

Cam - Operated Switch



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Cam - Operated Switch

General :

Cam - Operated Switch is a kind of switch with semi-independent manual operation that is defined in the standard as follows :

Switch: Mechanical Making and Breaking device capable of connecting to, Transmit & disconnect the circuit is in normal conditions which may include specified operating overload conditions and can also be for a certain period under abnormal conditions such as short circuit current will crossing. A Switch short-circuit currents may be able to connect, but can not break it.

Semi – independent manual operation: The action applies only to direct energy to be done manually. Manually force to a much greater extent so that it leads to increased switching Unless the operator is deliberately delayed .

Cam operated & Selector Switches from Electro Kaveh company, covers a full range of cam operated switches which are suitable for Switching circuits and power supplies, Changeover switch (power - generator), Multi-step switch (selector switch), Ammeter switch, voltmeter switch and Motor Reversing cam switches like star – triangle ,

Rated currents from 12A up to 630A with rotation angles of 30, 45, 60 and 90 degrees, ability to install inter - lock mechanism and very high variation in the layout and arrangement of contacts in utilization category AC-23A (switching motor loads or other loads to highly inductive) in accordance with international standards IEC60947-1&3 and national standards ISIRI4835 –1&3 are been produced in Electro Kaveh Group.

The quality of Electro Kaveh Switch is far beyond the expectations and requirements of the standards. The products not only approved by famous European institutions such as the International German VDE and Semko of Sweden but also local organizations like the Niroo Research Institute (NRI) and the organizations affiliated to the Ministry of Petroleum and Ministry of Energy.

Electro kaveh has certification mandatory standard from National Iranian Standards Organization .



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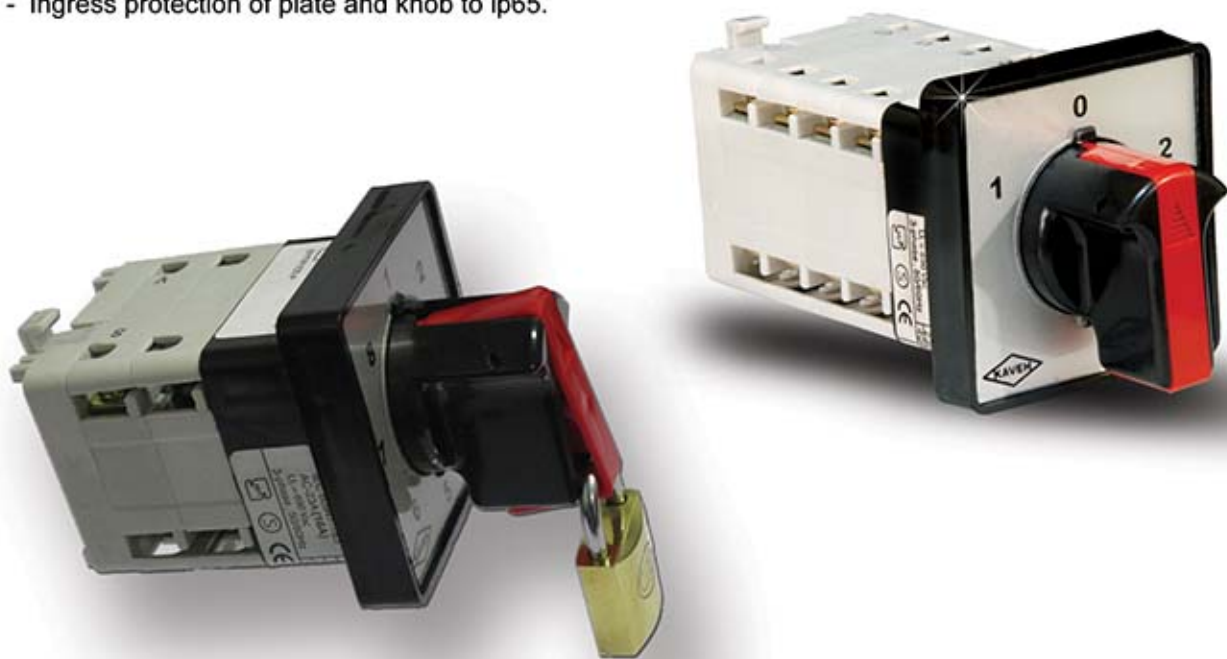
KS Model Cam-Operated switch:

KS Model is an evolution of com-operated switches produced during several based on the experience acquired in manufacturing different kinds of switches to local foresees industry market.

In most attempts has been taken in this type of switch to add features and capabilities and advantages other its previous ones . In order to increase our loyal customer's satisfaction.

Technical features of KS Model :

- Dimensional compatibilityfor mounting on the equipment ease of installation.
- Operation endurance in vibration condition.
- Variety of contact configuration to cover different needs ability to be installed on MCB Rail.
- Capability of locking in each position.
- Better performance longer lifetime than ever other designs.
- Ingress protection of terminal to IP20.
- Ingress protection of plate and knob to ip65.



Technical Specification:

Rated Voltage (Vn)	230/400 Vac
Rated Frequency	50/60 Hz
Utilization Category	AC-23A
Rated Current (In)	12A , 16A , 20A
Thermal Current (Ith)	16A , 20A , 25A
Rated Power (400Vac)	4kW , 7.5kW , 9kW
Standard No.	IEC/EN 60947-1&3

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KA Model Classification :



KA16.00 Series



KA25.00 Series



KA50.00 Series



KA63.00 Series



KA100.00 Series



KA200.00 Series

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AC Utilization Category :

Utilization Cat.	Rated Current	Power (KW)											
		12A	16A	20A	25A	32A	40A	50A	63A	100A	200A	400A	630A
Single Phase	110V	0.75	1.00	1.30	1.60	2.30	3.00	3.90	5.10	8.10	10.0	18.0	28.0
	230V	1.50	2.10	2.60	3.30	4.60	6.10	7.80	10.3	16.2	20.0	36.0	56.0
	400V	2.60	3.60	4.50	5.70	8.00	10.0	13.3	17.6	28.0	34.0	62.0	96.0
AC1 Non-inductive or slightly inductive loads (Resistance furnaces, lighting circuits).	110V	1.80	2.50	3.00	3.50	5.00	6.20	6.90	10.0	13.2	26.0	50.0	80.0
	230V	3.50	4.40	5.50	7.00	10.0	12.5	13.8	20.0	26.5	52.0	100	160
	400V	6.00	7.50	9.50	12.0	17.0	20.0	24.0	33.0	45.6	90.0	172	275
AC2 Slip-Ring Motors: Starting & Reversing the motor rapidly while the motor is running.	110V	1.50	2.20	2.80	3.20	4.40	5.50	6.50	8.20	13.0	23.0	44.0	70.0
	230V	3.00	4.50	5.50	6.60	8.80	11.0	13.0	16.5	26.0	46.0	88.0	140
	400V	5.10	7.40	9.00	11.7	15.2	19.0	23.0	28.5	44.0	78.0	150	240
AC3 Squirrel cage motors: Starting ,Switching OFF motors during running.	110V	1.30	1.80	2.20	2.50	4.00	5.10	6.00	8.00	11.0	20.0	38.0	60.0
	230V	2.20	3.70	4.00	5.50	7.50	9.00	11.0	15.0	22.0	30.0	76.0	120
	400V	3.50	5.50	7.50	10.0	15.0	16.3	18.0	22.0	37.0	45.0	130	205
AC4 Squirrel Cage motors: Starting ,Plugging , Inching.	110V	1.00	1.40	1.70	2.00	3.00	3.80	4.20	6.10	7.00	14.0	26.0	41.0
	230V	2.00	2.70	3.30	4.00	6.10	7.70	8.50	12.0	17.5	28.0	52.0	82.0
	400V	3.40	4.70	5.50	7.00	10.3	13.2	14.7	21.3	30.0	48.0	89.0	141
AC .21A ⁽¹⁾ Switching of resistive loads including moderate overloads.	110V	2.00	2.75	3.30	4.40	5.50	6.90	8.50	11.0	17.6	32.0	57.0	90.0
	230V	4.00	5.50	6.60	8.80	11.0	13.8	17.0	22.0	35.2	64.0	114	180
	400V	6.90	9.50	11.4	15.7	19.0	24.0	28.8	38.0	60.0	108	196	310
AC .22A Switching of mixed resistive & inductive loads including moderate overloads.	110V	1.80	2.50	3.00	3.90	5.00	6.30	7.60	9.80	15.6	28.0	49.0	77.0
	230V	3.50	5.00	6.00	7.80	10.0	12.5	13.3	19.6	31.2	56.0	98.0	154
	400V	6.00	8.50	10.3	13.5	17.3	21.5	25.7	34.0	54.0	95.0	168	265
AC .23A Switching of motor Overloads or other Highly inductive loads.	110V	1.50	2.10	2.60	3.30	4.20	5.20	6.40	8.30	13.2	24.0	41.0	64.0
	230V	3.00	4.00	5.50	8.50	10.0	12.0	15.0	18.5	30.0	48.0	82.0	128
	400V	4.00	7.50	9.00	15.0	18.5	21.0	25.0	30.0	45.0	82.0	141	220

(1) - A: Frequent Operations. B: Infrequent Operations.

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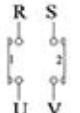

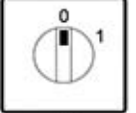

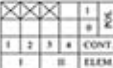
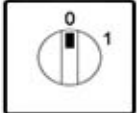
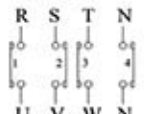

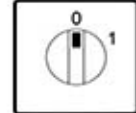
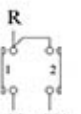

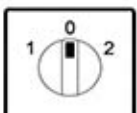
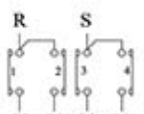

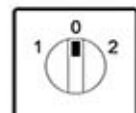
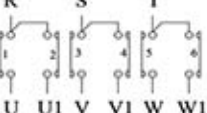

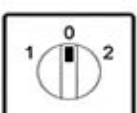


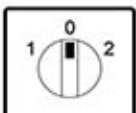
DC Utilization Category :

Rated Current (AC-23A)	12A	16A	20A	25A	32A	40A	50A	63A	100A	200A	
Utilization Cat.	V(DC)	Power (KW)									
Single Pole Switching of resistive loads	24	0.28	0.38	0.48	0.60	0.75	0.90	1.15	1.40	2.20	4.50
	48	0.50	0.68	0.86	1.05	1.35	1.60	2.05	2.50	3.95	8.10
	110	1.00	1.30	1.65	2.05	2.50	3.15	4.00	5.00	8.00	15.0
	250	1.50	2.00	2.50	3.10	3.85	4.80	6.10	7.75	12.0	22.5
DC .21B⁽¹⁾ Switching of resistive loads including moderate overloads.	24	0.25	0.34	0.43	0.55	0.67	0.80	1.00	1.25	2.00	4.00
	48	0.45	0.61	0.77	0.94	1.20	1.45	1.80	2.25	3.60	7.20
	110	0.90	1.15	1.50	1.80	2.25	2.80	3.60	4.50	7.20	13.5
	250	1.35	1.80	2.25	2.75	3.40	4.30	5.45	6.95	10.8	20.2
DC .22B Switching of mixed resistive & inductive loads including moderate overloads.	24	0.19	0.25	0.32	0.41	0.50	0.60	0.75	0.94	1.50	3.00
	48	0.34	0.45	0.58	0.70	0.90	1.10	1.35	1.69	2.70	5.40
	110	0.67	0.86	1.12	1.35	1.69	2.10	2.70	3.35	5.40	10.1
	250	1.00	1.35	1.69	2.05	2.55	3.22	4.05	5.20	8.10	15.1
DC .23B Switching of motor Overloads or other Highly inductive loads.	24	0.13	0.17	0.21	0.27	0.33	0.40	0.50	0.62	1.00	2.00
	48	0.22	0.30	0.38	0.47	0.60	0.77	0.90	1.13	1.80	3.60
	110	0.45	0.57	0.75	0.90	1.13	1.40	1.80	2.25	3.60	6.75
	250	0.65	0.90	1.12	1.35	1.70	2.10	2.65	3.40	5.00	10.0

(1) - A: Frequent Operations. B: Infrequent Operations.

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Standard Diagrams :

<p>Code:01 کلید تک فاز یکطرفه</p> <p>Single . Pole Switch</p>    <p>60°</p>	<p>Code:02 کلید دو فاز یکطرفه</p> <p>Double . Pole Switch</p>    <p>60°</p>
<p>Code:03 کلید سه فاز یکطرفه</p> <p>Three . Pole Switch</p>    <p>60°</p>	<p>Code:04 کلید سه فاز و نول یکطرفه</p> <p>Four . Pole Switch</p>    <p>60°</p>
<p>Code:05 کلید تک فاز دو طرفه</p> <p>Single . Pole Line Change Over Switch</p>    <p>60°</p>	<p>Code:06 کلید دو فاز دو طرفه</p> <p>Double . Pole Line Change Over Switch</p>    <p>60°</p>
<p>Code:07 کلید سه فاز دو طرفه</p> <p>Three . Pole Line Change Over Switch</p>    <p>60°</p>	<p>Code:07/2 N کلید سه فاز با نول دو طرفه</p> <p>Four . Pole Line Change Over Switch</p>    <p>60°</p>

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Standard Diagrams :

<p>Three . Pole Reversing Switch</p> <p>کلید سه فاز چگردد راستگرد Code:08</p> <p>60°</p>	<p>Pole Changing Switch</p> <p>کلید سه فاز دو سرعت Code:09</p> <p>60°</p>
<p>Star . Delta Starter</p> <p>کلید ستاره مثلث Code:10</p> <p>60°</p>	<p>Pole Changing and Reversing Switch</p> <p>کلید چگردد و راستگرد دو سرعت Code:11</p> <p>45°</p>
<p>Pole Changing and Reversing Switch without "0"</p> <p>کلید چگردد و راستگرد دو سرعت بدون مسفر Code:11/1</p> <p>45°</p>	<p>Star . Delta Starting and Seversing Switch</p> <p>کلید ستاره مثلث چگردد و راستگرد Code:12</p> <p>45°-90°</p>
<p>Pole Changing and Star . Delta Starting</p> <p>کلید دالاندر Code:13</p> <p>45°</p>	<p>Ampermetric Change Over Switch for Direct Measure</p> <p>کلید سنجش آمپر برای آمپرمتر بدون ترانس کسوران Code:14</p> <p>60°</p>

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Standard Diagrams :

<p>Code:15 کلید ولت بین فاز و نول</p> <p>Voltmetric Change Over Switch Phase - Neutral</p> <p>45°</p>	<p>Code:16 کلید ولت بین فاز و فاز</p> <p>Voltmetric Change Over Switch Phase - Phase</p> <p>45°</p>
<p>Code:17 کلید ولت بین فاز و فاز برای دو ولتاژ سه فاز</p> <p>Voltmetric Change Over Switch Phase - Phase for 2 Three-Phase Voltages</p> <p>45°</p>	<p>Code:18 کلید ولت بین فاز و فاز و هر فاز و نول</p> <p>Voltmetric Change Over Switch Phase - Phase - Neutral</p> <p>45°</p>
<p>Code:19 کلید ولت بین یک فاز با نول و فاز و فاز</p> <p>Voltmetric Change Over Switch Phase - Neutral - phase - phase</p> <p>45°</p>	<p>Code:20 کلید تک فاز آمپر متر</p> <p>Single-Pole Ampermetric Change Over Switch for 1 Divider</p> <p>90°</p>
<p>Code:21 کلید دو فاز آمپر متر</p> <p>Single-Pole Ampermetric Change Over Switch for 2 Dividers</p> <p>90°</p>	<p>Code:22 کلید سه فاز آمپر متر با ترانس کوران</p> <p>Single-Pole Ampermetric Change Over Switch for 3 Dividers</p> <p>90°</p>



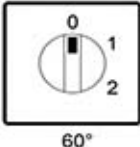


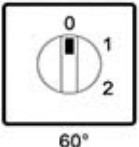


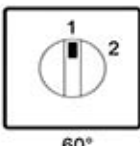
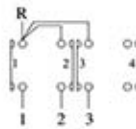
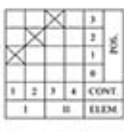
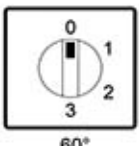
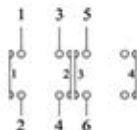
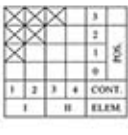
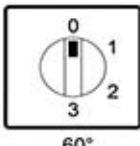
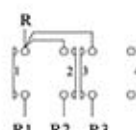
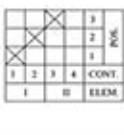
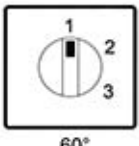
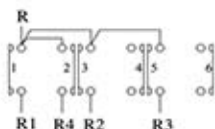
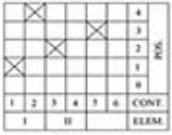
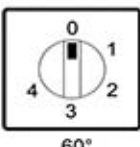
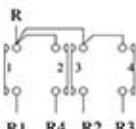
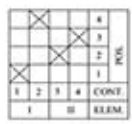
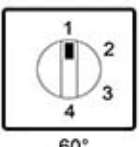
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Standard Diagrams :

<p>کلید سه فاز و نول آمپر متر Code:23</p> <p>Single-Pole Amperetric Change Over Switch for 4 Dividers</p>	<p>کلید دو پل سه فاز آمپر متر Code:25</p> <p>Two-Pole Amperetric Change Over Switch for 3 Dividers</p>
<p>کلید برای سنجش وات Code:27</p> <p>Commutator for wattmeter</p>	<p>کلید برای سنجش ضریب توان Code:28</p> <p>Commutator for Power-factor meter</p>
<p>کلید کنترل دستی استارت خور Code:29</p> <p>Commutator for remote control operation</p>	<p>کلید کنترل دستی استارت خور چگسرد و رامسنگرد Code:30</p> <p>Commutator for remote control Reverser-operation</p>
<p>کلید تک فاز با فاز کمکی فرمان Code:31</p> <p>Switch for Single - phase motor with auxiliary phase</p>	<p>کلید تک فاز با فاز کمکی فرمان چگسرد و رامسنگرد Code:32</p> <p>Reverser for Single - phase motor with auxiliary phase</p>

Cam - Operated Switch

Selector Switch Diagrams :

<p>Code:CM012 کلید تک فاز دو حالتی با صفر</p> <p>1 Pole Changeover Switch 2 Positions, with "0"</p>   	<p>Code:CM012/1 کلید تک فاز دو حالتی با صفر در حالی که کنتاکتهای قبلی وصل هستند</p> <p>1 Pole Changeover Switch 2 Positions, with "0" whereas previous contacts are connected</p>   
<p>Code:CM12 کلید تک فاز دو حالتی بدون صفر</p> <p>1 Pole Changeover Switch 2 Positions, without "0"</p>   	<p>Code:CM013 کلید تک فاز سه حالتی با صفر</p> <p>1 Pole Changeover Switch 3 Positions, with "0"</p>   
<p>Code:CM013/1 کلید تک فاز سه حالتی با صفر در حالی که کنتاکتهای قبلی وصل هستند</p> <p>1 Pole Changeover Switch 3 Positions, with "0" whereas previous contacts are connected</p>   	<p>Code:CM13 کلید تک فاز سه حالتی بدون صفر</p> <p>1 Pole Changeover Switch 3 Positions, without "0"</p>   
<p>Code:CM014 کلید تک فاز چهار حالتی با صفر</p> <p>1 Pole Changeover Switch 4 Positions, with "0"</p>   	<p>Code:CM14 کلید تک فاز چهار حالتی بدون صفر</p> <p>1 Pole Changeover Switch 4 Positions, without "0"</p>   

Cam - Operated Switch

Selector Switch Diagrams :

<p>Code:CM015 کلید تک فاز پنج حالتی با صفر</p> <p>1 Pole Changeover Switch 5 Positions, with "0"</p>	<p>Code:CM15 کلید تک فاز پنج حالتی بدون صفر</p> <p>1 Pole Changeover Switch 5 Positions, without "0"</p>
<p>Code:CM016 کلید تک فاز شش حالتی با صفر</p> <p>1 Pole Changeover Switch 6 Positions, with "0"</p>	<p>Code:CM16 کلید تک فاز شش حالتی بدون صفر</p> <p>1 Pole Changeover Switch 6 Positions, without "0"</p>
<p>Code:CM017 کلید تک فاز هفت حالتی با صفر</p> <p>1 Pole Changeover Switch 7 Positions, with "0"</p>	<p>Code:CM17 کلید تک فاز هفت حالتی بدون صفر</p> <p>1 Pole Changeover Switch 7 Positions, without "0"</p>
<p>Code:CM18 کلید تک فاز هشت حالتی بدون صفر</p> <p>1 Pole Changeover Switch 8 Positions, without "0"</p>	<p>Code:CM022 کلید دو فاز دو حالتی با صفر</p> <p>2 Poles Changeover Switch 2 Positions, with "0"</p>

Cam - Operated Switch

Selector Switch Diagrams :

<p>Code:CM22 کلید دو فاز دو حالتی بدون صفر</p> <p>2 Poles Changeover Switch 2 Positions, without "0"</p>	<p>Code:CM023 کلید دو فاز سه حالتی با صفر</p> <p>2 Poles Changeover Switch 3 Positions, with "0"</p>
<p>Code:CM23 کلید دو فاز سه حالتی بدون صفر</p> <p>2 Poles Changeover Switch 3 Positions, without "0"</p>	<p>Code:CM024 کلید دو فاز چهار حالتی با صفر</p> <p>2 Poles Changeover Switch 4 Positions, with "0"</p>
<p>Code:CM24 کلید دو فاز چهار حالتی بدون صفر</p> <p>2 Poles Changeover Switch 4 Positions, without "0"</p>	<p>Code:CM025 کلید دو فاز پنج حالتی با صفر</p> <p>2 Poles Changeover Switch 5 Positions, with "0"</p>
<p>Code:CM25 کلید دو فاز پنج حالتی بدون صفر</p> <p>2 Poles Changeover Switch 5 Positions, without "0"</p>	<p>Code:CM026 کلید دو فاز شش حالتی با صفر</p> <p>2 Poles Changeover Switch 6 Positions, with "0"</p>

Cam - Operated Switch

Selector Switch Diagrams :

<p>کلید دو فاز شش حائنه بدون صفر Code:CM26</p> <p>2 Poles Changeover Switch 6 Positions, without "0"</p>	<p>کلید دو فاز هفت حائنه با صفر Code:CM027</p> <p>2 Poles Changeover Switch 7 Positions, with "0"</p>
<p>کلید دو فاز هفت حائنه بدون صفر Code:CM27</p> <p>2 Poles Changeover Switch 7 Positions, without "0"</p>	<p>کلید دو فاز هشت حائنه بدون صفر Code:CM28</p> <p>2 Poles Changeover Switch 8 Positions, without "0"</p>
<p>کلید سه فاز دو حائنه با صفر Code:CM032</p> <p>3 Poles Changeover Switch 2 Positions, with "0"</p>	<p>کلید سه فاز دو حائنه بدون صفر Code:CM32</p> <p>3 Poles Changeover Switch 2 Positions, without "0"</p>
<p>کلید سه فاز سه حائنه با صفر Code:CM033</p> <p>3 Poles Changeover Switch 3 Positions, with "0"</p>	<p>کلید سه فاز سه حائنه بدون صفر Code:CM33</p> <p>3 Poles Changeover Switch 3 Positions, without "0"</p>

Cam - Operated Switch

Selector Switch Diagrams :

<p>کلید سه فاز چهار حالتی با صفر Code:CM034</p> <p>3 Poles Changeover Switch 4 Positions, with "0"</p> <p>R1 R4 R2 R3 T1 T4 T2 T3 S1 S4 S2 S3</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>CONT.</td><td>4</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>60°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	CONT.	4	I	II	III	IV	V	VI	VII	VIII	IX	ELEM.										POS.	<p>کلید سه فاز چهار حالتی بدون صفر Code:CM34</p> <p>3 Poles Changeover Switch 4 Positions, without "0"</p> <p>R1 R4 R2 R3 S1 S4 S2 S3 T1 T4 T2 T3</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>CONT.</td><td>1</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>60°</p>	1	2	3	4	5	6	7	8	9	10	11	12	CONT.	1	I	II	III	IV	V	VI	ELEM.							POS.																																						
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<p>کلید سه فاز پنج حالتی با صفر Code:CM035</p> <p>3 Poles Changeover Switch 5 Positions, with "0"</p> <p>R1 R4 R2 R5 R3 S1 S4 S2 S5 S3 T1 T4 T2 T5 T3</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>CONT.</td><td>5</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>60°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	CONT.	5	I	II	III	IV	V	VI	VII	VIII	IX	ELEM.										POS.	<p>کلید سه فاز پنج حالتی بدون صفر Code:CM35</p> <p>3 Poles Changeover Switch 5 Positions, without "0"</p> <p>R1 R4 R2 R5 R3 S1 S2 S5 S3 S4 T1 T4 T2 T5 T3</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>CONT.</td><td>1</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>60°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	CONT.	1	I	II	III	IV	V	VI	VII	VIII	IX	ELEM.									POS.																													
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<p>کلید سه فاز شش حالتی با صفر Code:CM036</p> <p>3 Poles Changeover Switch 6 Positions, with "0"</p> <p>R1 R2 R3 R4 R5 R6 S1 S2 S3 S4 S5 S6 T1 T2 T3 T4 T5 T6</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>CONT.</td><td>6</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>45°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	CONT.	6	I	II	III	IV	V	VI	VII	VIII	IX	ELEM.										POS.	<p>کلید سه فاز شش حالتی بدون صفر Code:CM36</p> <p>3 Poles Changeover Switch 6 Positions, without "0"</p> <p>R1 R4 R2 R5 R3 R6 S1 S4 S2 S5 S3 S6 T1 T4 T2 T5 T3 T6</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>CONT.</td><td>6</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>60°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	CONT.	6	I	II	III	IV	V	VI	VII	VIII	IX	ELEM.										POS.																										
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<p>کلید سه فاز هفت حالتی با صفر Code:CM037</p> <p>3 Poles Changeover Switch 7 Positions, with "0"</p> <p>R1 R5 R2 R6 R3 R7 R4 S1 S5 S2 S6 S3 S7 S4 T1 T5 T2 T6 T3 T7 T4</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>CONT.</td><td>7</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>X</td><td>XI</td><td>XII</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>45°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	CONT.	7	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	ELEM.														POS.	<p>کلید سه فاز هفت حالتی بدون صفر Code:CM37</p> <p>3 Poles Changeover Switch 7 Positions, without "0"</p> <p>R1 R5 R2 R6 R3 R7 R4 S1 R4 S2 S6 S3 S7 S4 S5 T1 T5 T2 T6 T3 T7 T4</p> <table border="1"> <tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>CONT.</td><td>7</td></tr> <tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td><td>VII</td><td>VIII</td><td>IX</td><td>X</td><td>XI</td><td>XII</td><td>ELEM.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>POS.</td></tr> </table> <p>45°</p>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	CONT.	7	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	ELEM.														POS.
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Cam - Operated Switch

Selector Switch Diagrams :

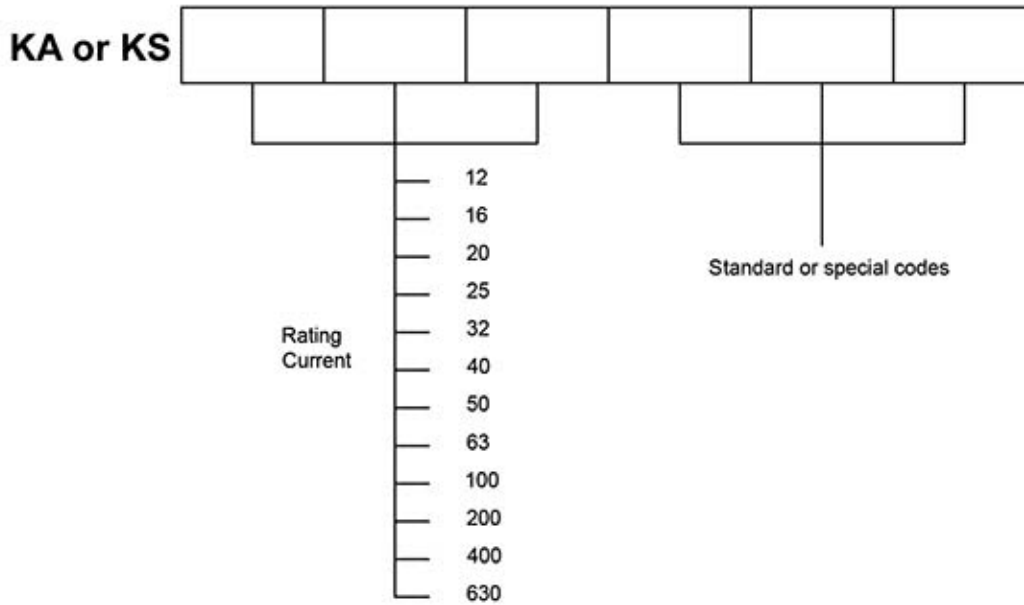
<p>Code:CM38 کلید سه فاز هشت حالتی بدون صفر</p> <p>3 Poles Changeover Switch 8 Positions, without "0"</p>	<p>Code:CM042 کلید چهار پل دو حالتی با صفر</p> <p>4 Poles Changeover Switch 2 Positions, with "0"</p>
<p>Code:CM42 کلید چهار پل دو حالتی بدون صفر</p> <p>4 Poles Changeover Switch 2 Positions, without "0"</p>	<p>Code:CM43 کلید چهار پل سه حالتی بدون صفر</p> <p>4 Poles Changeover Switch 3 Positions, without "0"</p>
<p>Code:CM44 کلید چهار پل چهار حالتی بدون صفر</p> <p>4 Poles Changeover Switch 4 Positions, without "0"</p>	<p>Code:CM45 کلید چهار پل پنج حالتی بدون صفر</p> <p>4 Poles Changeover Switch 5 Positions, without "0"</p>
<p>Code : CM052 کلید پنج پل، دو حالتی با صفر</p> <p>5 Poles Changeover Switch 2 Positions, with "0"</p>	<p>Code:CM52 کلید پنج پل دو حالتی بدون صفر</p> <p>5 Poles Changeover Switch 2 Positions, without "0"</p>

Cam - Operated Switch

Ordering Information :

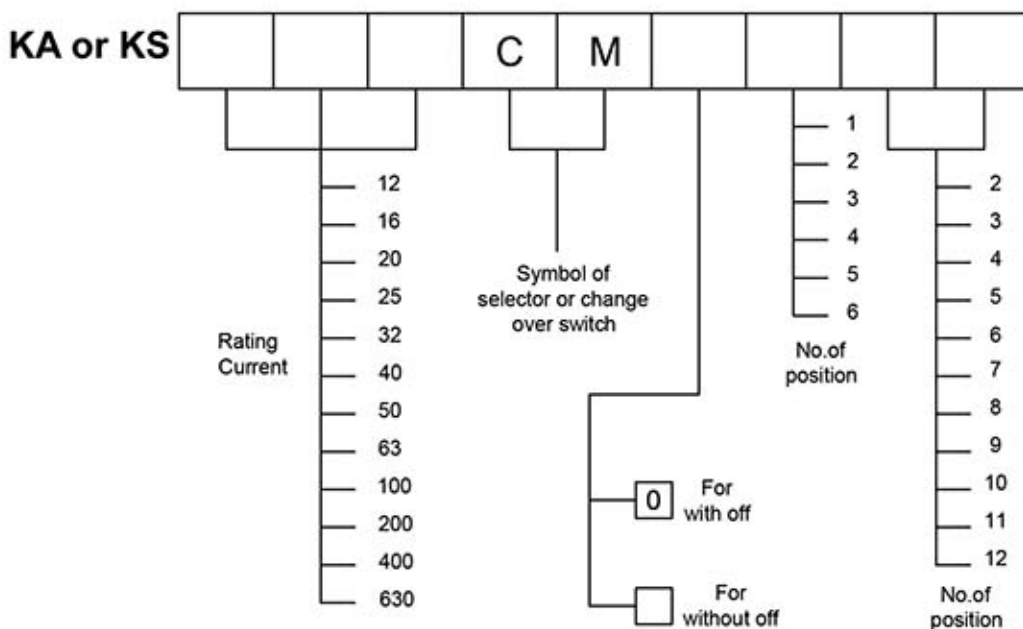
Standard and special switches in according AC-23A (AC3)

Standard switch , available for prompt delivery in flush and rear mounting version A... The diagram number forms part of the switches ,in the last two position. For example :A three - pole linechange - over switch (diagram 07)in 25A Series (A.2500) is identified by the type number 2507.



Selector and changeover switches in according AC-23A(AC3)

For example:A three - pole changeover switch 2 position,without off in 16A is identified by the number 16CM32.



Cam - Operated Switch

Dimensions for KA Model Switches :

Plastic Plate Version						Installation Diagram						Pad Lock Plate Version						
Series	A	A1	A2	B	B1	R	C	P	S	Q	L1	L2	L3	D1	D2	S1	S2	S3
A16.00	52	19	7	52	24	10	22	12	16	39	—	37	28	4	4	2.9x9.5	3.5x10	2.9x6.5
	64	20	9	75	28	10	24	12	16	39	—	47	28	4	4	2.9x9.5	3.5x10	2.9x6.5
	75	20	9	75	28	10	24	18	20	58	44	59	28	4	4	2.9x9.5	3.5x10	2.9x6.5
A25.00	64	20	9	75	28	10	24	18	20	58	—	47	28	4	4	2.9x9.5	3.5x10	2.9x6.5
	75	20	9	75	28	10	24	18	20	58	44	59	28	4	4	2.9x9.5	3.5x10	2.9x6.5
A50.00	105	30	11	105	40	10	24	18	20	58	—	85	28	5.5	5.5	4x10	5x12	2.9x11
A63.00	105	30	11	105	40	12	36	25	30	84	—	85	40	5.5	5.5	4x10	5x12	2.9x11
A100.00	130	42	13	—	—	16.5	46	30	30	110	—	110	89	5.5	5.5	5x20	5x25	2.9x13
A200.00	130	42	13	—	—	16.5	46	39	30	110	—	110	89	5.5	5.5	5x20	5x25	2.9x13

Chase Assembly Of Plastic Or Pad-Lock Plate						
Series	A	B	C	D	E	F
A16.00	52	36	36	40	4	36
	64	48	48	40	4	48
	75	44	44	40	4	58
A25.00	64	48	48	58	4	58
	75	44	44	58	5.5	85
A50.00	105	85	85	73	5.5	85
A63.00	105	85	85	84	5.5	85
A100.00	130	95	95	110	5.5	110
A200.00	130	95	95	110	5.5	110

Metal Back Plate Assembly									
Series	L1	L2	L3	L4	D1	D2	D3	Q	P
A16.00	18	27	60	28	4	5	4	71	10
A25.00	18	27	60	28	4	5	4	71	10
A50.00	26	40	87	40	5.3	5.3	5.3	99	12.5
A63.00	26	40	87	40	5.3	5.3	5.3	99	12.5

Assembly Template							
Series	L1	L2	L3	L4	D1	D2	D3
A100.00	89.5	96	40	30	5.5	15	10
A200.00	89.5	96	40	40	5.5	15	10

All sizes are in "mm".



Cam - Operated Switch

Accessories :

1- Handles & Install Plates



General Type :

Transparent Plates :
52, 64, 75, 105 & 130 mm
with Black Knob, IP40.
In = 16A upto 630A.

B&G (2Pcs) Type :
Transparent Plates :
52, 64, 75 mm with Black and
Gray Knob, IP40.
In = 16A upto 40A.



Lock Type :

Yellow plates : 52,75,105 & 130 mm
with Red padlock knob
(Max. 3 padlocks), IP40.
In = 16A upto 630A.



Handwheel Type :

Transparent Plates :
130 x 130 mm, IP40
with Black Handwheel.
In = 100A upto 630A.

2- Thermoplastic Enclosure Boxes :



Protection degree upto IP65 .
Front or Lateral lever drive .
Small Box Size : 120 x 95 x 77 mm (L x W x D).
Large Box Size : 190 x 135 x 114 mm (L x W x D).

Handles & Install plates type :

BLU : Lock type & Front. , **BLS** : Lock type & Lateral.
BPU : General type & Front. , **BPS** : General type & Lateral.
BCS : Black Lever Length from Lateral.

3- Mechanical door Inter lock

Handles and Install Plates with Inter Lock

Size of Plates :
52 x52, 64x64, 75x75, 105x105mm

Handel type :
General, B&G, Lock, Black lever length



4- Transparent Terminal Cover :



Transparent cover on main switches body for avoiding
accessibility on electrical Sections and prevent dusts.
There are 3 types: 16,25,63A series.

5- Base mount by Metal Bracket (MBP):



The MBP assembly is the switch which enables the user to mount the
Switch to internal plate of switch cabinet. This bracket can be mount to
switch up to 63A types.

There are 2 sizes :

Small: 12A upto 40A.

Large: 50A upto 63A.

For upper types, this possibility is considered generally & no need for this
bracket.