

Features
$\rightarrow$ Compact Size
$\rightarrow$ Reliable Design
$\rightarrow$ Multi pole
$\rightarrow$ Quick \& Easy to Installation
$\rightarrow$ High Protection Class


Sifam Tinsleys New Cam I,C,M \&INS rotary cam Switches offer a complete range of cam switches for control, instrumentation and motor starting applications, maximizing the benefits and optimizing your use of asset

## 1. Product Features

- Compact Size

Different contact design, contact material \& terminals allows us to make them compact.

- Reliable Design

These switches are tested in various laboratories as per National and International standards for performance and user safety.

- Multi pole

Multi pole design with multiple stacks gives freedom to user to use same switch in different/multiple application

- Quick \& Easy to Installation

Captive +/- screw save installation time. The integrated screw driver guides (available in 20A size) make the use of motorized screw driver easy \& stable . Lug terminals for connecting cable clamps \& crimp plugs available forall sizes.

- High Protection Class

Finger touch proof tunnel terminal provides IP 20 protection in Cam 20A, eliminate the risk of touching live parts without adding any protective covers.

## 2. Application

- ON-OFF Switches
- Change over Switches
- Multi-step Switches
- Volt-Ammeter Switches
- Selector Switches
- Mains Switching
- Coolant Pumps

A focused standard range of Cam series Rotary Cam Switches cover most applications with different contact designs, contact material and terminals allow their use as control switches, instrumentation switches and motor control switches, as well as in electronic circuitry and in aggressive environment according to IEC/EN 60947-3 and VDE 0660 part 107.



## 4. Installation



## 5. Technical Data

| PARAMETER | STANDARD | 20A | 32A | 40A | 63A | 100A | 200A | UNIT |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | VALUE |  |  |  |  |  |  |  |
| Rated Insulation Voltage (Ui) | IEC 60947-3, EN 60947-3 VDE 0660 part 107 SEV | $\begin{aligned} & 690 \\ & 660 \end{aligned}$ | $\begin{aligned} & 690 \\ & 690 \end{aligned}$ | $\begin{aligned} & 690 \\ & 690 \end{aligned}$ | $\begin{aligned} & 690 \\ & 690 \end{aligned}$ | $\begin{aligned} & 690 \\ & 690 \end{aligned}$ | $690$ | $\begin{aligned} & V \\ & V \end{aligned}$ |
| Rated Impulse Withstand Voltage Uimp |  | 6 | 6 | 6 | 6 | 6 | 6 | KV |
| Rated Thermal Current (lu/ Ith) | $\begin{aligned} & \text { IEC 60947-3, EN 60947-3 } \\ & \text { VDE 0660 part 107 } \\ & \text { SEV } \begin{array}{lr}  \\ & 380 \mathrm{~V} \\ 660 \mathrm{~V} \end{array} \end{aligned}$ | $\begin{aligned} & 20 \\ & 16 \\ & 12 \end{aligned}$ | $\begin{aligned} & 32 \\ & 32 \\ & 32 \end{aligned}$ | $\begin{aligned} & 40 \\ & 40 \\ & 40 \end{aligned}$ | $\begin{aligned} & 63 \\ & 63 \\ & 63 \end{aligned}$ | $\begin{gathered} 100 \\ 100 \\ - \end{gathered}$ | $200$ | $\begin{aligned} & A \\ & A \\ & A \end{aligned}$ |
| Rated operational Current (le) |  |  |  |  |  |  |  |  |
| AC-21A Switching of resistive loads, including moderate overloads | IEC 60947-3, EN 60947-3 <br> VDE 0660 part 107 | 20 | 32 | 40 | 63 | 100 | 200 | A |
| AC-1 Resistive or low Inductive Loads | SEV 380 V <br> 660 V  | $\begin{aligned} & 16 \\ & 12 \end{aligned}$ | $\begin{aligned} & 32 \\ & 32 \end{aligned}$ | $\begin{aligned} & 40 \\ & 40 \end{aligned}$ | $\begin{aligned} & 63 \\ & 63 \end{aligned}$ | $100$ |  | $\begin{aligned} & A \\ & A \end{aligned}$ |
| AC-22A Switching of Combined resistive or low inductive loads including moderate overloads | IEC 60947-3, EN 60947-3 VDE 0660 part 107 220V-500V $660 \mathrm{~V}-690 \mathrm{~V}$ | $\begin{aligned} & 20 \\ & 20 \end{aligned}$ | $\begin{aligned} & 32 \\ & 32 \end{aligned}$ | $\begin{aligned} & 40 \\ & 40 \end{aligned}$ | $\begin{aligned} & 63 \\ & 63 \end{aligned}$ | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | $\begin{aligned} & 150 \\ & 125 \end{aligned}$ | $\begin{aligned} & A \\ & A \end{aligned}$ |
| AC-15 Switching of control devices, contactors, valves etc. | $\begin{aligned} & \text { IEC } 60947-3, \text { EN } 60947-3 \\ & \text { VDE } 0660 \text { part } 107 \text { 220V-240V } \\ & 380 \mathrm{~V}-440 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & 5 \\ & 4 \end{aligned}$ | $\begin{gathered} 12 \\ 6 \end{gathered}$ | $\begin{gathered} 14 \\ 6 \end{gathered}$ | $\begin{gathered} 16 \\ 7 \end{gathered}$ |  | - | $\begin{aligned} & \text { A } \\ & \text { A } \end{aligned}$ |
| Breaking Capacity | $\begin{aligned} & 220 \mathrm{~V}-240 \mathrm{~V} \\ & 380 \mathrm{~V}-440 \mathrm{~V} \\ & 660 \mathrm{~V}-690 \mathrm{~V} \end{aligned}$ | $\begin{gathered} 150 \\ 150 \\ 80 \end{gathered}$ | $\begin{aligned} & 280 \\ & 250 \\ & 150 \end{aligned}$ | $\begin{aligned} & 290 \\ & 290 \\ & 170 \end{aligned}$ | $\begin{aligned} & 440 \\ & 440 \\ & 260 \end{aligned}$ | $\begin{aligned} & 860 \\ & 860 \\ & 400 \\ & \hline \end{aligned}$ | $\begin{gathered} 1100 \\ 1100 \\ 490 \end{gathered}$ | $\begin{aligned} & \text { A } \\ & \text { A } \\ & \text { A } \end{aligned}$ |
| Ambient Temperature of Stages open at 100\% (lu/Ith) <br> Enclosed at 100\% (Ithe) | $55^{\circ} \mathrm{C}$ during 24 hours with peaks up to 600 C $35^{\circ} \mathrm{C}$ during 24 hours with peaks up to 400 C |  |  |  |  |  |  |  |

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## 6. CAM Series

| FEATURES | CAM-I | (ISOLATORS) | - CAM-MOFF (9 W) | (Mutti step with Off 9 Way) |
| :---: | :---: | :---: | :---: | :---: |
| - COMPACT \& RELIABLE | - CAM-60 | (isolators 600 Rotation) | - CaM-Moff (10 W) | (Mutitistep with off 10 Way) |
| - multipole | - CAM-190 | (Isolators 900 Rotation) |  |  |
| - EASY Installation | - CAM-190 CR | (Isolators 900 Complete Rotation) | - CAM-MWOFF (3W) | (Mutti step without Off 3 Way) |
| - TERMINAL SCREWS WITH FIXED CLAMP | - CAM-14 | (Isolators 45 D ) | - Cam-mwoff(4 W) | (Multi step without Off 4 Way) |
|  | CAM-C | (CHANGEOVER) | - CAM-MWOFF(5 W) | (Multi step without Off 5 Way) |
| APPLICATIONS | - CAM-COFF 60 | (Change over with Off 60 D Rotation) | - CAM-MWOFF(6 W) | (Multi step without Off 6 Way) |
| APPICATIO | - CAM-COFF 90 | (Change over with Off 90D Rotation) | - CAM-MWOFF(7 | (Multi step without Off 7 Way) |
| - MAINS SWITCHING | - CAM-CWOFF 90 | (Change over with out Off 90 DRotation) | - CAM-MWOFFF(8 W) | (Multi step without off 8 Way) |
| - BREAKER CONTROL | - CAM-PC 90 | (Phase Change over 90 D Rotation | - CAM-MWOFF(9 | (Multi step without Off 9 Way) |
| - COOLANT PUMPS | CAM-I | (MULTISTEP) | - CAM-MWOFF(10 W) | (Multi step without Off 10 Way) |
| - CONTROL CIRCUITS | - Cam-moff (3W) | ( Mutit step with Off 3 Way) | - CAM-MWOFF(11 W) | (Multi step without Off 11 Way) |
| - instrumentation | - Cam-moff (4W) | (Multi step with Off 4 Way) | - CAM-MWOFF( 12 W ) | (Multi step without Off 12 Way) |
| - ISOLATORS | - Cam-moff (5W) | (Multi step with Off 5 Way) |  |  |
| - Changeover SWitch | - CAM-MOFF | (Multis step with Off 6 Way) | CAM-I | Strument SWICHES) |
|  | - Cam-moff (7W) | (Mult step with Off 7 Way) | - CAM-AMP | (Ammeter Selector Switch) |
|  | - CAM-MOFF (8W) | (Multi step with Off 8 Way) | - CAM-VOLT | (Voltmeter Selector Switch) |



OFFERED UP TO 12 POLES


CAM-190

| DESCRIPTION | CURRENT |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10 A | 16 A | 25 A | 32 A | 40 A | 63 A | 100 A | 200 A |
| 1P ON-OFF | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ |
| 2P ON-OFF | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ |
| 3P ON-OFF | $\star$ | $\star$ | $\star$ | $\star$ | $\star$ | $*$ | $\star$ | $\star$ | $\star$ |

Offered Up To 12 Poles

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Offered Up To 12 Poles


CAM-145

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6A | 10A | 16A | 25A | 32A | 40A | 63A | 100A | 200A |
| 1P ON-OFF | * | * | * | * | * | * | * | - | - |
| 2P ON-OFF | * | * | * | * | * | * | * | - | - |
| 3P ON-OFF | * | * | * | * | * | * | * | - | - |

Offered Up To 12 Poles



## CAM-COFF90

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10A | 16A | 25A | 32A | 40A | 63A | 100A | 200A |
| 1P 2W - OfF | * | * | * | * | * | * | * | * | * |
| 2P 2W - OFF | * | * | * | * | * | * | * | * | * |
| 3P 2W - OFF | * | * | * | * | * | * | * | * | * |

Offered Up To 6 Poles
CAM-CWOFF90

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10A | 16 A | 25 A | 32A | 40A | 63A | 100A | 200A |
| 1 P 2W - W0FF | * | * | * | * | * | * | * | * | * |
| 2P 2W - W0FF | * | * | * | * | * | * | * | * | * |
| 3P 2W - W0FF | * | * | * | * | * | * | * | * | * |

CAM-PCF90

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6A | 10A | 16 A | 25A | 32A | 40A | 63A | 100A | 200A |
| 1P 3W -0FF | * | * | * | * | * | * | * | * | * |
| 2P 3W -0FF | * | * | * | * | * | * | * | * | * |
| 3P 3W -0FF | * | * | * | * | * | * | * | * | * |



CAM-MOFF (3 WAY)

| CAM-MOFF (3 WAY) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
|  | 6A | 10A | 16A | 25A | 32A | 40A | 63A | 100A | 200A |
| 1P 3W-0FF | * | * | * | * | * | * | * | * | * |
| 2P 3W-OFF | * | * | * | * | * | * | * | * | * |
| 3P 3W-OFF | * | * | * | * | * | * | * | * | * |
| 4P 3W - OFF | * | * | * | * | * | * | * | * | * |



CAM-MOFF (7 WAY)


## CAM-MOFF (8 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6A | 10A | 16 A | 25A | 32 |  | 40A | 63A | 100 A |  |
| 8W-0f | * | * | * | - | . |  | . | . | - |  |



## CAM-MOFF (9 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10 A | 16 A | 25 A | 32A | 40 A | ${ }^{63}$ |  | 100A | 200 A |
| 1P 9W - OfF | * | * | * | - | . |  | - |  |  |  |




CAM-MOFF (10 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6A | 10 A | 16 A | 25 A |  | 2A | 40A | 63A | A |  |
| 1P 10W - OfF |  | * | * | - |  |  | . | . |  |  |



CAM-MOFF (11 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10 A | 16 A | 25 A | 32A | 40A | 63A | 100 A | 200A |
| 1P11W-0 | * | * | * | . | . | - | - | - |  |



CAM-MWOFF (6 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10 A | 16 A | 25A | 32A | 40A | 63 A | 100 A | 200 A |
| 1P6W - Woff | - | * | - | * | * | * | * | * | * |
| 2P6W - Woff | * | * | * | * | * | * | * | * | * |



## CAM-MWOFF (3 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6A | 10A | 16A | 25A | 32A | 40A | 63A | 100A | 200A |
| 1P 3W - WOFF | * | * | * | * | * | * | * | * | * |
| 2P 3W - WOFF | * | * | * | * | * | * | * | * | * |
| 3P 3W - WOFF | * | * | * | * | * | * | * | * | * |
| 4P 3W - WOFF | * | * | * | * | * | * | * | * | * |



CAM-MWOFF (7 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10A | 16 A | 25A | 32A | 40A | 63 |  | 100A |  |
| 1P 7W - W0FF | * | * | * | * | * | * |  |  | - |  |



CAM-MWOFF (9 WAY)

| DESCRIPTION | CURRENT RATING |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6 A | 10 A | 16 A | 25 A | 32A | 40A | 63A |  |  |  |
| IP 9W - W0FF | * | * | * | - | . | . | . | . |  |  |



## 7. Ordering Information

Example

1) Customer Requirement: 16A, multi step, without off, 1 Pole 12 Way

Ordering code : CAM - MWOFF (12WAY)
1P 12W-WOFF, 16A
2) Customer Requirement: 100A, Change over, without off, 90D rotation, 3 Pole 2 Way

Ordering code: CAM - CWOFF90
3P 2W - WOFF, 100A

