KAYCEE

GENERAL INFORMATION

Kaycee Rotary Switches are manufactured in accordance with the latest engineering practices. These are guaranteed for optimum performance and meet the arduous industrial applications. Designed for ON LOAD Switching, Kaycee Rotary Switches are hand operated, assembled on packet principle giving choice of multiposition and multipole circuits.

Kaycee Rotary Switches are used for Making - Breaking and isolation of power circuits and switching of auxiliary circuits. Kaycee Rotary Switches conform to Defence and various relevant specifications. The present range covers standard Rotary Switches up to 600 amps. / 440 volts. AC or AC/DC Switching.

Switches for custom built switching to control complex circuits are supplied against specific requirements.

All designs, dimensions, specifications listed in the catalogue are subject to change without notice.

GUARANTEE

Kaycee Rotary Switches are guaranteed against manufacturing defects and / or faulty workmanship. This guarantee is restricted only to the repair or replacement of defective switches reported on receipt and not misused and / or damaged.

TECHNICAL INFORMATION

Range

Kaycee Rotary Switches are manufactured in the following range :

- 4 - Positions 90° Operation 10,16, 25, 40,63,80,100, 200, 300, 400, 500 & 600 Amperes AC and AC/DC.
- 6 - Positions 60° Operatjon 10,16, and 25 Amperes AC only.
- 8 - Positions 45° Operation 16 Amperes AC only.

Above current ratings are based on voltage of 250 or 440 for AC or AC/DC Switching. Switches for higher voltages are offered against specific applications.

Construction

Kaycee Rotary Switches in open execution incorporate rotary action air break type wiping contacts housed in an assembly of packets moulded from anti - tracking thermosetting plastics. The stationary and moving contacts manufactured from non - ferrous materials, are operated to open or close to achieve desired switching circuits.

The operation of the assembly of contacts with suitable handle, is by actuating mechanism. Large Mechanism is superimposed for switches with multipole circuits.

Mechanism

Kaycee Rotary Switches are manufactured with two type of operating mechanism.

a) Slow Break - Principally for AC switching only.

b) Quick Make Break - Principally for DC switching. Also for AC when easy and quick action is necessary.

c) Spring return Switches for AC and DC Principally for breaker controls are available.

Notes:

1) 100-600 ampere range is supplied with quick make break mechanism only.
2) 6 -8 position range is supplied with slow break mechanism only.
   i.e. Not recommended for DC switching.
3) In quick make break mechanism the making and breaking of contacts is independent of the operator's action. There is no direct connection between the operating handle and the moving contacts.

Specifications

Kaycee Rotary Switches comply with British and Indian Standard Specifications mentioned as:

CUTWAY VIEW OF AC / DC SWITCH

CUTWAY VIEW OF AC SWITCH

Switches upto 63 Amperes
BSEN 60947-3/1992
IS 13947 (Part I and Part III) 1993
RCS156
JSS51208
Switches 100 - 600 Amperes
BSEN 60947-3/1992
IS 13947 (Part I and Part 111) 1993

High Voltage Test

Switches withstand High Voltage test of 2.5 kv for one minute.

Temperature

Switches are suitable for use upto 50°C (max) ambient temperature.

Mounting Arrangements

Kaycee Rotary Switches are supplied with the following standard Mountings :

a) Flush at the back of panel.
b) Flush at the front of panel (base mounting).
c) Universal Mounting - Base and Panel

Blocked Positions

Rotary Switches are also supplied with unwanted positions blocked when specified.

Optional Accessories

A wide range of optional accessories are available. These include : Handles -Indicating Plates - Centre Key Locks - Cubicle Door Interlocks (lockable and non-lockable type)

Special Applications

The versatile Kaycee Rotary Switches offer design flexibility that makes complex switching combinations possible. Offers are made against specific requirements, also available with Spring Return to Neutral (revertable mechanism), terminal shrouds, make before break contacts etc.

Note:

Product improvement being a continuous process at KAYCEE. The product suppplied may differ from that illustrated and described in the literature.

CODING SYSTEM

CODIFICATION:

The Rotary Switches consist of index letters and figures grouped in sequence to indicate the salient features of the switch.

A) Prefix Letters : S - Indicates AC only - slow break quick make mechanism, and absence of 'S' indicates a universal type AC/DC. A quick make and quick break mechanism indicates AC/DC only.

B) The next group of letters - indicates the method of mounting :

RP - Back of panel flush mounting (terminals screws accessible from the back)
BC - Front of panel Base mounting (terminal screws accessible from the front)
X - Universal mounting for 10 - 63 AMP. and 100 AMP Light duty switches.
M - Indicates switch for three phase - 440 volts 16 Amps & above.
C - Universal mounting for 100 Amps & above.

C) The next group of figures :

The first figure indicates the following current rating upto and including 63A. The first figure is followed by Zero for rating of 100 amps and above.

1 -10 or 16 Amps.	2 - 25 Amps.	3 - 40 Amps.
6 - 63 Amps.	8 - 80 Amps.	10 - 100 Amps.
20 - 200 Amps.	30 - 300 Amps	40 - 400 Amps.
50 - 500 Amps.	60 - 600 Amps.	

The following second figure (or a pair of figures) indicates the number of poles in the switch.

The last figure (or pair of figures) indicates the number of discs in the switch barrel assembly.

D) Suffix Letters :

Indicates switching sequence. Note : ON/OFF switches have no suffix letters.

(I) Rotary Switches:

A - 2 way no off.	B - 2 way with off
C - 3 way with off	D - 4 way no off

After the second figure

E - 5 way with off	F - 6 way no off
G - 7 way with off	H - 8 way no off

(II) Motor Control Switches :

BX - 34 - Star delta starting with off
AB - 65 - Two speeds with off (High or Low)
LK - Reversing, or polarity change over no off (forward - reverse)
K - Reversing, or polarity change over with off.

E) Special Codes:

RK - Removable knob
VS - Voltmeter selector switch
MA60 - Ammeter selector switch
PC - Speed control switch
MB - Make before break contact
RM - Revertable mechanism (spring return)
PD - Pad locking

F) Code for Locking Attachment:

(1) Centre Key lock assembly (with different keys or common keys)

L - Lever type lock
T - Tee type lock

Code Ref.	G1	G2	G3	G4
Locking position & key removable	1	2	3	4
Code Ref.	G12	G13	G24	G
Locking position & key removable	1 &2	1&3	2 &4	All

NOTE :

100 to 600 Amp Heavy Duty Switches are supplied with Metalic I. P.

(2) Cubicle door interlock

(a) **Lockable type** (with different keys or common keys)

L - Lever type lock
T - Tee type lock

Code Ref.	HR1	HR2	HR3	HR4
Position in which lock dis - engages	1	2	3	4
Code Ref.	HR12	HR13	HR24	HR
Position in which lock dis - engages	1 & 2	1 & 3	2 & 4	All

(b) Non Lockable Type

L - Lever type handle
B - Ball type handle
C - Capstan type handle
P - Pistol grip type handle
K - Knob type handle.

Code Ref.	SH1	SH2	SH3	SH4
Handle dis-engages in positions.	1	2	3	4
Code Ref.	SH13	SH24		
Handle dis-engages in positions.	1 & 3	2 & 4		

G) Code for indicating plates for 10, 16, 25, 40, 63, 80 & 100 Amperes Light Duty only.

GB - Grey flush plate with acrylic indicating plate and black knob.
YR - Yellow flush plate with acrylic indicating plate and red knob.
GC - Grey flush plate with acrylic indicating plate and chrome plated lockable handle.
G - Grey flush plate with acrylic indicating plate.
Y - Yellow flush plate with acrylic indicating plate.

H) Limiting Mechanism : Switching movement can be limited to two or more positions and blocked between any adjacent position.

(a) Code Ref. - for 4 position switch

TA - Indicates switch limited to 3 operating positions.
TB - Indicates switch limited to 2 operating positions.
TC - Indicates switch limited to between normal positions.

(b) Code Ref. - For 6 position switch

TA - Indicates switch limited to 3 operating positions.
TC - Indicates switch between normal positions.
TD - Indicates switch 4 operating positions.
TE - Indicates switch 5 operating positions.

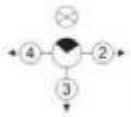
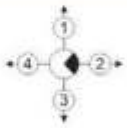
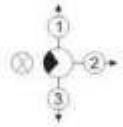
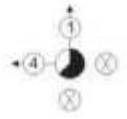
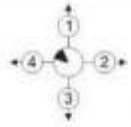
Example : SRP 1817A / MB / TB3 / LG1 / GC

Explanation :

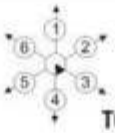
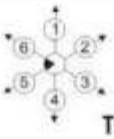
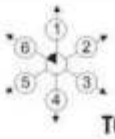
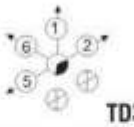
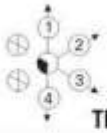
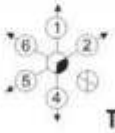
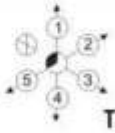
S - indicates AC only	RP - back of panel flush mounting
1 - Rating, 10 amps.	8 - No. of poles
17 - No. of discs	A - Two way without off
MB - Make before break contact	TB3 - Blocked in 3rd & 4th position

LG1 - Lever type lock, lockable in positon 1
GC - Grey flush plate with acrylic indicating plate and chrome plated lockable handle.

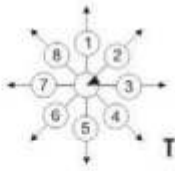
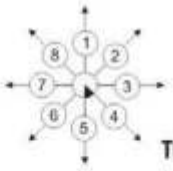
CODING FOR LIMITED POSITION SWITCHES 90° SWITCHING

3 POSITION SWITCH CODE TA	 TA1	 TA2	 TA3	 TA4
2 POSITION SWITCH CODE TB	 TB1	 TB2	 TB3	 TB4
BETWEEN POSITIONS LIMITING MECHANISM CODE TC	 TC1	 TC2	 TC3	 TC4

CODING FOR LIMITED POSITION SWITCHES 60° SWITCHING

3 POSITION SWITCH CODE TA	 TA1	 TA2	 TA3	 TA4	 TA5	 TA6
BETWEEN POSITION LIMITING MECHANISM CODE TC	 TC1	 TC2	 TC3	 TC4	 TC5	 TC6
4 POSITION SWITCH CODE TD	 TD1	 TD2	 TD3	 TD4	 TD5	 TD6
5 POSITION SWITCH CODE TE	 TE1	 TE2	 TE3	 TE4	 TE5	 TE6

CODING FOR LIMITED POSITION SWITCHES 45° SWITCHING

BETWEEN POSITION LIMITING MECHANISM CODE TC	 TC1	 TC2	 TC3	 TC4
	TC5	TC6	TC7	TC8

ROTARY SWITCHES
10-16-25 Amperes 4-Position 90°

Rotary Switches of 10,16 and 25 amperes, 4 position, listed on next page, are with standard switching sequences up to 4 poles. Multi - pole switches are offered on request.

TYPE:
Open execution without any enclosure.

DESIGN:
Air break wiping contacts (Double Break) silver plated, self aligning.

RATING:
10 -16 - 25 amperes for working voltage of 250 or 440 for AC or AC/DC switching.

SPECIFICATIONS:
Rotary Switches conform to IS: 13947 (Part I and Part III) /1993 and also to BSS and Defence Specifications.

MECHANISM :
Slow Break - principally for AC switching only. Quick Make Break - principally for DC switching. Also for AC when easy and quick action is necessary.

MOUNTING:
For Switches flush at the back of panal mounting specify **SRP** or **SRPM** for AC and **RP** or **RPM** for AC/DC. For switches flush at the front of panel mounting specify **SBC** or **SBCM** for AC and **BC** or **BCM** for AC/DC.

OPERATING HANDLE:
Knob (wing type) of black colour / red colour.

OPTIONAL ACCESSORIES:
A selection of accessories and attachments from a wide variety is available, viz. Handles, Detachable Handles Indicating Plates, Centre Key Locks, Cubicle Door Interlocks, Lockable - Non-Lockable, Pad Locking etc. Details available on request.

It is recommended that Switches with large built up should have lever handle & Lockable Switches with large built up should have LG Lock.

PANEL MOUNTING

DC WITH LARGE MECHANISM LOCKABLE TYPE

CENTRE KEY LOCK

DOOR INTERLOCK LOCABLE TYPE

ACCESSORIES

INDICATING PLATE

75 X 75 mm
95 X 95 mm
(CKL)

75 X 75 mm

KNOB

LEVER TYPE HANDLE

LEVER HANDLE

PROTECTOR WITH INDICATING PLATE

75 X 75 mm

BALL HANDLE

REMOVABLE KNOB

SMALL SHROUDING

PAD LOCKING

ROTARY SWITCHES
10-16-25 Amperes 4-Position 90°

STANDARD SWITCHING COMBINATIONS

Suitable for Mounting Flush at the Back of Panel
Single Phase - 250 Volts (1 & 2 Poles)
Three Phase - 440 Volts (3 Poles & above)
(Working Voltage 250 to earth)

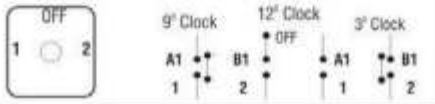
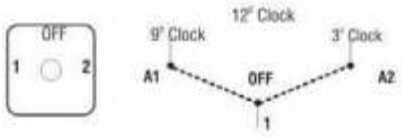
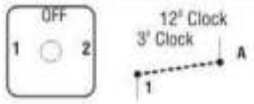
SWITCHING	NO. OF POLES	10 Amp. AC TYPE	10 Amp. AC DIM. Y	16 Amp. AC TYPE	16 Amp. AC DIM. Y	25 Amp. AC TYPE	25 Amp. AC DIM. Y
OFF-ON 	1	----	----	SRP112 SRPM112	16/28	SRP213 SRPM213	22/36
	2	----	----	SRP123 SRPM123	22/36	SRP225 SRPM225	34/52
	3	SRP134	28	SRPM134	44	SRPM237	68
	4	SRP145	34	SRPM145	52	SRPM249	84
TWO WAY NO OFF A 	1	----	----	SRP113A SRPM113A	22/36	SRP213A SRPM213A	22/36
	2	----	----	SRP125A SRPM125A	34/52	SRP225A SRPM225A	34/52
	3	SRP137A	46	SRPM137A	68	SRPM237A	68
	4	SRP149A	58	SRPM149A	84	SRPM249A	84
TWO WAY WITH OFF B 	1	----	----	SRP113B SRPM113B	22/36	SRP215B SRPM215B	34/52
	2	----	----	SRP125B SRPM125B	34/52	SRP229B SRPM229B	58/84
	3	SRP137B	46	SRPM137B	68	SRPM2313B	116
	4	SRP149B	58	SRPM149B	84	----	-
THREE WAY WITH OFF C 	1	----	----	SRP113C SRPM113C	22/36	SRP215C SRPM215C	34/52
	2	----	----	SRP126B SRPM126C	40/60	SRP229C SRPM229C	58/84
	3	SRP139C	58	SRPM139C	84	SRPM2313C	116
	4	SRP1412C	76	SRPM1412C	108	----	-
FOUR WAY NO OFF D 	1	----	----	SRP113D SRPM113D	22/36	SRP215D SRPM215D	34/52
	2	----	----	SRP126D SRPM126D	40/60	SRP229D SRPM229D	58/84
	3	SRP139D	58	SRPM139D	84	SRPM2313D	116
	4	SRP1412D	76	SRPM1412D	108		-

SWITCHING	NO. OF POLES	10 Amp. AC/DC TYPE	10 Amp. AC/DC DIM. Y	16 Amp. AC/DC TYPE	16 Amp. AC/DC DIM. Y	25 Amp. AC/DC TYPE	25 Amp. AC/DC DIM. Y
OFF-ON 	1	----	—	RP112 RPM112	16/28	RP213 RPM213	22/36
	2	----	---	RP123 RPM123	22/36	RP225 RPM225	34/52
	3	RP134	28	RPM134	44	RPM238/LM	76
	4	RP145	34	RPM145	52	RPM2410/LM	92
TWO WAY NO OFF A 	1	----	—	RP113A RPM113A	22/36	Rp213 RPM213	22/36
	2	----	---	RP125A RPM125A	34/52	RP225 RPM225	34/52
	3	RP138A/LM	52	RPM138A/LM	76	RPM238/LM	76
	4	RP1410A/LM	64	RPM1410A/LM	92	RPM2410A/LM	92
TWO WAY WITH OFF B 	1	----	—	RP113B RPM113B	22/36	RP215B RPM215B	34/52
	2	----	---	RP125B RPM125B	34/52	RP2210B/LM RPM2210B/LM	64/92
	3	RP138B/LM	52	RPM138B/LM	76	RPM2410A/LM	124
	4	RP1410B/LM	64	RPM1410B/LM	92	----	-
THREE WAY WITH OFF C 	1	----	—	RP113C RPM113C	22/36	RP215C RPM215C	34/52
	2	----	---	RP126B RPM126C	46/68	RP229C RPM229C	64/92
	3	RP1310C/LM	64	RPM1310C/LM	92	RPM2314C/LM	124
	4	RP1413C/LM	82	RPM1413C/LM	116	----	-
FOUR WAY NO OFF D 	1	----	----	RP113D RPM113D	22/36	RP215D RPM215D	34/52
	2	----	----	RP127D/LM RPM127D/LM	46/68	RP2210D RPM2210D	64/92
	3	RP1310D/LM	64	RPM1310D/LM	92	RPM2314D/LM	124
	4	RP1413D/LM	82	RPM1413D/LM	116	----	-

NOTE : Suffix code 'LM' denotes Large Mechanism (40-63 AMP) • For other dimensions refer separate dimension sheet • Indicating plates square size 75 x 75 mm for standard switches and 95 x 95 mm for switches with Locks-Interlocks - Large Mechanism - Lever Type Handle • Single and Double Pole Switches are rated 250V. If required for 440V - In code add M as shown above. Dimension Y shown correspondingly.

• Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob. If either codes are not specified, then we shall book order with GB.

SPRING RETURN SWITCHES

SWITCHING	NO. OF POLES	RATING	SWITCH TYPE	DIM 'Y'	FOR OTHER DETAILS REFER DRG. NO.
	2	7.5A/230V AC or 5A/230V DC	RP123R/TA3/PRM/LM	41	SW-C-1631
	2	20A/230V AC or 15A/230V DC	RPM323R/TA3/PRM	35	SW-C-2405
	4	20A/230V AC or 15A/230V DC	RPM345R/TA3/PRM	56	SW-C-2405
	4	40A/230V AC or 30A/230V DC	RPM649R/TA3/PRM	97	SW-C-2405
	1	7.5A/230V AC or 5A/230V DC	SRP113B/TA3/PRM/LM	41	SW-C-1631
	2	7.5A/230V AC or 5A/230V DC	SRP125B/TA3/PRM/LM	57	SW-C-1631
	1	20A/230V AC or 15A/230V DC	RPM343B/TA3/PRM	35	SW-C-2405
	2	20A/230V AC or 15A/230V DC	RPM325B/TA3/PRM	56	SW-C-2405
	3	20A/230V AC or 15A/230V DC	RPM337B/TA3/PRM	76	SW-C-2405
	4	20A/230V AC or 15A/230V DC	RPM349B/TA3/PRM	97	SW-C-2405
	1	20A/230V AC or 15A/230V DC	RPM312/TB3/PRM	25	SW-C-2405
	3	40A/230V AC or 30A/230V DC	RPM637/TB3/PRM	76	SW-C-2405

NOTE : Switches with other sequence on request.

MOTOR CONTROL SWITCHES

ON LOAD SWITCHES

as per IS 13947(Part I & Part III) 1993, AC - 23A & 23B

Nominal Current Rating in Amps.	Switch type for T.P. Panel Mounting	Mechanism	H. P. Rating At 415 VOLTS
16*	SRPM134	SBQM	07.5
16	RPM134	QMB	10
25*	SRPM237	SBQM	15
40*	SRPM334	SBQM	20
63*(2X40)	SRPM637	SBQM	30
63*(2X40)	RPM637	QMB	50
100*(2X60)	SC10H311	QMB	60
100	SC1034	QMB	80
200	SC2034	QMB	175
300	SC3034	QMB	250
400	SC4037	QMB	270
500	SC5037	QMB	300
600	SC6037	QMB	300
* Tested at I.I.T. Powai, Mumbai.			

- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

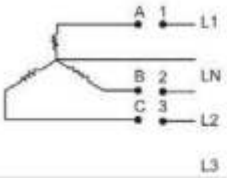
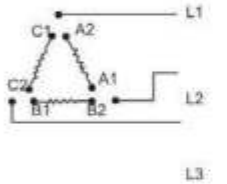
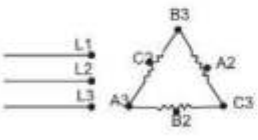
If either codes are not specified, then we shall book order with GB.

SBQM - Slow Break Quick Make Mechanism QMB - Quick Make and Break Mechanism

RECOMMENDED H.P. RATING OF DC ROTARY SWITCHES as per IS 13947(Part I & Part III) 1993, DC - 22A & 22B

Nominal Current Rating in Amps	Switch type for T.P. Panel Mounting	Mechanism	H. P. Rating		
			AT 110V DC	AT250V DC	AT 460V DC
10	RP134	QMB	1.25	2.5	5
16	RPM134	QMB	2	4	8
25	RPM237	QMB	3	6	12
40	RPM334	QMB	5	10	20
63	RPM637	QMB	10	20	40
100	C1034	QMB	17.5	35	70
200	C2034	QMB	30	60	120
300	C3034	QMB	45	90	180
400	C4037	QMB	55	110	220
500	C5037	QMB	75	150	300
600	C6037	QMB	75	150	300

QMB - Quick Make and Break Mechanism

Description	Type	Max. H. P. Rating	Y Dim	Connection Diagram		
Reversing of 3 phase Induction motors	SRP136K SRPM136K SRPM336K	5 7.5 17.5	40 60 66		1 Off 2 Forward 3 Off 4 Reverse	Off 1-A, 2-B.3-C Off 1-C,2-B,3-A
Star Delta Switching with Off position	SRP1310K SRPM1310AK SRPM1310AK	5 7.5 17.5	64 92 103		1Off 2Star 3Delta 4Star	Off L1-A2, L2-B2, L3-C2 A_1-B_1-C_1 L1-A2-C1, L2-B2-A1, L3-C2-B1 L1-A2.L2-B2L3-A2 A_1-B_1-C_1
2 speed Control (Dhalander Switch)	SRP139PC SRPM139PC SRPM339PC	5 7.5 17.5	58 84 97		1 Off 2 Low speed Off 4 High Speed	Off L1-A3, L2-B3, L3-C3 Off L1-B2, L2-A2, L3-C2 (A3-B3-C3)

- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

If either codes are not specified, then we shall book order with GB.

ROTARY SWITCHES
10-16-25 Amperes 6 & 8 Position

Rotary Switches of 10,16 and 25 amperes, 6 and 8 Position listed are with standard switching Sequences up to 3 multipoles.

TYPE:
Open execution without any enclosure.

DESIGN:
Air break wiping contacts (Double Break), silver plated, self aligning.

RATING:
10-16-25 amperes for working voltage of 250 or 440 for AC switching only.

SWITCHING ANGLE:
6 Position - 60°
8 Position -45°

SPECIFICATIONS:
Rotary Switches conform to IS : 13947 (Part I and Part III) /1993 and also to BSS and Defence Specifications.

MECHANISM:
Slow break - Principally for AC switching only.

MOUNTING:
6 Position - Universal
8 Position - Back of Panel

OPERATING HANDLE:
Knob (wing type) of Black colour /Red colour

OPTIONAL ACCESSORIES:
A Selection of accessories and attachments from a wide variety is available, viz. Handle, Detachable Handles Indicating Plates - Details available on request.

INDICATING PLATES
The size of Indicating Plates for 6 position & 8 position in 95mm x 95mm

SWITCHES 6 - POSITION 60° AC ONLY

SWITCHING	NO. OF POLES	16 AMP 250 V	DIM Y	10 AMP 440 V	DIM Y
FIVE WAY WITH OF E 	1	SRPM11E3	36	---	---
	2	SRPM12E6	60	---	---
	3	---	---	SRPM13E9	84
	NO. OF POLES	**25 AMP 250 V**	**DIM Y**	**16 AMP 440**	**DIM Y**
	1	SRPM21E5	52	---	---
	2	SRPM22E10	92	---	---
	3	---	---	SRPM23E15	132
SWITCHING	**NO. OF POLES**	**16 AMP 250V**	**DIM Y**	**10 AMP 440 V**	**DIM Y**
SIX WAY NO OFF F 	1	SRPM11F3	36	---	---
	2	SRPM12F6	60	---	---
	3	---	---	SRPM13F9	84
	NO. OF POLES	**25 AMP 250 V**	**DIM Y**	**16 AMP 440 V**	**DIM Y**
	1	SRPM21F5	52	---	---
	2	SRPM22F10	92	---	---
	3	---	---	SRPM23F15	132

SWITCHES 8 - POSITION 45° AC ONLY

SWITCHING	NO. OF POLES	25 AMP 250 V	DIM Y	16 AMP 440 V	DIM Y
FIVE WAY WITH OF G 	1	SRPM21G4	46	---	---
	2	SRPM22G7	76	---	---
	3	---	---	SRPM23G10	107
EIGHT WAY NO OFF H 	1	SRPM21H4	46	---	---
	2	SRPM22H7	76	---	---
	3	---	---	SRPM23H12	127

- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

If either codes are not specified, then we shall book order with GB.

INSTRUMENT SELECTOR SWITCHES 10 Amperes

Rotary Selector Switches are suitable for instruments like Ammeters, Voltmeters, Power Factor Meters etc. The design enables to indicate by means of a single meter, the currents or the voltages. Ammeter Selector Switches are provided with make - before - break contacts to give security against risk of open circuit of the current transformer secondaries. Listed below are standard switches.

TYPE:
Open execution without any enclosure.

DESIGN:
Air break wiping contacts (Double Break) silver plated, self aligning.

RATING:
10 amperes for working voltage of 250 or 440 for AC circuits only.

MECHANISM:
Slow - Break - principally for AC switching only.

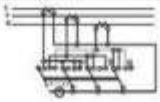
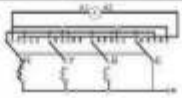
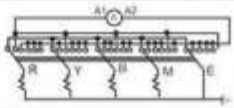
MOUNTING:
For Switches flush at the back of panel mounting specify **SRP** for switches at the front of panel base mounting specify **SBC**

OPERATING HANDLES:
Knob (wing type) of Black / Red colour.

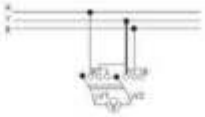
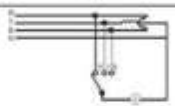
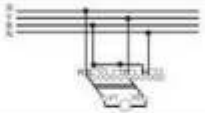
SPECIFICATIONS:
Rotary Switches conform to IS : 13947 -1993 and also Defence Specifications.

OPTIONAL ACCESSORIES:
Indicating Plates for these switches with standard markings as shown below.

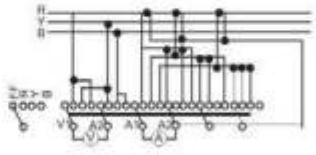
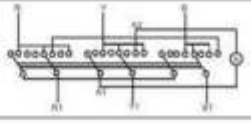
AMMETER SELECTOR

SWITCHING		TYPE	DIM. Y	DIAGRAM
Current in each phase with OFF 4 positions 90° Indicating plate size 75 x 75 mm	OFF B R Y	SRP136MA60	40	
Current in each phase and leackage or out of balance current with OFF 6 positions 60 Indicating plate size 95 x 95 mm	OFF L R B Y OFF	SRP1148MF42/S	52	
Current in each phase and neutral and leackage current with OFF 6 positions 60 Indicating plate size 95 x 95 mm sq.	OFF O/B R N Y B	SRP1210MA43/S	64	

VOLTMETER SELECTOR

Voltage between phase and neutral with OFF 4 position 90° Indicating plate size 75 x 75 mm	OFF BN RY YB	SRP135VS	34	
Voltage between phase and neutral with OFF 4 position 90° Indicating plate size 75 x 75 mm	OFF BN RN YB	SRP115BE18	34	
Voltage between phases and between phase and neutral without OFF 6 positions 60 Indicating plate size 95 x 95 mm	RY BN YB YN RB RN	SRP137SV	46	

SPECIAL SELECTOR SWITCHES

With one switch to indicate, with one Ammeter & one Voltimeter. Simultaneous reading of phase current & Voltage between phases with an OFF position. Indicating plate size 75 x 75 mm	OFF B R Y	SRP1310MB28	64	
4 Pos. Ammeter selector switch Direct in line without 'CT's Indicating plate size 75 x 75 mm	OFF B R Y	SRP1313ZZF12	82	

- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

If either codes are not specified, then we shall book order with GB.

ROTARY SWITCHES
40-63 Amperes 4-Position 90°

Rotary Switches of 40 - 63 amperes, 4 Position, listed on next page, are with standard switching sequences up to 4 poles. Multi - pole switches are offered on request.

TYPE:
Open execution without any enclosure.

DESIGN:
Air break wiping contacts (Double Break) silver plated, self aligning.

RATING:
40 - 63 amperes for working voltage of 250 or 440 for AC or AC/DC switching.

SPECIFICATIONS:
Rotary Switches conform to IS: 13947 (Part I and Part III) /1993 and also to BSS and Defence Specifications.

MECHANISM:
Slow Break - principally for AC switching only. Quick Make Break - principally for DC switching. Also for AC when easy and quick action is necessary.

MOUNTING:
For Switching flush at the back of panel mounting, specify **SRPM** for AC or **RPM** for AC/DC.
For switches at the front of panel base mounting specify, **SBCM** for AC or **BCM** for AC/DC.

OPERATING HANDLE:
Knob (wing type) of Black / Red colour.

OPTIONAL ACCESSORIES:
A selection of accessories and attachments from a wide variety is available, viz. Handles, Detachable Handles, Indicating Plates, Centre Key Locks, Cubicle Door Interlocks, Lockable - Non-Lockable, Pad Locking etc. Details available on Request.

PANEL MOUNTING

BASE MOUNTING

CENTRE KEY LOCK

DOOR INTERLOCK
NON LOCABLE TYPE

ACCESSORIES

INDICATING PLATES

95 X 95 mm
(CKL)

95 X 95 mm

KNOB

LEVER TYPE HANDLE

LEVER HANDLE

BALL HANDLE

PAD LOCKING

LARGE SHROUDING

REMOVABLE KNOB

STANDARD SWITCHING COMBINATIONS

Suitable for Mounting Flush at the Back of Panel
SINGLE PHASE-250 VOLTS (1 & 2 Poles)
THREE PHASE-440 VOLTS (3 Poles & above)
(Working Voltage 250 to earth)

SWITCHING		SWITCHING	40 AMP. AC		63 AMP. AC	
			TYPE	DIM. Y	TYPE	DIM. Y
OFF-ON		1	SRPM312	25	SRPM613	35
		2	SRPM323	35	SRPM625	56
		3	SRPM334	46	SRPM637	76
		4	SRPM345	56	SRPM649	97
TWO WAY NO OFF A		1	SRPM313A	35	SRPM613A	35
		2	SRPM325A	56	SPRM625A	56
		3	SRPM337A	76	SPRM637A	76
		4	SRPM349A	97	SPRM649A	97
TWO WAY WITH OFF B		1	SRPM313B	35	SRPM615B	56
		2	SRPM325B	56	SPRM629B	97
		3	SRPM337B	76	SPRM6313B	137
		4	SRPM349B	97	SPRM6417B	177
THREE WAY WITH OFF C		1	SRPM313C	35	SRPM615C	56
		2	SRPM326C	66	SPRM629C	97
		3	SRPM339C	97	SPRM6313C	137
		4	SRPM3412C	127	SPRM6417C	177
FOUR WAY NO OFF D		1	SRPM313D	35	SRPM615D	56
		2	SRPM326D	66	SPRM629D	97
		3	SRPM339D	97	SPRM6313D	137
		4	SRPM3412D	127	SPRM6417D	177

SWITCHING		SWITCHING	40 AMP. AC/DC		63 AMP. AC/DC	
			TYPE	DIM. Y	TYPE	DIM. Y
OFF-ON		1	RPM312	25	RPM613	35
		2	RPM323	35	RPM625	56
		3	RPM334	46	RPM637	76
		4	RPM345	56	RPM649	97
TWO WAY NO OFF A		1	RPM313A	35	RPM613A	35
		2	RPM325A	56	RPM625A	56
		3	RPM337A	76	RPM637A	76
		4	RPM349A	97	RPM649A	97
TWO WAY WITH OFF B		1	RPM313B	35	RPM615B	56
		2	RPM325B	56	RPM629B	97
		3	RPM337B	76	RPM6313B	137
		4	RPM349B	97	---	---
THREE WAY WITH OFF C		1	RPM313C	35	RPM615C	56
		2	RPM326C	66	RPM629C	97
		3	RPM339C	97	RPM6313C	137
		4	RPM3412C	127	---	---
FOUR WAY NO OFF D		1	RPM313D	35	RPM615D	56
		2	RPM326D	66	RPM629D	97
		3	RPM339D	97	RPM6313D	137
		4	RPM3412D	127	---	---

NOTE : For other dimensions refer separate dimension sheet.
Indicating plates square size 95 x 95 mm for standard switches & also for switches with Locks & Interlocks.

- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

If either codes are not specified, then we shall book order with GB.

ROTARY SWITCHES
100-600 Amperes

Rotary Switches of 100 - 600 amperes, 4 Position, listed overleaf, are with standard switching sequences up to 4 poles. Multi - pole switches are offered on request.

TYPE:

Open execution without any enclosure.

DESIGN:

Air-break wiping contacts (Double Break) silver plated, self aligning.

RATING:

100, 200, 300,400, 500 and 600 amperes for working voltage of 250 or 440 for AC or AC/DC switching.

SPECIFICATIONS:

Rotary Switches conform to ISS : 13947 (Part I and Part III) /1993 for short circuit conditions and also to BSS and Defence Specifications.

MECHANISM:

Quick Make Break for AC as well as DC switching.

MOUNTING:

Universal mounting for Base and panel. Specify **SC** for AC and **C** for DC.

OPERATING HANDLE:

Lever type metallic handle painted black, for switches up to 3 discs. Above 3 discs all switches are provided with Capstan type handle. 100 Amp Light duty switches are supplied with black / red knob.

OPTIONAL ACCESSORIES:

A selection of accessories and attachments from a wide variety is available, viz. Handles, Indicating Plates, Centre Key Locks, Cubicle Door Interlocks, Lockable -Non - Lockable etc. Details available on request.

DOOR INTERLOCK NON-LOCABLE TYPE

DOOR INTERLOCK NON-LOCABLE TYPE

100 AMP. LIGHT DUTY

ACCESSORIES

INDICATING PLATE

178 X 178 mm

LEVER HANDLE

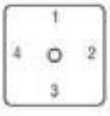
INDICATING PLATE

178 X 178 mm FOR (CKL)

CAPSTAN HANDLE

ROTARY SWITCHES
100 Amperes Light Duty 4-Position 90°

STANDARD SWITCHING COMBINATIONS
Suitable for Mounting Flush at the Back of Panel
SINGLE PHASE-250 VOLTS (1 & 2 Poles)
THREE PHASE-440 VOLTS (3 Poles & above)
(Working Voltage 250 to earth)

SWITCHING		NO. OF POLES	100 AMP. AC TYPE	DIM. Y
OF-ON		1 2 3 4	SC 101H4 SC 102H6 SC 103H11 SC 104H14	46 66 117 147
TWO WAY NO OFF A		1 2 3	SC 101H7A SC102H11A SC103H15A	76 117 157
TWO WAY WITH OFF B		1 2 3	SC 101H7B SC102H11B SC103H15B	76 117 157
THREE WAY WITH OFF C		1 2 3	SC 101H7C SC102H11C SC103H15C	76 117 157
FOUR WAY NO OFF D		1 2 3	SC101H7D SC102H11D SC103H15D	76 117 157

NOTE : For other dimensions refer separate dimension sheet.
Indicating plates square size 95 x 95 mm for standard switches & also for switches with Locks & Interlocks.
- Add GB in code for switches required with Grey F.P. and Black Knob. Alternatively add YR for Yellow F.P. and Red Knob.

If either codes are not specified, then we shall book order with GB.

ROTARY SWITCHES
100-200-300 AMPS. 4-POSION 90°

STANDARD SWITCHING COMBINATIONS

Suitable for Universal Mounting (Base and Panel)

SINGLE / THREE PHASE - 440 VOLTS

(Working Voltage 250 to earth)

SWITCHING		NO. OF POLES	100 AMP. AC TYPE	200 AMP. AC TYPE	300 AMP. AC TYPE	DIM. Y
OFF-ON		1	SC1012	SC2012	SC3012	46
		2	SC1023	SC1023	SC3023	68
		3	SC1034	SC2034	SC3034	91
		4	SC1045	SC2045	SC3045	113
TWO WAY NO OFF A		1	SC1013A	SC2013A	SC3013A	68
		2	SC1025A	SC2025A	SC3025A	113
		3	SC1037A	SC2037A	SC3037A	158
		4	SC1049A	SC2049A	SC3049A	203
TWO WAY WITH OFF B		1	SC1013B	SC2013B	SC3013B	68
		2	SC1025B	SC2025B	SC3025B	113
		3	SC1037B	SC2037B	SC3037B	158
		4	SC1049B	SC2049B	SC3049B	203
THREE WAY WITH OFF C		1	SC1013C	SC2013C	SC3013C	68
		2	SC1025C	SC2025C	SC3025C	113
		3	SC1037C	SC2037C	SC3037C	158
		4	SC1049C	SC2049C	SC3049C	203
FOUR WAY NO OFF D		1	SC1013D	SC2013D	SC3013D	68
		2	SC1025D	SC2025D	SC3025D	113
		3	SC1037D	SC2037D	SC3037D	158
		4	SC1049D	SC2049D	SC3049D	203

SWITCHING		NO. OF POLES	100 AMP. AC/DC TYPE	200 AMP. AC/DC TYPE	300 AMP. AC/DC TYPE	DIM. Y
OFF-ON		1	C1012	C2012	C3012	46
		2	C1023	C1023	C3023	68
		3	C1034	C2034	C3034	91
		4	C1045	C2045	C3045	113
TWO WAY NO OFF A		1	C1013A	C2013A	C3013A	68
		2	C1024A	C2024A	C3024A	113
		3	C1037A	C2037A	C3037A	158
		4	C1049A	C2049A	C3049A	203
TWO WAY WITH OFF B		1	C1013B	C2013B	C3013B	68
		2	C1025B	C2024B	C3024B	113
		3	C1037B	C2037B	C3037B	158
		4	C1049B	C2049B	C3049B	203
THREE WAY WITH OFF C		1	C1013C	C2013C	C3013C	68
		2	C1025C	C2024C	C3024C	113
		3	C1037C	C2037C	C3037C	158
		4	C1049C	C2049C	C3049C	203
FOUR WAY NO OFF D		1	C1013D	C2013D	C3013D	68
		2	C1025D	C2024D	C3024D	113
		3	C1037D	C2037D	C3037D	158
		4	C1049D	C2049D	C3049D	203

NOTE : For other dimensions refer separate dimension sheet. ¦
Indicating plates square size178 x 178 mm of Metal for standard switches & also for switches with Locks & Interlocks.

ROTARY SWITCHES
400-500-600 AMPERS 4-Position 90

STANDARD SWITCHING COMBINATIONS

Suitable for Universal Mounting (Base and Panel)
SINGLE / THREE PHASE - 440 VOLTS
(Working Voltage 250 to earth)

SWITCHING	NO. OF POLES	400 AMP. AC TYPE	500 AMP. AC TYPE	600 AMP. AC TYPE	DIM. Y
OFF-ON 	1 2 3 4	SC4013 SC4025 SC4037 SC4049	SC5013 SC5025 SC5037 SC5049	SC6013 SC6025 SC6037 SC6049	68 113 158 203
TWO WAY NO OFF A 	1 2 3 4	SC4015A SC4029A SC40313A ----	SC5015A SC5029A SC50313A ----	SC6015A SC6029A SC60313A ----	113 203 292 ----
TWO WAY WITH OFF B 	1 2 3 4	SC4015B SC4029B SC40313B SC40413B	SC5015B SC5029B SC50313B SC50413B	SC6015B SC6029B SC60313B SC60413B	113 203 292 292
THREE WAY WITH OFF C 	1 2 3 4	SC4015C SC4029C SC40313C ----	SC5015C SC5029C SC50313C ----	SC6015C SC6029C SC60313C ----	113 203 292 ----
FOUR WAY NO OFF D 	1 2 3 4	SC4015D SC4029D SC40313D ----	SC5015D SC5029D SC50313D ----	SC6015D SC6029D SC60313D ----	113 203 292 ----

SWITCHING	NO. OF POLES	400 AMP. AC/DC TYPE	500 AMP. AC/DC TYPE	600 AMP. AC/DC TYPE	DIM. Y
OFF-ON 	1 2 3 4	C4013 C4025 C4037 C4039	C5013 C5025 C5037 C5049	C6013 C6025 C6037 C6049	68 113 158 203
TWO WAY NO OFF A 	1 2 3 4	C4015A C4029A C4031A ----	C5015A C5029A C50313A ----	C6015A C6029A C60313A ----	113 203 292 ----
TWO WAY WITH OFF B 	1 2 3 4	C4015B C4029B C4031B C40413B	C5015B C5029B C50313B C50413B	C6015B C6029B C60313B C60413B	113 203 292 292
THREE WAY WITH OFF C 	1 2 3 4	C4015C C4029C C40413C ----	C5015D C5029D C50313D ----	C6015D C6029D C60313D ----	113 203 292 ----
FOUR WAY NO OFF D 	1 2 3 4	C4015D C4029D C40413D ----	C5015D C5029D C50313D ----	C6015D C6029D C60313D ----	113 203 292 ----

NOTE : For other dimensions refer separate dimension sheet. ¦
Indicating plates square size178 x 178 mm of Metal for standard switches & also for switches with Locks & Interlocks.

ROTARY SWITCHES 10-16-25 AMP. 4-POSION 90°

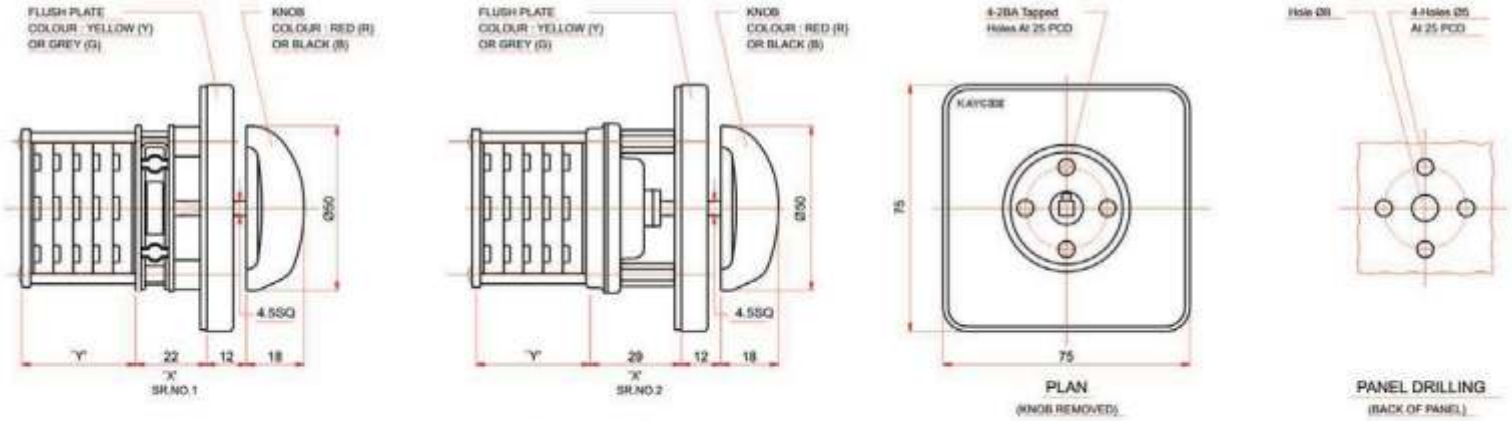
Sr. No.	Type of mounting	AC / DC	Dimension 'X' Max	
			4 Pos. Switch	Switch with Blocked Pos.
1&7	Panel	AC	22	28
2&8	Panel	DC	29	38
3	Base	AC	12	18
4	Base	DC	22	29
5	Small Frame with large AC Mechanism	AC	18	24
6	Small Frame with large DC Mechanism	DC	36	46

ALL DIMENSIONS IN mm UNLESS OTHERWISE STATED

AC

DC

PANEL MOUNTING



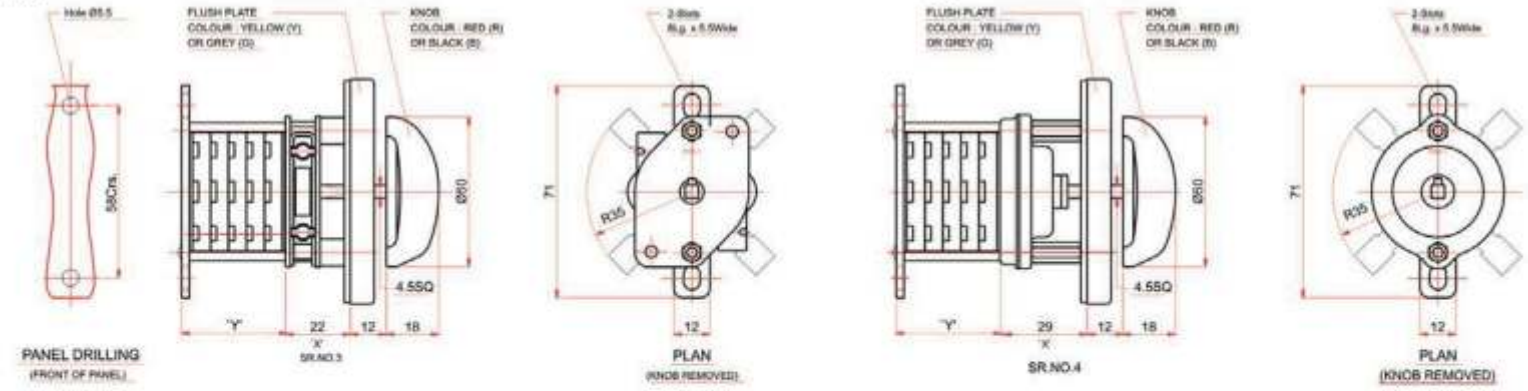
DRG. NO. SW - C. 1603

DRG. NO. SW - C. 1604

BASE MOUNTING

AC

DC



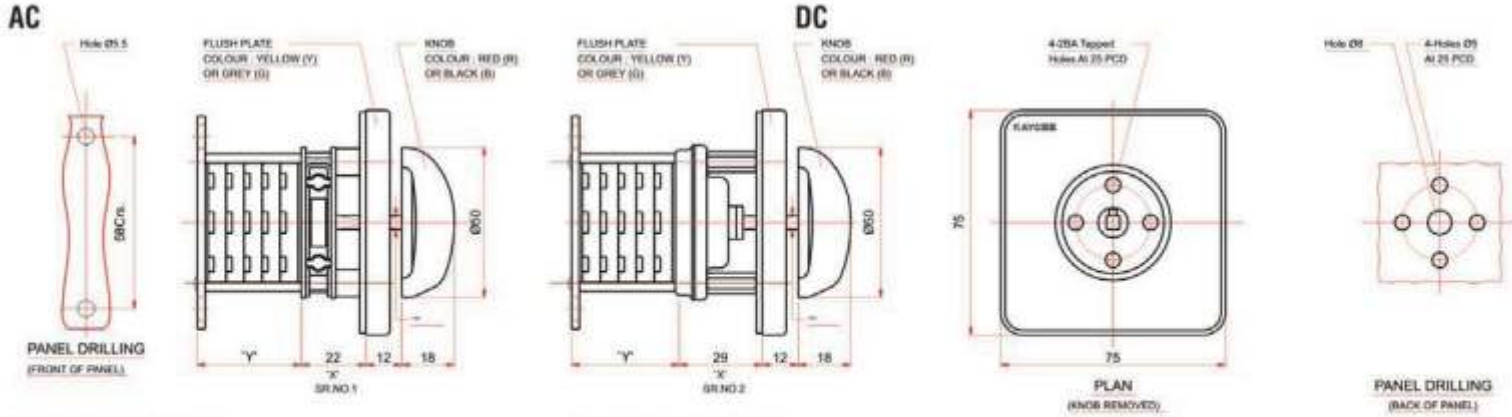
DRG. NO. SW - C. 1641

DRG. NO. SW - C. 1642

SMALL UNIVERSAL MOUNTING

AC

DC



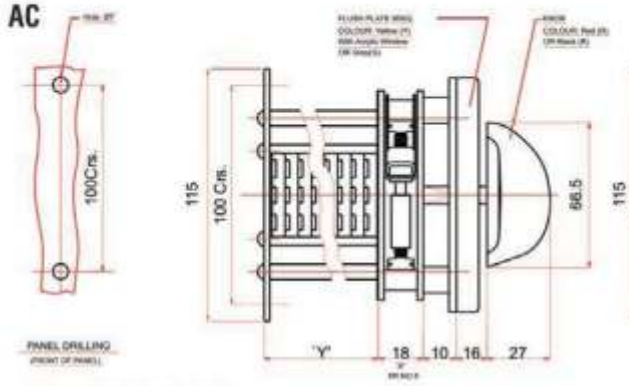
DRG. NO. SW - C. 1646

DRG. NO. SW - C. 1647

SMALL FRAME WITH LARGE MACHANISM (LMX)

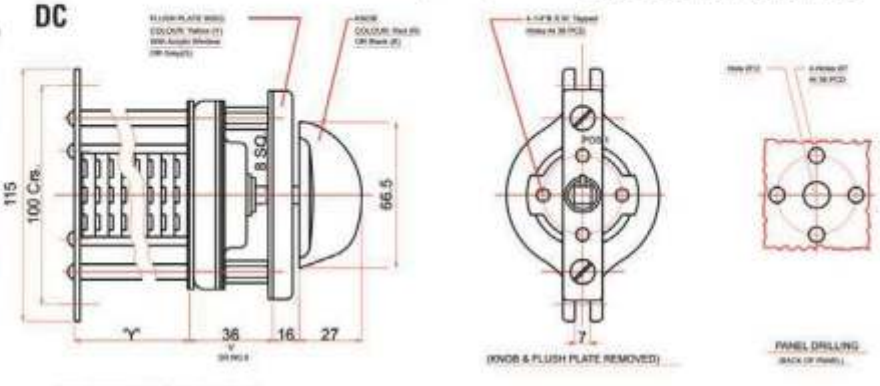
ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED

AC



DRG. NO. SW - C. 1632

DC

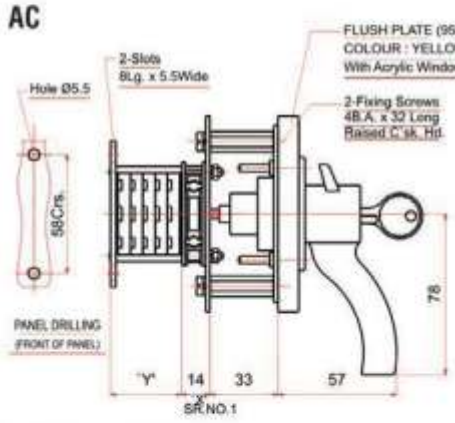


DRG. NO. SW - C. 1633

Sr. No.	Type of mounting	AC / DC	Dimension "X" Max	
			4 Pos. Switch	Switch with Blocked Pos.
1	Panel	AC	14	20
2	Panel	DC	40	53
3	Door Interlock non lockable	AC	14	20
4	- d0 -	DC	38	50
5	Door Interlock Lockable	AC	14	20
6	- do -	DC	38	50

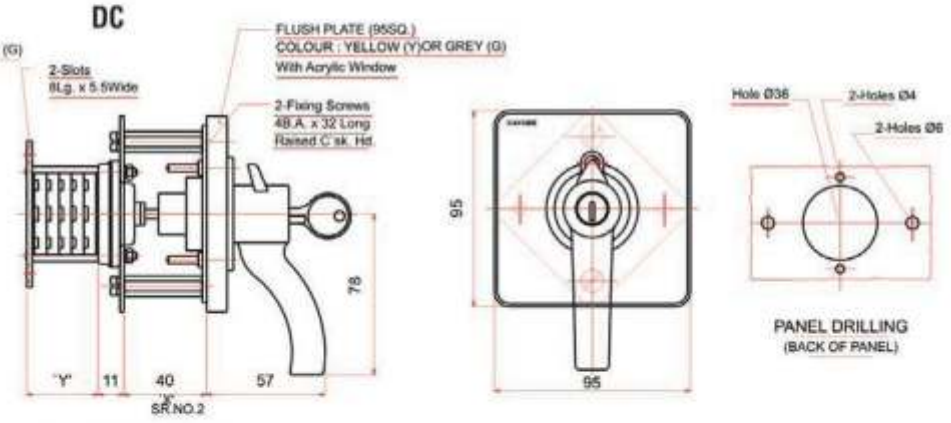
CENTRE KEY LOCK

AC



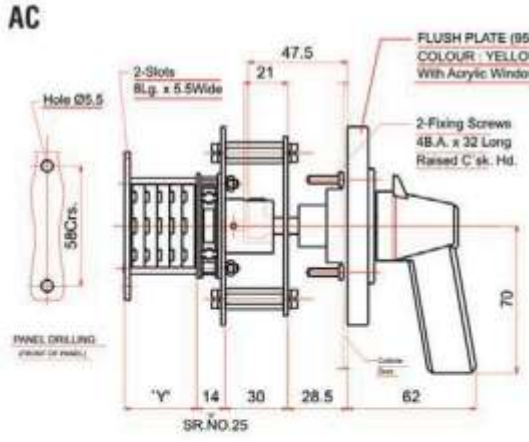
DRG. NO. SW - C. 1633

DC



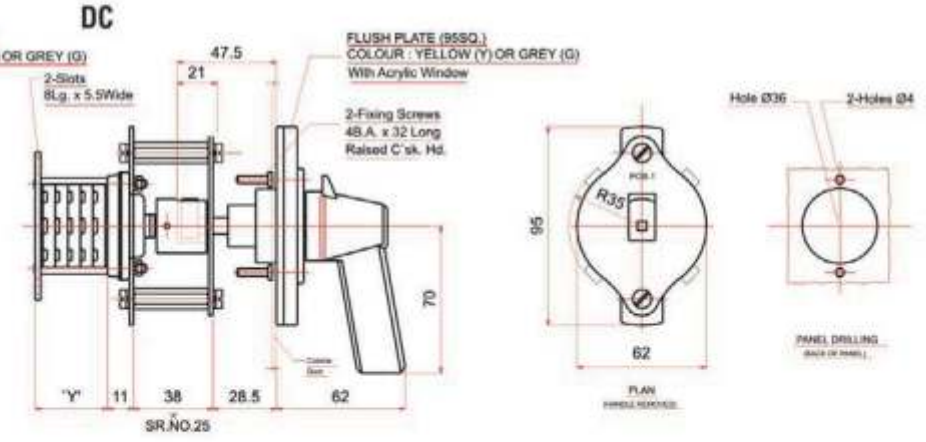
DRG. NO. SW - C. 1635

AC



DRG. NO. SW - C. 1758

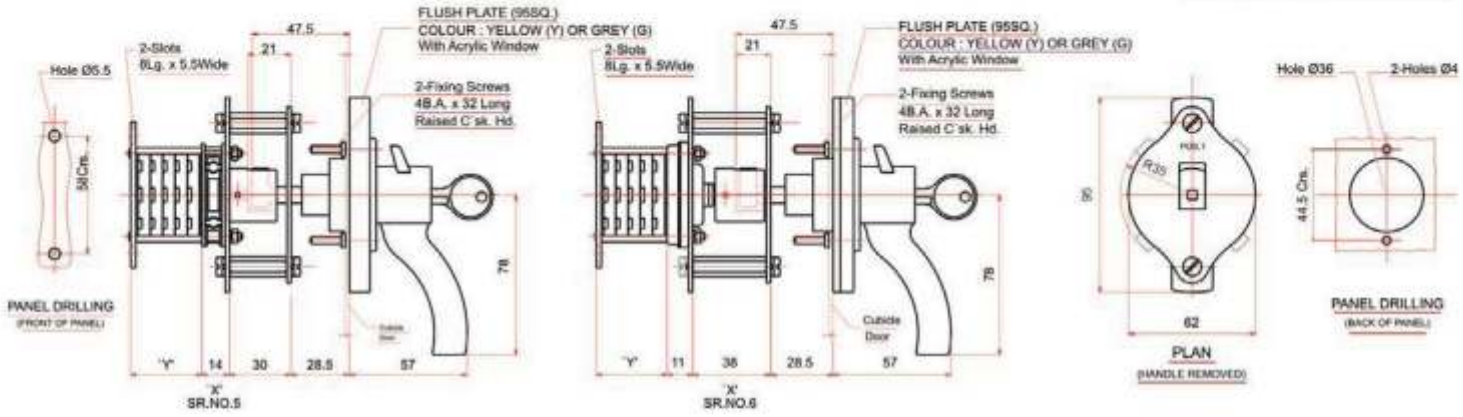
DC



DRG. NO. SW - C. 1759

CUBICLE DOOR INTERLOCK (LOCKABLE)

ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED

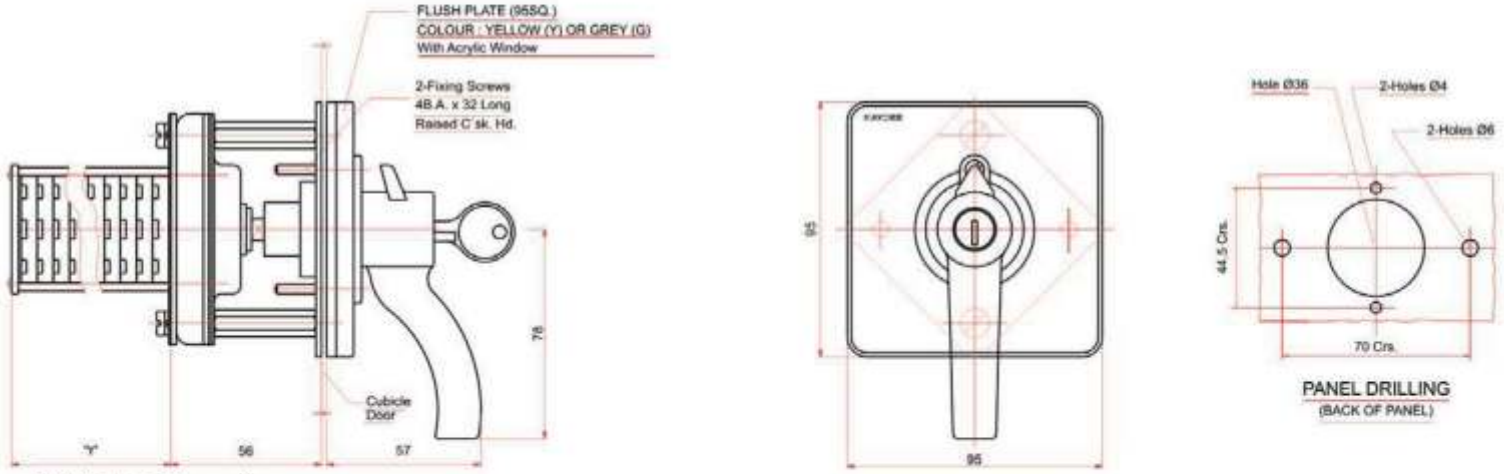


DRG. NO. SW - C. 1765
OLD DRG. NO. SW - C. 1638

DRG. NO. SW - C.1766
OLD DRG. NO. SW - C.1639

Sr. No.	Type of mounting	AC / DC	Dimension "X" Max	
			4 Pos. Switch	Switch with Blocked Pos.
1	Panel Small Frame with Large Mechanism	DC	56	68
2	Panel	AC	12	18
3	Panel	DC	29	38
4	Panel Small Frame with Large Mechanism	DC	38	48

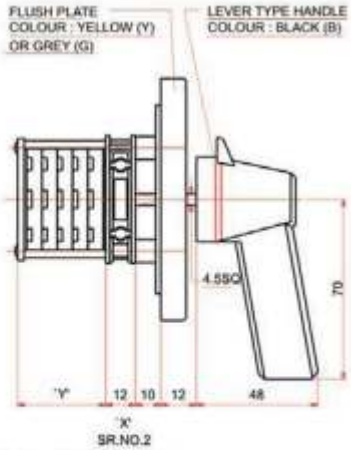
SMALL SWITCH WITH LARGE DC MECHANISM WITH CENTRE KEY LOCK ASSEMBLY WITH LEVER TYPE HANDLE (LG) 'LM' TYPE



DRG. NO. SW - C. 1767
OLD DRG. NO. SW - C. 1640

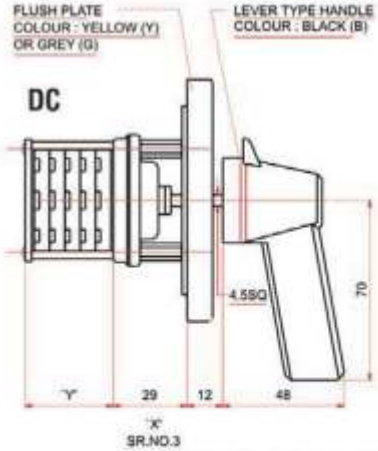
SWITCH WITH LEVER TYPE HANDLE

AC

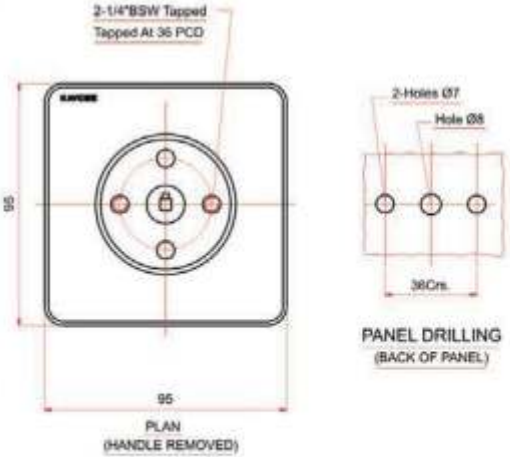


DRG. NO. SW - C. 1758
OLD DRG. NO. SW - C. 1627

DC

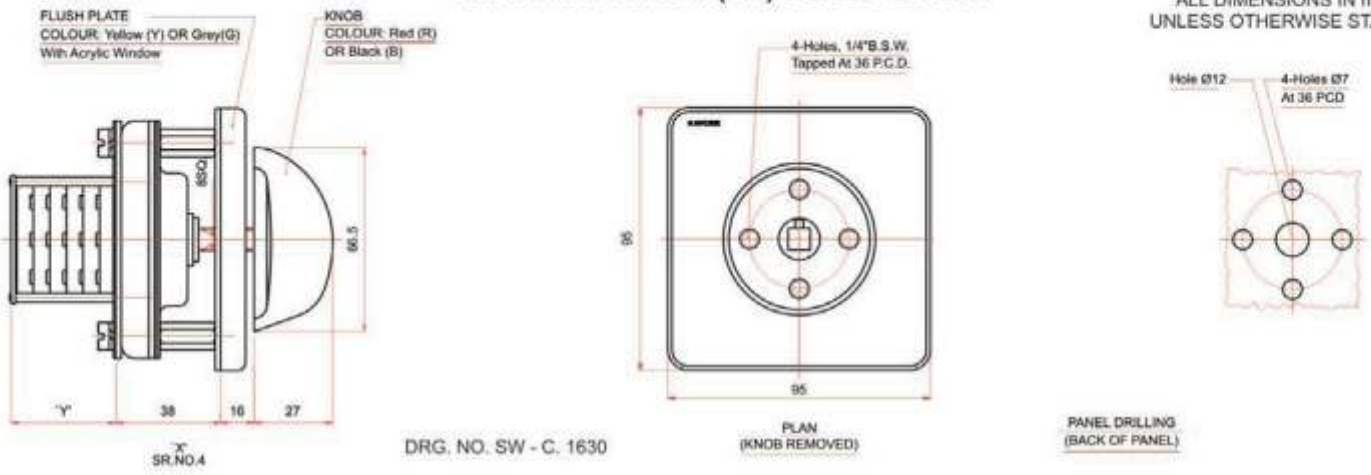


DRG. NO. SW - C. 1759
OLD DRG. NO. SW - C. 1628



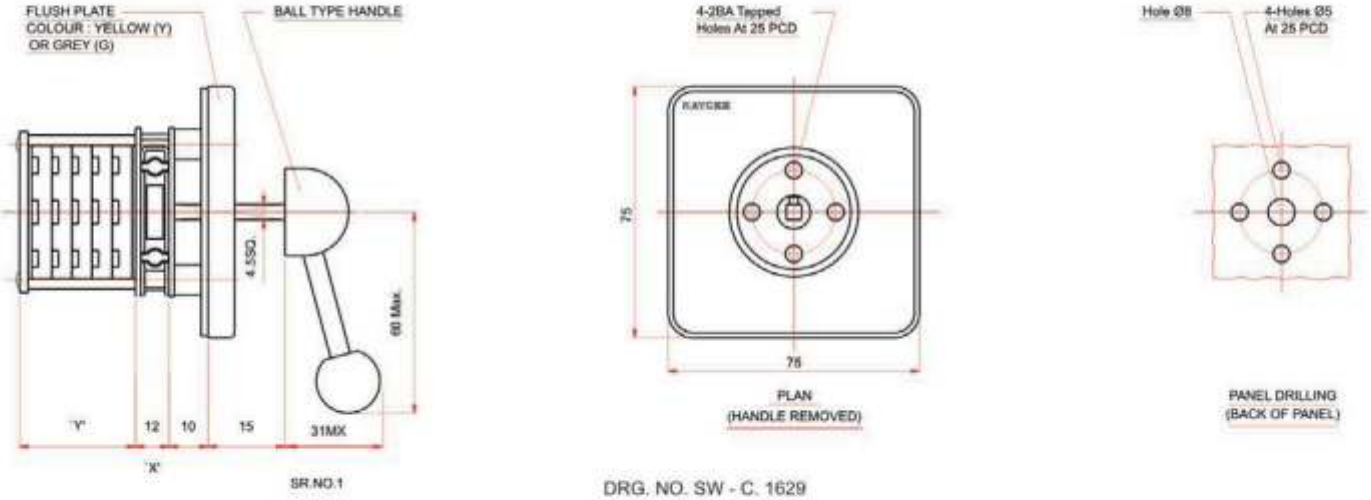
LARGE MECHANISM (LM) FOR DC SWITCH

ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED



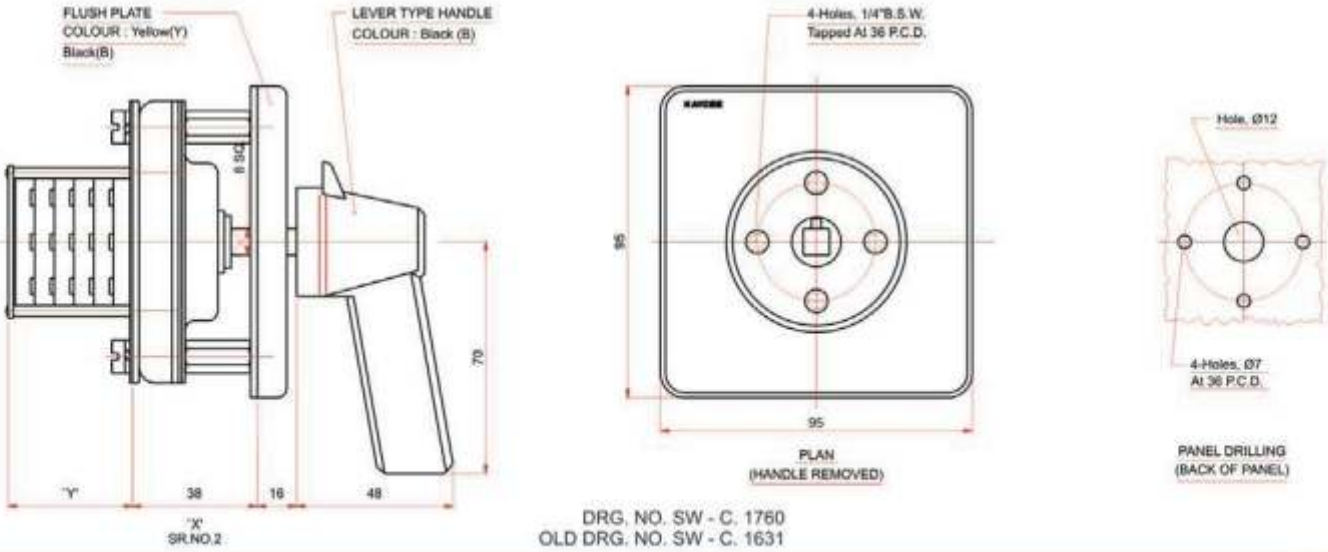
Sr. No.	Type of mounting	AC / DC	Dimension 'X' Max	
			4 Pos. Switch	Switch with Blocked Pos.
1	IPanel	AC	12	18
2	Panel Small Frame with Large Mechanism	DC	38	48
3	Panel Large Switch	DC	38	48

SMALL AC SWITCH WITH BALL TYPE HANDLE



DRG. NO. SW - C. 1629

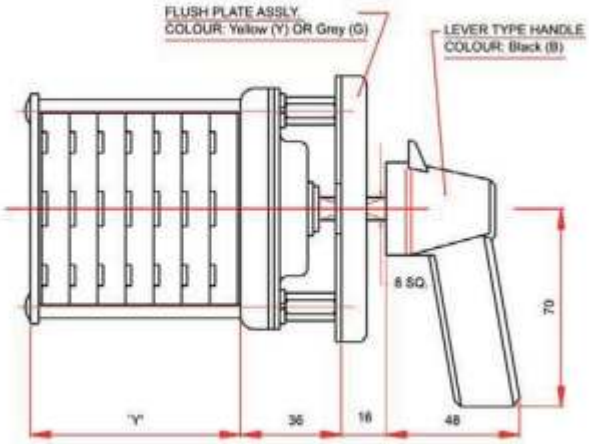
SMALL SWITCH WITH LARGE DC MECHANISM WITH LEVER TYPE HANDLE ('RM' TYPE)



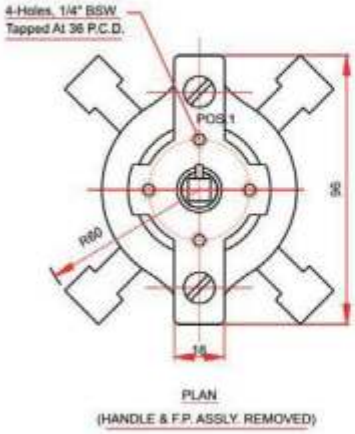
DRG. NO. SW - C. 1760
OLD DRG. NO. SW - C. 1631

LARGE SWITCH WITH LEVER TYPE HANDLE ('RM' TYPE)

ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED



DRG. NO. SW - C. 2405
OLD DRG. NO. SW - C. 2094



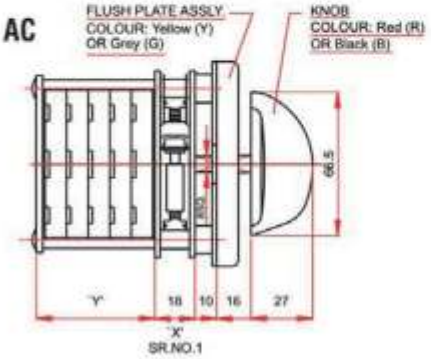
PLAN
(HANDLE & F.P. ASSLY. REMOVED)

PANEL DRILLING

Sr. No.	Type of mounting	AC / DC	Dimension 'X' Max.	
			4 Pos. Switch	Switch with Blocked Pos.
1	Panel	Large AC	18	24
2	Panel	Large DC	36	46
3	Base	Large AC	18	24
4	Base	Large DC	27	36
5	Universal 6 Pos	AC	27	27
6	Universal 8 Pos	AC	18	24

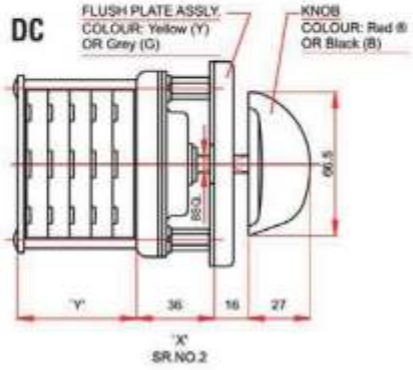
40-63 AMP. 4 POSITION - 90° PANEL MOUNTING

AC



DRG. NO. SW - C. 2403

DC



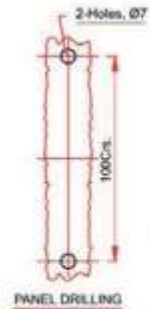
PLAN
(KNOB REMOVED)

PANEL DRILLING
(BACK OF PANEL)

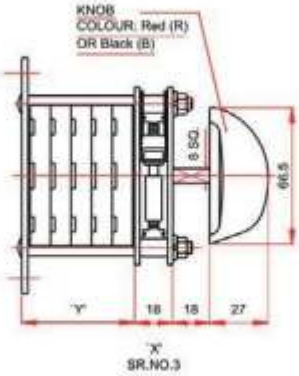
DRG. NO. SW - C. 2402

BASE MOUNTING

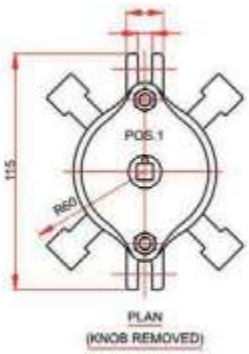
AC



PANEL DRILLING
(FRONT OF PANEL)

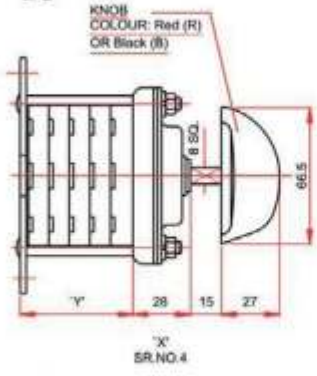


DRG. NO. SW - C. 2415



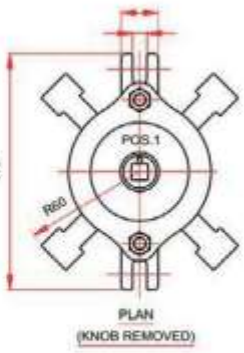
PLAN
(KNOB REMOVED)

DC



SW-C.2416

DRG. NO. SW - C. 2416

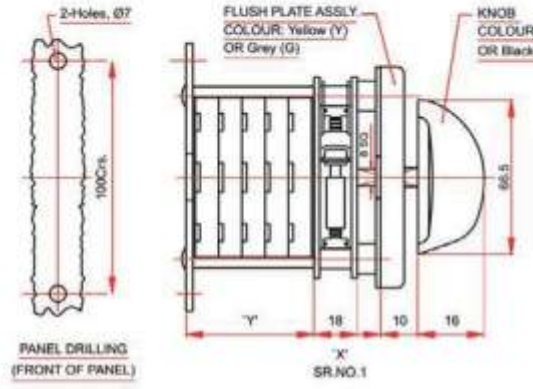


PLAN
(KNOB REMOVED)

LARGE UNIVERSAL MOUNTING

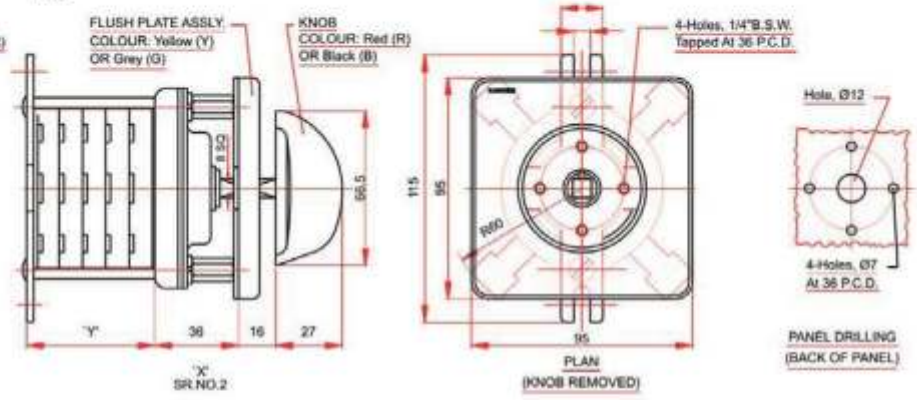
ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED

AC



DRG. NO. SW - C. 2419

DC



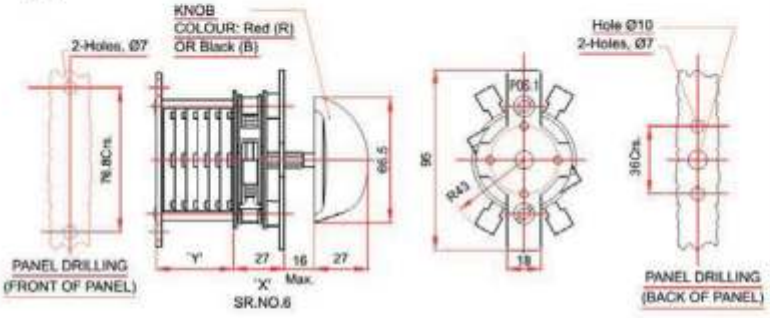
DRG. NO. SW - C. 2420

6-POSITIONS

10-16-25 AMP.

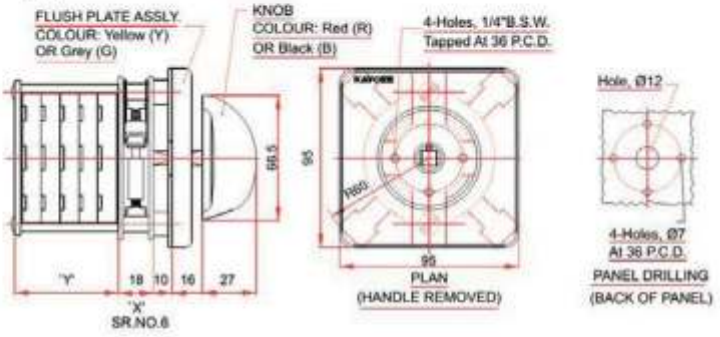
8-POSITIONS

AC



DRG. NO. SW - C. 3281 / 1

AC

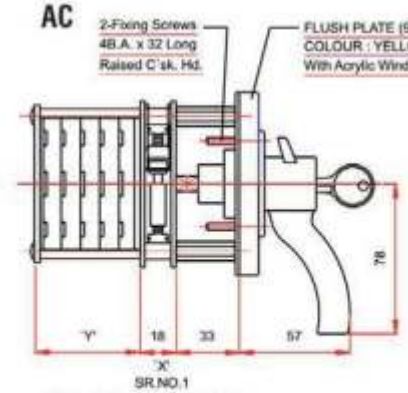


DRG. NO. SW - C. 2403

Sr. No.	Type of mounting	AC / DC	Dimension 'X' Max.	
			4 Pos. Switch	Switch with Blocked Pos.
1	Panel	AC	18	24
2	Panel	DC	40	52
3	Base Door Interlock non lockable	AC	18	24
4	- do -	DC	40	51
5	Base Door Interlock lockable	AC	18	24
6	- do -	DC	40	51

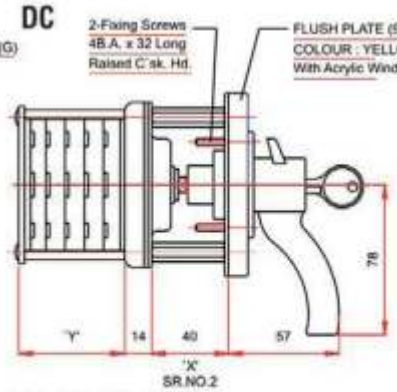
40-63 AMP 4 POSITION 90° CENTRE KEY LOCK

AC

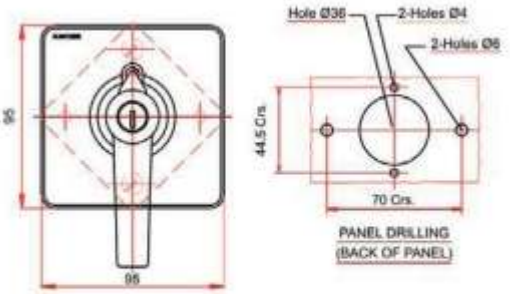


DRG. NO. SW - C. 2388
OLD DRG. NO. SW - C. 2404

DC



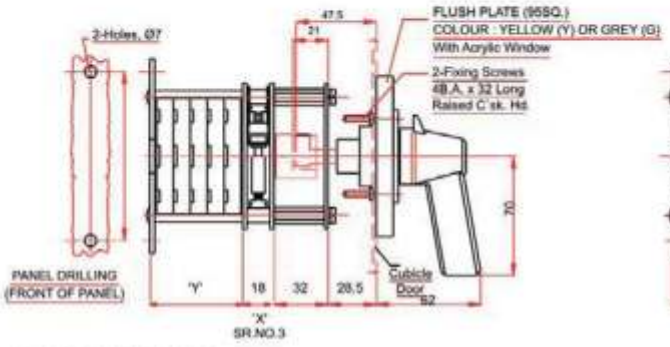
DRG. NO. SW - C. 2389
OLD DRG. NO. SW - C. 2408



CUBICLE DOOR INTERLOCK (NON - LOCKABLE)

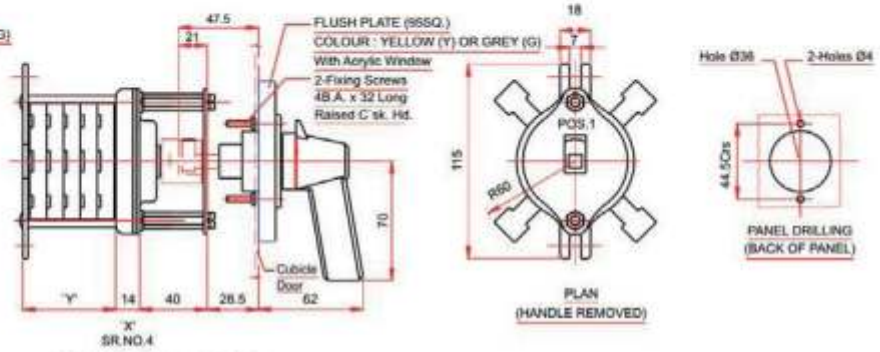
ALL DIMENSIONS IN mm
UNLESS OTHERWISE STATED

AC



DRG. NO. SW - C. 2390
OLD DRG. NO. SW - C. 2413

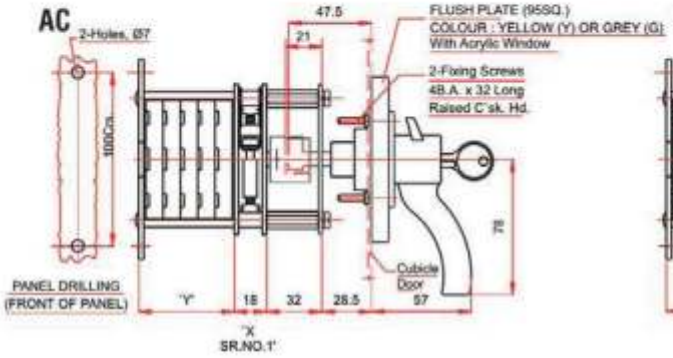
DC



DRG. NO. SW - C. 2391
OLD DRG. NO. SW - C. 2414

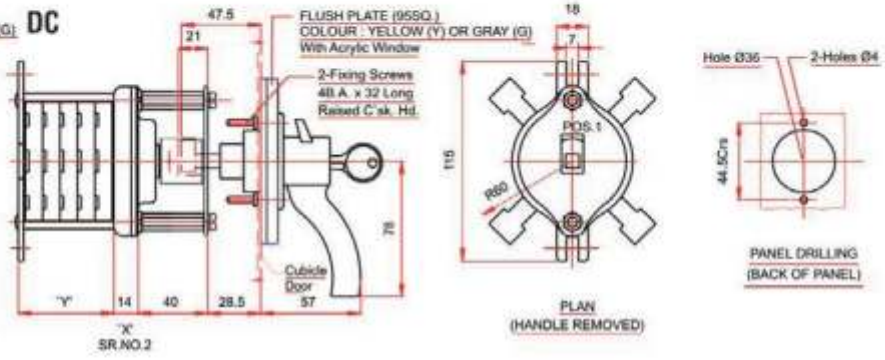
CUBICLE DOOR INTERLOCK (LOCKABLE)

AC



DRG. NO. SW - C. 2392
OLD DRG. NO. SW - C. 2411

DC

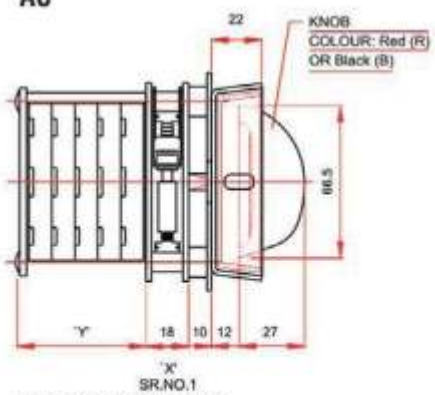


DRG. NO. SW - C. 2393
OLD DRG. NO. SW - C. 2412

Sr. No.	Type of mounting	AC / DC	Dimension 'X' Max.	
			4 Pos. Switch	Switch with Blocked Pos.
1	Panel Pad Locking	AC	18	24
2	Panel Pad Locking	DC	36	46
3	Panel	AC	18	24
4	Panel	DC	36	46
5	Panel Lockable	AC	18	24
6	Panel Lockable	DC	40	52

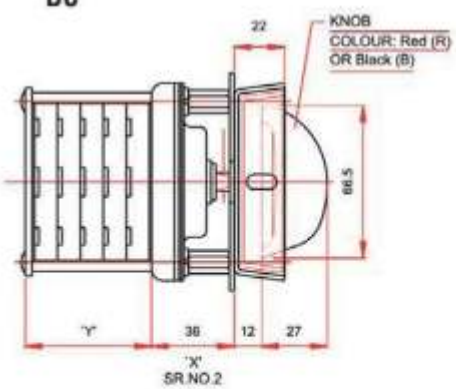
LARGE SWITCH WITH PAD LOCKING ARRANGEMENT

AC

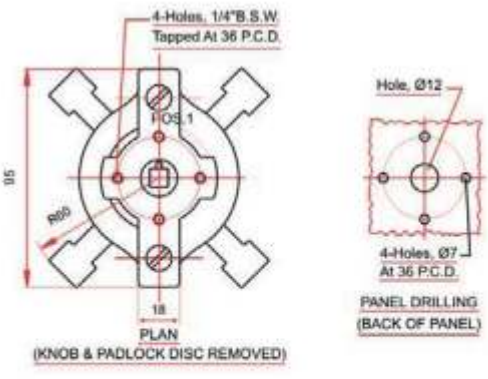


DRG. NO. SW - C. 2029

DC



DRG. NO. SW - C. 2119



KAYCEE

Brand that set the standards

ROTARY CAM SWITCHES

Kaycee for Commitment...

Kaycee for Quality..

CMS GROUP

With Enclosure

Front of Panel Mounting (Base Mounting)

Back of Panel Mounting

KAYCEE
ROTARY CAM SWITCHES

KAYCEE Rotary Cam Switches have been engineered and designed especially to meet the requirements of latest concepts in switching technology demanding miniaturization and sophistication in control engineering. These are guaranteed for optimum performance and meet the most arduous industrial applications. Kaycee Rotary Cam Switches are hand-operated, assembled on packet principle giving choice of multi-position and multi-pole circuits.

Switches for Motor Control application covers a wide range of applications such as switching, controlling and starting of 3 phase AC squirrel cage induction motors.

Kaycee Rotary Cam switches are manufactured in the following range :

10A/440V AC, 50 Hz at 0.8 Power Factor or 6A/250V DC. (Thermal Rating)
12A/380V AC, 50 Hz at 0.8 Power Factor.
25A/250V AC or 10A/440V AC, 50 Hz at 0.8 Power Factor or 25A/250V DC. (Thermal Rating)

Motor Control Switches suitable for squirrel cage induction motors up to 7.5 H.P., 3 phase 415 V AC, 50 Hz. system.

CONSTRUCTION

Kaycee Rotary Cam Switches are assembled on packet principle. Packets are manufactured from selected insulating material which can withstand mechanical and electrical stresses and have excellent electrical properties. Each packet house two independent sets of double break type silver tipped butt contacts which ensures effective making and breaking, giving long and trouble-free service. Various Cams are used depending upon the contact sequence for making and breaking, which is achieved by operating the handle.

SWITCHING ANGLE

The switches are manufactured to suit switching angles like 30^o, 45^o, 60^o and 90^o depending on the number of ways/positions, in case of stayput switches.

However, the switching angle is restricted to 30^o in case of switches having spring return arrangement.

MOUNTING

As a standard, switches are suitable for flush at the back of panel (panel mounting). However, base mounting switches can be supplied on request.

ENCLOSURE

Kaycee Rotary Cam Switches are supplied in open execution. However, 25A switches and Motor Control Switches having disc built up to 4 discs can be supplied in sheet steel enclosures.

SPECIFICATIONS

Kaycee Rotary Cam Switches comply with relevant clauses of IS 4064/1978. Part-I

Kaycee 10A Rotary Cam Switches comply with relevant clauses of IS 6875/1973.

Switches of 6 A & 25 A for DC application tested at VJTI, Bombay for Rated Making and Breaking Capacity and Load Operation Test as per DC-11 Utilisation Category of IS:6875.

Kaycee Motor Control Switches meet the requirements of Utilisation category AC 3 as per IS 4064/1978. Part-II.

TEMPERATURE

The switches are recommended for use up to 55^o C ambient temperature.

HIGH VOLTAGE

All switches withstand a test of 2.5 KV for one minute between phase and earth and between terminals when the switch is off.

LIFE

The mechanical life of 10A and 12A switches is virtually long, i.e. over million operations. Electrical life depends upon the application.
The mechanical life of 25A and Motor Control switches is over 1.2 million operations and the electrical life depends upon the frequency and load conditions.

OPTIONAL ACCESSORIES

A wide range of optional accessories is available.
These include:

Handles

Indicating plates

Centre Key Locks (available for only 25A switches)

Cubicle door interlock - lockable/non-lockable type (available for only 25A switches)

SPECIAL FEATURES

Switches for custom-built switching to control complex circuits are supplied against specific requirements.

Switches with spring return arrangement can be supplied against specific requirements. In case of 10A & 12A switches, spring return arrangement can be provided either on one side/both sides of center position or with the combination of stayput and spring return positions. In case of 25A switches spring return arrangement can be provided either on both sides of center or a combination of stayput and spring return positions.
(For details please refer page No. 12).
Switches with make before break contacts supplied against specific requirements.

GUARANTEE

Kaycee Rotary Cam Switches are guaranteed for one year from the date of purchase against manufacturing defects and/or faulty workmanship. This guarantee is restricted only to the repair or replacement of defective switches and not for misused and/or damaged switches.

DRAWINGS

1. Switching Angles - Please refer Pg. No. 12
2. Typical Schematics Diagram - Please refer Pg. No. 12
3. Mounting Details
   a. 10A and 12A - Please refer Pg. No. 12 & 13
   b. 25A and Motor Control Swtiches - Please refer Pg. No. 12 & 13
4. Dimensional Drawings :
   a. Dimensional drawings of 10A and 12A Cam switches with escutcheon plate - Please refer Pg. No. 13
   b. Dimensional drawing of 25A Cam switches with escutcheon plate with Wing type knob - Please refer Pg. No. 14
   c. Dimensional drawing of 25A Cam switches with escutcheon plate with Ball type handle - Please refer Pg. No. 13
   d. Dimensional drawing of 25A Cam switches with escutcheon plate with Pistol Grip Handle - Please refer Pg. No. 13
5. Dimensional drawing for 25A Cam switches/Motor Control switches with enclosure - Please refer Pg. No. 15
6. Dimensional drawing for 25A Cam switches with Centre Key Lock assembly with 'Tee' type handle - Please refer Pg. No. 14
7. Dimensional drawing for 25A Cam switches with Centre Key Lock assembly with Lever type handle - Please refer Pg. No. 14
8. Dimensional drawing of 25A Cam switches with cubicle door interlock.
   a. Non-lockable type - Please refer Pg. No. 15
   b. Lockable type - Please refer Pg. No. 15

CODING SYSTEM

Kaycee Rotary Cam Switches are identified by a coding system. This consists of index letters and figures grouped in sequence to indicate the salient features of the switch.

A. First group of numerical indicates number of discs in the switch assembly.
B. Next letter indicates the rating of the switch.
   - S - 10A/440V AC.
   - T - 12A/380V AC.
   - V - 25A/250V AC or 10A/440V AC.
   - M - Motor Control Switch suitable for squirrel cage induction Motor upto 7.5 H.P. 3 Ø, 415V AC.

	Rated Thermal Current	Rated Insulation Voltage
TD -	6A	250 V DC
MD -	25A	250 V DC

C. Next group of numerical indicates the number of poles in the switch.
D. Next group of numerical indicates the angle of throw.
   - 3 - 30⁰ 6 - 60⁰
   - 4 - 45⁰ 9 - 90⁰

E. Next group of letters indicate the switching sequence.

(1) ROTARY CAM SWITCHES

O - ON OFF BO - 2 WAY WITH OFF
B - 2 WAY NO OFF C - 3 WAY NO OFF
and so on as indicated in the standard switches table.

(2) MOTOR CONTROL SWITCHES

- K - REVERSING WITH OFF
- SD - STAR/DELTA STARTING WITH OFF
- PC - TWO SPEED POLE CHANGING
- C - SYSTEMS SELECTOR

F. Letter X after above group of letters indicates Base mounting switch while absence of X indicates panel mounting switch.
G. Special Codes:
   - AP - Ammeter Selector Switch
   - VP - Voltmeter Selector Switch
   - MB - Make before Break contacts
   - RM - Spring return mechanism (Revertible Mechanism)
   - E - Switches with enclosure

H. Group of letters written after stroke indicates the accessories, fitted with the switch.
   - P - Pistol Grip Handle
   - W - Wing type knob
   - B - Ball type handle
   - LG - Centre key lock with Lever type handle
   - TG - Centre key lock with 'Tee' type handle
   - LSH - Cubicle door interlock-nonlockable type with Lever type handle
   - LHR - Cubicle door interlock-lockable type with Lever type handle

EXAMPLE

2V23BO/RM/W
Explanation :
- 2 - No. of discs
- V - Rating of 25A/250V AC
- 2 - No. of poles
- 3 - 30 angle of throw
- BO - 2 way with off
- RM - Spring return mechanism (Revertible Mechanism)
- W - Wing type knob

ELECTRICAL RATING : Rated Thermal Current : 6A DC. Rated Insulation Voltage: 250 VDC.
Mechanical Life : Upto 5 Million cycles of operations.
DC Breaking capacity : For 25,000 operations, ratings are given in the table below :

Voltage	No. of contacts in series	Resistive	Inductive 10 M.Sec	Inductive 20 M.Sec	Inductive 40 M.Sec
50	1	6*	5	3.75	1.5
	2	-	-	5.00	3.5
	3	-	-	-	5.00
110	1	0.75	0.6	0.37	0.25
	2	5.00	3.75	2.5	1.25
	3	-	6.00	5.00	2.5
	4	-	-	-	5.00
220	1	0.25	0.12	0.07	0.05
	2	1.25	0.5	0.25	0.12
	3	5.00	2.5	1.0	0.25
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	3.0

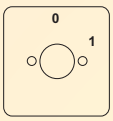
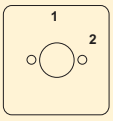
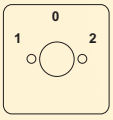
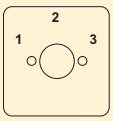
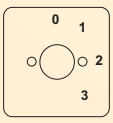
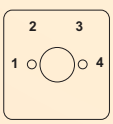
*Tested at VJTI, Bombay for 25,000 operations.

ELECTRICAL RATING : Rated Thermal Current : 25A DC. Rated Insulation Voltage: 250 VDC.
Mechanical Life : Upto 5 Million cycles of operations.
DC Breaking capacity : For 25,000 operations, ratings are given in the table below :

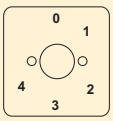
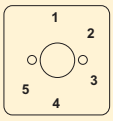
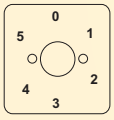
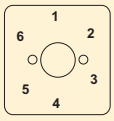
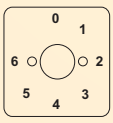
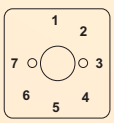
Voltage	No. of contacts in series	Resistive	Inductive 10 M.Sec	Inductive 20 M.Sec	Inductive 40 M.Sec
50	1	20	20	15*	6
	2	-	-	20*	14
	3	-	-	-	20
110	1	3	2.5	1.5*	1
	2	20	15	10*	5
	3	-	20	20*	10
	4	-	-	-	20
220	1	1	0.5	0.3	0.2
	2	5	2	1*	0.5
	3	20	10	4*	1
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	12

*Tested at VJTI, Bombay for 25,000 operations.

STANDARD CAM SWITCHES

CODE	DESCRIPTION	POLES	10 Amps.	6 Amps.		12 Amps.		25 Amps.		
			Type for AC	Type for DC	'Y' Dimn.	Type For AC	'Y' Dimn.	Type for AC	Type for DC	'Y' Dimn.
O	ON OFF	1	1S16O	1TD 16O	33	1T16O	33	1V16O/W	1MD 16O/W	19
	2 Position 60⁰	2	1S26O	1TD 26O	33	1T26O	33	1V26O/W	1MD 26O/W	19
		3	2S36O	2TD 36O	43	2T36O	43	2V36O/W	2MD 36O/W	32
		4	2S46O	2TD 46O	43	2T46O	43	2V46O/W	2MD 46O/W	32
B	2 Way NO OFF	1	1S16B	1TD 16B	33	1T16B	33	1V16B/W	1MD 16B/W	19
	2 Position 60⁰	2	2S26B	2TD 26B	43	2T26B	43	2V26B/W	2MD 26B/W	32
		3	3S36B	3TD 36B	52	3T36B	52	3V36B/W	3MD 36B/W	45
		4	4S46B	4TD 46B	62	4T46B	62	4V46B/W	4MD 46B/W	58
BO	2 Way with OFF	1	1S16BO	1TD 16BO	33	1T16BO	33	1V16BO/W	1MD 16BO/W	19
	3 Position 60⁰	2	2S26BO	2TD 26BO	43	2T26BO	43	2V26BO/W	2MD 26BO/W	32
		3	3S36BO	3TD 36BO	52	3T36BO	52	3V36BO/W	3MD 36BO/W	45
		4	4S46BO	4TD 46BO	62	4T46BO	62	4V46BO/W	4MD 46BO/W	58
C	3 Way NO OFF	1	2S16C	2TD 16C	43	2T16C	43	2V16C/W	2MD 16C/W	32
	3 Position 60⁰	2	3S26C	3TD 26C	52	3T26C	52	3V26C/W	3MD 26C/W	45
		3	5S36C	5TD 36C	71	5T36C	71	5V36C/W	5MD 36C/W	71
		4	6S46C	6TD 46C	81	6T46C	81	6V46C/W	6MD 46C/W	84
CO	3 Way with OFF	1	2S14CO	2TD 14CO	43	2T14CO	43	2V14CO/W	2MD 14CO/W	32
	4 Position 45⁰	2	3S24CO	3TD 24CO	52	3T24CO	52	3V24CO/W	3MD 24CO/W	45
		3	5S34CO	5TD 34CO	71	5T34CO	71	5V34CO/W	5MD 34CO/W	71
		4	6S44CO	6TD 44CO	81	6T44CO	81	6V44CO/W	6MD 44CO/W	84
D	4 Way NO OFF	1	2S16D	2TD 16D	43	2T16D	43	2V16D/W	2MD 16D/W	32
	4 Position 60⁰	2	4S26D	4TD 26D	62	4T26D	62	4V26D/W	4MD 26D/W	58
		3	6S36D	6TD 36D	81	6T36D	81	6V36D/W	6MD 36D/W	84
		4	8S46D	8TD 46D	100	8T46D	100	8V46D/W	8MD 46D/W	110

STANDARD CAM SWITCHES

CODE	DESCRIPTION	POLES	10 Amps.	6 Amps.		12 Amps.		25 Amps.		
			Type for AC	Type for DC	'Y' Dimn.	Type for AC	'Y' Dimn.	Type for AC	Type for DC	'Y' Dimn.
DO	4 Way with OFF 5 Position 60⁰	1	3S16DO	3TD 16DO	52	3T16DO	52	3V16DO/W	3MD 16DO/W	45
		2	5S26DO	5TD 26DO	71	5T26DO	71	5V26DO/W	5MD 26DO/W	71
		3	8S36DO	8TD 36DO	100	8T36DO	100	8V36DO/W	8MD 36DO/W	110
		4	10S46DO	10TD 46DO	119	10T46DO	119	10V46DO/W	10MD 46DO/W	136
E	5 Way NO OFF 5 Position 60⁰	1	3S16E	3TD 16E	52	3T16E	52	3V16E/W	3MD 16E/W	45
		2	5S26E	5TD 26E	71	5T26E	71	5V26E/W	5MD 26E/W	71
		3	8S36E	8TD 36E	100	8T36E	100	8V36E/W	8MD 36E/W	110
		4	10S46E	10TD 46E	119	10T46E	119	10V46E/W	10MD 46E/W	136
EO	5 Way with OFF 6 Position 60⁰	1	3S16EO	3TD 16EO	52	3T6EO	52	3V16EO/W	3MD 16EO/W	45
		2	6S26EO	6TD 26EO	81	6T26EO	81	5V26EO/W	6MD 26EO/W	71
		3	9S36EO	9TD 36EO	109	9T36EO	109	8V36EO/W	9MD 36EO/W	110
		4	12S46EO	12TD 46EO	138	12T46EO	138	12V46EO/W	12MD 46EO/W	162
F	6 Way NO OFF 6 Position 60⁰	1	3S16F	3TD 16F	52	3T16F	52	3V16F/W	3MD 16F/W	45
		2	6S26F	6TD 26F	81	6T26F	81	6V26F/W	6MD 26F/W	84
		3	9S36F	9TD 36F	109	9T36F	109	9V36F/W	9MD 36F/W	123
		4	12S46F	12TD 46F	138	12T46F	138	12V46F/W	12MD 46F/W	162
FO	6 Way with OFF 7 Position 45⁰	1	4S14FO	4TD 14FO	62	4T14FO	62	4V14FO/W	4MD 14FO/W	58
		2	7S24FO	7TD 24FO	90	7T24FO	90	7V24FO/W	7MD 24FO/W	97
		3	11S34FO	11TD 34FO	128	11T34FO	128	11V34FO/W	11MD 34FO/W	149
G	7 Way NO OFF 7 Position 45⁰	1	4S14G	4TD 14G	62	4T14G	62	4V14G/W	4MD 14G/W	58
		2	7S24G	7TD 24G	90	7T24G	90	7V24G/W	7MD 24G/W	97
		3	11S34G	11TD 34G	128	11T34G	128	11V34G/W	11MD 34G/W	149

STANDARD CAM SWITCHES

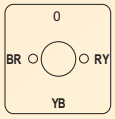
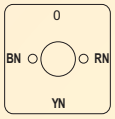
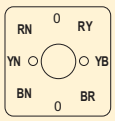
CODE	DESCRIPTION	POLES	10 Amps.	6 Amps.		12 Amps.		25 Amps.		
			Type for AC	Type for DC	'Y' Dimn.	Type for AC	'Y' Dimn.	Type for AC	Type for DC	'Y' Dimn.
GO	7 Way with OFF 8 Position 45⁰	1 2 3	4S14GO 8S24GO 12S34GO	4TD 14GO 8TD 24GO 12TD 34GO	62 100 138	4T14GO 8T24GO 12T34GO	62 100 138	4V14GO/W 8V24GO/W 12V34GO/W	4MD 14GO/W 8MD 24GO/W 12MD 34GO/W	58 110 162
H	8 Way NO OFF 8 Position 45⁰	1 2 3	4S14H 8S24H 12S34H	4TD 14H 8TD 24H 12TD 34H	62 100 138	4T14H 8T24H 12T34H	62 100 138	4V14H/W 8V24H/W 12V34H/W	4MD 14H/W 8MD 24H/W 12MD 34/W	58 110 162
HO	8 Way with OFF 9 Position 30⁰	1 2	5S13HO 10S23HO	5TD 13HO 10TD 23HO	71 119	5T13HO 10T23HO	71 119	5V13HO/W 10V23HO/W	5MD 13HO/W 10MD 23HO/W	71 136
J	9 Way NO OFF 9 Position 30⁰	1 2	5S13J 9S23J	5TD 13J 9TD 23J	71 109	5T13J 9T23J	71 109	5V13J/W 9V23J/W	5MD 13J/W 9MD 23J/W	71 123
JO	9 Way with OFF 10 Position 30⁰	1 2	5S13JO 10S23JO	5TD 13JO 10TD 23JO	71 119	5T13JO 10T23JO	71 119	5V13JO/W 10V23JO/W	5MD 13JO/W 10MD 23JO/W	71 136
K	10 Way NO OFF 10 Position 30⁰	1 2	5S13K 10S23K	5TD 13K 10TD 23K	71 119	5T13K 10T23K	71 119	5V13K/W 10V23K/W	5MD 13K/W 10MD 23K/W	71 136

STANDARD CAM SWITCHES

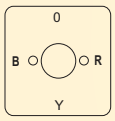
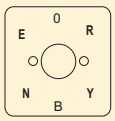
CODE	DESCRIPTION	POLES	10 Amps.	6 Amps.		12 Amps.		25 Amps.		
			Type for AC	Type for DC	'Y' Dimn.	Type for AC	'Y' Dimn.	Type for AC	Type for DC	'Y' Dimn.
KO	10 Way with OFF 11 Position 30⁰	1 2	6S13KO 11S23KO	6TD 13KO 11TD 23KO	81 128	6T13KO 11T23KO	81 128	6V13KO/W 11V23KO/W	6MD 13KO/W 11MD 23KO/W	84 149
L	11 Way NO OFF 11 Position 30⁰	1 2	6S13L 11S23L	6TD 13L 11TD 23L	81 128	6T13L 11T23L	81 128	6V13L/W 11V23L/W	6MD 13L/W 11MD 23L/W	84 149
LO	11 Way with OFF 12 Position 30⁰	1 2	6S13LO 12S23LO	6TD 13LO 12TD 23LO	81 138	6T13LO 12T23LO	81 138	6V13LO/W 12V23LO/W	6MD 13LO/W 12MD 23LO/W	84 162
M	12 Way NO OFF 12 Position 30⁰	1 2	6S13M 12S23M	6TD 13M 12TD 23M	81 138	6T13M 12T23M	81 138	6V13M/W 12V23M/W	6MD 13M/W 12MD 23M/W	84 162
RO	REVERSING with OFF 3 Position 60⁰	2 3	2S26RO 3S36RO	2TD 26RO 3TD 36RO	42 52	2T26RO 3T36RO	42 52			

INSTRUMENTS SWITCHES

VOLTMETER SELECTOR

Code	Description	10 Amps		12 Amps	
		Type	'Y' Dimn.	Type	'Y' Dimn.
VP	 Voltage between phases with OFF 4 Position 90⁰	3S39VP	52	3T39VP	52
VN	 Voltage between phases and Neutral with OFF 4 Position 90⁰	3S49VN	52	3T49VN	52
VPN	 Voltage between phases and each Phase and Neutral with OFF 8 Position 45⁰	4S44VPN	62	4T44VPN	62

AMMETER SELECTOR

AP	 Current in each phase with OFF 4 Position 90⁰	4S39AP	62	4T39AP	62
APN	 Current in each phase neutral and leakage with OFF 3 Position 60⁰	6S56APN	81	6T56APN	81

MOTOR CONTROL SWITCHES

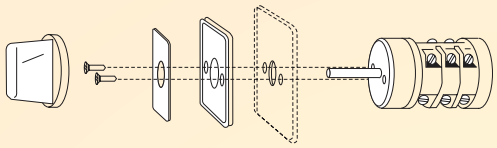
	Application	Type	Indicating Plate Marking	No. of Position	Angle of throw	No. Of Packets	'Y' Dimn.
1.	ON OFF	2M6OB	0-1	2	60⁰	2	32
2.	Reversing	3M6KB	1-0-1	3	60⁰	3	45
3.	Star / Delta	4M6SDB	0-●-◔-	3	60⁰	4	58
4.	Two Speed Pole Changing						
	a. Separate Windings	3M6PCB	0-1-2	3	60⁰	3	45
	b. Dahalander Windings	4M6PCB	0-1-2	3	60⁰	4	58
	c. Reversing	7M4PCKB	2-1-0-1-2	5	45⁰	7	97
5.	System Selector	3M6CB	1-0-2	3	60⁰	3	45

Motor Control Switches having disc built-up upto 4 disc can be supplied in sheet steel enclosure.

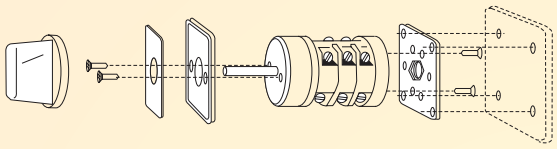
10-12 Amp.

MOUNTING DETAILS (EXPLODED VIEW)

PANEL MOUNTING



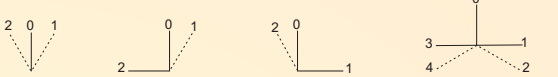
BASE MOUNTING



SWITCHING ANGLES OF SPRING RETURN

Angle of Throw Stayput Position 90°
Spring Return Position 30°

10-12-25 A SWITCHES



Spring Return to 0 | Stayput 0-2 Spring Return 1-0 | Stayput 0-1 Spring Return 2-0 | Stayput 0-1, 0-3 Spring Return 2-1,4-3

10-12 A SWITCHES

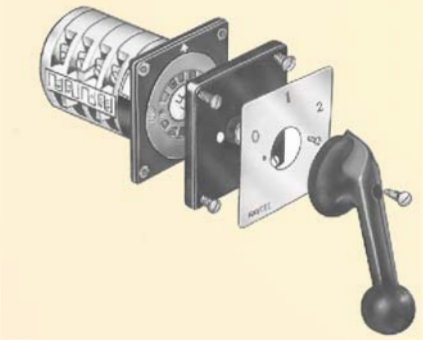
Spring Return 0-1

Note : 10-12 Amp cam switches with spring return can be offered up to 3 packets.

25 Amp

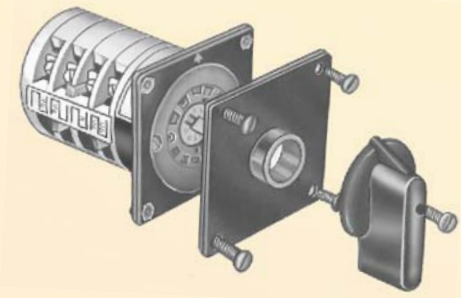
1) Handle

The switch is supplied with a choice of two handles – Wing type and Ball type – (as illustrated), which has a predetermined position with respect to the spindle. Fix the handle by means of a screw provided with the switch.



2) Switch Mounting with indicating Plate

The switch is provided with – 4-M4 C'Sunk Head Screws – Escutcheon Plate – Indicating Plate – 2-6BA Screws Handle. Mount the switch from the back of the panel, and escutcheon plate from the front of the panel with 4-M4 C'sunk head screws. Fix the indicating plate over the escutcheon plate with 2-6BA screws and replace the handle as shown.

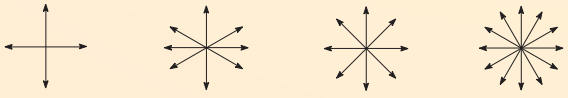


3) Switch Mounting without Indicating Plate

The switch is provided with – 4-M4 C'sunk Head Screws Bearing Plate Handle. Mount the switch and bearing plate from the back of the panel with 4-M4 C'sunk head screws and replace the handle from the front as shown.

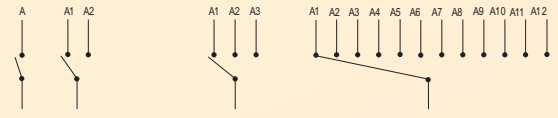
10-12-25 Amp

SWITCHING ANGLES



9 = 90° | 6 = 60° | 4 = 45° | 3 = 30°

TYPICAL SCHEMETIC DIAGRAMS (SINGLE POLE)



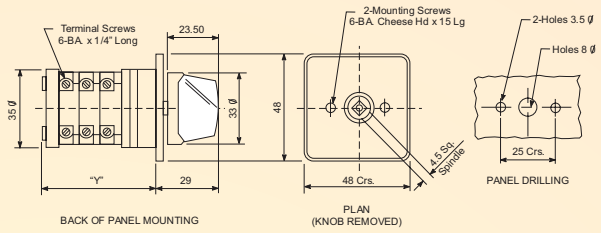
ON-OFF TWO WAY | THREE WAY.....TO ..... TWELVE WAYS

DIMENSION

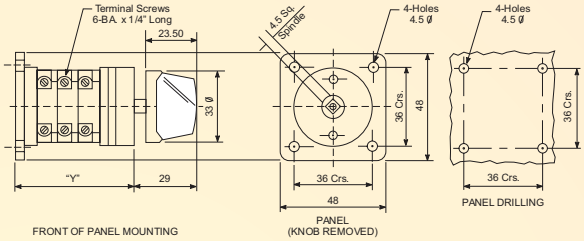
(All in mm.)

10 Amp. Cam Switch

No. OF DISCS	DIM "Y"
1	33
2	43
3	52
4	62
5	71
6	81
7	90
8	100
9	109
10	119
11	128
12	138



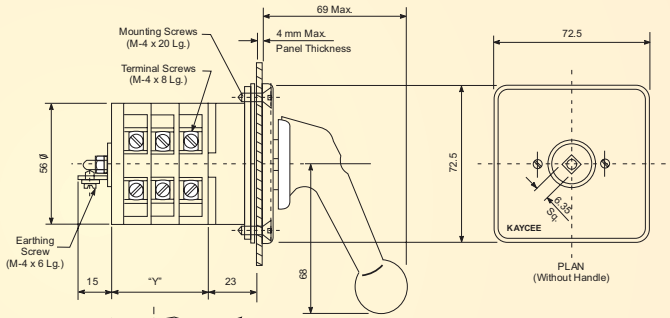
No. OF DISCS	DIM "Y"
1	36
2	46
3	55
4	65
5	74
6	84
7	93
8	103
9	112
10	122
11	131
12	141

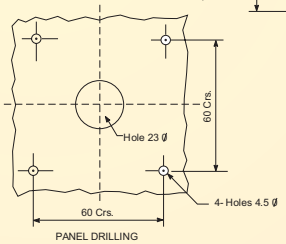


GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 11037/2

25 Amp. Cam Switch With Escutchean Plate With Ball Type Handle



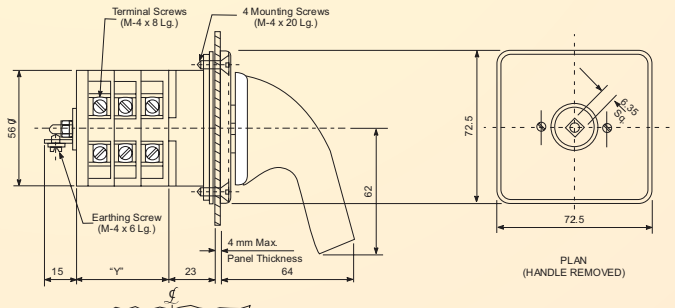


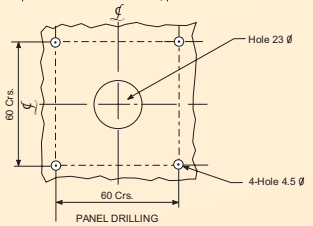
No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10066/1

25 Amp. Cam Switch With Escutchean Plate With Pistol Grip Type Handle





No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

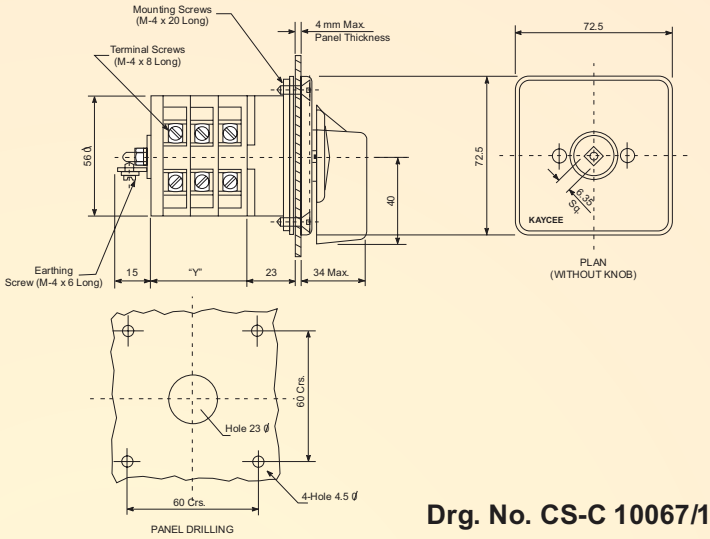
GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10105

DIMENSION

(All in min.)

25 Amp. Cam Switch With Escutchean Plate With Wing Type Knob

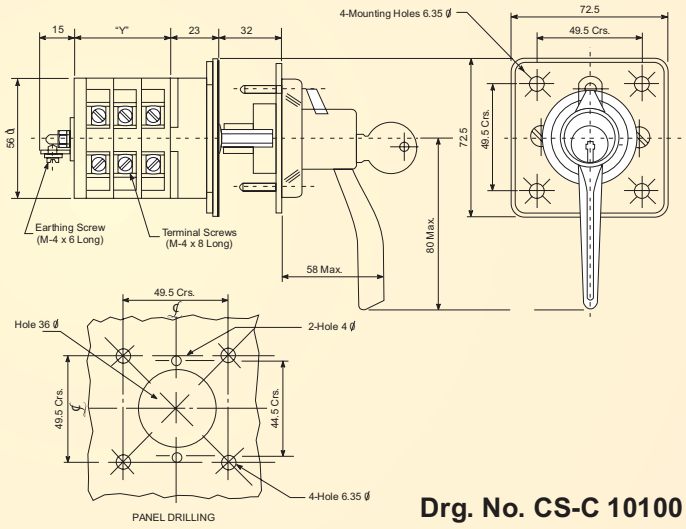


No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10067/1

25 Amp. Cam Switch Centre Key Lock Assembly With Lever Type Handle ('LG' Type)

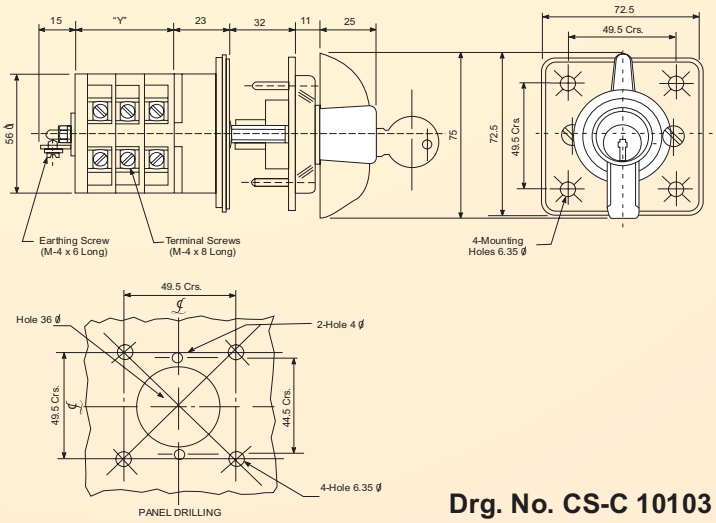


No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10100

25 Amp. Cam Switch With Centre Key Lock Assembly With 'Tee' Type Handle



No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

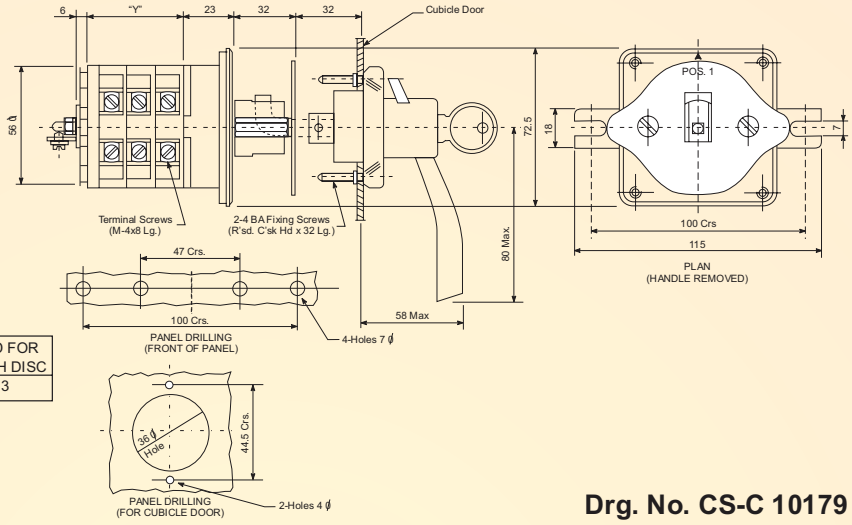
GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10103

DIMENSION

(All in mm.)

25 Amp. Cam Switch With Cubicle Door Interlock With Lever Type Handle (Lockable 'LHR' Type)

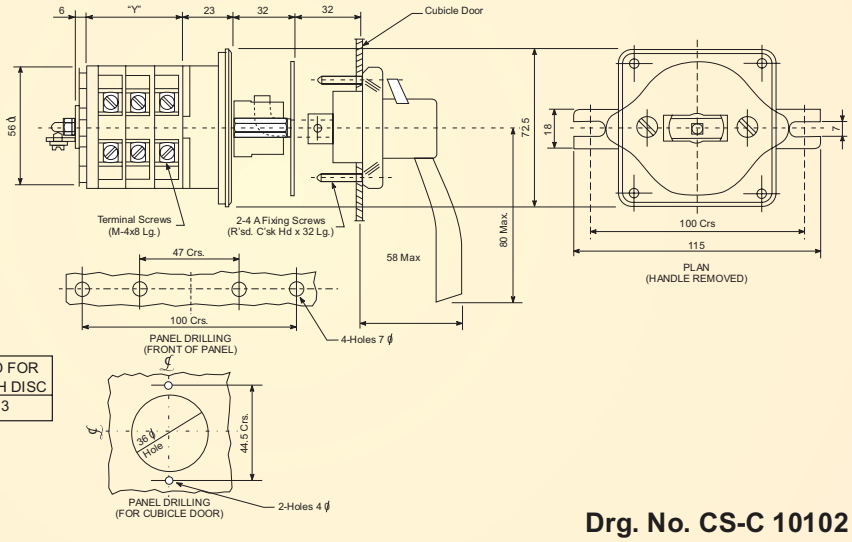


No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10179

25 Amp. Cam Switch With Cubicle Door Interlock With Lever Type Handle (Non-Lockable 'LHR' Type)

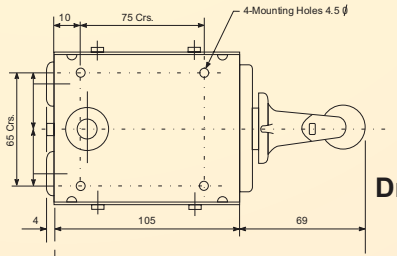


No. OF DISCS	2	3	4	5	6	7	8	ADD FOR EACH DISC
DIMENSION "Y"	32	45	58	71	84	97	110	13

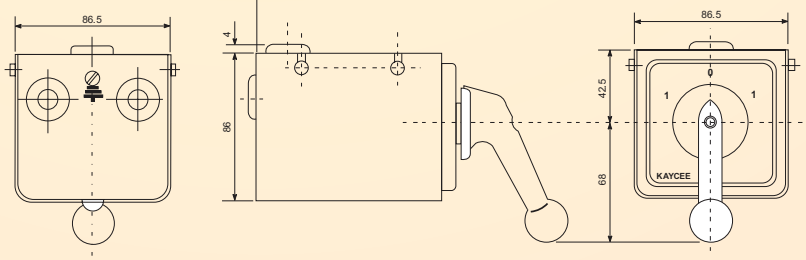
GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

Drg. No. CS-C 10102

25 Amp. Cam Switch With Enclosure (Only up to 4 Disc switch)

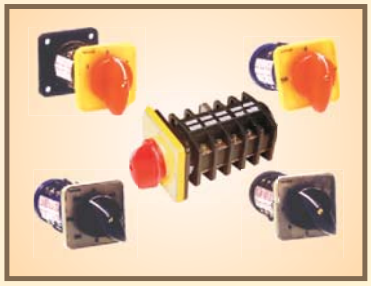


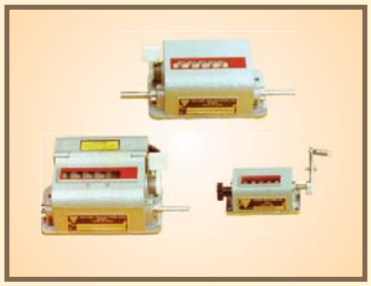
Drg. No. CS-C 10049



GENERAL TOLERANCES	
Full Figure	± 1
Up to 1st Decimal	± 0.5
Up to 2nd Decimal	± 0.25

KAYCEE OTHER PRODUCTS





KAYCEE KI

Manufactured by :

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate,
Mumbai - 400 001.
Tel. : +91 (22) 2261 3521 / 22 / 23
Fax : +91 (22) 2261 6106
E-mail : kayceeindltd@vsnl.com
Website : www.kayceeindustries.com

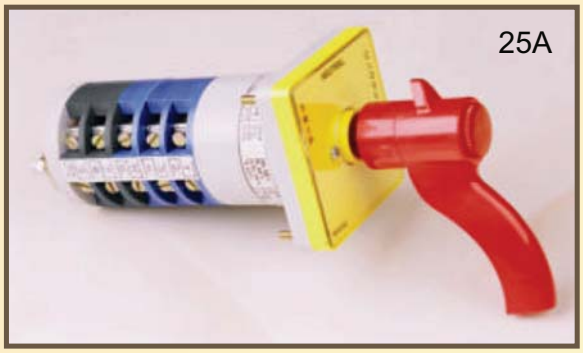
Branch Offices :

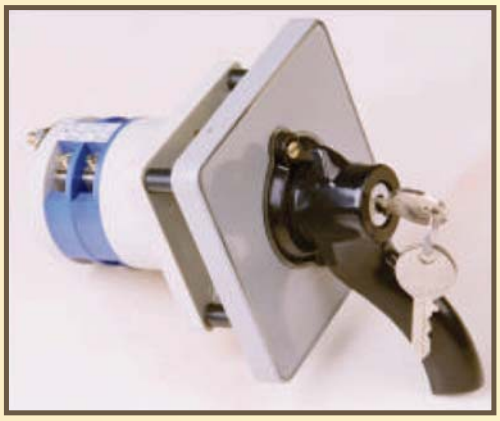
Delhi : 093120 04687
Kolkata : 093392 00968
Indore : 093007 51464
Bangalore : 093428 53324
Chennai : 093812 01556

01-01-2010

KAYCEE

Brand that set the standards





TESTED AT
ERDA AS PER
IEC 60947-5-1:2003

KAYCEE BREAKER CONTROL SWITCHES : (25A & 32A)

SPECIFICATION:

Utilization Category AC-15, AC-23, AC-21, DC-22 & DC-13 As Per IEC 60947-5-1:2003
I.S.13947 Part I & V / Sec. 1:2004

FEATURES :

- Compact Design
- Double Break butt Contact
- Stay Put
- Spring Return
- Lost Motion
- Sequence Locking
- Locking Facility.
- 45°, 60°, 90° angle of throw.
- Common Mounting Plate Suitable for Standard + ODS Mounting

Kaycee for Commitment...
Kaycee for Quality...

CMS GROUP

KAYCEE BREAKER CONTROL SWITCHES

KAYCEE BREAKER CONTROL SWITCHES

ELECTRICAL DATA :

Continous Current (Ith)	- 25A / 32A
Operational Voltage	- 660 Volt
High Voltage Test	- 2.5 KV (R.M.S.)
Ambient Temperature	- 55°
Frequency of Operation	- 300 cycles / Hour
Mechanical Life	- 1 Million Cycles of Operation
Electrical Life	- 1 Lac Operations
Short Time Withstand Current	- 250 A for 1 Sec.(25 Amp)
	- 300 A for 1 Sec.(32 Amp)
Short Time Making & Breaking Capacity	- 250 A (25 Amp)
	- 300 A (32 Amp)

DC BREAKING CAPACITY (25 Amp)

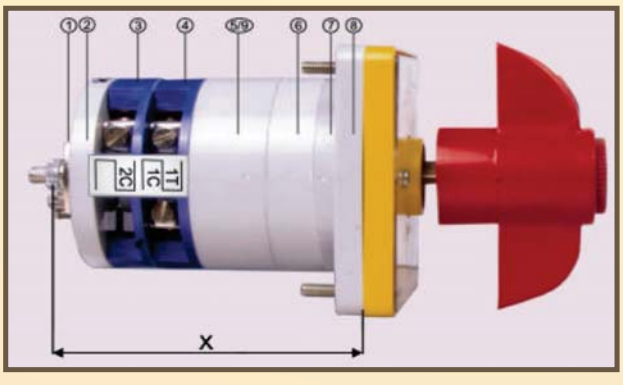
Voltage	Resistive	Inductive 10 m Sec.	Inductive 20 m Sec.	Inductive 40 m Sec.
50	20	20	15	6
110	3	2.5	1.5	1
220	1.5	0.5	0.3	0.2

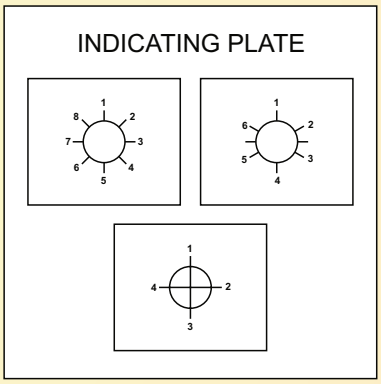
DC BREAKING CAPACITY (32 Amp)

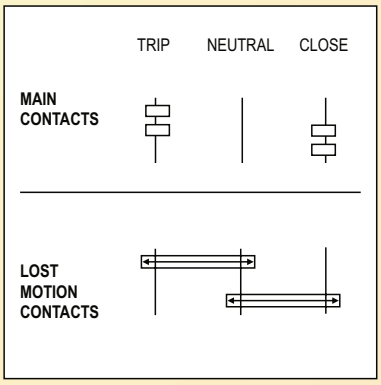
Voltage	Resistive	Inductive 10 m Sec.	Inductive 20 m Sec.	Inductive 40 m Sec.
50	25	20	7.5	6.5
110	4	4	3	1.5
220	4	2.5	2	0.5

ITEM	DESCRIPTION	WIDTH	MECHANISM				
			'A'	'B'	'C'	'D'	'E"
1	Earthing Plate	15.0	15.0	15.0	15.0	15.0	15.0
2	Base Plate	06.5	06.5	6.5	06.5	06.5	-
3	Pack (L.M.D.)	12.7	-	-	-	-	-
4	Pack	12.7	-	-	-	-	-
5	Spring Return Mech.	20.0	20.0	20.0	20.0	20.0	20.0
6	Seq. Locking Device	12.0	-	-	12.0	12.0	-
7	Housing Cover No. 3	06.5	06.5	06.5	06.5	06.5	-
8	Flush Plate	07.0	07.0	07.0	07.0	07.0	07.0
9	Stay Put Mechanism	16.0	-	-	-	-	16.0
	Total -'X'	-	45.00	55.00	66.00	66.00	38.00

MECHANISM 'A' - Spring Return
MECHANISM 'B' - Spring Return + Lost Motion Device
MECHANISM 'C' - Spring Return + Seq. Locking
Lost Motion Device
MECHANISM 'D' - Spring Return + Seq. Locking
MECHANISM 'E' - Stay Put Mechnism







CODING SYSTEM :

The Breaker Control Switches will bear the code number; its details are given below:

1	2	3	4	5	6	7	8	9
B	C							

(3) Mechanism:

A. Spring Return,
B. Spring Return with Lost Motion Device
C. Spring Return with Lost Motion Device plus Sequence Locking.
D. Spring Return with Sequence Lacking.
E. Stay Put.

(4) & (5) : No. of Standard packets (2 electrical ways per packet).

Example;
01 = 1 Packet = 2 Electrical ways. 02 = 2 Packets = 4 Electrical ways.

(6) Type of Handles

*L = Lever Type Handle P=Pistol Grip Handle
*T = TEE Type Handle W=Wing Type Handle
* Available with Barrel Lock

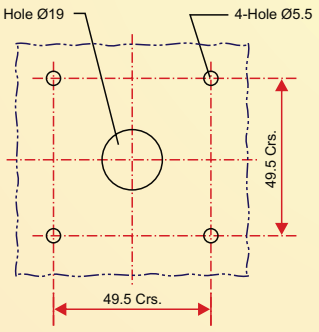
(7) & (8) : No. of packets with Lost Motion Device.

Example:
01 = 1 Packet = 2 Electrical ways. 02 = 2 Packets = 4 Electrical ways,

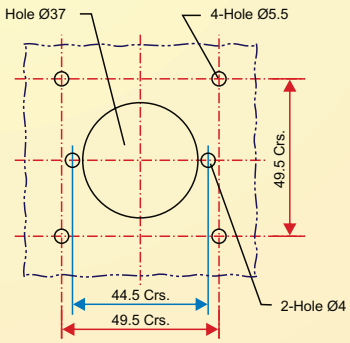
(9) Angle of throw:

4 = 45° 6 = 60° 9 = 90°

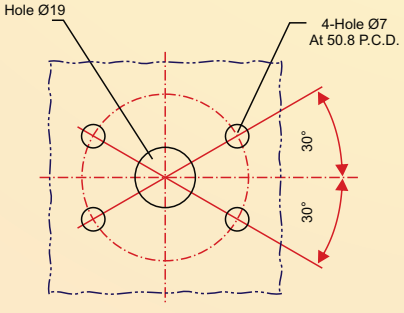
PANEL CUTOUT DETAILS



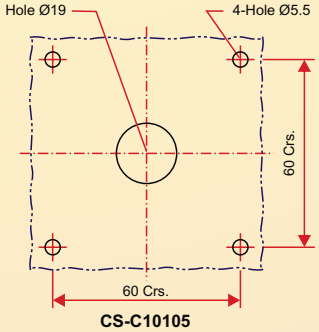
CS-C10231
Breaker Control Switch With O.D.C. Mounting (Non-Lokable)



CS-C10188
Breaker Control Switch With Bamel Locking (Lever Type or 'T' Type)

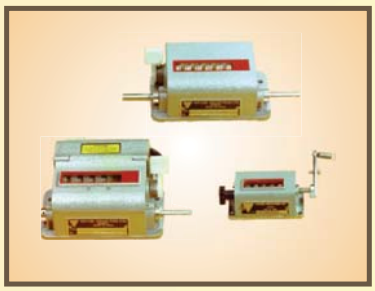


CS-C10232
Breaker Control Switch With O.D.C. Mounting (Non-Lokable)



CS-C10105
Breaker Control Switch With Standard Mounting

KAYCEE OTHER PRODUCTS



Manufactured by :

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate,
Mumbai - 400 001.
Tel. : +91 (22) 2261 3521 / 22 / 23
Fax : +91 (22) 2261 6106
E-mail : kayceeindltd@vsnl.com
Website : www.kayceeindustries.com

Branch Offices :

Delhi : 093120 04687
Kolkata : 093392 00968
Indore : 093007 51464
Bangalore : 093428 53324
Chennai : 093812 01556

01-01-2010

Microswitches

Types of Microswitches

Micro Switch K1

Micro Switch K3

Micro Switch K4/K7

Micro Switch K5/K8

Micro Switch K6

KAYCEE

BRAND THAT SET THE STANDARDS

TOGGLE SWITCHES UNSEALED & PANEL SEALED

UNSEALED D.P.

UNSEALED S.P.

PANEL SEALED

KAYCEE'S "KT" Series of precision Toggle Switches employ rocker-type contact mechanism. It is housed in an anti-tracking moulded case for dust free performance. Operating lever is sealed for protection against environmental conditions.

SPECIFICATIONS :

1. Conforms to I. S. 3452
2. For Defence use to DEF 5151 & JSS 51201

RANGE :

a) Position - 2 and 3
b) Poles - Single and Double
c) Mounting Unsealed 12 mm centre bush
   Mounting Sealed 15 mm centre bush
d) Terminals - Screw, Solder and Push - on
e) Switching Circuits
   Large variety with Stay Put and Momentary Contacts.

Suffix for Unsealed and Panel Sealed Toggle Switches.		
Type of Terminals	Unsealed	Panel Sealed
Solder	AY	AYZ
Screw	BY	BYZ
Push-On	CY	CYZ

e.g. KT 1021 AY will represent Single Pole 6 Amp. OFF-ON switch - with Solder terminals.

SINGLE POLE UNSEALED				
		SEQUENCE		
Type	Rating	Pos : 1	Pos:2 CENTRE	Pos : 3
KT 1621	6 Amp.	OFF	--	ON (2-1)
KT 1021	10 Amp.	OFF	--	ON (2-1)
KT 1521	15 Amp.	OFF	--	ON (2-1)
KT 1022	10 Amp.	OFF	--	ON (2-1)*
KT 1631	6 Amp.	ON (2-3)	--	ON (2.1)
KT 1031	10 Amp.	ON (2-3)	--	ON (2-1)
KT 1531	15 Amp.	ON (2-3)	--	ON (2-1)
KT 1632	6 Amp.	ON (2-3)	OFF	ON (2-1)
KT 1032	10 Amp.	ON (2-3)	OFF	ON (2-1)
KT 1532	15 Amp.	ON (2-3)	OFF	ON (2-1)
KT 1033	10 Amp.	ON (2-3)	--	ON (2-1)*
KT1034	10 Amp.	ON (2-3)	OFF	ON (2-1)*
KT 1035	10 Amp.	ON (2-3)*	OFF	ON (2-1)*

DOUBLE POLE UNSEALED				
		SEQUENCE		
Type	Rating	Pos : 1	Pos:2 CENTRE	Pos : 3
KT 2641	6 Amp.	OFF	--	ON (2-1)(5-4)
KT 2041	10 Amp.	OFF	--	ON (2-1)(5-4)
KT 2541	15 Amp.	OFF	--	ON (2-1)(5-4)
KT 2042	10 Amp.	OFF	--	ON (2-1)(5-4)*
KT 2661	6 Amp.	ON (2-3) (5-6)	--	ON (2-1)(5-4)
KT 2061	10 Amp.	ON (2-3) (5-6)	--	ON (2-1)(5-4)
KT 2561	15 Amp.	ON (2-3) (5-6)	--	ON (2-1)(5-4)
KT 2662	6 Amp.	ON (2-3) (5-6)	OFF	ON (2-1)(5-4)
KT 2062	10 Amp.	ON (2-3) (5-6)	OFF	ON (2-1)(5-4)
KT 2562	15 Amp.	ON (2-3) (5-6)	OFF	ON (2-1)(5-4)
KT 2063	10 Amp.	ON (2-3) (5-6)	--	ON (2-1)(5-4)*
KT 2064	10 Amp.	ON (2-3) (5-6)	OFF	ON (2-1)(5-4)*
KT 2065	10 Amp.	ON* (2-3) (5-6)	OFF	ON (2-1)(5-4)*

* Indicates Momentary Contract.
No. in Brackets indicates Pole.

CMS GROUP

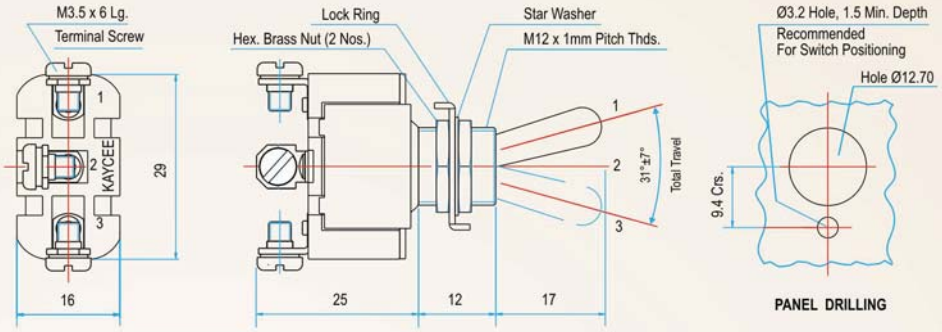
KAYCEE

BRAND THAT SET THE STANDARDS

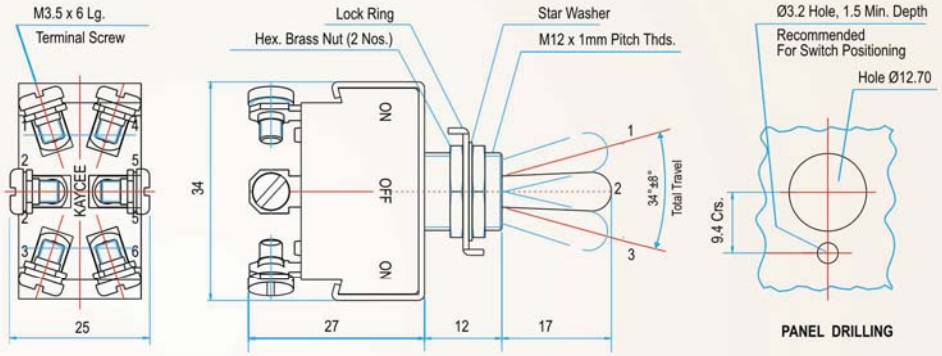
SPECIFICATIONS

Operation	Toggle Action
Contact Rating (Resistive) Screw Terminals	6 Amp-250V AC 10 Amp-250V AC 15 Amp-250V AC 15 Amp- 28V DC
Solder Terminals	6 Amp-250V AC 15 Amp-28V DC
Circuitry	Single and Double Throw 2-3 Position with stay put and momentary contacts
Mechanical & Electrical Life Expectancy	20,000 Cycles
Contact Resistance	10m Ω Max.
Insulation Resistance	1000m Ω Min.
Mounting	Centre Bush with suitable Nuts and Washer Unsealed : Threading 12 mm Sealed : Threading 15 mm
Weight	Unsealed : Single Pole 30 gms. (Approx.) Double Pole 40 gms. (Approx.) Sealed Single Poles 48 gms (approx) Double Poles 55 gms (approx)
Thickness of Panel	2-5 mm
Temtrature Category	- 40° to 70° C
Sealing	Neoprene Rubber
Operating Force	3.5 kg. Max

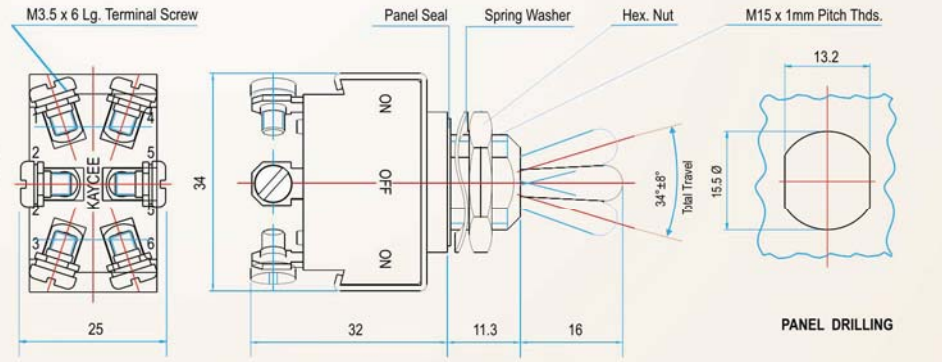
SINGLE POLE UNSEALED



DOUBLE POLE UNSEALED



SINGLE / DOUBLE POLE PANEL SEALED



Product improvement being a continues process at KAYCEE
Product supplied may differ from that illustrate and descried in the literature.

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate, Mumbai - 400 001.
Tel : +91 (22) 2261 3521 / 22 / 23 Fax : +91 (22) 2261 6106
E-mail : kayceeindltd@vsnl.com • kaycee_ho@cms.com
Website : www.kayceeindustries.com

BRANCH :

BANGALORE : # 9/2, First Floor, Dhonusa Complex, Residency Road, (Richmond Circle), Bangalore - 560 001. • Mob.: 9342853324

CHENNAI : CMS Tower, 42, Cathedral Road Chennai - 600 086 • Mob. 93812 01556

KOLKATA : 10/D/2, Hochi Minh Sarani, 1st Floor, Kolkata - 700 071 • Mob. 9339200968

NEW DELHI : 35-A, Rear Building, Near CTC Plaza, Opp. Maharani Bagh, Ring Road, Kilokari, New Delhi - 110 014. • Mob. 9312004687

INDORE : Mob. 9300751464

REPUTED CUSTOMERS : ABB • Crompton Graves • L & T • Siemens • C & S • BHEL • G E Power • NTPC • ICF • RCF Areva T & D • Schneider • HMT • Bharti Airtel • Reliance • Ipoti Ltd. • Mega Win • BSES • Hindustan Motors • Indian Railways

KAYCEE

TWIN ROTARY TOGGLE SWITCHES (WATHER TIGHT)

TYPE :
2RT 1000 A-N

KAYCEE Twin Rotary Toggle Switches type 2 RT 1000 A-N incorporate two independent. Q.M.B. mechanisms protected in a metallic housing, suitable for outdoor installation as they are weather tight. These switches are recommended for their quick installation and use in all weather conditions. Installation is by fixing two suitable screws. Easy wiring is through a conduit entry size M -20 x 1.5 mm Pitched tap.

CIRCUITARY :
Two independent single pole switches with ON-OFF function.

NOMINAL RATING :

6A/250V DC or 500V AC.

SPECIFICATIONS :
Switches comply with the relevant clauses of the following specifications:

ISS 13947 (Part 1 & 5) of 1993
BSS 5419 of 1977

TEMPERATURE:
Operational range is from -45° C to 85° C.

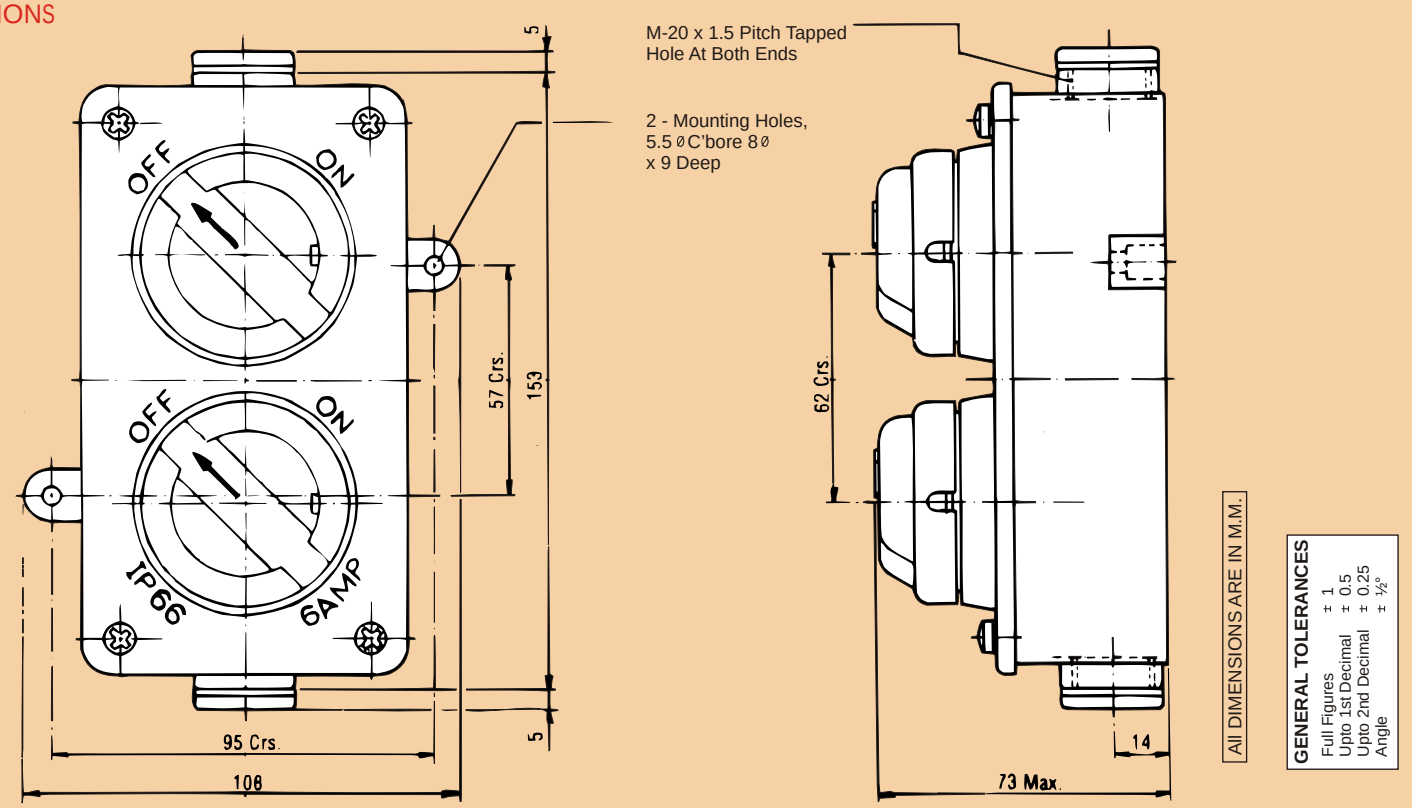
VOLTAGE PROOF :
Switches are tested to 2.5 KV AC between current carrying parts and accessible metal parts.

TERMINALS :
Screw Terminals

OPERATING FORCE (TORQUE) :
7 Kg. Cm

WEIGHT :
488 gms. (approx.)

DIMENSIONS



Drg. No. RTS - C 4294

KAYCEE

ROTARY TOGGLE SWITCHES WITH PLUG AND SOCKET (WEATHER TIGHT)

TYPE :
RT 1000 B / PS / S - N
RT 1000 C/ PS / S - N

KAYCEE Rotary Toggle Switches with Plug and Socket, incorporate a switch with Q.M.B. mechanism protected in a metallic housing, suitable for outdoor installation as they are weather tight. The assembly is available with Plug and Socket with and without shutters. The plug consists of suitable rated fuse for over-loading protection. These switches are recommended for their Quick installation and use in all weather condition. Installation is by fixing two suitable screw. Easy wiring is through a conduit entry size M-25 x 2 mm. pitch tap.

CIRCUITARY :
Single pole with ON-OFF function.

NOMINAL RATING :
13A and 15A 250V DC or 500V AC.

SPECIFICATIONS :
Switches comply with the relevant clauses of the following specifications:
ISS 13947 (Part 1& 5) of 1993
BSS 5419 of 1977 I.E.C. : 669-1

TEMPERATURE:
Operation range is from -45° C to 85° C.

VOLTAGE PROOF :
Switches are tested to 2.5 KV AC between current carrying parts and accessible metal parts.

TERMINALS :
Screw Terminals.

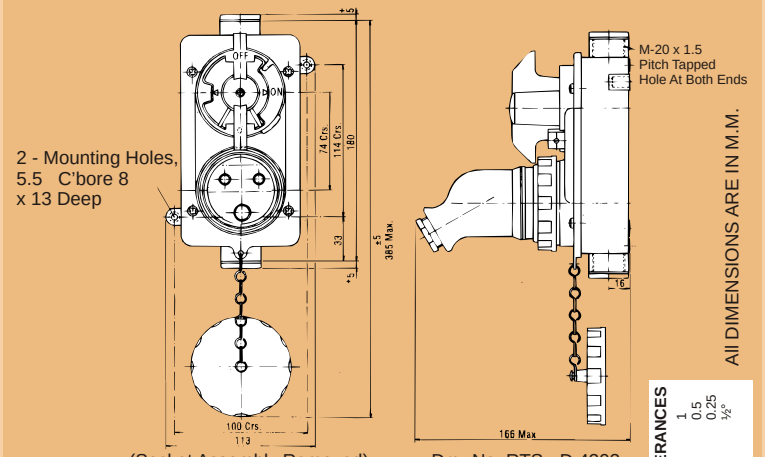
OPERATING FORCE (TORQUE) :
10 Kg. Cm

WEIGHT :
13 Amps: 738gms. (Approx.)
15 Amps: 764 gms. (approx.)

NOTE : 13 AMP available with shutters and without shutters.
Please specify while ordering.
15 AMP available with shutters only.

DIMENSIONS

13 AMP Plug & Socket

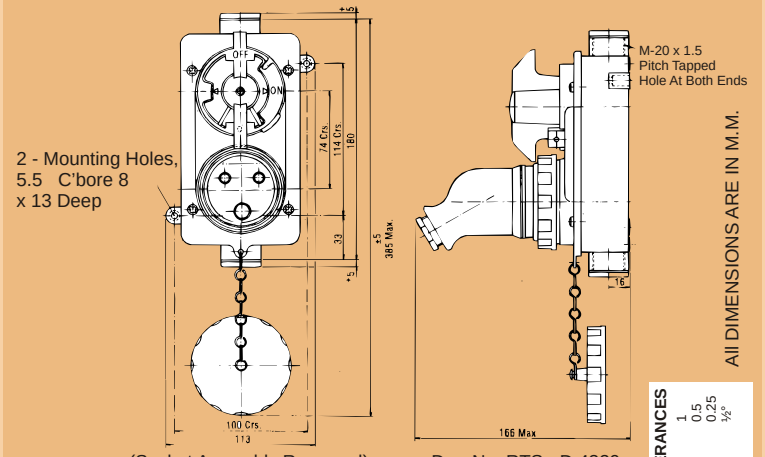


(Socket Assembly Removed) Drg. No. RTS - D 4293

All Dimensions are in M.M.

GENERAL TOLERANCES	
Full Figures	1
Upto 1st Decimal	0.5
Upto 2nd Decimal	0.25
Angle	½°

15 AMP Plug & Socket



(Socket Assembly Removed) Drg. No. RTS - D 4329

All Dimensions are in M.M.

GENERAL TOLERANCES	
Full Figures	1
Upto 1st Decimal	0.5
Upto 2nd Decimal	0.25
Angle	½°

Product improvement bring a continuous process of Kaycee. A product supplied may differ from that illustrated and described in literature

Manufactured by
KAYCEE INDUSTRIES LIMITED
32, Ramjibhai Kamani Road, Ballard Estate, Mumbai 400 001
Tel.: 91-22-22613521/22/23 Fax : 91-22-22616106
Website - www.kayceeindustries.com Email: kayceeindltd@vsnl.com

OFFICES AT:

BANGALORE : C/O. CMS Computers Ltd., #9/2, First Floor, Dhondusa Complex, Residency Road, Bangalore-560 025.Mob - 9324853324
CHENNAI : C/o. CMS Computers Ltd, CMS Tower 42, Cathedral Road, CHENNAI - 600 086. Mob - 9381201556
KOLKATTA : C/o. M/s. CMS Computers Ltd. 10/D/2, Hochi Minh Sarani, 1st Floor, Calcutta - 700 071. Mob - 9339723155
NEW DELHI : C/o. CMS Computers Limited, 35 - A, Rear Building, Near CTC Plaza, Opp.Maharani Bagh, Ring Road Kilokari, N-Delhi - 110 014. Mob - 9312004687
INDORE : Mob : 9300751464
GUWAHATI : Mob : 9864279934

Revised on 12.01.2006 Ver - 1

KAYCEE

LIMIT SWITCHES

DESCRIPTION :

Kaycee Limit Switches type KLS have been specially designed to convert a mechanical motion into an electrical control signal. The mechanical motion is usually in the form of a cam, a machine component or an object moving towards a predetermined position. The cam engages the limit switch roller lever or plunger and in turn makes or breaks an electrical contact inside the switch. This electrical control signal is then used to limit, position or reverse motion travel or to initiate another operating sequence It can also be used for counting, sorting or as a safety device. Typical applications of the Kaycee Limit Switch are in the control circuit of solenoids control relays and motor starters (which control the motion of the machine tools), presses, conveyors, hoists, elevators and practically every type of motor driven machines.

APPLICATIONS :

Kaycee Limit Switches are available in four basic types. They are normally used where actuation is relatively fast or for snap action where action is relatively slow. The extended NO contact closes considerably after the NC contact opens and the overlapping NO contact closes before the NC contact opens.

The basic limit switches are also available in standard die cast aluminium housing with or without oil tight enclosure and with three types of actuators, namely, push rod, normal roller lever and angular roller lever.

CIRCUITRY :

Type KLS is available having 1 NO and 1 NC contact arrangement.

SPECIFICATION :

Switches conform to AC II duty as per IS 6875 (Part 1)—1973 and IS 2147/1962 for degree of protection of enclosure.

CAUTION FOR APPLICATION :

The following general rules should be followed when installing a limit switch.

1. Make sure the electrical load is within the limit switch contact rating.
2. Do not connect the double pole contacts to opposite polar rating.
3. Adjust the lever arm parallel to the leading guage of the cam. 45° is recommended.
4. Over travel of the limit switch should not be exceeded. 5° to 15° is recommended.
5. Do not allow the lever arm to snap back. A gradual controlling guage should be used on cams which travel beyond the roller.
6. When possible, avoid mounting limit switches where they will be constantly exposed to coolant, chips etc. Although designed for such applications the switches will last longer when not exposed to these contaminants.
7. When possible avoid use of fire resistance coolants of the phosphate ester type.
8. See that leakage through conduit system into a standard limit switch is avoided by proper conduit entry and sealing.

Execution		Design	Code	Contacts		Enclosure according to IS : 2147/1962
				Arrangement	No. of Contacts	
Open		With push rod	KLS 000X-OA KLS 000X-OB KLS 000X-OC KLS 000X-OD	Normal Snap Action Ext. Stroke Overlapping	1 NO + 1 NC	IP 00
		With Push rod & Plastic Protective Cover	KLS 001X-OA KLS 001X-OB KLS 001X-OC KLS 001X-OD	Normal Snap Action Ext. Stroke Overlapping	1 NO + 1 NC	IP 40
In standard die-cast aluminium housing		With Push rod	KLS 002X-OA KLS 002X-OB KLS 002X-OD	Normal Snap Action Overlapping	1 NO + 1 NC	IP 43
		With normal roller lever	KLS 003X-OA KLS 003X-OB KLS 003X-OD	Normal Snap Action Overlapping	1 NO + 1 NC	IP 43
		With angular roller lever	KLS 004X-OA KLS 004X-OB KLS 004X-OD	Normal Snap Action Overlapping	1 NO + 1 NC	IP 43
In oil-tight die-cast aluminium housing		With push rod	KLS 005X-OA KLS 005X-OB KLS 005X-OC KLS 005X-OD	Normal Snap Action Ext. Stroke Overlapping	1 NO + 1 NC	IP 65
		With normal roller lever	KLS 006X-OA KLS 006X-OB KLS 006X-OC KLS 006X-OD	Normal Snap Action Ext. Stroke Overlapping	1 NO + 1 NC	IP 65
		With angular roller lever	KLS 007X-OA KLS 007X-OB KLS 007X-OC KLS 007X-OD	Normal Snap Action Ext. Stroke Overlapping	1 NO + 1 NC	IP 65

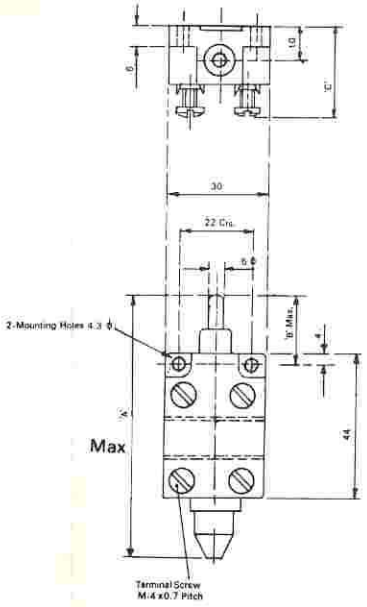
Technical Data :

Limit Swiches For Rating upto 500 VAC 600 VDC 10 A

Insulation Rating	500 V A.C. 600 V D.C.				
Continuous Current	10 A				
Making & Breaking Capacity	40—60 Hz. A.C. 11 duty as per IS 6875 (Part I) of 1973.				
Rated Operational Current and making breaking capacity	Voltage V	Rated Operational Current Ie A	Rated Making Capacity A	Rated Breaking Capacity A	
	24	6(3)	66(33)	66(33)	
	125	6(3)	66(33)	66(33)	
	220	6(3)	66(33)	66(33)	
	380	6(3)	66(33)	66(33)	
	415	4(3)	44(33)	44(33)	
	500	4(3)	44(33)	44(33)	
Short Circuit Protection	20A HRC/DZ (16A)				
Mechanical Life	15 Millions				
Contact Life—A.C.	Breaking Current Amps.	1	3	6	10
	Contact life (million cycles)	15 (10)	5 (3)	2.5 (2)	1 (0.8)
Heavy Duty Making & Breaking Capacity	Max. Rating Per Pole Voltage V A.C. — Switching Capacity: Making — Breaking 120 — 60 A — 6 A 240 — 30 A — 3 A				
Breaking Capacity D.C.	Voltage V	Resistive* Load (DC11) A	Inductive* Load (DC 11) A		
	24	10 (7)	10 (7)		
	110	2.2 (1.50)	1.3 (0.91)		
	220	0.9 (0.62)	0.4 (0.28)		
	440	0.4 (0.28)	0.2 (0.14)		
	600	0.3 (0.21)	0.14 (0.1)		
Switching Frequency At temp. below-20°C only 500 make/break ops/hour are possible	Breaking Current A	Switching Frequency Max. Opn./h			
	0.1	6000			
	1.0	3000			
Mechanical Switching Accuracy	The repeat accuracy of two successive making or breaking operations is 0.01 mm.				
Ambient Temp.	—40°C to + 85°C				
Degree of Protection As per IS 2147 (1962)	Open Type Cast-metal Clad Electrical Connectors For Limit Switches	IP 00 IP 43 For Normal IP 65 For oil-tight			
Conductor Sizes (M-4 Screw Terminals)	2 x 1.5 mm² finely stranded with end sleeves 2 x 2.5 mm² solid (do not use cable lugs)				
Cable Entry For Cast-metal Housing	3/4" I.S. Conduit Pipe				
Protective Earth. Conductor Connection Inside Housing Outside Housing	M-4 Tapped hole M-4 terminal screw				
Housing	Cast Aluminium				
Mounting Position	Any				

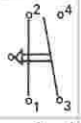
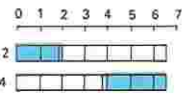
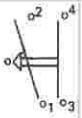
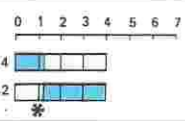
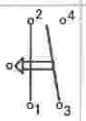
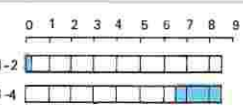
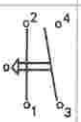
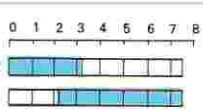
* The figures in brackets apply to snap action switches.

DIMENSIONS (All in m.m.)



DRG. NO. LS.C 19020/2

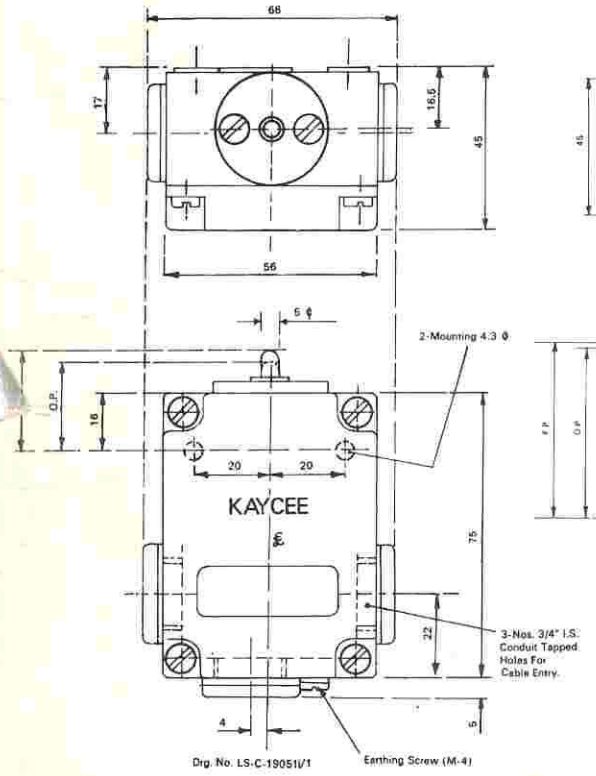
BASIC SWITCH

Code	Dimensions A	B	C	Contact Arrangement	Terminal Markings	Travel (mm.) Zero line = Initiation of Push-rod.movement — Contact closed / Contact open	Force required at end stop when actuated: in direction of stroke approx. kg.	in lateral direction at permiss angle of actuation approx. kg.
KLS 000X-OA	81	21	25				1.5	0.7
KLS 001X-OA	81	21	30					
KLS 000X-OB	79	19	25				1.5	0.9
KLS 001X-OB	79	19	30					
KLS 000X-OC	81	21	25				1.2	0.7
KLS 001X-OC	81	21	30					
KLS 000X-OD	81	21	25				1.2	0.7
KLS 001X-OD	81	21	30					

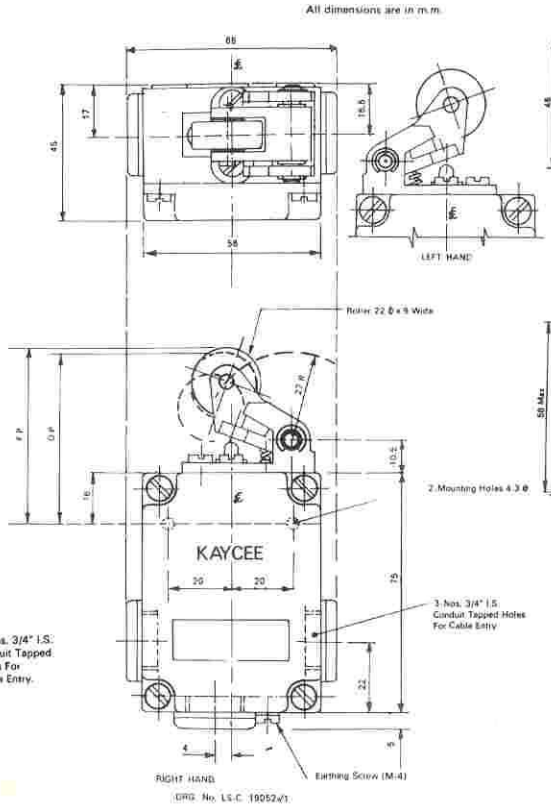
✱ Operating point during return travel.

IN STANDARD DIE CAST ALUMINIUM HOUSING

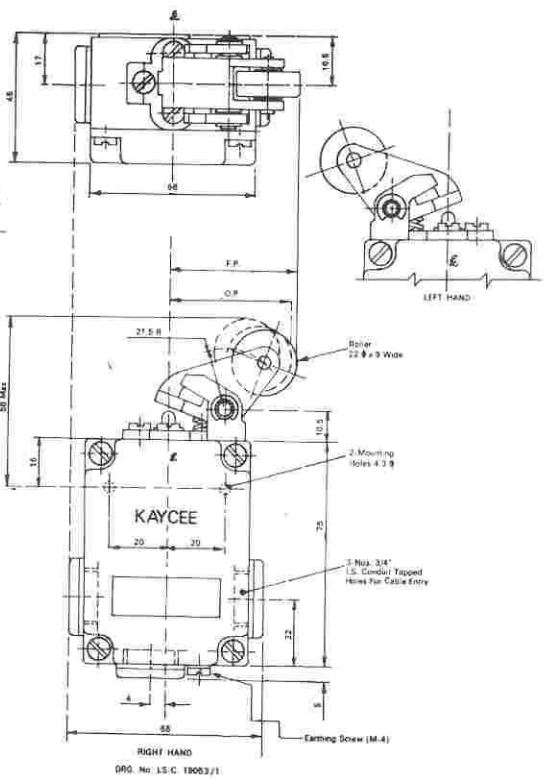
All dimensions are in m.m.



Drg. No. LS-C-19051/1



DRG. No. LS-C. 19052/1



DRG. No. LS-C. 19053/1

Note: For basic switch details refer to our drawing no. LS-C 19020/1

Characteristics —

CODE	F.P. (Max.)	O.P.	O.T. (Max.)
KLS 002X-OA	28	24.5	3.2
KLS 002X-OB	—	—	—
KLS 002X-OD	28	25.5	5.0

PUSH ROD

Characteristics :—

CODE	F.P. (Max.)	O.P.	O.T. (Max.)
KLS 003X-OA	56	51-2	5.0
KLS 003X-OB	—	—	—
KLS 003X-OD	56	52.0	6.0

NORMAL ROLLER LEVER

Characteristics :—

CODE	F.P. (Max.)	O.P.	O.T. (Max.)
KLS 004X-OA	44.5	40-5	3.2
KLS 004X-OB	—	—	—
KLS 004X-OD	44.5	41.5	5.0

ANGULAR ROLLER LEVER

GENERAL TOLERANCES.	
Full Figure	± 1
Upto 1st Decimal	± 0.5
Upto 2nd Decimal	± 0.25

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate, Bombay-400 038.

Tel.: 261 35 21-22-23, 261 55 67-68 · Telex: 011-81049 KCIL · Cable: 'TURNRITE' · Fax: 91-22-261 61 06

OFFICES AT:

BANGALORE: No. 114, First Floor, Richmoud Towers, No. 12, Richmoud Road, Bangalore-560 025. · Tels: 221 12 78, 221 34 89 · Telex: 0845-8036 LAMP IN · Fax: 91-080-558 03 57

CALCUTTA: 10, Ganesh Chandra Avenue, Calcutta-700 013. · Tel.: 27 22 81 · Telex: 021-5164

DELHI: 62, Dayanand Road, Daryaganj, Delhi-110 002 · Tel.: 327 20 97 · Telex: 031-62468 BITS IN · Fax: 011-3276876

MADRAS: 2, Raja Annamalai Road, Pursawalkam, Madras-600 084. · Tel.: 641 24 91/641 20 17 · Telex: 041-24187 HIRT IN

Leaflet no. LT/2A Dec. 93/3000

Counters

Types of Counters

Stroke Counter

Senior Revolution Counter

Measuring Machine Counters

Predetarmined Counters

Road Measure Counters

KAYCEE

Brand that set the standards

TIME TOTALIZER

Tells how long electronic gear operates, electric machinery has run, components are in operation or maintenance checks are due

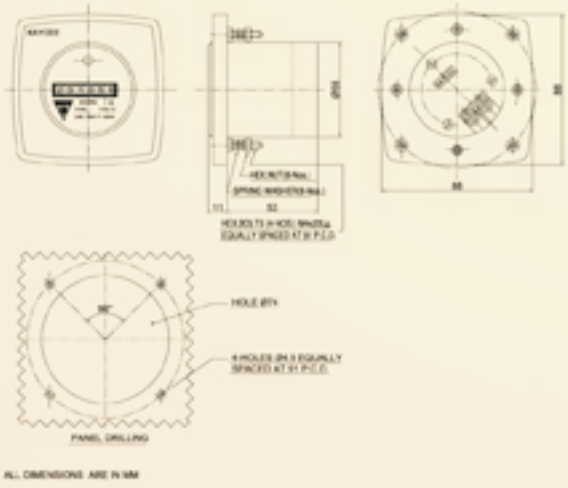
APPLICATIONS

- Air Compressors
- Circuit Breakers
- Generators
- Computers
- Radio and TV Stations
- Machine Tools
- Textile Machines
- Air Conditioners
- Boilers
- Power Plants
- Elevators
- Mouldings Machines
- Electric Furnaces
- Laboratories

In any other machine, process or equipment where AC power used.

WITHOUT RESET 6 DIGITS (HOURS & 1/10)	WITHOUT RESET 5 DIGITS (HOURS & 1/10)	WITHOUT RESET 5 DIGITS (HOURS)
TT6 / H (0 to 99999.9)	T T5 / H (0 to 9999.9)	T T5 / HZ (0 to 99999)

TESTED AT ERTL FOR VIBRATION TEST



In many industries, it is important to know the length of time a machine or equipment has been used. The purpose is to cut down production cost by checking the operating hours of machines.

Kaycee Time Totalizers tell you when Lubrication, Overhaul, Adjustment or Replacement of component is due on Machine Tools, Industrial Machinery, and Test Equipment or complete Processing Systems.

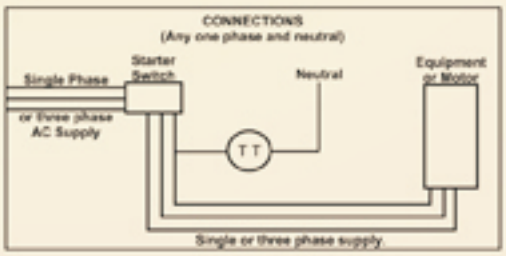
Kaycee Time Totalizer incorporates a self-starting synchronous movement ensuring accurate summation of ON TIME of any circuit fed from an AC Supply. Each time the machine is switched on, the Totalizer records the running time of that machine directly on the straight reading dial to read either in hours or minutes down to tenths.

All models of Time Totalizer are suitable for flush panel mounting.

TECHNICAL DATA

Operating Voltage	: 230 - 240 Volts AC
Frequency	: 50 Hz
Duty Cycle	: Continuous
Power Consumption	: 2.5 Watts approx.
Temperature Category	: -20°to +50°C
Voltage Proof Test	: 1.5 Kv
Face Size	: 90mm x 90 mm
Weight	: 180 gm approx.
Counting Range	: Given in the table
Mounting	: Flush Panel
Height of Figures	: 3.5 mm

The Product development being a continuous process in KAYCEE, the product supplied may differ from the illustrated & described in the literature.



Kaycee for Commitment...
Kaycee for Quality...

CMS GROUP

KAYCEE

KAYCEE

Brand that set the standards

H.R.C. FUSE FITTINGS

TESTED AS PER IS 9224 AT VJIT, MUMBAI FOR

- HIGH VOLTAGE TEST
- INSULATION RESISTANCE TEST
- TEMPERATURE RISE

TYPE 'KF'

20-32-63-100 Amp. /500 V

TYPE 'KP'

20 Amp. /500 V

RATING

KAYCEE moulded fuse fittings type 'KF' are available in FOUR RATINGS, 20, 32, 63 and 100 Amp. They are suitable for front wiring at both ends. Back connected type 'KP' available in 20 Amp only.

FEATURES

- Base and Carrier Moulded from High Grade Phenolic Compound.
- Base and Carrier Moulding are non-inflammable and non-hygroscopic, Surface-Hard gloss Finish - Black.
- Phosphor Bronze Contact Clips ensures intimate contact with base contact block made from brass.
- Visible fault indication through window on carrier - removal of carrier not necessary.
- Single piece brass base contact block with adequate hole, suitable for Aluminium Cable.
- Spare fuse carriers also available.

SPECIFICATION FOR ORDERING

RATING AMP -	CARRIER AND BASE	ONLY CARRIER	RECOMMENDED FUSELINK RATINGS AMP-	RECOMMENDED CABLE SIZE SQ. Mm.
20	KF 20 BC	KF 20 OC	2 to 20	1.5 to 20
20	KF 20 BC	KF 20 OC	2 to 20	1.5 to 20
32	KF 32 BC	KF 32 OC	25.32	2.5 to 32
63	KF 63 BC	KF 63 OC	40.50.63	4 to 35
100	KF 100 BC	KF 100 OC	80.100	6 to 50

The Crimped Type Socket Adoptor Recommended for Aluminium Conductor

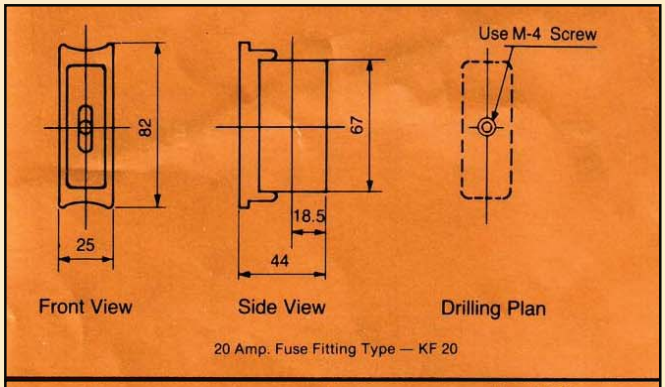
Kaycee for Commitment...
Kaycee for Quality...

CMS GROUP

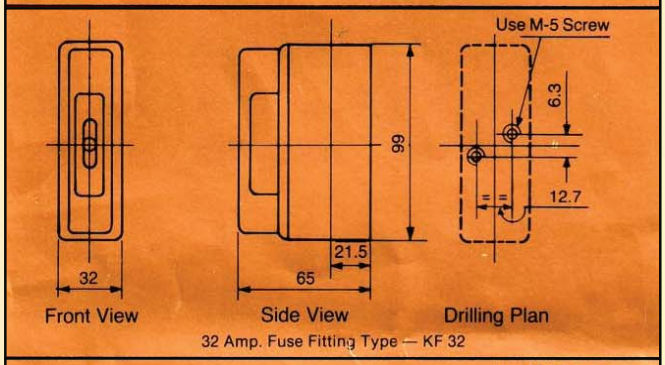
DIMENSIONAL DRAWING FOR FUSE FITTING

(Dimensions are in mm)

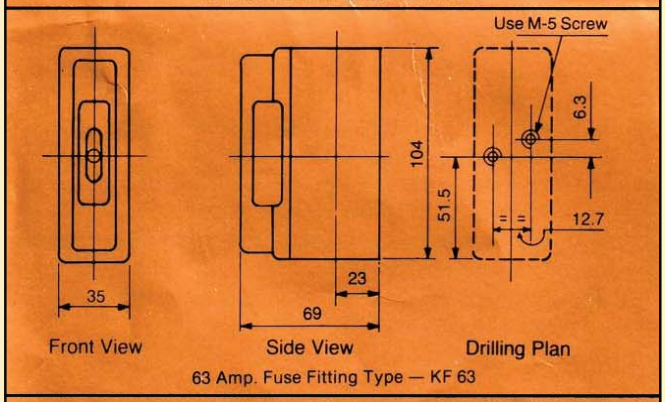
TYPE'KF'



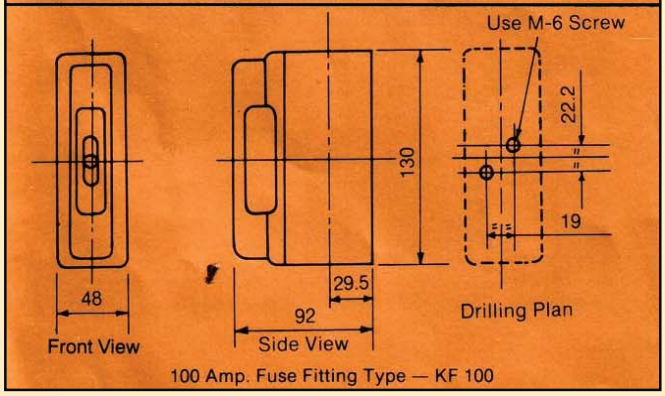
20 Amp. Fuse Fitting Type — KF 20



32 Amp. Fuse Fitting Type — KF 32

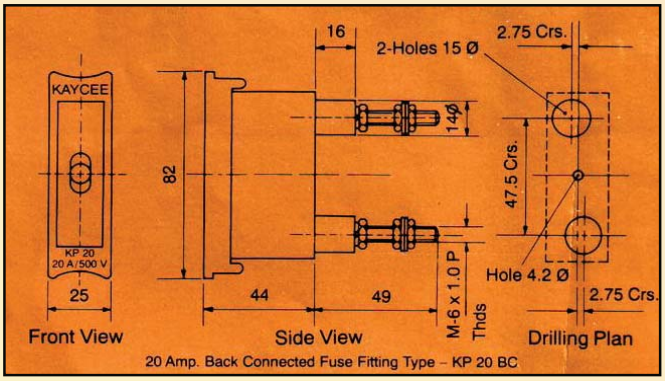


63 Amp. Fuse Fitting Type — KF 63



100 Amp. Fuse Fitting Type — KF 100

TYPE'KP'



20 Amp. Back Connected Fuse Fitting Type – KP 20 BC

MOTOR STARTING APPLICATION

Recommended fuse ratings for motor starting applications.

MOTOR RATING KW	MOTOR F.L.C. AMP.	FUSE RATING	
		FOR D.O.L. START* AMP	FOR ASSISTED START† AMP
0.37	1.05	04	2
0.55	1.44	06	4
0.75	1.90	06	4
1.1	2.50	10	6
1.5	3.45	16	10
2.2	4.70	16	10
3.0	6.20	20	16
4.0	8.10	25	16
5.5	10.90	32	20
7.5	14.80	40	25
11.0	20.50	50	32
15.0	28.00	63	40
18.5	34.50		40
22.0	41.00		63
45.0	83.00		100
53.0	97.00		100

* D.O.L. = direct on line for which the starting condition is assumed to be 5 x F.L.C. for a run-up time of 5 seconds for motors upto 1 k w and 7 x F.L.C. for a run-up time of 10 seconds for larger ones.

†Assisted = star-delta starter (or similar means) for which starting condition is assumed to be 2.5 x F.L.C. for motors upto 1 k w, or 3.5 x F.L.C. for larger ones, for a run-up time of 20 seconds.

Product improvement is a continuous process at KAYCEE. The data given in this publication is therefore subject to revision.

GENERAL TOLERANCES	
FULL FIGURE	±1
UPTO 1ST DECIMAL	±0.5

Manufactured by :

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate,
Mumbai - 400 001.
Tel. : +91 (22) 2261 3521 / 22 / 23
Fax : +91 (22) 2261 6106
E-mail : kayceeindltd@vsnl.com
Website : www.kayceeindustries.com

Branch Offices :

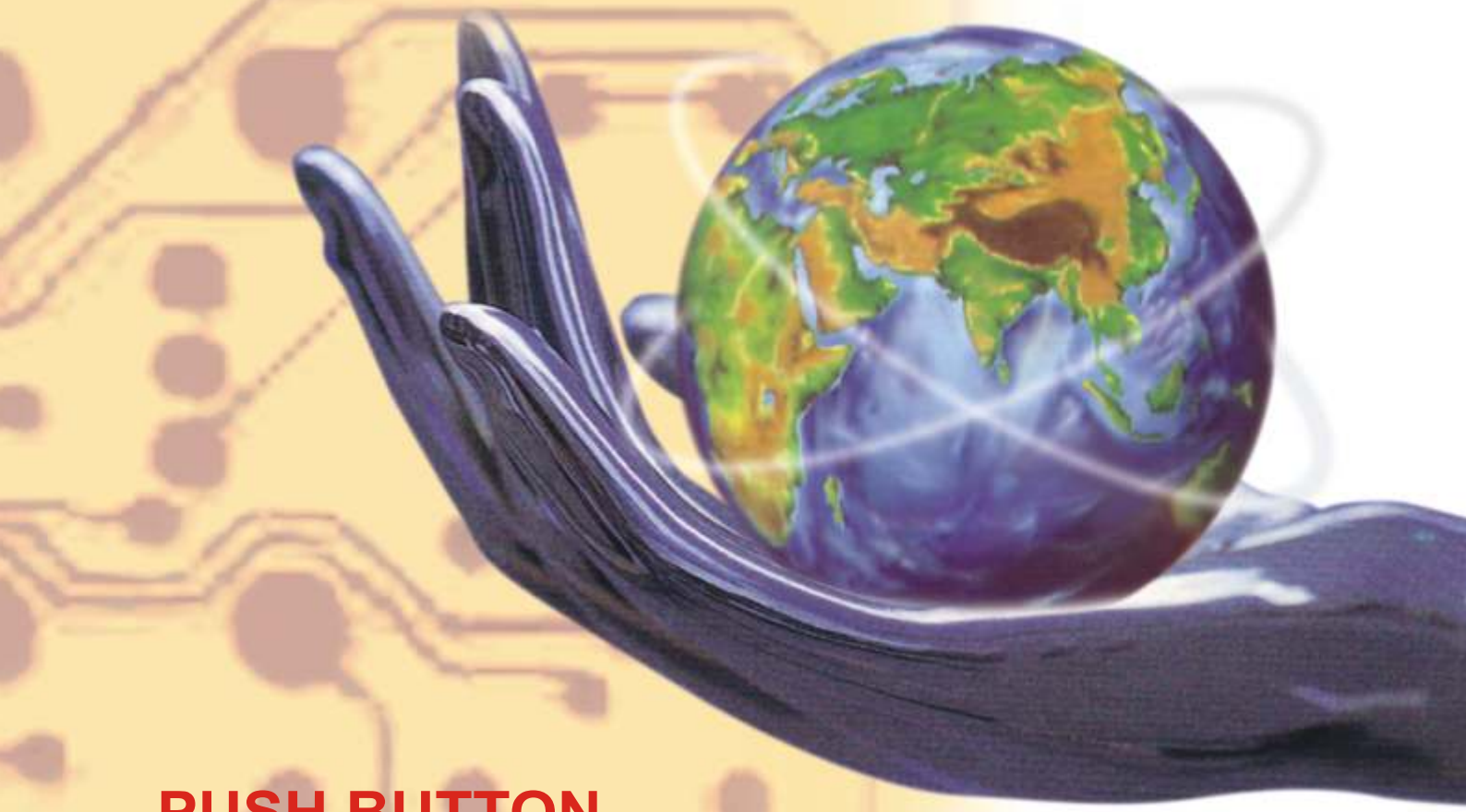
Delhi : 093120 04687
Kolkata : 093392 00968
Indore : 093007 51464
Bangalore : 093428 53324
Chennai : 093812 01556

01-01-2010

KAYCEE

KAYCEE

Brand that set the standards

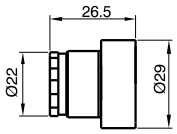
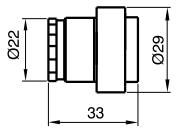
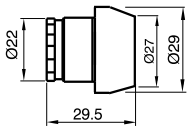
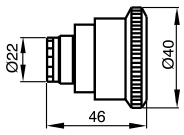
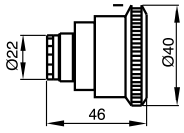
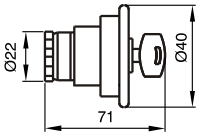
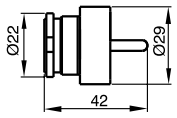
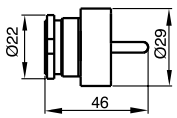


PUSH BUTTON

Kaycee for Commitment...
Kaycee for Quality...

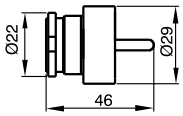
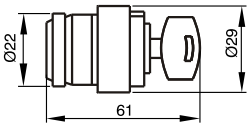
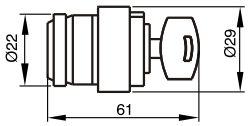
CMS GROUP

CONTROL & SIGNALING DEVICES Ø 22.5

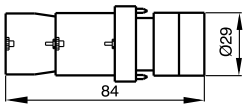
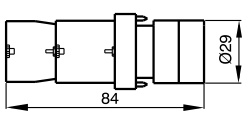
Illustration		Description Metal Bezel	Type
		Shrouded Actuator - Flush type	● K01R ● K01G ● K01Y ● K01B ● K01S ○ K01W
		Shrouded Actuator - Projecting type	● K02R ● K02G ● K02Y ● K02B ● K02S ○ K02W
		Shrouded Actuator - Booted type	● K05R ● K05G ● K05B
		Mushroom Head Spring Return	● K03R ● K03S
		Mushroom Head press to lock & turn to Reset	● K04R ● K04S
		Stayput Mushroom actuator with key (press to lock and Key to Release. Key removable in actuated and unactuated positions).	● K04LR ● K04LS
		Selector actuator, 2-position (maintained contact).	● K31S
		Selector Actuator, 2 - position (spring return from right to left).	● K31SRR
		Selector 3 - position (maintained contact, all contacts open in mid position).	● K32S
		Selector Actuator, 3 - position (centre off, spring return from right to centre and left to centre).	● K32SR

KAYCEE

CONTROL & SIGNALING DEVICES Ø 22.5

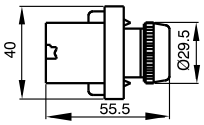
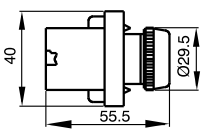
Illustration		Description Metal Bezel	Type
		Selector Actuator, 3 - Position (centre off, maintained contact on right, spring return from left to centre).	● K32SRL
		Selector Actuator, 3 - Position (centre off, maintained contact on left, spring return from right to centre).	● K32SRR
		Lockable Key Actuator (2 - position, maintained contact, Key removable in right position).	● KIL10R
		Lockable Key Actuator (2 - position, maintained contact, Key removable in left position).	● KIL10L
		Lockable Key Actuator (2 - position, maintained contact, Key removable in both positions).	● KIL10B
		Lockable Key Actuator (2 - position, spring return, key removable in un actuated position).	● KIL10S
		Lockable Key Actuator (3 - Position maintained contact centre off, key removable in both right and left positions).	● KIL20LR
		Lockable Key Actuator (3 - position maintained contact on left, spring return from right to centre, the key removable in right side position).	● KIL20SRR
		Lockable Key Actuator (3 - position maintained contact on right, spring return from left to centre, key removable in left side position).	● KIL20SRL
		Lockable Key Actuator (3 - position, Spring return from both sides) key removable in the centre.	● KIL20SRC

CONTROL & SIGNALING DEVICES Ø 22.5

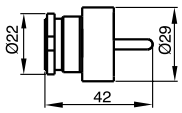
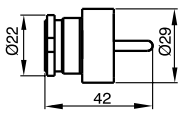
Illustration		Description Metal Bezel	Type
		Illuminated Actuator without resistor (220V) Bulb : Ba9s	K11C1 K11R1 K11G1 K11Y1 K11B1 K11W1 K11A1
		Illuminated Actuator without resistor (110V) Bulb : Ba9s	K11C2 K11R2 K11G2 K11Y2 K11B2 K11W2 K11A2
		Illuminated Actuator without resistor (48V) Bulb : Ba9s	K11C3 K11R3 K11G3 K11Y3 K11B3 K11W3 K11A3
		Illuminated Actuator without resistor (24V) Bulb : Ba9s	K11C4 K11R4 K11G4 K11Y4 K11B4 K11W4 K11A4
		Illuminated Actuator without resistor (12V) Bulb : Ba9s	K11C5 K11R5 K11G5 K11Y5 K11B5 K11W5 K11A5
		Illuminated Actuator with resistor 220V (Bulb : 130V) Bulb : Ba9s	KR11C2 KR11R2 KR11G2 KR11Y2 KR11B2 KR11W2 KR11A2

KAYCEE

CONTROL & SIGNALING DEVICES Ø 22.5

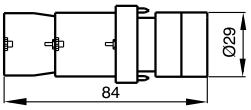
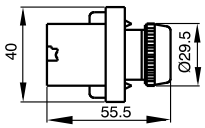
Illustration		Description Metal Bezel	Type
		Pilot Light without resistor (220V) Bulb : Ba9s	K51C1 K51R1 K51G1 K51Y1 K51B1 K51W1 K51A1
		Pilot Light without resistor (110V) Bulb : Ba9s	K51C2 K51R2 K51G2 K51Y2 K51B2 K51W2 K51A2
		Pilot Light without resistor (48V) Bulb : Ba9s	K51C3 K51R3 K51G3 K51Y3 K51B3 K51W3 K51A3
		Pilot Light without resistor (24V) Bulb : Ba9s	K51C4 K51R4 K51G4 K51Y4 K51B4 K51W4 K51A4
		Pilot Light without resistor (12V) Bulb : Ba9s	K51C5 K51R5 K51G5 K51Y5 K51B5 K51W5 K51A5
		Pilot Light with resistor (220V) (Bulb : 130V) Bulb : Ba9s	K52C2 K52R2 K52G2 K52Y2 K52B2 K52W2 K52A2

CONTROL & SIGNALING DEVICES Ø 22.5

Illustration		Description Metal Bezel	Type
		Selector Illuminated Actuator Without resistor (220V) Bulb : Ba9s	K31LC1 K31LR1 K31LG1 K31LY1 K31LB1 K31LW1 K31LA1
		Selector Illuminated Actuator Without resistor (110V) Bulb : Ba9s	K31LC2 K31LR2 K31LG2 K31LY2 K31LB2 K31LW2 K31LA2
		Selector Illuminated Actuator Without resistor (48V) Bulb : Ba9s	K31LC3 K31LR3 K31LG3 K31LY3 K31LB3 K31LW3 K31LA3
		Selector Illuminated Actuator Without resistor (24V) Bulb : Ba9s	K31LC4 K31LR4 K31LG4 K31LY4 K31LB4 K31LW4 K31LA4
		Selector Illuminated Actuator Without resistor (12V) Bulb : Ba9s	K31LC5 K31LR5 K31LG5 K31LY5 K31LB5 K31LW5 K31LA5
		Selector Illuminated Actuator With resistor 220V (Bulb : 110V) Bulb : Ba9s	K32LC2 K32LR2 K32LG2 K32LY2 K32LB2 K32LW2 K32LA2

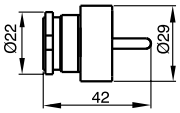
KAYCEE

CONTROL & SIGNALING DEVICES Ø 22.5

Illustration		Description Metal Bezel	Type
		Illuminated Actuator LED Type (220V)	KL11R1 KL11G1 KL11Y1 KL11B1 * KL11A1
		Illuminated Actuator LED Type (110V)	KL11R2 KL11G2 KL11Y2 KL11B2 * KL11A2
		Illuminated Actuator LED Type (48V)	KL11R3 KL11G3 KL11Y3 KL11B3 * KL11A3
		Illuminated Actuator LED Type (24V)	KL11R4 KL11G4 KL11Y4 KL11B4 * KL11A4
		Pilot Light LED Type (220V)	KL53R1 KL53G1 KL53Y1 KL53B1 * KL53A1
		Pilot Light LED Type (110V)	KL53R2 KL53G2 KL53Y2 KL53B2 * KL53A2
		Pilot Light LED Type (48V)	KL53R3 KL53G3 KL53Y3 KL53B3 * KL53A3
		Pilot Light LED Type (24V)	KL53R4 KL53G4 KL53Y4 KL53B4 * KL53A4

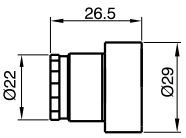
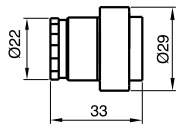
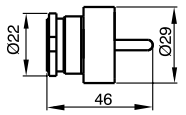
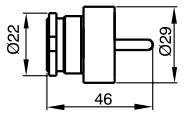
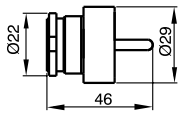
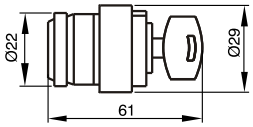
Note : AC/DC to be specified white placing order.
* On Request

CONTROL & SIGNALING DEVICES Ø 22.5

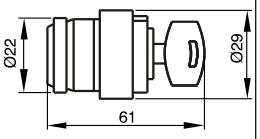
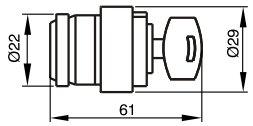
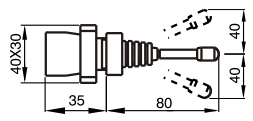
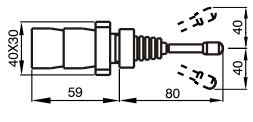
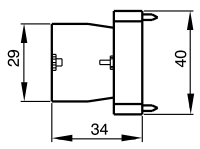
Illustration		Description Metal Bezel	Type
		Selector Illuminated Actuator LED Type (220V)	● KL33R1 ● KL33G1 ● KL33Y1 ● * KL33B1 ● KL33A1
		Selector Illuminated Actuator LED Type (110V)	● KL33R2 ● KL33G2 ● KL33Y2 ● * KL33B2 ● KL33A2
		Selector Illuminated Actuator LED Type (48V)	● KL33R3 ● KL33G3 ● KL33Y3 ● * KL33B3 ● KL33A3
		Selector Illuminated Actuator LED Type (24V)	● KL33R4 ● KL33G4 ● KL33Y4 ● * KL33B4 ● KL33A4

Note : AC/DC to be specified white placing order.
* On Request

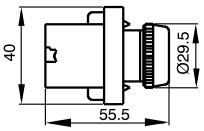
CONTROL & SIGNALING DEVICES Ø 22.5

Illustration		Description (Plastic Bezel)	Type
		Shrouded Actuator - Flush Type	● K01RP ● K01GP ● K01YP ● K01BP ● K01SP ○ K01WP
		Shrouded Actuator - Projected Type	● K02RP ● K02GP ● K02YP ● K02BP ● K02SP ○ K02WP
		Selector actuator, 2 - position (maintained contact).	● K31SP
		Selector Actuator 2 - position (spring return from right to left).	● K31SRP
		Selector 3 - position (maintained contact, all contacts open in mid position).	● K32SP
		Selector Actuator , 3 - position (centre off , spring return from right to centre and left to centre).	● K32SRP
		Selector Actuator,3 - Position (centre off, maintained contact on right, spring return from left to centre).	● K32SRLP
		Selector Actuator, 3 - Position (centre off, maintained contact on left, spring return from right to centre).	● K32SRRP
		Lockable Key Actuator (2 - position, maintained contact, Key removable in right position).	● KIL10RP

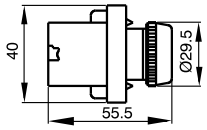
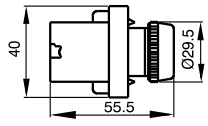
CONTROL & SIGNALING DEVICES Ø 22.5

Illustration		Description (Plastic Bezel)	Type
		Lockable Key Actuator (2 - position, maintained contact, Key removable in left position).	● KIL10LP
		Lockable Key Actuator (2 - position, maintained contact, Key removable in both positions).	● KIL10LP
		Lockable Key Actuator (2 - position,spring return, key removable in un actuated position).	● KIL10BP
		Lockable Key Actuator (3 - Position maintained contact centre off, key removable in both right and left positions).	● KIL20LRP
		Lockable Key Actuator (3 - position maintained contact on left ,spring return from right to centre, key removable in right side position).	● KIL20SRRP
		Lockable Key Actuator (3 -position maintained contact on right, spring return from left to centre, key removable in left side position).	● KIL20SRLP
		Joy stick controller 2 - position with spring return to centre. (With 2 Contact Blocks)	● KIL2JS25P
		Joy stick controller 4 position spring return to centre. (With 2 Contact Blocks)	● KIL2JS45P
		Normally Open Contact (With 2 Contact Blocks)	KA1O ● Green slide.
		Normally Closed Contact (With 2 Contact Blocks)	KA1C ● Red slide.

CONTROL & SIGNALING DEVICES Ø 22.5

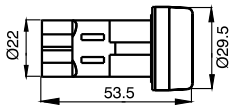
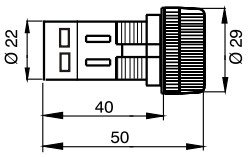
Illustration		Description (Plastic Bezel)	Type
		Pilot Light with out resistor (220V) Bulb : Ba9s	K51CP1 K51RP1 K51GP1 K51YP1 K51BP1 K51WP1 K51AP1
		Pilot Light with out resistor (110V) Bulb : Ba9s	K51CP2 K51RP2 K51GP2 K51YP2 K51BP2 K51WP2 K51AP2
		Pilot Light with out resistor (48V) Bulb : Ba9s	K51CP3 K51RP3 K51GP3 K51YP3 K51BP3 K51WP3 K51AP3
		Pilot Light with out resistor (24V) Bulb : Ba9s	K51CP4 K51RP4 K51GP4 K51YP4 K51BP4 K51WP4 K51AP4
		Pilot Light with out resistor (12V) Bulb : Ba9s	K51CP5 K51RP5 K51GP5 K51YP5 K51BP5 K51WP5 K51AP5

CONTROL & SIGNALING DEVICES Ø 22.5

Illustration		Description (Plastic Bezel)	Type
		Pilot Light with resistor (230-240V) Bulb : 130V Bulb : Ba9s 	● K52CP2 ● K52RP2 ● K52GP2 ● K52YP2 ● K52BP2 ○ K52WP2 ● K52AP2
		Pilot Light LED Type (220V)	● KL53RP1 ● KL53GP1 ● KL53YP1 ● * KL53BP1 ● KL53AP1
		Pilot Light LED Type (110V)	● KL53RP2 ● KL53GP2 ● KL53YP2 ● * KL53BP2 ● KL53AP2
		Pilot Light LED Type (48V)	● KL53RP3 ● KL53GP3 ● KL53YP3 ● * KL53BP3 ● KL53AP3
		Pilot Light LED Type (24V)	● KL53RP4 ● KL53GP4 ● KL53YP4 ● * KL53BP4 ● KL53AP4

Note : AC/DC to be specified white placing order.
* On Request

CONTROL & SIGNALING DEVICES Ø 22.5

Illustration	Description (Plastic Bezel)	Type
 	Direct mounting barrel type Pilot Light (220V) Bulb : Ba9s 	● K54CP1 ● K54RP1 ● K54GP1 ● K54YP1 ● K54BP1 ○ K54WP1 ● K54AP1
	With Cluster LED Direct mounting barrel type LED Indicating Lamp (6/12/24/48/110/220 V AC/DC) AC/DC to be specified while placing order	● KL54CP1 ● KL54RP1 ● KL54GP1 ● KL54YP1 ● KL54BP1 ○ KL54WP1 ● KL54AP1
	With Single LED Direct mounting barrel type LED Indicating Lamp (6/12/24/48/110/220 V AC & 6/12/24/48 V DC) AC/DC to be specified while placing order	● KL75RP ● KL75GP ● KL75UGP ● KL75YP ● KL75BP ● KL75AP

Electrical & Mechanical Characteristics

Compliance with standards	:	IEC 947 - 5 - 1
Rated Insulation voltage	:	500V
Rated thermal current	:	10A
Contact operation	:	Self wiping slow break, NO or NC
Make & Break capacity	:	AC15 : 415V AC, 4A DC13 : 110V DC, 0.5A
Connection	:	> 1X0.5mm² , <21X2.5mm² Screw type terminal with retained clamp.
Short circuit protection	:	10A fuses recommended
Ambient temperature	:	-25° C to +70° C
Altitude	:	< 3000M
Operating position	:	All positions
Degree of protection	:	IP 65
Mechanical life	:	Over 1 Million operations

KAYCEE is an ISO 9001:2000 and UL certified manufacturing & marketing organisation offering a wide range of Electromechanical switches & Low Voltage Switchgears. KAYCEE is an integral part of the CMS group, a well-known name in India for providing System Integration and Networking, Outsourcing and Traffic System Services.

KAYCEE is the pioneer in the Indian switchgear industry & one of the most reputed brands of electrical and electronic components. KAYCEE has a wide spectrum of products which include Rotary switches, Rotary Cam switches, Micro & Toggle switches, Limit switches, Push Button switches & Indicating lamps, Weather tight switches, Breaker Control switches, Time Totalizers, Water meters, Counters & Fuse fittings, which conform to various international & national standards.

KAYCEE has a strong Design & Development Centre, dedicated towards development of new products & continuous improvement in existing products. A full-fledged Quality Control System laid down at KAYCEE assures the best quality product to its customers. Timely deliveries & prompt customer service, are a tradition at KAYCEE.

For more than six decades, KAYCEE has been serving to a wide gamut of industries from Electrical, Electronics, Telecommunication, Machine & Machine Tool, Automobile, Appliances & various other fields, through its network of Sales & Service centers, distributors, stockists & dealers spread across the country. KAYCEE is also exporting its products to the Middle East, South East Asia, Australia & European markets.

KAYCEE is committed to its customers, as a reliable partner in their ventures, for exhibiting a global performance.

UL REGISTERED FIRM UKAS QUALITY MANAGEMENT 062
ISO 9001-2000

KAYCEE INDUSTRIES LIMITED

32, Ramjibhai Kamani Road, Ballard Estate, Mumbai - 400 001.
Tel.: +91 (22) 2261 3521 / 22 / 23. Fax : +91 (22) 2261 6106.
Email : kayceeindltd@vsnl.com, Website : www.kayceeindustries.com

Branch Offices :

BANGALORE : C/o CMS Computers Ltd. M/s. Kaycee Industries Ltd.
2nd Floor, Laxmi Complex, 54, St. Marks Rd., Bangalore - 560 001.
Tel.: +91 (80) 2558 6451 / 6790. Fax : +91 (80) 2555 0336.
Mobile : 9342853324

CHENNAI : C/o CMS Computers Ltd. M/s. Kaycee Industries Ltd.
42, Cathedral Road, Chennai - 600 086. Tel.: +91 (44) 2811 4118.
Fax : +91 (44) 2811 4159. Mobile : 9381201556

HYDERABAD : C/o CMS Computers Ltd. M/s. Kaycee Industries Ltd.
6-3-569/1, 2nd Floor, Surana House, Opp. RTA Office, Somajiguda,
Hyderabad - 500 082. Tel.: 5573 9900 (5 lines). Fax : 5573 9900.
Mobile : 9392489349

KOLKATA : C/o CMS Computers Ltd. M/s. Kaycee Industries Ltd.
10/D/2, Ho-Chi-Minh Sarani, 1st Floor, Kemwell Manor, Kolkata - 700 071.
Tel.: +91 (33) 2280 6112 / 13 / 14, 2247608 / 22408949.
Fax : +91 (33) 2240 9145. Mobile : 9339723155 / 9339200968

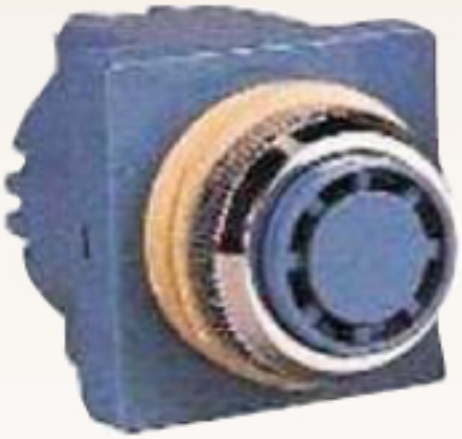
NEW DELHI : C/o CMS Computers Ltd. M/s. Kaycee Industries Ltd.
D-38, 3rd Floor, Dena Bank Building, South Ext. Part -1, Delhi - 110 006.
Tel.: +91 (11) 2464 7055, 51647300 / 1 / 2 / 3. Fax : +91 (11) 2464 2053.
Mobile : 9312004687 / 9350828127

Reputed Customers : ■ ABB ■ Crompton Greaves ■ L&T ■ Siemens ■ C&S ■ Bhel ■ GE Power ■ NTPC ■ ICF ■ RCF ■ Alstom ■ Schneider ■ HMT ■ BPL Telecom ■ Reliance ■ Jyoti Ltd. ■ Keltron ■ Ion Exchange ■ Hindustan Motors ■ Indian Railways

BUZZERS

CBZ -10

CBZ -20



CBZ -30

SPECIFICATIONS

SPEC. \ Model No.	CBZ - 10	CBZ - 20	CBZ - 30
MOUNTING STYLE	SURFACE MOUNT	FLUSH MOUNT	FLUSH MOUNT
VOLUME IN dB	8	8	4
WEIGHT in Gms	160	190	125
OPERATING VOLTAGE	AC : - 110, 220, 380 V DC : - 12 & 24 V		AC : - 110, 220V DC : - 12 & 24 V

Kaycee for Commitment... Kaycee for Quality...

CMS GROUP

RELAY


MY - SERIES


LY - SERIES

MK - SERIES

		MY SERIES			LY SERIES			MK SERIES	
MODEL		MY-2	MY-3	MY-4	LY-2	LY-3	LY-4	MK2P-1	MK3P-1
EXTERNAL DIMENSION (MM)	L W H	27.6 21.5 34			27.6 21.5 36	27.6 31.5 36	27.6 41.5 36	34.7 34.7 52	
CONTACT FORM		2A2B	3A3B	4A4B	2A2B	3A3B	4A4B	2A2B	3A3B
CONTACT CAPACITY		28V DC 220V AC			28V DC 220V AC			28V DC 220V AC	
		5A		3A	15A1DA	10A		10A 5A	
COIL VOLTAGE	DC	6,12,24,36,110 V			6,12,24,36,48,110 V			6,12,24,36,48,60,110,220 V	
	AC	6,12,24,36,110,220 V			6,12,24,36,48,110,220 V			6,12,24,36,48,60,110,127,220,380 V	
CONTACT RESISTANCE		≤ 50m Ω			≤ 50m Ω			≤ 50mΩ	
INSULATION RESISTANCE		≥1000m Ω			≥1000m Ω			≥ 500m Ω	
DIELECTRIC STRENGTH		1000V AC 50/60 Hz			1500V AC 50/60 Hz			1500V AC 50/60 Hz	
SERVICE LIFE	MECHANICAL	10,000,000			10,000,000			10,000,000	
	ELECTRICAL	100,000			100,000			100,000	
TERMINAL		OUTLET AND PRINTED CIRCUIT BOARD			OUTLET AND PRINTED CIRCUIT BOARD			OUTLET SOLDER	