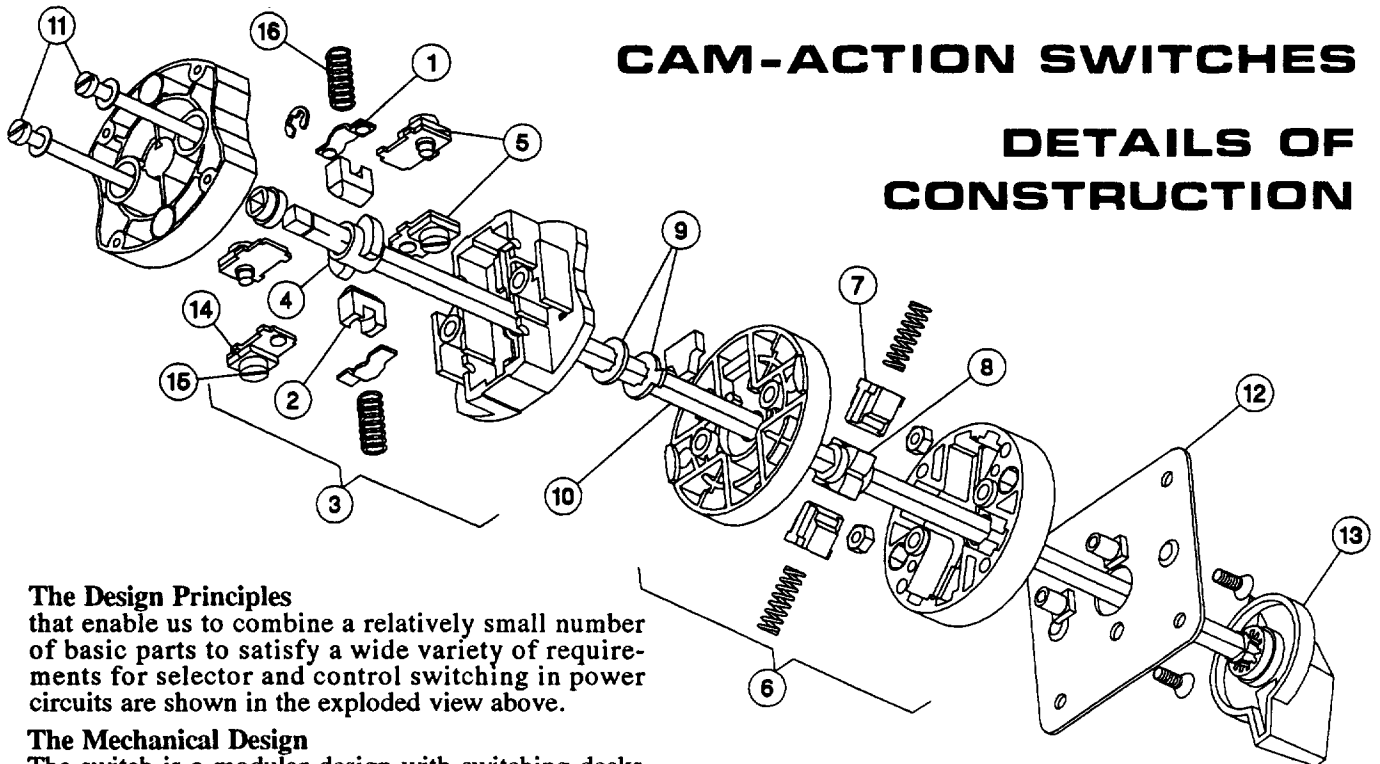
KW800

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
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.

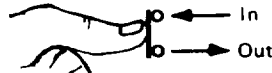
Contact Operation

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

Circuit Open

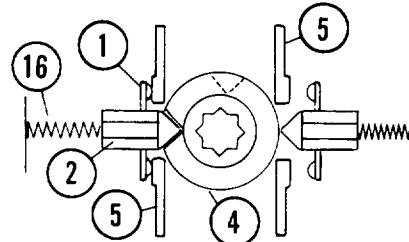


Circuit Closed



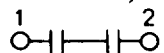
Using this simple principle, two independent sets of contacts are placed in each deck. The moving portion is spring-loaded to close the contact. A notch on the cam

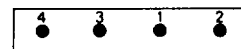
that is affixed to the operating shaft allows the moving contact to spring closed, bridging the stationary contacts. This action is illustrated below.



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).

Voltage	through air		over surfaces	
	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



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

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

HOW TO ORDER

Cam-action Switches

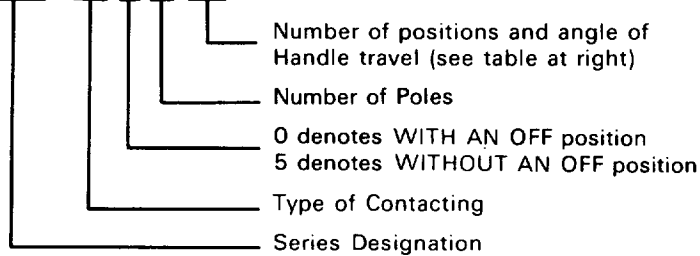
BASIC NUMBERING SYSTEM

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



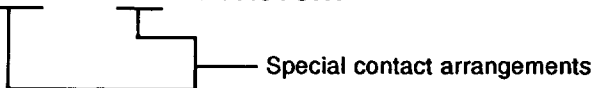
STANDARD SWITCH DIAGRAMS

KW12 - 1



- 1 Minor deviations from Standards.
Dash number sequentially assigned.

KW12 - 904 A8 TBA BY FACTORY



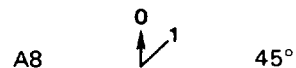
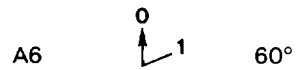
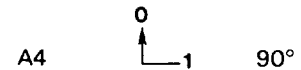
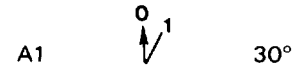
Special-purpose switches

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.

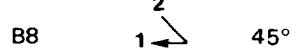
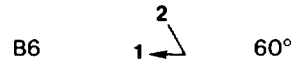
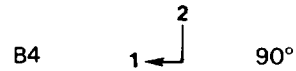
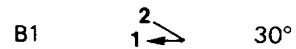
1. Tell us what you want the switch to do.
2. Send us a contact diagram of the switch ("X" chart).
3. Indicate maximum continuous current and maximum make and break current.
4. Indicate maximum voltages and state whether ac or dc.
5. Specify any unusual requirements, such as: overload, contact resistance, 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

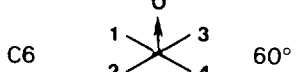
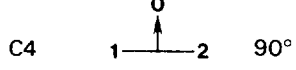
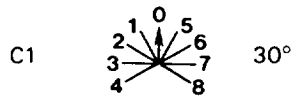
A 1st position 0° next position clockwise



B 1st position 270° next position clockwise



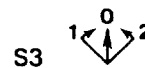
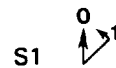
C For 3, 5, 7, and 9 positions.
Switch's only rotation is across the top.
Center position is at 0°.



D 2 positions only, 330° and 30°



S Spring Return 30° only

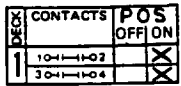
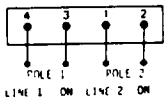


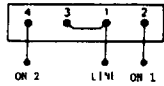

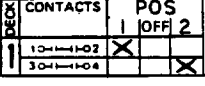
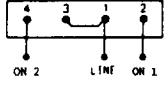

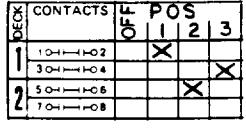
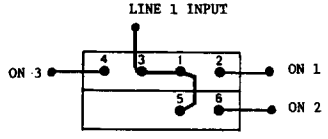

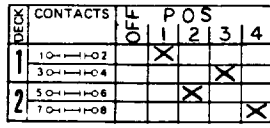
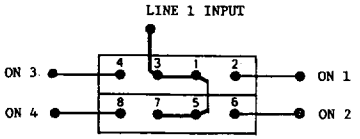

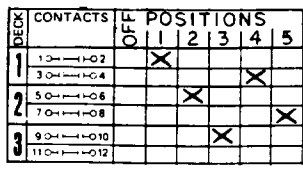
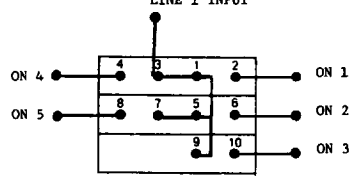



S9 Combination Spring-return
and maintained positions

OFF-ON, Tap and Selector Switches

Assembled jumpers supplied as shown on circuits below

SWITCH TYPES AND
MAXIMUM NUMBER
OF POLES

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

(Continued on next page)

off-on, tap and selector switches (continued)

SWITCH TYPES AND
MAXIMUM NUMBER OF POLES

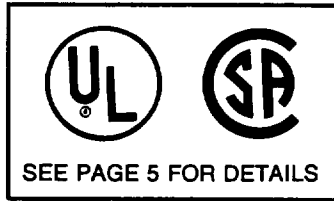
"X" CHARTS AND WIRING			CIRCUIT NUMBER	STANDARD HANDLE POSITIONS	POLES	DECKS	KW12 - KW200
6-THROW (WITH OFF) 			1 pole 2601	B1 30° 	1 2 3	4 7 12	2601 2602 2603
7-THROW (WITH OFF) 			1 pole 2701	B1 30° 	1 2 3	4 8 12	2701 2702 2703
8-THROW (WITH OFF) 			1 pole 2801	B1 30° 	1 2	5 9	2801 2802
9-THROW (WITH 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



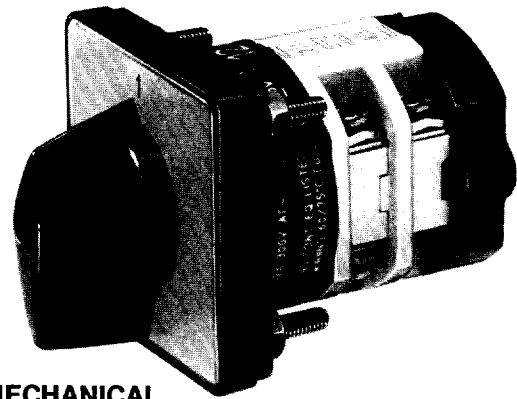
UNIT OF ELECTRO SWITCH CORP. • Weymouth, Massachusetts 02188 • Telephone: 617/335/5200 • FAX: 617/335/4253

KW12

20A/240VAC



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

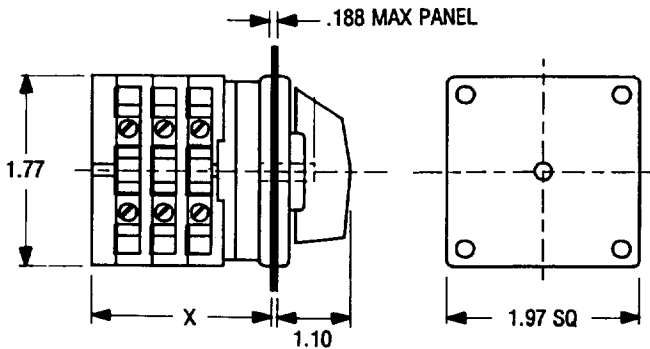
Special Drives:

Key-operated

Ganged gear-operated

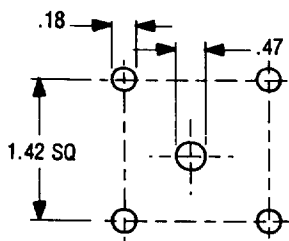
Spring-return

PANEL MOUNTED

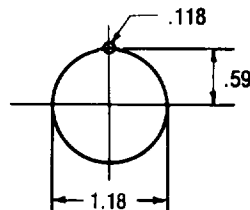


PANEL DRILLING DIMENSIONS

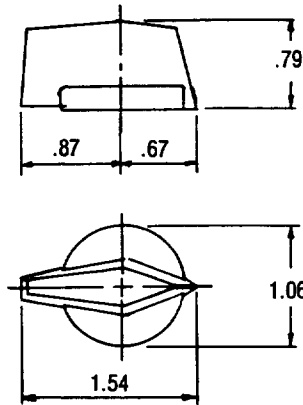
PANEL MOUNT



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

KW16

25A/600VAC

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

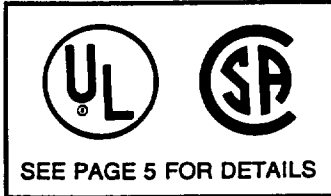
3-phase ratings - reduce by half for 1-phase

5 hp 220/240 volts ac

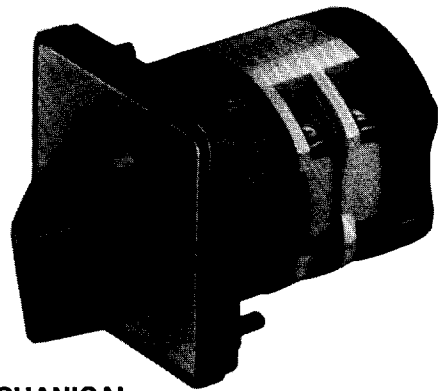
10 hp 440/480 volts ac

10 hp 550/600 volts ac

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



UL FILE NO. E54035



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

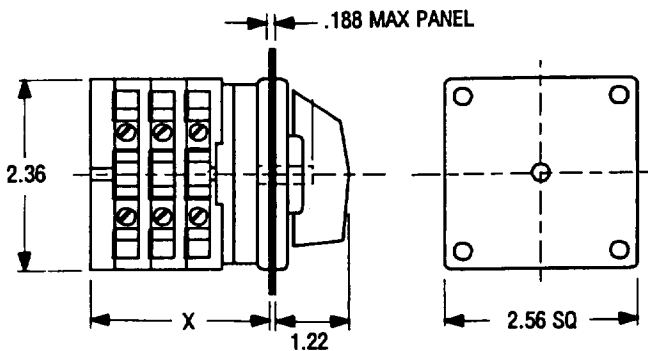
Special Drives:

Key-operated

Ganged gear-operated

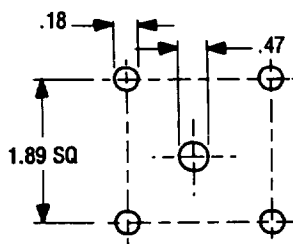
Spring-return

PANEL MOUNTED

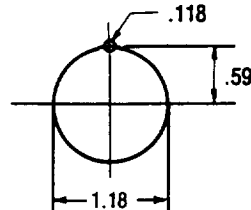


PANEL DRILLING DIMENSIONS

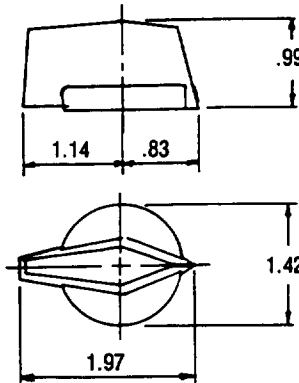
PANEL MOUNT



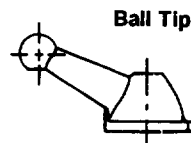
SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



STANDARD HANDLE FLUSH POINTER



Optional Handles
See page 21



DEPTH BEHIND PANEL DIMENSION "X" (INCHES) NOMINAL

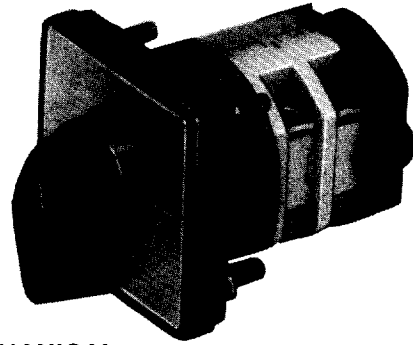
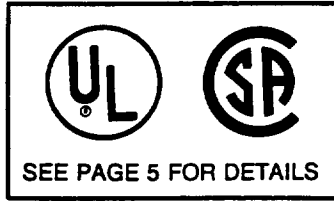
DECKS	KW 16
1	1.95
2	2.51
3	3.07
4	3.63
5	4.19
6	4.75
7	5.31
8	5.86
9	6.43
10	6.98
11	7.54
12	8.10

Increase the dimensions above for the following optional features

Single-hole mount	.52
Key-operation	1.20

KW20

25A/240VAC



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

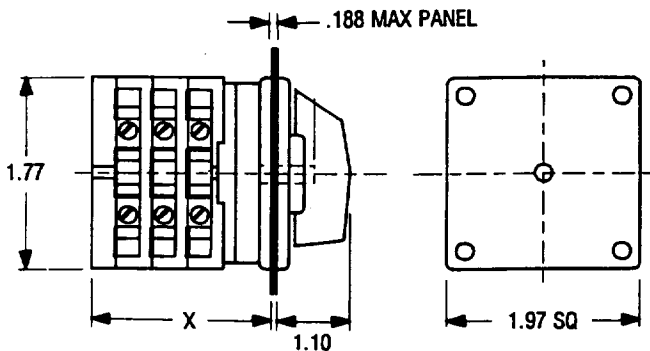
Special Drives:

Key-operated

Ganged gear-operated

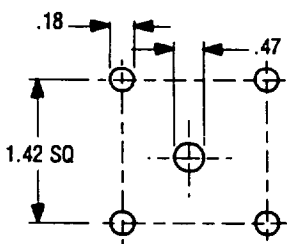
Spring-return

PANEL MOUNTED

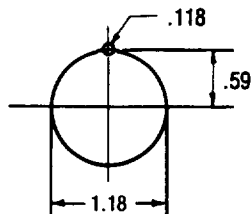


PANEL DRILLING DIMENSIONS

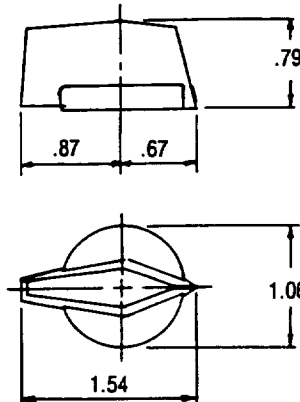
PANEL MOUNT



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

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

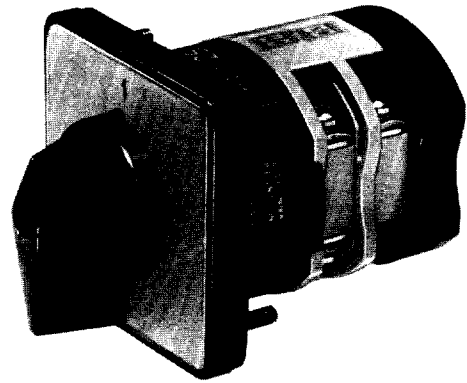
15 hp 550/600 volts ac

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



SEE PAGE 5 FOR DETAILS

UL FILE NO. E54035



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

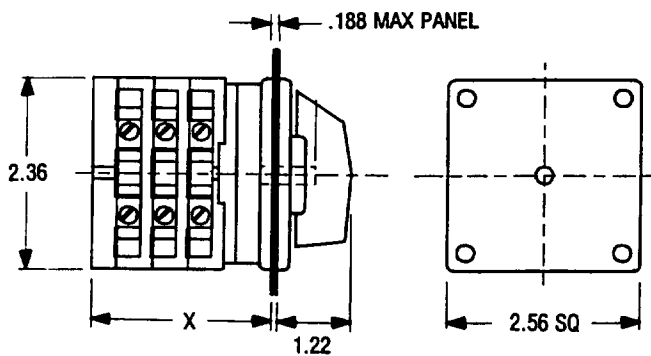
Special Drives:

Key-operated

Ganged gear-operated

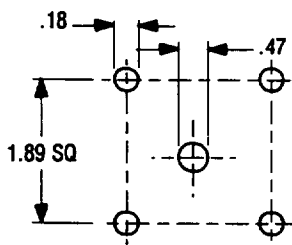
Spring-return

PANEL MOUNTED

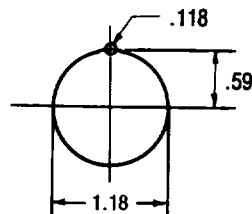


PANEL DRILLING DIMENSIONS

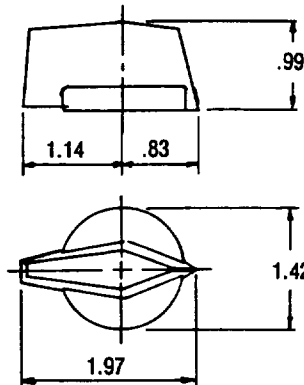
PANEL MOUNT



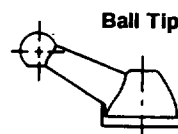
SINGLE-HOLE MOUNT AND KEY-OPERATED 3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



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



ELECTROSWITCH

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

KW32

40A/600VAC

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

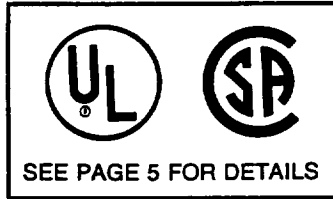
3-phase ratings - reduce by half for 1-phase

10 hp 220/240 volts ac

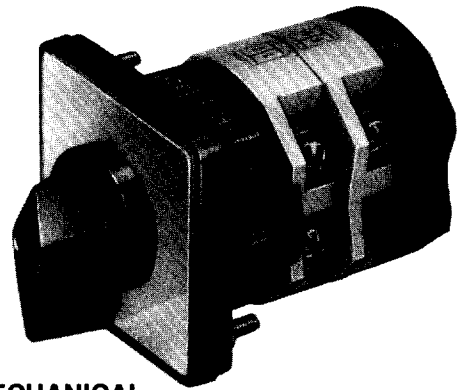
20 hp 440/480 volts ac

20 hp 550/600 volts ac

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



UL FILE NO. E54035



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

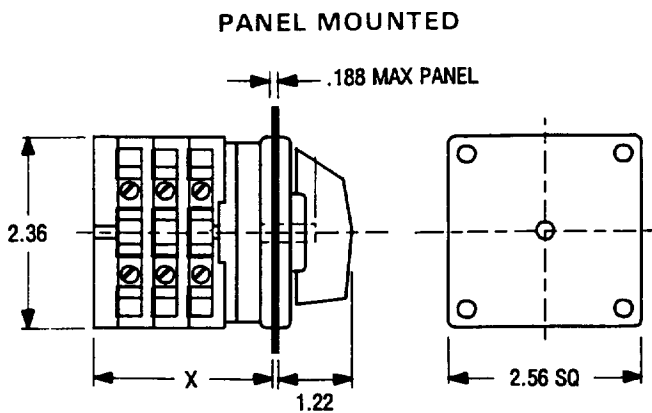
Locking Features: Key-interlock

Special Drives:

Key-operated

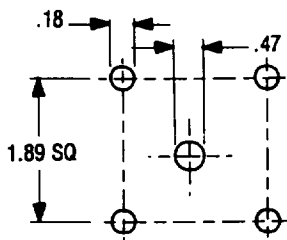
Ganged gear-operated

Spring-return

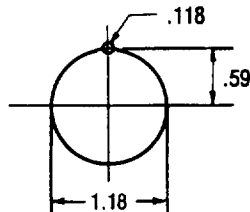


PANEL DRILLING DIMENSIONS

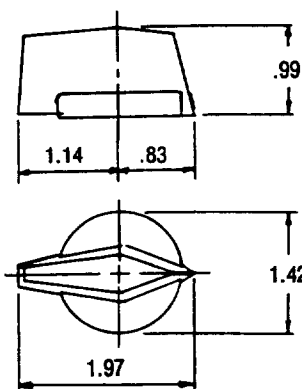
PANEL MOUNT



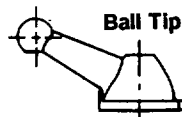
SINGLE-HOLE MOUNT AND KEY-OPERATED
3/16" MAXIMUM PANEL THICKNESS WITHOUT NAMEPLATE



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

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

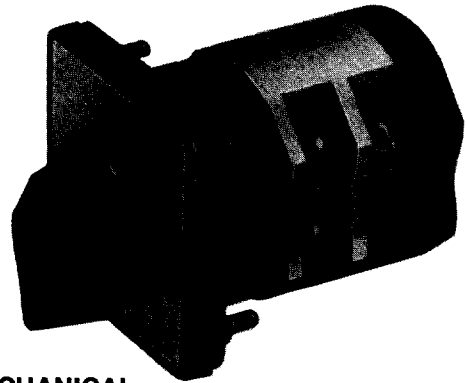
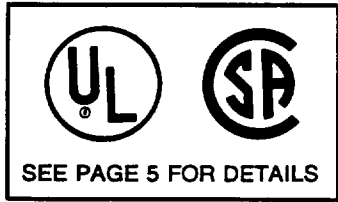
Contact resistance: 10 milliohms

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

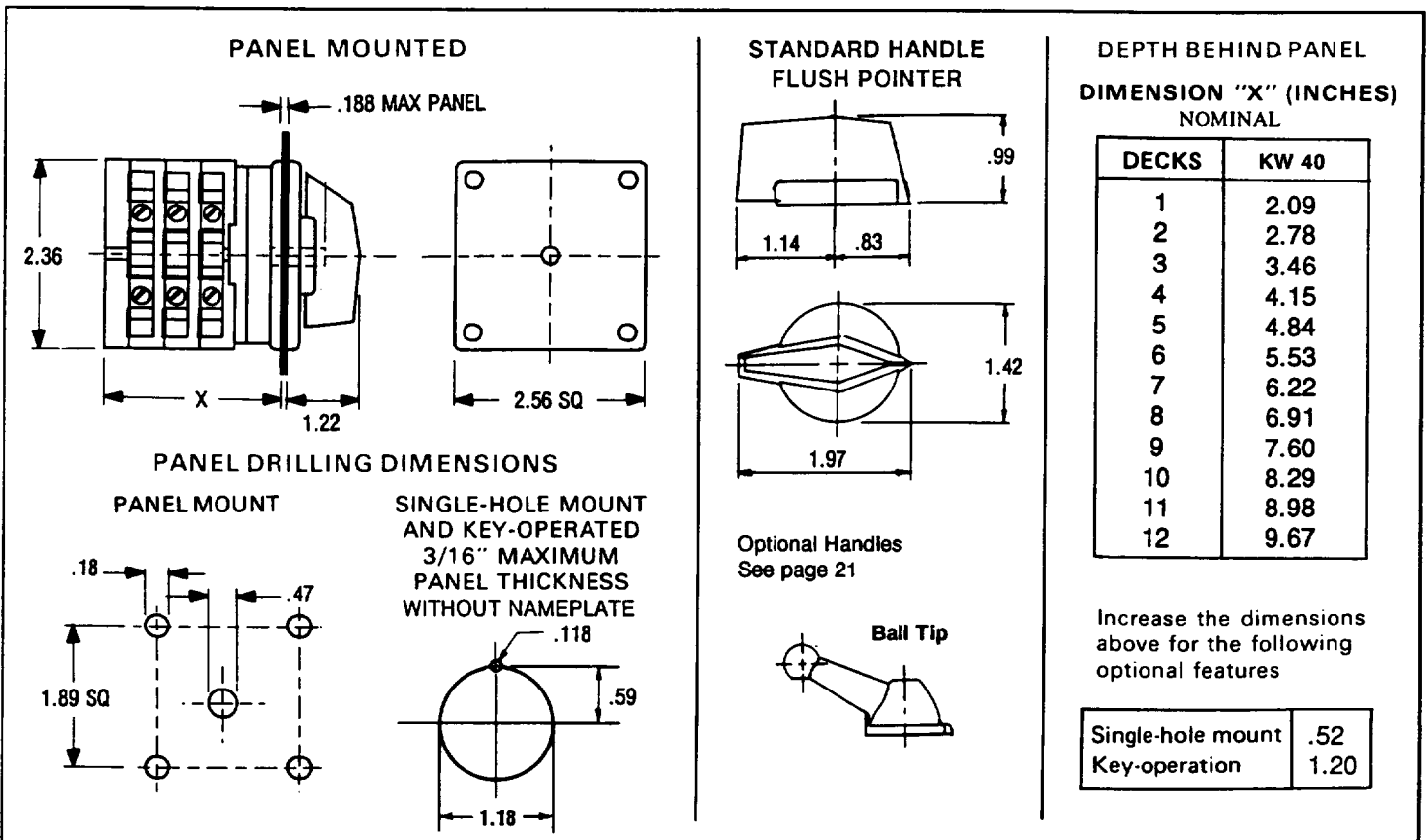
Mountings:

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

Locking Features: Key-interlock

Special Drives:

- Key-operated
- Ganged gear-operated
- Spring-return



ELECTROSWITCH

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

KW63

80A/600VAC

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

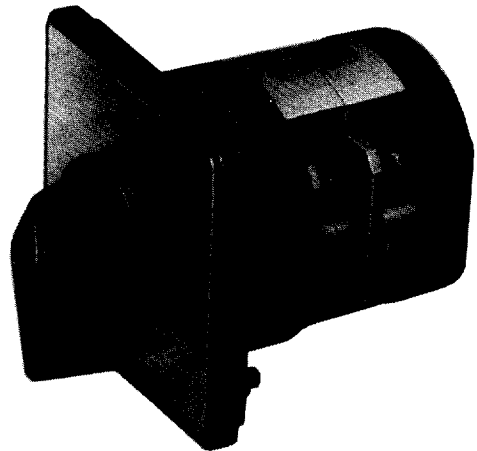
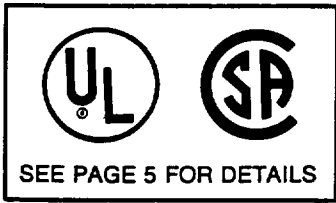
3-phase ratings - reduce by half for 1-phase

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

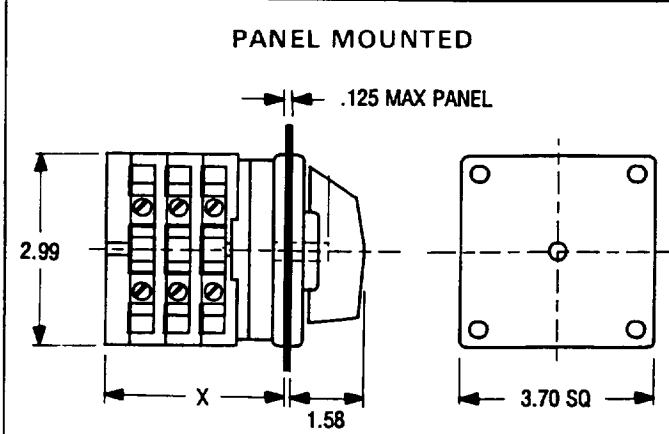
Waterproof-mount

Door-mount

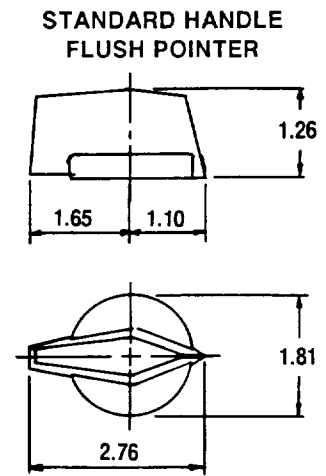
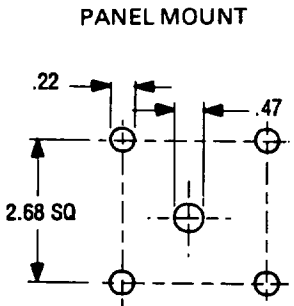
Locking Features: Key-interlock

Special Drives:

Ganged gear-operated



PANEL DRILLING DIMENSIONS

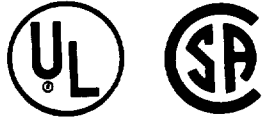


DEPTH BEHIND PANEL
DIMENSION "X" (INCHES)
NOMINAL

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

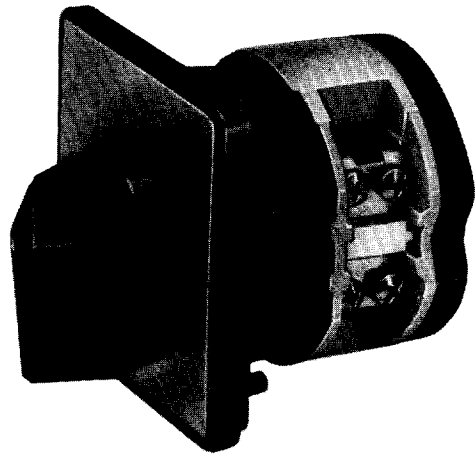
3-phase ratings - reduce by half for 1-phase

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

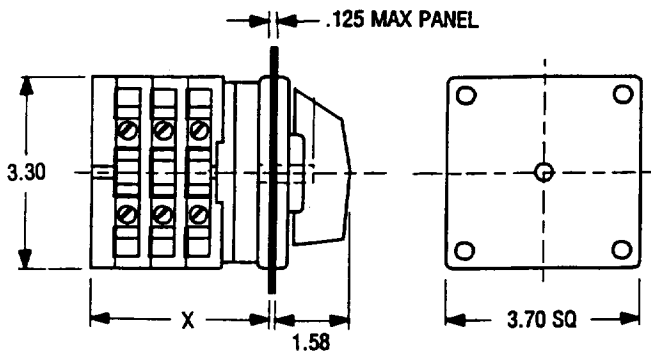
Door-mount

Locking Features: Key-interlock

Special Drives:

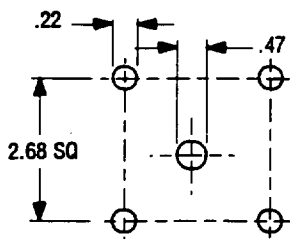
Ganged gear-operated

PANEL MOUNTED

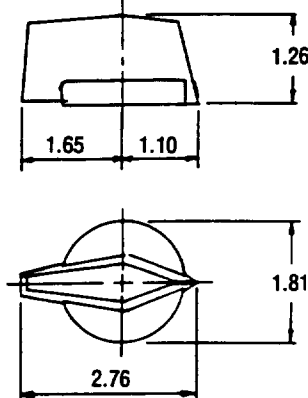


PANEL DRILLING DIMENSIONS

PANEL MOUNT



STANDARD HANDLE FLUSH POINTER

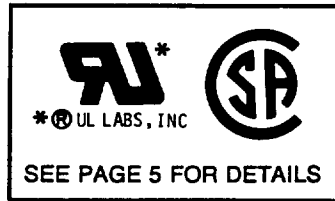


DEPTH BEHIND PANEL DIMENSION "X" (INCHES) NOMINAL

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



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

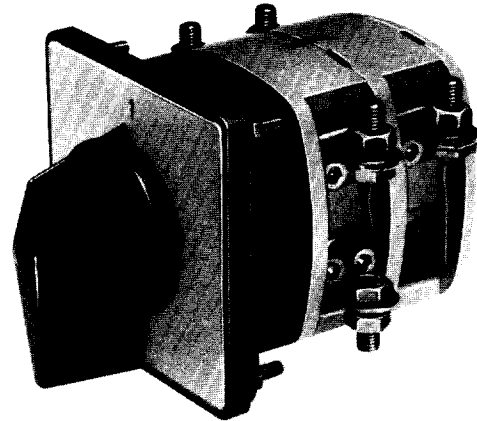
3-phase ratings - reduce by half for 1-phase

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

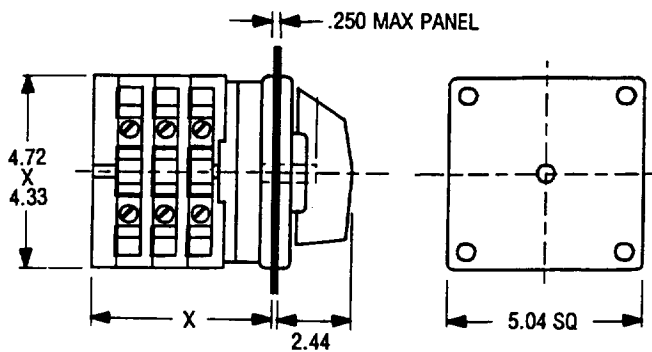
Door-mount

Locking Features: Key-interlock

Special Drives:

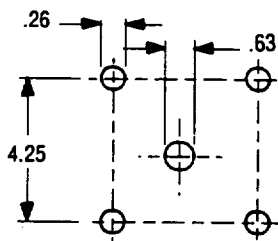
Ganged gear-operated

PANEL MOUNTED

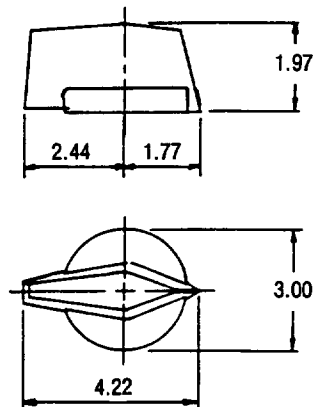


PANEL DRILLING DIMENSIONS

PANEL MOUNT



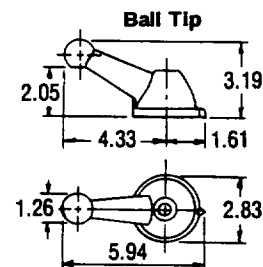
STANDARD HANDLE FLUSH POINTER



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



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

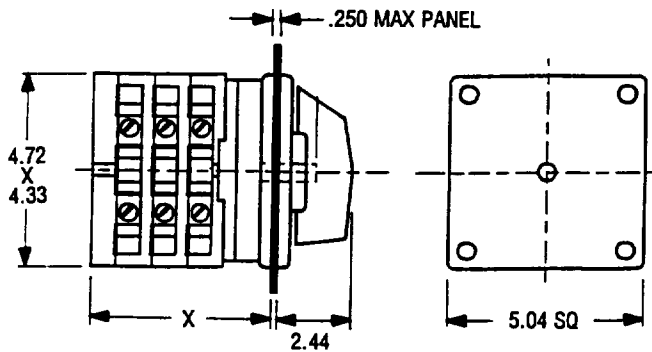
Sections: 1 - 12 Positions 2 - 12
Detenting Angle: 30°, 45°, 60°, 90°
Contacts: Double Break Contacts

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

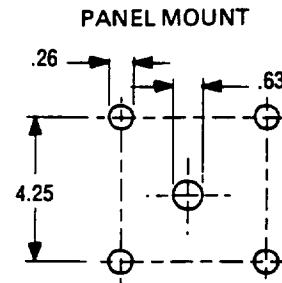
Locking Features:
Key-interlock, Padlockable

Special Drives:
Ganged, Gear-operated

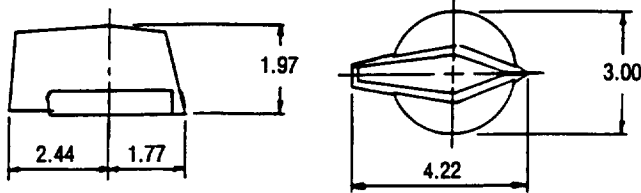
PANEL MOUNTED



PANEL DRILLING DIMENSIONS



STANDARD HANDLE FLUSH POINTER



DEPTH BEHIND PANEL DIMENSION "X" (INCHES) NOMINAL

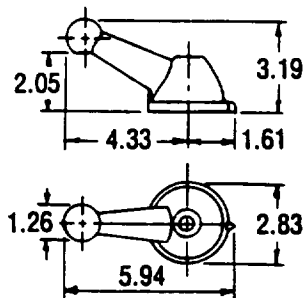
DECKS	DEPTH (INCHES)
2	5.31
3	6.89
4	8.46
5	10.04
6	11.61
7	13.19
8	14.76
9	16.34
10	17.91
11	19.49
12	21.06

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.

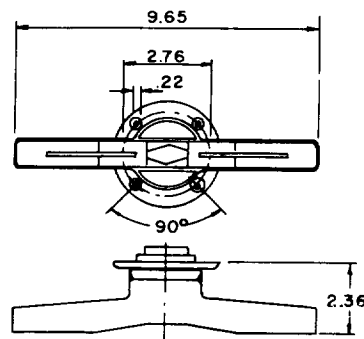
Please contact factory in regard to your application.

OPTIONAL HANDLES

Ball Tip



T-Handle



ELECTROSWITCH

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

Typical Circuits using Cam-Action Switches

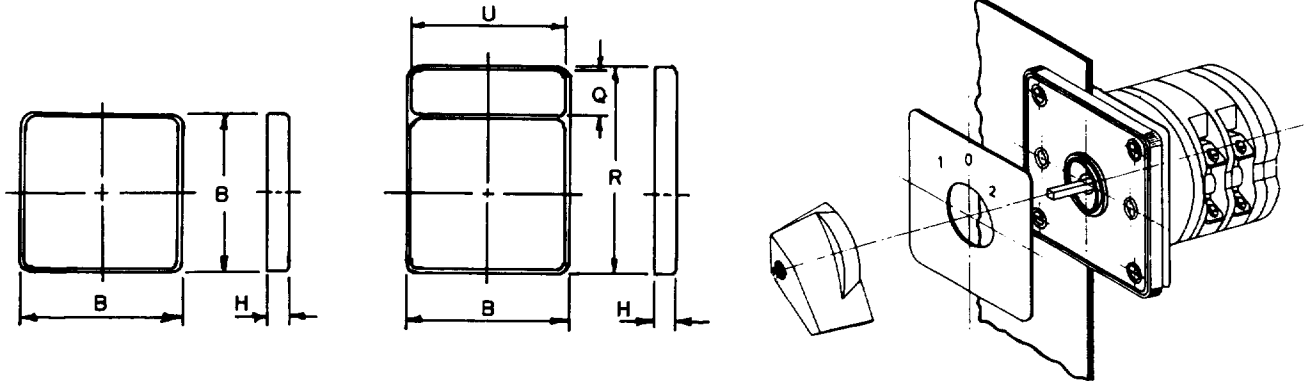
The following metering and motor control circuits are typical applications of CAM-ACTUATED switches. Catalog numbers consist of the switch type, dash, circuit number (e.g. KW12-701). The units consist of standard switch with oval handle. Engraved nameplates ordered separately. *NOTE: All jumpers shown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

APPLICATION	"X" CHARTS & WIRING	APPLICATION	"X" CHARTS & WIRING																																																																																		
VOLTMETER TRANSFER SWITCH CIRCUIT 701 3 ϕ , phase-to-phase 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2			X			2	2-1-1-3	X			X		3	3-1-1-1		X			X	HEATER CONTROL SWITCH CIRCUIT 614 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2			X	X	X	2	2-1-1-3	X			X		3	3-1-1-1		X			X														
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VOLTMETER TRANSFER SWITCH CIRCUIT 705 3 ϕ , phase-to-phase and phase-to-neutral 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="6">POSITIONS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	POS	CONTACTS			POSITIONS						1	2	3	1	2	3	4	5	6	7	1	1-1-1-2			X							2	2-1-1-3	X									3	3-1-1-1		X								MOTOR REVERSING SWITCH CIRCUIT 101 (switch 2 phases for reversal) 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="2">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td>X</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td></td> <td>X</td> <td></td> <td>X</td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	POS	CONTACTS			POS		1	2	3	1	2	1	1-1-1-2	X		X		2	2-1-1-3		X		X	3	3-1-1-1			X	
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AMMETER TRANSFER SWITCH CIRCUIT 724 3 ϕ , 2 CT 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POSITIONS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td></td> <td>X</td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POSITIONS			1	2	3	1	2	3	1	1-1-1-2			X		X	2	2-1-1-3	X			X		3	3-1-1-1		X			X	MOTOR-STARTING SWITCH CIRCUIT 300 Y- Δ start single-speed non-reversing 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2			X	X	X	2	2-1-1-3	X			X		3	3-1-1-1		X			X														
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AMMETER TRANSFER SWITCH CIRCUIT 731 3 ϕ , 3 CT 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="4">POSITIONS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	POS	CONTACTS			POSITIONS				1	2	3	1	2	3	4	1	1-1-1-2			X	X			2	2-1-1-3	X			X			3	3-1-1-1		X			X		MOTOR-STARTING SWITCH CIRCUIT 302 Y- Δ start single-speed Forward/Reverse 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2			X	X	X	2	2-1-1-3	X			X		3	3-1-1-1		X			X									
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AMMETER VOLTMETER TRANSFER SWITCH CIRCUIT 743 3 ϕ , 3 CT volts-phase-to-neutral amps-phase 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="4">POSITIONS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>	POS	CONTACTS			POSITIONS				1	2	3	1	2	3	4	1	1-1-1-2			X				2	2-1-1-3	X			X			3	3-1-1-1		X			X		MOTOR-STARTING SWITCH CIRCUIT 372 non-reversing 3-speed (for use with motors with double windings) 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2				X		2	2-1-1-3	X			X		3	3-1-1-1		X			X									
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MOTOR CONTROL SWITCH CIRCUIT 405 Split-Field Motor RAISE LOWER (1) (2) spring-return 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="2">CONTACTS</th> <th colspan="2">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS		POS		1	2	1	2	1	1-1-1-2		X		2	2-1-1-3	X		X	MOTOR-STARTING SWITCH CIRCUIT 372 non-reversing 3-speed (for use with motors with double windings) 	<table border="1" style="font-size: small;"> <thead> <tr> <th rowspan="2">POS</th> <th colspan="3">CONTACTS</th> <th colspan="3">POS</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1-1-1-2</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>2-1-1-3</td> <td>X</td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>3-1-1-1</td> <td></td> <td>X</td> <td></td> <td></td> <td>X</td> </tr> </tbody> </table>	POS	CONTACTS			POS			1	2	3	1	2	3	1	1-1-1-2				X		2	2-1-1-3	X			X		3	3-1-1-1		X			X																													
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3	3-1-1-1		X			X																																																																															

Nameplates

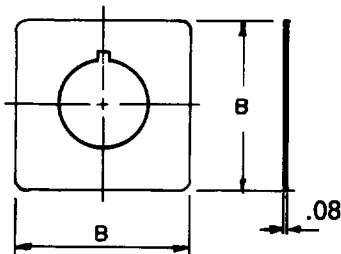
Type PPA

Type PRA



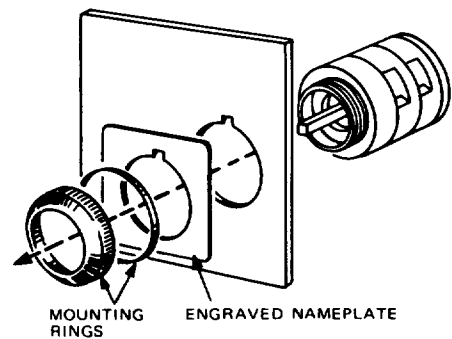
SERIES	CODE PPA	CODE PRA	TITLE ENGRAVING	POSITION ENGRAVING	B	R	H	U	Q
12-20	64	68	15	5	1.97	2.56	0.28	1.85	0.43
16-25-32-40	65	69	13	5	2.56	3.35	0.28	2.40	0.63
63-100	66	70	15	6	3.70	4.61	0.28	3.54	0.75
200	67	71	17	6	5.20	6.18	0.39	4.96	0.83

Type PA

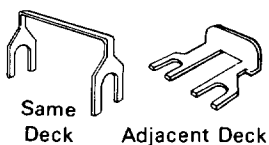


Single hole mount

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



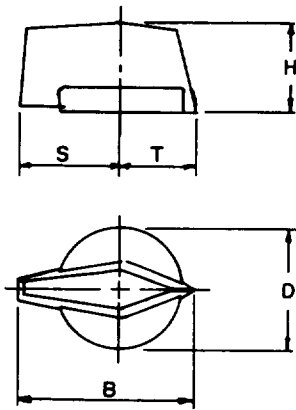
Jumpers



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

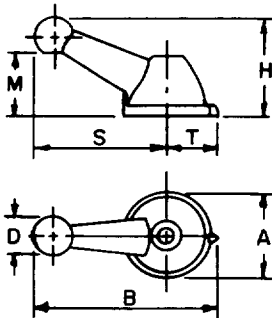
HANDLES

Flush Pointer



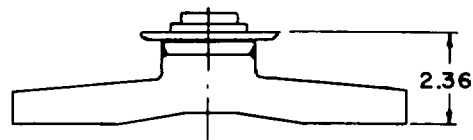
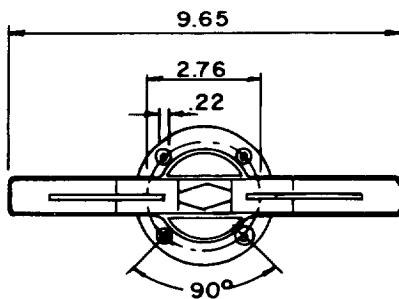
KW-	DIMENSIONS				
	D	H	T	S	B
12 - 20	1.06	0.79	0.67	0.87	1.54
16 - 25 - 32 - 40	1.42	0.99	0.83	1.14	1.97
63 - 100	1.81	1.26	1.10	1.65	2.76
200 - 800	3.00	1.97	1.77	2.44	4.22

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

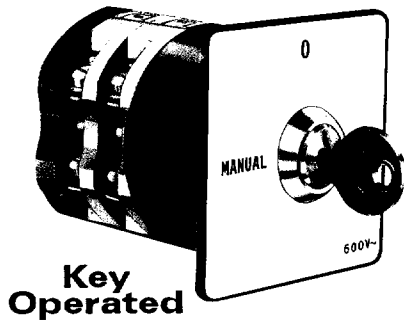
T-Handle, KW200 - 800 ONLY



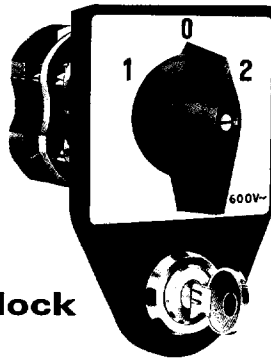
ELECTROSWITCH

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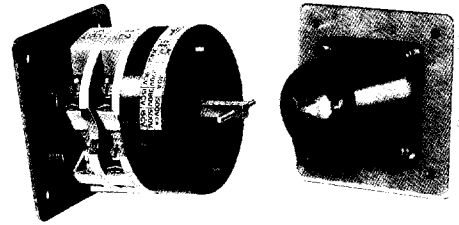
For SPECIAL Requirements



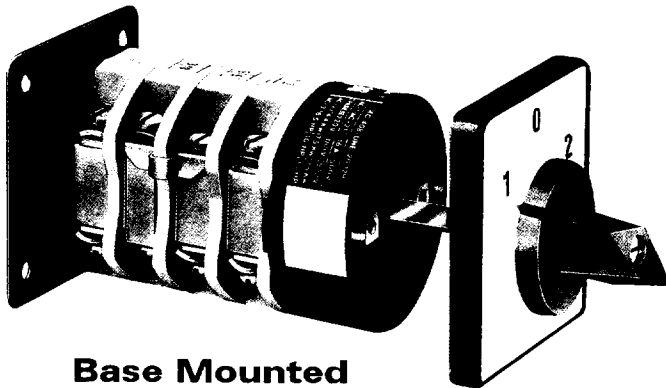
Key Operated



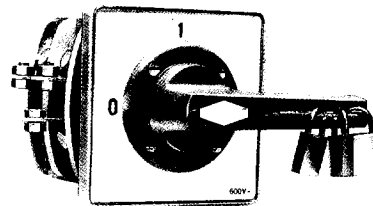
Keylock



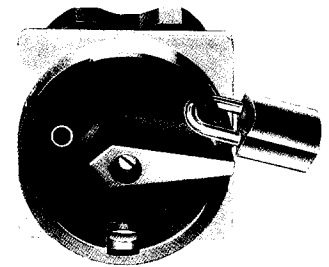
Door Mounted Handle



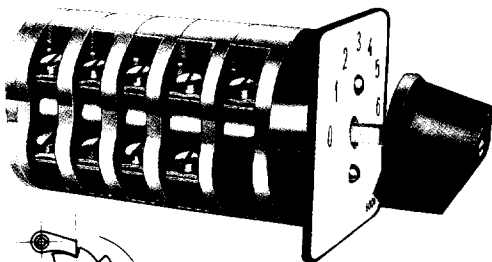
Base Mounted



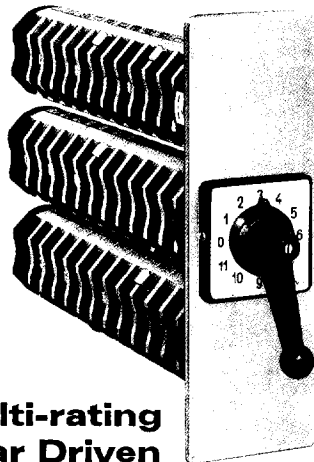
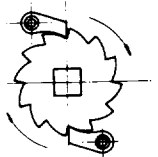
Padlock



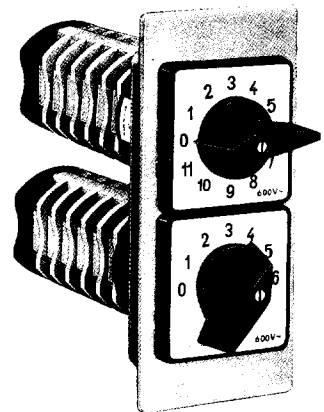
Padlock



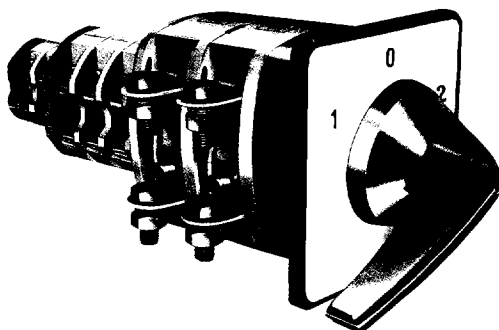
Unidirectional



**Multi-rating
Gear Driven**

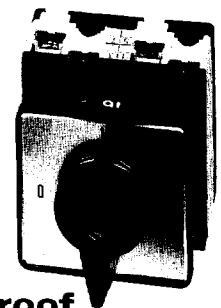


Special Gear Driven



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

**Contact Factory
for Catalog Numbers**



**Finger-proof
Protected Terminals**

Series 5000

Load Break Switches

Interrupting Current Ranges:

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

Mechanical:

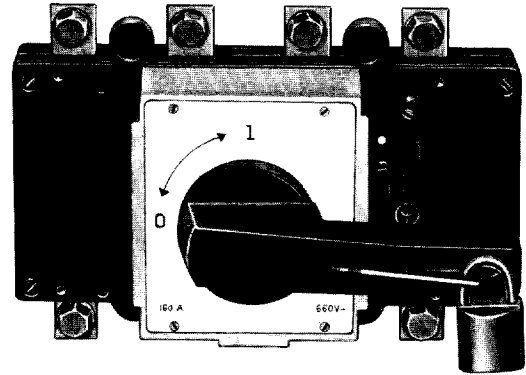
Poles: 3 - 4 Positions: 2 -3

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



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ELECTROSWITCH

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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

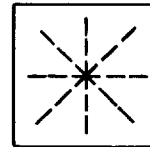
SPECIAL FEATURES

- Panel Thickness _____ Maximum Depth Behind Panel Allowable _____
- Single-Hole Mount
- Key Operated
Removable in _____
- Key-Interlock
- Push to Turn
- Nameplate _____

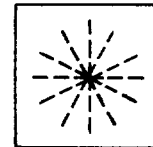
TITLE ENGRAVING		POSITION ENGRAVING											
DECK	CONTACTS HANDLE END	POSITIONS											
		1	2	3	4	5	6	7	8	9	10	11	12
1	10- --- 02												
	30- --- 04												
2	50- --- 06												
	70- --- 08												
3	90- --- 10												
	110- --- 12												
4	130- --- 14												
	150- --- 16												
5	170- --- 18												
	190- --- 20												
6	210- --- 22												
	230- --- 24												
7	250- --- 26												
	270- --- 28												
8	290- --- 30												
	310- --- 32												
9	330- --- 34												
	350- --- 36												
10	370- --- 38												
	390- --- 40												
11	410- --- 42												
	430- --- 44												
12	450- --- 46												
	470- --- 48												

*DENOTES
MAKE-
BEFORE-
BREAK
CONTACTS

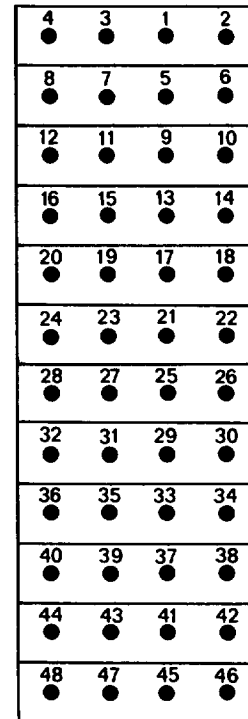
HANDLE POSITIONS



45° 90°



30° 60°



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.

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.