## LA39 Train Selector Switch Siemens APT

## TK Series Selector Switch

- Vivid visual profile and elegant lines. The inclined screws are used for fixation and installation, which meet European and American strict, solid and reliable design philosophy.
■ $\varnothing 30.5 \mathrm{~mm}$ mounting hole.
- The head highlights the ultrathin effect and effectively prevent the misoperation.
- The whole series are widely used in interior decoration and driver control fields of locomotives.


no mark: momentary pushbutton T: maintained pushbutton M : mushroom pushbutton MT: maintained mushroom pushbutton Z: rotator release way of emergency stop pushbutton ZY: key released of emergency stop pushbutton $X$ : short-handle twoposition rotated pushbutton XS: short-handle three-position rotated pushbutton CX: Iong-handle two-position rotated pushbutton CXS: long-handle three-position rotated pushbutton

Number of Contacts NO: the number of normally open contacts NC: the number of normally closed contacts

Contact code no mark: quick-action type contact R: slow-action type contact (RW series are defaulted as slow-action types. No R is required)

## Main Pushbutton Model $\varnothing 30 \mathrm{~mm}$

## Main Technical Data

| Standards | GB 14048.5 | GB/T 7928-2003 | IEC 61373-1999 | IEC 60947.5 | DIN5510.2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rated Insulation Voltage | AC 660V |  |  |  |  |
| Uimp | AC 2500 V 50 Hz .1 min |  |  |  |  |
| Ith | 10A |  |  |  |  |
| Mechanical endurance | Normal buttons $\geq 3$ million times knobs $\geq 300$ thousand times key buttons $\geq 50$ thousand times emergency stop buttons $\geq 50$ thousand times |  |  |  |  |
| Electrical endurance | $\geq 600$ thousand times |  |  |  |  |
| Ambient Temperature | $-25^{\circ} \mathrm{C} \sim+55^{\circ} \mathrm{C}$ |  |  |  |  |
| Protection Class | IP54 for heads IP20 for contactor blocks (the guard cover for F4 connector shall be provided) |  |  |  |  |
| Impact Resistance Class | Duration 11ms maxim accelerated speed 15g comply with IEC600682-27 |  |  |  |  |
| Vibration Resistance Class | Maximum accelerated speed 5g frequency range 10~500Hz comply with IEC60068 2-6 |  |  |  |  |
| Contact Resistance | TK: $\leq 50 \mathrm{~m} \Omega \quad \mathrm{RW}: \leq 30 \mathrm{~m} \Omega$ |  |  |  |  |
| Altitude | $\leq 2000 \mathrm{~m}$ |  |  |  |  |
| Relative Air Humidity | $\leq 90 \%$ (the average temperature in this month $\leq 25 \square$ ) |  |  |  |  |
| Installation class | III |  |  |  |  |
| Pollution Class | Class 3 |  |  |  |  |

## Contact Capacity

| Quick-action Type | AC-15: $220 \mathrm{~V} / 2.5 \mathrm{~A} 380 \mathrm{~V} / 1.5 \mathrm{~A} 660 \mathrm{~V} / 0.8 \mathrm{~A}$ | DC-13: $24 \mathrm{~V} / 3.6 \mathrm{~A} 48 \mathrm{~V} / 3 \mathrm{~A} 110 \mathrm{~V} / 1 \mathrm{~A} 220 \mathrm{~V} / 0.4 \mathrm{~A} 440 \mathrm{~V} / 0.25 \mathrm{~A}$ |
| :--- | :--- | :--- |
| Slow-action Type | $\mathrm{AC}-15: 220 \mathrm{~V} / 6 \mathrm{~A} 380 \mathrm{~V} / 4 \mathrm{~A} 660 \mathrm{~V} / 2 \mathrm{~A}$ | DC-13: $24 \mathrm{~V} / 6 \mathrm{~A} 48 \mathrm{~V} / 3 \mathrm{~A} 110 \mathrm{~V} / 1 \mathrm{~A} 220 \mathrm{~V} / 0.5 \mathrm{~A} 440 \mathrm{~V} / 0.25 \mathrm{~A}$ |

## Component Material

| Outer Ring of Head | Middle Seat of Installation | Head | Contact | Switch Enclosure | Contact Chip |
| :--- | :---: | :---: | :---: | :---: | :---: |
| AL (Black or Silver) | Zn \& PBT | PC | AgNi | PC | Cu |
| AL (Black or Silver) | Zn \& PBT | PC | $\mathrm{AgNi}+$ Gold | PC | Cu |



Installation Hole Sizes


Attention: If the contactor block or illuminate components are installed by yourself, please check whether the hasps are locked completely or not after the installation.

## Printed Labels of Contacts

The figures of the contact wiring terminal are indicated by two digits, " 1 " at tens place indicates the $1^{\text {st }}$ pair of contacts of the $1^{\text {st }}$ contactor block, and " 2 " at tens place indicates the 2 nd pair of contacts of the 1 st contactor block. " 1 and 2 " at ones place indicates the two wiring terminals of the normally closed contact and " 3 and 4 " at ones place indicates the two wiring terminals of the normally open contact.

Functional Diagram for contactor block of rotated pushbutton and Key-lock pushbutton

Two-position


Three-position


## Three-position


(Zero position): indicates the original status position of the switch

## LA39 Selector Switch Series

## Rotated Pushbutton



## Notes:

1. $\square$ before the '/' filled with the number of the NO and NC.
2. $\mathbf{\Delta}$ filled with color code.

## Application projects

| Category | Project Name | Places of Application | All Products |
| :---: | :---: | :---: | :---: |
| Large Railways | Various types of rail collection train set tamping machines, screen scarifies, ballast distributing and trimming machines, material transportation machines, rail status verification machines etc. | Built-in, car body, driver control etc. | Whole series of APT products |
|  | Official vehicle power distribution panels, special emergency power supply boxes for air-conditioned trains, train enclosures | Enclosures of 25T, 25K series of large railway passenger trains | Whole series of APT products |
|  | SS9 locomotive, SS8 locomotive, SS7C locomotive, SS7D locomotive, 25G, 25K, 25T (locomotives) | DC600V power supply system cabinets of locomotives | 1. Cam switches, 2. Two-color lights, <br> 3. Key buttons, 4. Maintain buttons, <br> 5. Normal buttons, 6. Acoustic and optical separately controlled buzzers, <br> 7. Triangular key buttons (normally used in 25 series locomotives) |
|  | Qinghai-Tibet Railway |  | 1. Cam switches, <br> 2. Two-color lights |
| Intercity Multiple Units (Trains) | Multiple units used for 200km | Driver control station and carriage enclosures | 1. Cam switches, 2. Two-color lights, <br> 3. Quadrangular key switches |
|  | Multiple units used for 250km | Driver control station and carriage enclosures | 1. Combined indications, 2. Buzzers, <br> 3. Triangular key switches |
|  | Multiple units used for 300km | Driver control station and carriage enclosures | 1. Combined indications, <br> 2. Illuminated buttons |
|  | Multiple units used for 350 km | Driver control station and carriage enclosures | 1. Combined indications, <br> 2. Illuminated buttons |
| City Metros | Chengdu Metro Lines | Control of metro stations | Whole series of APT products |
|  | Chongqing Rail Line 3 | Control of metro stations | Whole series of APT products |
|  | Bombay Light Rail, India | Indications of light rail trains | 35 series train door indicator lights |
|  | Changchun Light Rail | Driver control station of light rail | TK series special pushbuttons and twocolor indicator lights |
|  | City Rail Vehicle Door Control Series | Auto door locks | Triangular key buttons, quadrangular key buttons and TK series special pushbuttons |
|  | Chongqing Rail Line 3 | Driver control station of metro | Whole series of APT products |
|  | Beijing Metro Lines 1, 4 Chengdu Metro Lines Tianjin Metro Lines Guangzhou Metro Lines 3, 4, 5 | Built-in, car body and driver control etc. | 1. TK series pushbuttons, 2. Lead sea series knobs and cam switches, 3. Indicato lights, 4. Buzzers, 5. RW series pushbuttons |
| Metro Base Stations | Shanghai Metro Lines 2, 6, 7, 8, 9, 10, 11, 13 Shenzhen Metro Line 2 Shanghai Hongqiao Transportation Hub etc. | Various communication, control and power distribution systems etc. | Whole series of APT products |

## Model Selection of Rail Transportation products

Pushbutton, Indicator/Buzzer, Cam Switch Series


