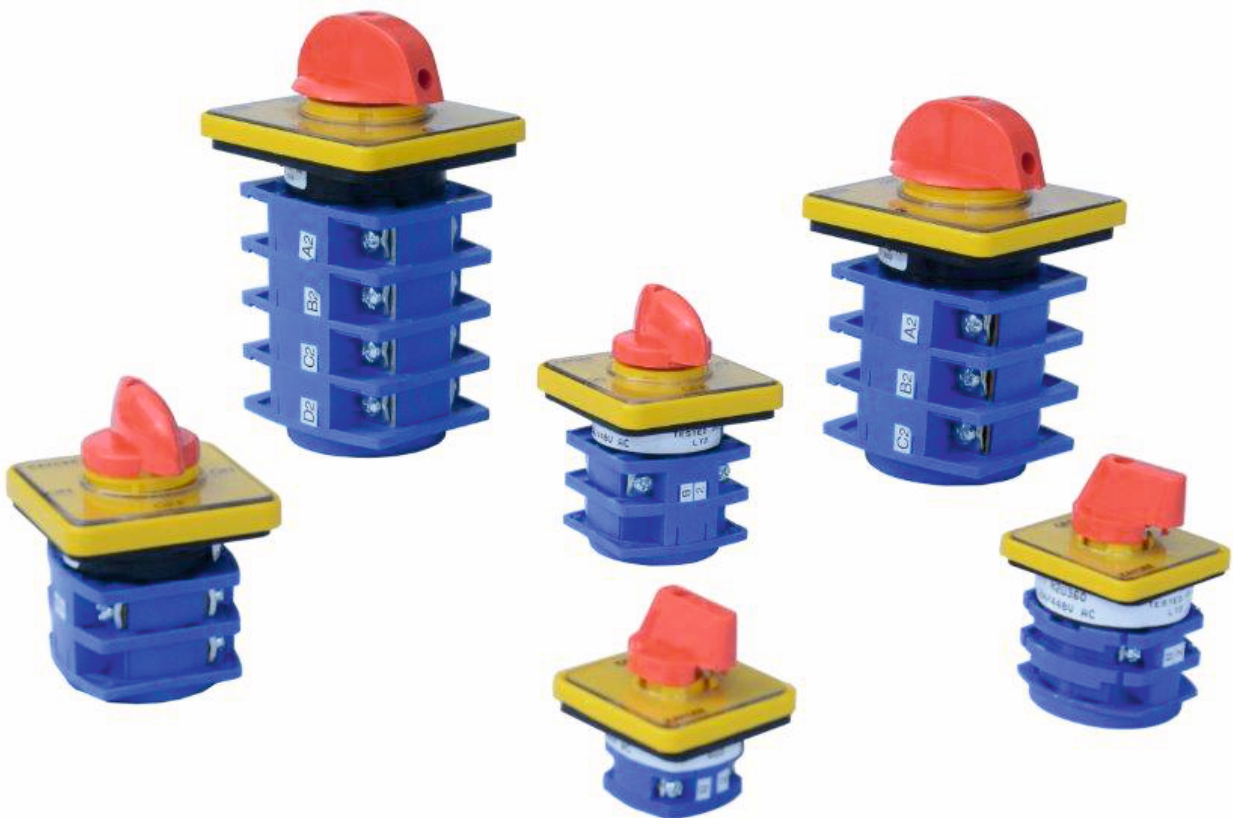


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Kaycee for Quality...



KAYCEE
Brand that set the standards



**New Rotary
Cam Switches**

New Rotary Cam Switches

New Rotary Cam Switches used to perform Make and Break operation in a sequential way by rotating the switch to different positions.

The Cam, which closes and opens the contacts, has rotary movement to multiple positions, thereby multiple Circuit functions can be controlled.

Further, the flexibility in the switch type selection covering various current / voltage ratings and options to select the number of contacts, is added advantage. This ensures that a right switch is chosen for the desired application. CAM Switches thus offer complete design flexibility to assemble complex switching programs, contact ratings and customize all switching applications.

Moreover the Cam Switches are suitable for AC applications.

The basic operating mechanism of Cam Switch is required to suit intended application coupled with Quick-Make, Quick-Make-Quick-Break and Spring Return operating mechanisms are offered to cover wide range requirements.

The Cam Switches offers versatile mounting options in addition to Standard Panel/Flush Mounting and other special features like single hole, padlock, Lock and Key for various needs. The wide option such as type of Knob, Front plate Color and customized marking on the Marking Plate gives compatible to the panel design and thus eliminates the need of the separate label on the panel.

The superior quality of engineering materials and Double Butt contacts with silver bimetal on copper/brass provide stable electrical performance. The high-grade engineering plastics with high tracking index like Nylon, Celcon and glass filled polyamide for the components ensures greater mechanical strength.

Advanced manufacturing processes for Cam Switch components under stringent quality conditions ensures durability, reliability and enhanced life and safe operations for a very long time.

Construction

Cam Switches incorporate silver alloy contacts as per position. The AC Switches are Quick Make-Slow Break.

Contacts	: Double break type AgCdO	Operating temp	: 55°C
Insulation	: Glass filled polyamide with high tracking index	Operating frequency	: 50 to 60Hz
		Humidity	: 95%, Rh 48 hours



- Available from 6 to 20 Amp
- Open terminals for easy accessibility
- Available from 6 to 20 Amp
- Finger Protection on request

AC Duty Rating	
Category	Typical AC Application
AC-1	Non-Inductive or slightly Inductive Loads, Resistance Furnaces
AC-3	Squirrel Cage motors: starting switching off motors during running
AC-15	Control of AC electromagnetic loads
AC-21A	Switching of resistive loads, including moderate overloads (frequent switching)
AC-23-A	Switching of motor loads or other highly inductive loads (frequent switching)

New Rotary Cam Switches

DATA SHEET

TECHNICAL SPECIFICATION

IEC/EN Ratings

AC Rating Code	Unit	6	10	16	25	32	40	63
Rated Operational Voltage (Ue)	V	440	440	690	690	690	690	690
Rated frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Rated Impulse withstand Voltage (Uimp)	Kv	4	4	6	6	6	6	6
Rated Operational current(Ie) AC21/AC1	A	6	10	16	25	32	40	63
Rated Uninterrupted Current (Ith)	A	6	12	20	32	40	50	80
Rated operational power								
AC-23A "3 Ph, 415V"	kW	2.2	3	7.5	11	15	18.5	22
	A	—	—	13	19	26	32	38
Short Circuit Capacity								
Rated fused Short circuit current	kA	3	3	5	10	10	20	20
Fuse Size (Type gG/gM)	A	6	10	16	25	32	40	63
Terminal Cross Section								
Single core or Stranded Wire	mm ²	1.5	1.5	2.5	2.5	4	6	10
	AWG	16	16	14	8	8	8	8
Terminal Cross Section	Metric	M3	M3	M3.5	M4	M4	M5	M5
Terminal Tighting Torque	Nm	0.5	0.5	0.8	1.2	1.2	2	2

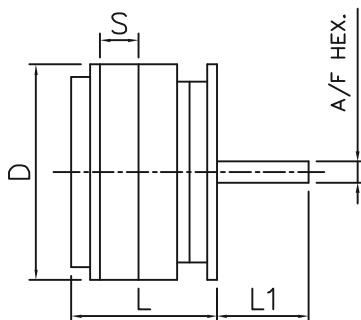
Rated duty— 8 hours: Installation, operation & maintenance
condition — Suitable for environment A (for industrial application)

Switch life under standard operating conditions:

Mechanical : 1,00,000 operations at 300 cycles/hour

Electrical : 10,000 operations at 100% rated duty for 120 cycles/hour

Front Mounting



TYPE		L1	D	A/F	S	W
S6/S10	N2R3940/ N2S3940	21.5	38	6	9.5	18.5
S16	N2U3940	21.5	54	6	12	22
S25/32	N2V3940/ N2W3940	30	65	6	15	23
S40/63	N2X3940/ N2Y3940	32	95	8	21	32

Length L = No of stages of Prog x S + W

ALL DIMENSIONS ARE IN mm

Applications: Switching of main/control and instrumentation circuits motor ON-OFF and other special application circuits.

Isolator Switches

Isolators are ON-OFF Switches to isolate the power to a particular area of operation. The Isolator Switches are offered in a wide range from 1 Pole to 12 Poles. Isolators with spring return upto 4 Poles are available to energise circuits. Isolators with pre-close contacts are used for safety circuits and for connecting neutral and earth lines. Isolators are generally rated for AC1/AC21 while for motor applications they need to be rated for AC3/AC23A duty.

Changeover Switches with OFF

Changeover Switches also called Double Throw Switches are available with OFF and without OFF. These are used to operate two different circuits with different number of inputs and outputs. Changeover Switches without Jumpers (potential free contacts) are used to connect two different circuits from two different sources with two different operating voltages or any other incompatible lines. All contacts by default are Break Before Make (BBM) type to avoid overlapping of different circuits. However, for overlapping changeover contacts. Make Before Break (MBB) type are offered against specific requirements.

Application: Power Supply to Generator Changeover, Auto/Manual Changeover, Standby/Remote Changeover and other special application circuits. Mainly used in Distribution Panels, UPS etc.

Multistep Switches with OFF

Multi-Step Switches also called Pole-Way Switches, are available with OFF and without OFF. Multi-Step Switches connect different circuits to a common supply or vice-versa. Multi-Step Switches with 1 Pole, 2 Poles and 3 Poles are popular for 1-Phase, 2-Phase and 3-Phase supply.

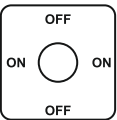
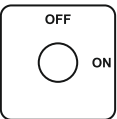
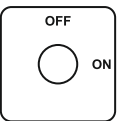
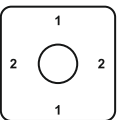
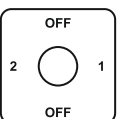
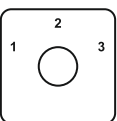
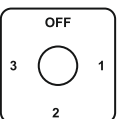
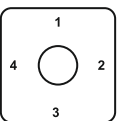
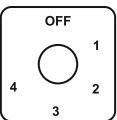
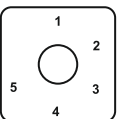
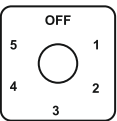
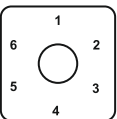
Applications: As Tap Changing Switch for Transformer/Stabiliser and other special application circuits.

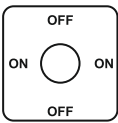
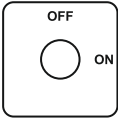
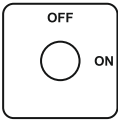
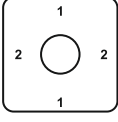
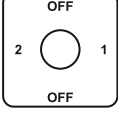
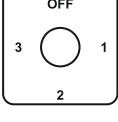
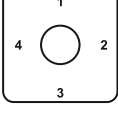
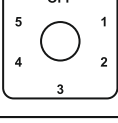
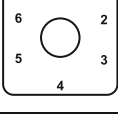
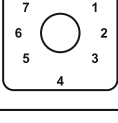
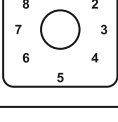


New Rotary Cam Switches

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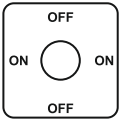
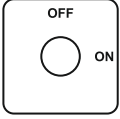
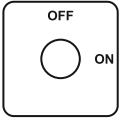
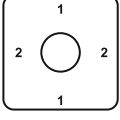
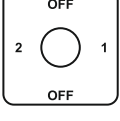
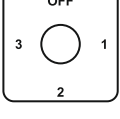
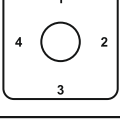
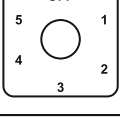
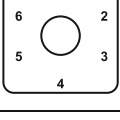
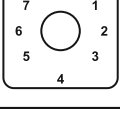
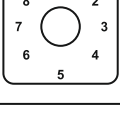
SR. NO	SWITCHING	IP MARKING	POLE	6A CODE
1	OFF - ON, 4 POS. 90 DEG. THROW		1	N1R194O
			2	N1R294O
			3	N2R394O
			4	N2R494O
2	OFF - ON, 2 POS. 90 DEG. THROW		1	N1R192O
			2	N1R292O
			3	N2R392O
			4	N2R492O
3	OFF - ON, 2 POS. 60 DEG. THROW		1	N1R16O
			2	N1R26O
			3	N2R36O
			4	N2R46O
4	TWO WAY NO OFF 4 POS. 90 DEG. THROW		1	N1R19B
			2	N2R29B
			3	N3R39B
			4	N4R49B
5	TWO WAY WITH OFF 4 POS. 90 DEG. THROW		1	N1R19BO
			2	N2R29BO
			3	N3R39BO
			4	N4R49BO
6	THREE WAY NO OFF 3 POS. 60 DEG. THROW		1	N2R16C
			2	N3R26C
			3	N5R36C
			4	N6R46C
7	THREE WAY WITH OFF 4 POS. 90 DEG. THROW		1	N2R19CO
			2	N3R29CO
			3	N5R39CO
			4	N6R49CO
8	FOUR WAY NO OFF 4 POS. 90 DEG. THROW		1	N2R19D
			2	N4R29D
			3	N6R39D
			4	N8R49D
9	FOUR WAY WITH OFF 5 POS. 60 DEG. THROW		1	N3R16DO
			2	N5R26DO
			3	N8R36DO
			4	N10R46DO
10	FIVE WAY NO OFF 5 POS. 60 DEG. THROW		1	N3R16E
			2	N5R26E
			3	N8R36E
11	FIVE WAY WITH OFF, 6 POS. 60 DEG. THROW		1	N3R16EO
			2	N6R26EO
			3	N9R36EO
12	SIX WAY NO OFF 6 POS. 60 DEG. THROW		1	N3R16F
			2	N6R26F
			3	N9R36F

SR. NO	SWITCHING	IP MARKING	POLE	10A CODE	16A CODE	25A CODE
1	OFF -ON , 4 POS. 90 DEG. THROW		1	N1S194O	N1U194O	N1V194O
			2	N1S294O	N1U294O	N1V294O
			3	N2S394O	N2U394O	N2V394O
			4	N2S494O	N2U494O	N2V494O
2	OFF -ON , 2 POS. 90 DEG. THROW		1	N1S192O	N1U192O	N1V192O
			2	N1S292O	N1U292O	N1V292O
			3	N2S392O	N2U392O	N2V392O
			4	N2S492O	N2U492O	N2V492O
3	OFF -ON , 2 POS. 60 DEG. THROW		1	N1S16O	N1U16O	N1V16O
			2	N1S26O	N1U26O	N1V26O
			3	N2S36O	N2U36O	N2V36O
			4	N2S46O	N2U46O	N2V46O
4	TWO WAY NO OFF, 4 POS. 90 DEG. THROW		1	N1S19B	N1U19B	N1V19B
			2	N2S29B	N2U29B	N2V29B
			3	N3S39B	N3U39B	N3V39B
			4	N4S49B	N4U49B	N4V49B
5	TWO WAY WITH OFF, 4 POS. 90 DEG. THROW		1	N1S19BO	N1U19BO	N1V19BO
			2	N2S29BO	N2U29BO	N2V29BO
			3	N3S39BO	N3U39BO	N3V39BO
			4	N4S49BO	N4U49BO	N4V49BO
6	THREE WAY WITH OFF, 4 POS. 90 DEG. THROW		1	N2S19CO	N2U19CO	N2V19CO
			2	N3S29CO	N3U29CO	N3V29CO
			3	N5S39CO	N5U39CO	N5V39CO
			4	N6S49CO	N6U49CO	N6V49CO
7	FOUR WAY NO OFF, 4 POS. 90 DEG. THROW		1	N2S19D	N2U19D	N2V19D
			2	N4S29D	N4U29D	N4V29D
			3	N6S39D	N6U39D	N6V39D
			4	N8S49D	N8U49D	N8V49D
8	FIVE WAY WITH OFF, 6 POS. 60 DEG THROW		1	N3S16EO	N3U16EO	N3V16EO
			2	N6S26EO	N6U26EO	N6V26EO
			3	N9S36EO	N9U36EO	N9V36EO
9	SIX WAY NO OFF 6 POS. 60 DEG. THROW		1	N3S16F	N3U16F	N3V16F
			2	N6S26F	N6U26F	N6V26F
			3	N9S36F	N9U36F	N9V36F
10	SEVEN WAY WITH OFF 8 POS. 45 DEG. THROW		1	N4S14GO	N4U14GO	N4V14GO
			2	N8S24GO	N8U24GO	N8V24GO
			3	N12S34GO	N12U34GO	N12V34GO
11	EIGHT WAY NO OFF 45 DEG. THROW		1	N4S14H	N4U14H	N4V14H
			2	N8S24H	N8U24H	N8V24H
			3	N12S34H	N12U34H	N12V34H

New Rotary Cam Switches

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SR. NO	SWITCHING	IP MARKING	POLE	32A CODE	40A CODE	63A CODE
1	OFF -ON , 4 POS. 90 DEG. THROW		1	N1W194O	N1X194O	N1Y194O
			2	N1W294O	N1X294O	N1Y294O
			3	N2W394O	N2X394O	N2Y394O
			4	N2W494O	N2X494O	N2Y494O
2	OFF -ON , 2 POS. 90 DEG. THROW		1	N1W192O	N1X192O	N1Y192O
			2	N1W292O	N1X292O	N1Y292O
			3	N2W392O	N2X392O	N2Y392O
			4	N2W492O	N2X492O	N2Y492O
3	OFF -ON , 2 POS. 60 DEG. THROW		1	N1W16O	N1X16O	N1Y16O
			2	N1W26O	N1X26O	N1Y26O
			3	N2W36O	N2X36O	N2Y36O
			4	N2W46O	N2X46O	N2Y46O
4	TWO WAY NO OFF, 4 POS. 90 DEG. THROW		1	N1W19B	N1X19B	N1Y19B
			2	N2W29B	N2X29B	N2Y29B
			3	N3W39B	N3X39B	N3Y39B
			4	N4W49B	N4X49B	N4Y49B
5	TWO WAY WITH OFF, 4 POS. 90 DEG. THROW		1	N1W19BO	N1X19BO	N1Y19BO
			2	N2W29BO	N2X29BO	N2Y29BO
			3	N3W39BO	N3X39BO	N3Y39BO
			4	N4W49BO	N4X49BO	N4Y49BO
6	THREE WAY WITH OFF, 4 POS. 90 DEG. THROW		1	N2W19CO	N2X19CO	N2Y19CO
			2	N3W29CO	N3X29CO	N3Y29CO
			3	N5W39CO	N5X39CO	N5Y39CO
			4	N6W49CO	N6X49CO	N6Y49CO
7	FOUR WAY NO OFF, 4 POS. 90 DEG. THROW		1	N2W19D	N2X19D	N2Y19D
			2	N4W29D	N4X29D	N4Y29D
			3	N6W39D	N6X39D	N6Y39D
			4	N8W49D	N8X49D	N8Y49D
8	FIVE WAY WITH OFF, 6 POS. 60 DEG THROW		1	N3W16EO	N3X16EO	N3Y16EO
			2	N6W26EO	N6X26EO	N6Y26EO
			3	N9W36EO	N9X36EO	N9Y36EO
9	SIX WAY NO OFF 6 POS. 60 DEG. THROW		1	N3W16F	N3X16F	N3Y16F
			2	N6W26F	N6X26F	N6Y26F
			3	N9W36F	N9X36F	N9Y36F
10	SEVEN WAY WTH OFF 8 POS. 45 DEG. THROW		1	N4W14GO	N4X14GO	N4Y14GO
			2	N8W24GO	N8X24GO	N8Y24GO
			3	N12W34GO	N12X34GO	N12Y34GO
11	EIGHT WAY NO OFF 45 DEG. THROW		1	N4W14H	N4X14H	N4Y14H
			2	N8W24H	N8X24H	N8Y24H
			3	N12W34H	N12X34H	N12Y34H

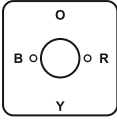
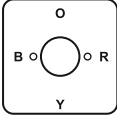
*Note : 80 to 125 Amp Switches can be manufacture on request.

Instrumentation Selector Switches

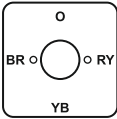
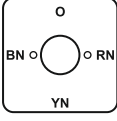
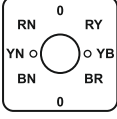
The Instrumentation Selector Switches help to:

- Measure currents in different circuits with a current transformer a single analog ammeter and a switch
- Measure voltages between phases and phase and neutral with one voltmeter and a switch
- Measure voltages and currents of a circuit with one voltmeter one ammeter and a single switch

AMMETER SELECTOR SWITCHES

SR.NO.	SWITCHING	IP MARKING	POLE	CODE	AMP
1	TO READ CURRENT IN EACH PHASE WITH OFF, TO BE USED WITH CTO 90 Deg.		3	N3R39AP	6
			3	N3S39AP	10
2	DIRECT READING CURRENT IN EACH PHASE WITHOUT CT'S. 90 DEG.		3	N5S39AP/SP	10
			3	N5U39AP/SP	16
			3	N5V39AP/SP	25

VOLTMETER SELECTOR SWITCHES

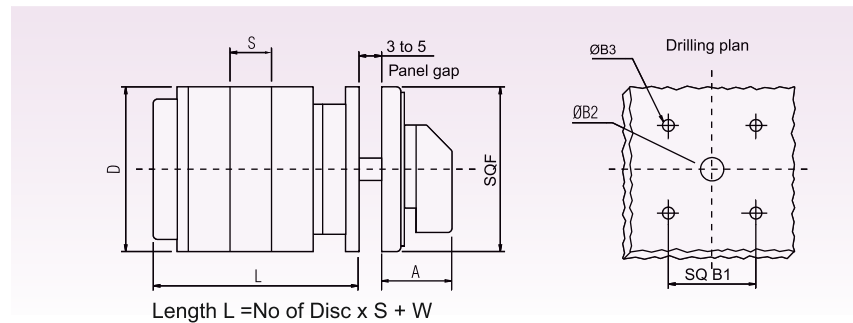
SR.NO.	SWITCHING	IP MARKING	POLE	CODE	AMP
1	TO READ VOTAGE BETWEEN PHASES WITH OFF 90 DEG.		3	N2R39VP	6
			3	N2S39VP	10
2	TO READ VOLTAGE BETWEEN PHASE AND NEUTRAL 90 DEG		3	N3R39VN	6
			3	N3S39VN	10
3	TO READ VOTAGE BETWEEN PHASES AND BETWEEN PHASE & NEUTRAL WITH OFF 45 DEG.		3	N3R44VPN	6
			3	N3S44VPN	10

New Rotary Cam Switches

Mountings



Front Mountings



6/10 Amps mounting 48x48mm only

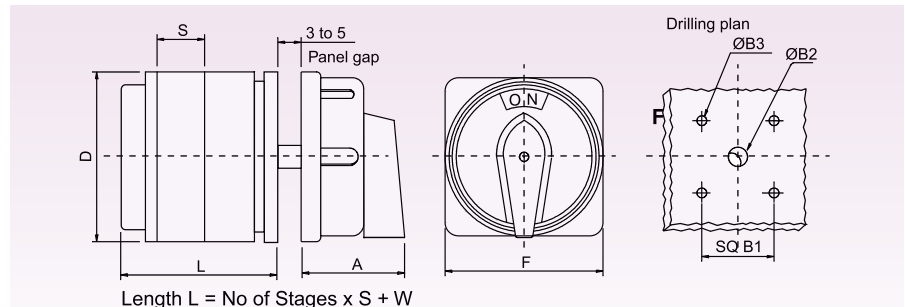
IP55 protection from front

Features:

- Standard 4 Hole front panel mounting
- Knob/Handle operatable
- Suitable for angle of throw 60°, 90° for std switches
- 45° angle or throw on request for Sprint return switches
- Front assembly in 2 different colors, Yellow/Red, Grey/Black

Type	A	B1	B2	B3	D	F	S	W	Max
10 Amp (48x48mm)	28	36	12	4.5	38	48	9.5	18.5	12
16 Amp	28	36	12	4.5	58	48	12	26	21
25 / 32 Amp	35	48	12	5.5	64	64	15	27	18
40 / 63 Amp	44	68	15	5.5	95	88	21	33	12

Pad Lockable Mountings



F-48mm with B1-36mm also available on request for 16,25,32Amps

IP55 protection from front

Features:

- Four hole round padlockable mounting
- Secure with max. 3 padlocks in OFF position prevents switching ON by unauthorised personnel
- Suitable for switches only with 90° switching angle

Type	A	B1	B2	B3	D	F	S	W	Max
16 Amp	44	36	12	4.5	58	65	12	26	6
25/32 Amp	44	36	12	4.5	64	65	15	27	6
40/63 Amp	48	68	15	5.5	95	95	21	33	6

Note : Centre Key Lock & base Mounting on request.



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