

# LA39-C1 Train Push Button Switch Siemens APT

## TK Series Pushbutton

- 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.
- Ø 30.5mm 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.

Application pic



### Model

LA39-C1 - □ □ □ □ / □ □ □ □ □ □ □ □

**Product Applicable Category** TK: special model for locomotives  
Rw: special model for driver control

**Mushroom Head Diameter** no mark: 40mm, 60: 60mm

**Head Shape** no mark: plat head H: high-position

**Action Function** no mark: knob positioning f: knob left resetting  
fu: knob right resetting ffu: knob left and right resetting

**Key remove-out Position** no mark: without lock a: pull out from left ao: pull out from middle  
au: pull out from right a ao ao: pull out from any of the three positions

**Voltage Code** no mark: without light 21: AC/DC 6V 22: AC/DC 12V  
23: AC/DC 24V 25: AC/DC 48V 26: AC/DC 110V  
28: AC/DC 220V 31: AC 220V 32: AC 380V

**Color Code** r: red g: green b: blue y: yellow w: white k: black

**Symbol Code** no mark: without symbol Sxy: select the symbol code from the  
printed symbol table S99: custom-made special symbol

**Illuminated modular** no mark: without light D: with light

**Operating Mechanism** 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 two-  
position rotated pushbutton XS: short-handle three-position  
rotated pushbutton CX: long-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** Ø30mm

## 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 2500V 50Hz.1min
Ith	10A
Mechanical endurance	Normal buttons≥3 million times knobs ≥300 thousand times key buttons≥50 thousand times emergency stop buttons≥50 thousand times
Electrical endurance	≥600 thousand times
Ambient Temperature	-25℃ ~+55℃
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: ≤50mΩ RW: ≤30mΩ
Altitude	≤2000m
Relative Air Humidity	≤90% (the average temperature in this month ≤25□)
Installation class	III
Pollution Class	Class 3

## Contact Capacity

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

## 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	AgNi+Gold	PC	Cu



# LA39-C1 Pushbutton Series

## Installation Hole Sizes

Normal Buttons, Illuminated Buttons, Short-handle rotated pushbutton	Emergency Stop Buttons, Mushroom Buttons, Long-handle rotated pushbutton

**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<sup>st</sup> pair of contacts of the 1<sup>st</sup> contactor block, and “2” at tens place indicates the 2<sup>nd</sup> pair of contacts of the 1<sup>st</sup> 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

Printed label of contact

(zero position)

Contact code

11-12

11

23-24

11-12

02

21-22

13-14

20

23-24

13-14

11

21-22

Three-position

Printed label of contact

(zero position)

Contact code

11-12

11

23-24

11-12

02

21-22

13-14

20

23-24

13-14

11

21-22

Three-position

Printed label of contact

(zero position)

Contact code

13-14

20

23-24

31

41

Wiring 02


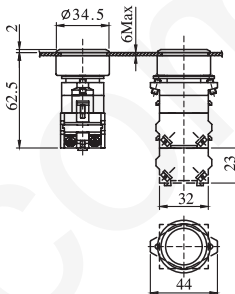
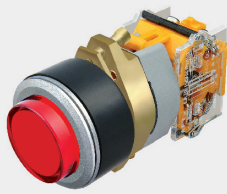
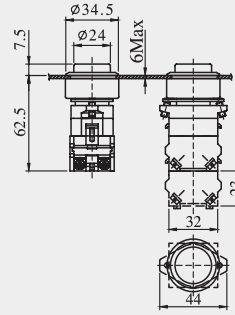

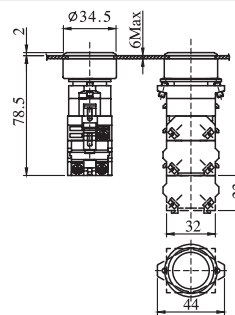

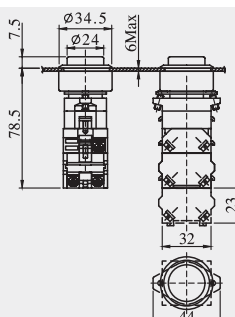
Notes

Indicates the closed status of the contact

Indicates the disconnection status of the contact

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

## Normal pushbutton and Raised pushbutton

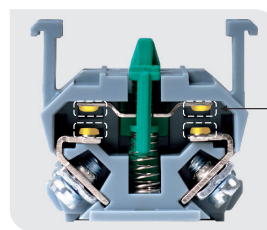
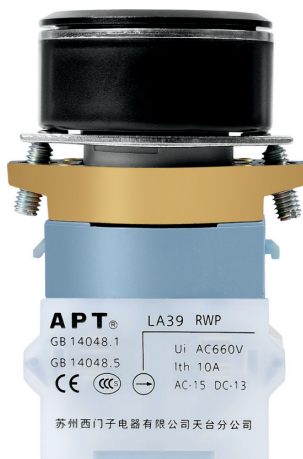
Name	Type	Working Status	Model	Color	Light Voltage	External Size
Normal Buttons		Momentary	LA39-C1-■/▲-TK	Red-r Green-g Blue-b		
		Maintained	LA39-C1-■T/▲-TK	Yellow-y White-w Black-k		
Rised pushbutton		Momentary	LA39-C1-■/▲H-TK	Red-r Green-g Blue-b		
		Maintained	LA39-C1-■T/▲H-TK	Yellow-y White-w Black-k		
Illuminated Normal Buttons		Momentary	LA39-C1-■D/▲★-TK	Red-r Green-g Blue-b	21-AC/DC 6V 22-AC/DC 12V 23-AC/DC 24V 25-AC/DC 48V 26-AC/DC 110V 28-AC/DC 220V	
		Maintained	LA39-C1-■TD/▲★-TK	Yellow-y White-w	31- AC 220V 32- AC 380V	
Illuminated Rised pushbutton		Momentary	LA39-C1-■D/▲★H-TK	Red-r Green-g Blue-b	21-AC/DC 6V 22-AC/DC 12V 23-AC/DC 24V 25-AC/DC 48V 26-AC/DC 110V 28-AC/DC 220V	
		Maintained	LA39-C1-■TD/▲★H-TK	Yellow-y White-w	31- AC 220V 32- AC 380V	

### Notes:

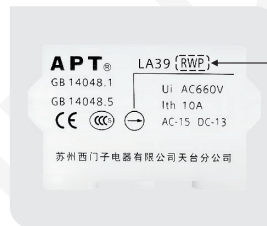
1. ■ filled with the number of the NO and NC.
2. ▲ filled with color; ★ filled with the voltage code of the illuminate component.

## RW Series Pushbutton for Driver Control

- The whole series have applied the gold-plated contacts, which have improved the micro-breaking capacity of the buttons. (DC24V 30mA)
- The products that are developed for the driver control field of the locomotives have high contact reliability.
- The anti-vibration performance complies with the requirements of IEC 61373-1999. They can withstand 1~50Hz sinusoidal vibration from the longitudinal, horizontal and vertical directions. The intensity is: 1~10Hz 25 m/s<sup>2</sup>, 10~50Hz 250 m/s<sup>2</sup>.
- Anti-impact performance complies with the requirements of IEC 61373-1999. They can withstand the impact of 3g from the longitudinal direction, 1g from the horizontal direction and 3g from the vertical direction.
- The flame retardant property complies with DIN5510-2: S1 Class.



The contact is gold plated



“RW” + the identification of customer code, easy for tracking

### Remarks:

1. RW series are specially used in the driver control field of the locomotives
2. Standard Model No. + RW Endnote = Special RW Pushbutton for Driver Control Field



## Application projects

Category	Project Name	Places of Application	All Products
Large Railways	Various types of rail collection train set tamping machines, screen scarifiers, 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, 3. Key buttons, 4. Maintain buttons, 5. Normal buttons, 6. Acoustic and optical separately controlled buzzers, 7. Triangular key buttons (normally used in 25 series locomotives)
	Qinghai-Tibet Railway		1. Cam switches, 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, 3. Quadrangular key switches
	Multiple units used for 250km	Driver control station and carriage enclosures	1. Combined indications, 2. Buzzers, 3. Triangular key switches
	Multiple units used for 300km	Driver control station and carriage enclosures	1. Combined indications, 2. Illuminated buttons
	Multiple units used for 350km	Driver control station and carriage enclosures	1. Combined indications, 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 two-color 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 seal series knobs and cam switches, 3. Indicator 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

