LA39-B Push Button Switch Siemens APT

Model definition

La39 - □ 1 2 3 / 4 5 6

Separated into $A_1A_2A_3$ $B_1B_2B_3$ $C_1C_2C_3$ according to the different actuators and holders

The code and serial number of the pushpushbutton code are issued by Shanghai Electrical Apparatus Research Institute.

1 Num of NO; 2 Num of NC; 3 Auxiliary model

Letter	Meaning	Letter	Meaning	Letter	Meaning
	Normal Pushbutton	Z	Emergency stop Pushbutton	XS	Short-handle three-position selector switch
D	Illuminated Pushbutton	ZY	Key-reset emergency stop pushbutton	CX	Long-handle two-position selector switch
T	Maintained Pushbutton	Y	Two-position key switch	CXS	Long-handle three-position selector switch
M	Mushroom Pushbutton	YS	Three-position key switch		
MT	Maintained mushroom Pushbutton	X	Short-handle two-position selector switch		

4 Color code of the Pushbutton, action function and pull-out position of the selector switch and key switch

Red	Green	Yellow	Blue	White	Black
r	g	y	b	w	k

Action function			Key pull-out position		
f	fu	ffu	a	ao	au
Left reset	Right reset	Left Right reset	Pull out from the left	Pull out from the middle	Pull out from the right

5 Voltage code of the indicator

Code	21	22	23	24	25	26	27	28	31	32
Power Supply	AC · DC							DC	50-60Hz AC	
Voltage	6V	12V	24V	36V	48V	110V	127V	220V	220V	380V

6 Humid thermal type is added with “TH”

Technical Data

Rated Capacity	Snap-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
Contact resistance	silver alloy contact≤50mΩ	
Rated impulse withstand voltage Uimp	AC 2500V 50Hz·1min	
Mechanical endurance	Momentary Pushbutton≥3×10^6 times, selector switch≥30×10^4 times, key switch≥5×10^4 times, emergency stop Pushbutton≥5×10^4 times	
Electric life	≥60×10^4 times	
Conventional thermal current	I_{th} 10A	
Rated insulation voltage	Ui AC660V	
Ambient temperature	-25℃ ~ +55℃	
Protection class of the front part	Defaulted as IP54. Please mark “-IP65” after the model when ordering the products if IP65 is required; the key button is IP40. The flat head circular button of LA39-A /B type can be equipped with F1 to become IP67	

Description of LA39-(A, B, C) Series Pushbutton

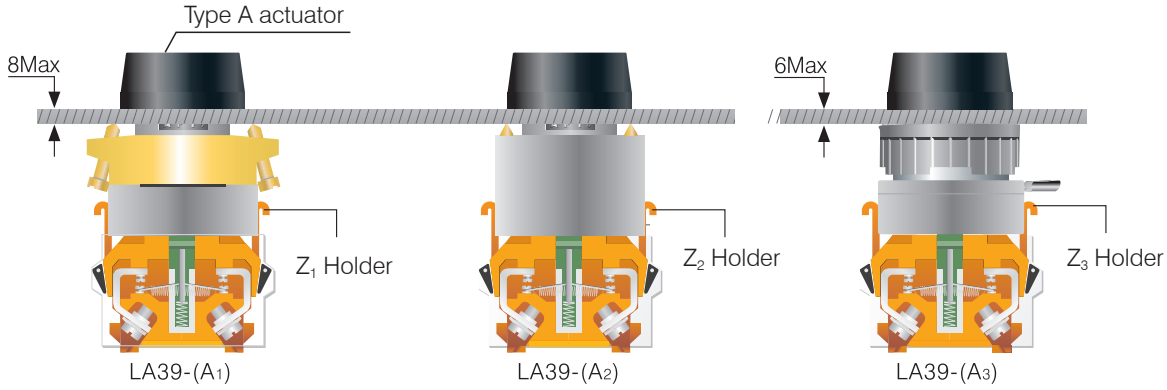
Component Materials

Outer Ring of Actuator	Holder	Actuator	Contact	Switch Shell	Contact Chip
AL Black	Zn or PBT.PA	PC	AgNi	PC	Cu

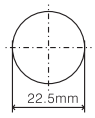
Standards

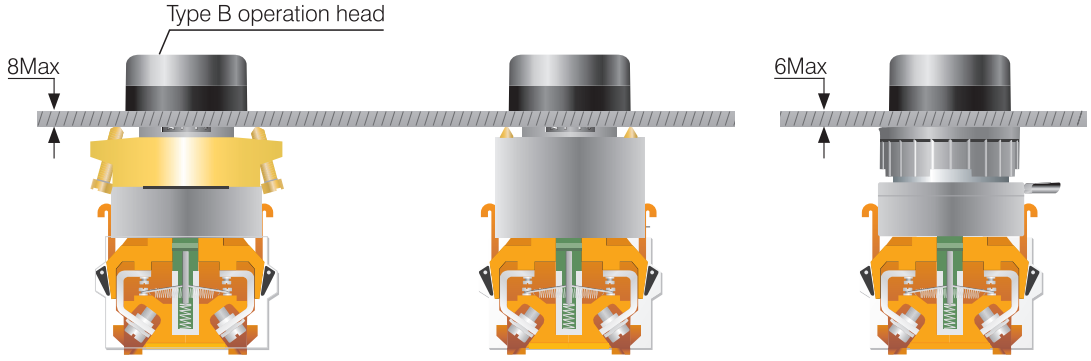
IEC 60947/GB 14048.5

Hole Size

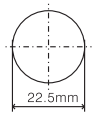


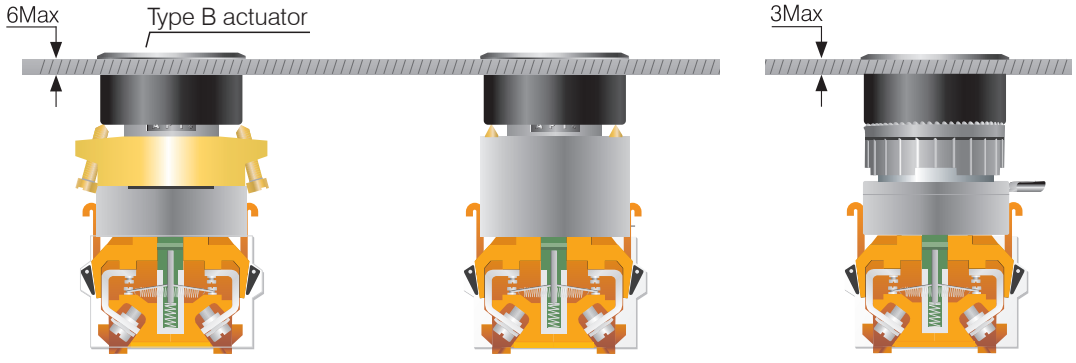
LA39-(A_1) LA39-(A_2) LA39-(A_3)



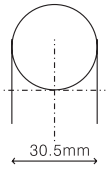


LA39-(B_1) LA39-(B_2) LA39-(B_3)



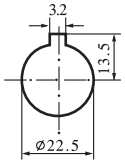


LA39-(C_1) LA39-(C_2) LA39-(C_3)



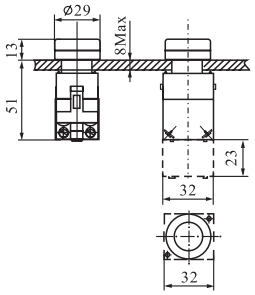
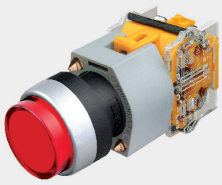
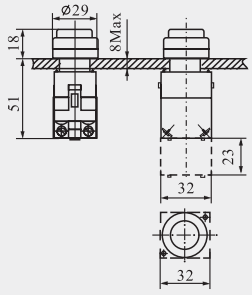
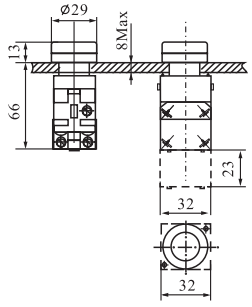
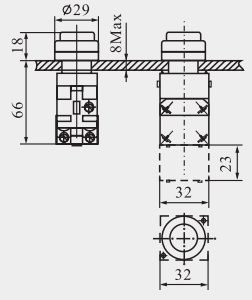
Features:

1. LA39-($A_1B_1C_1$): have distinctive visual profile with elegant lines. The inclined screws are used for installation and fixation, which meets European and American strict, solid and reliable project design philosophy.
2. LA39-($A_2B_2C_2$): have clear visual arrangement. The high-strength PBT plastic parts are combined with the straight screws for fixation, which not only continues the stable and solid feature of A1B1C1, but also considers the manufacturing cost. It is the simplified type of A1B1C1 to provide the multiple economic options to the users.
3. LA39-($A_3B_3C_3$): The nuts are used for fixation, simple and easy, which can reduce the installation difficulty and the work load of the users. The installation reliability may be reduced due to the influence of ambient temperature. It is suggested that such installation mode shall not be used when the selector switches and key switches which have switching work status are used. The selector switches cannot be used when C3 is selected. The retainer ring shall be installed when A3 and B3 choose the selector switches. The hole opening size is shown on the right figure.



Φ22 LA39-(B) Series Pushbutton Model Selection

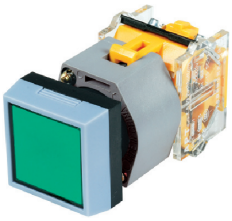
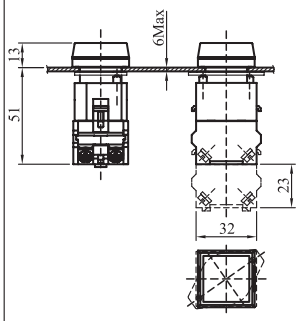
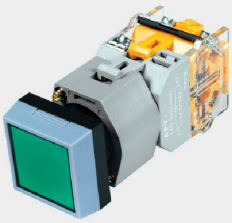
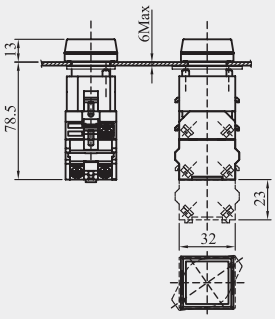
Model Selection

Name	Type	Work Status	Model	Color	Lamp Voltage	Appearance dimension
Round pushbutton		Momentary Maintained	LA39-B2-▨/▧ LA39-B2-▨T/▧	red-r green-g yellow-y white-w blue-b black-k		
Round Raised Pushbutton		Momentary Maintained	LA39-B2-▨/▧-H LA39-B2-▨T/▧-H	red-r green-g yellow-y white-w blue-b black-k		
Round Illuminated Pushbutton		Momentary Maintained	LA39-B2-▨D/▧▤ LA39-B2-▨TD/▧▤	red-r green-g yellow-y white-w blue-b	LED LS 21-AC.DC 6V 22-AC.DC 12V 23-AC.DC 24V 24-AC.DC 36V 25-AC.DC 48V 26-AC.DC 110V 27-AC.DC 127V 28-DC 220V 31-AC 220V 32-AC 380V	
Round Raised Illuminated Pushbutton		Momentary Maintained	LA39-B2-▨D/▧▤-H LA39-B2-▨TD/▧▤-H	red-r green-g yellow-y white-w blue-b	LED LS 21-AC.DC 6V 22-AC.DC 12V 23-AC.DC 24V 24-AC.DC 36V 25-AC.DC 48V 26-AC.DC 110V 27-AC.DC 127V 28-DC 220V 31-AC 220V 32-AC 380V	

Description:

1. ▨ before the oblique line shall be filled with the number of NO and NC contacts.
2. ▧ after the oblique line shall be filled with the color, ▤ shall be filled with the voltage class of the light.
3. The light source of the illuminated pushbutton shall all be high-bright pure LED.
4. If Z_1 and Z_3 holders are required during ordering, B_2 in the model can be changed to B_1 or B_3.

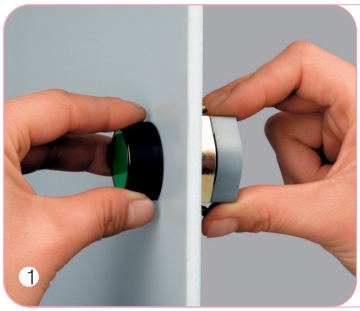
Φ22 LA39-(B) Series Pushbutton Model Selection

Name	Type	Work Status	Model	Color	Lamp Voltage	Appearance dimension
Square Pushbutton		Momentary	LA39-B2-▨F/▧	red-r green-g yellow-y white-w blue-b black-k		
Square Illuminated Pushbutton		Maintained	LA39-B2-▨DF/ ▧▤	red-r green-g yellow-y white-w blue-b black-k	LED LS 21-AC.DC 6V 22-AC.DC 12V 23-AC.DC 24V 24-AC.DC 36V 25-AC.DC 48V 26-AC.DC 110V 27-AC.DC 127V 28-AC.DC 220V 31-AC 220V 32-AC 380V	

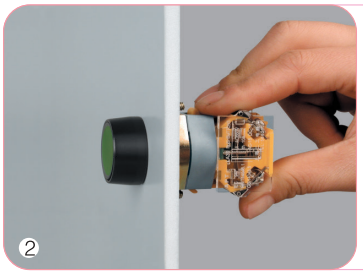
Description:

1. ▨ before the oblique line shall be filled with the number of NO and NC contacts.
2. ▧ after the oblique line shall be filled with the color, ▤ shall be filled with the voltage class of the light.
3. The light source of the illuminated pushbutton shall all be high-bright pure LED.
4. If Z_1 and Z_3 holders are required during ordering, B_2 in the model can be changed to B_1 or B_3.

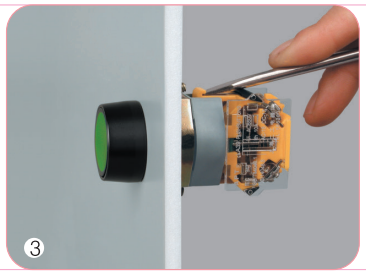
Installation & Operation Instructions of LA39 Series Pushbuttons



Insert the actuator into the installation hole in the front of the panel and rotate it into the holder. Then tighten the fixing screws on both ends evenly (no excessive force is allowed. The maximum torque is 25N-cm). If the panel is made of other non-metal materials such as plastic, a mounting plate can be backed on the panel (refer to accessory F5) before installation. When the diameter of the installation hole is 25mm, a piece of Ø25 mounting plate can be backed on the panel (refer to accessory F6) before installation.
For the Pushbutton with Z_2 holder, disassemble the switching elements with the holder together.
For the Pushbutton with Z_2 holder, disassemble the switching elements before installing the holder.
For the Pushbutton with Z_3 holder, disassemble the switching elements first. Insert the holder into the actuator and then fasten the nuts on the holder after turning the holder clockwise.
Note: if the Pushbutton is blocked after installation, adjust the two fixing screws on the holder to keep the same tightness.



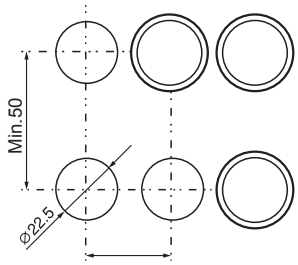
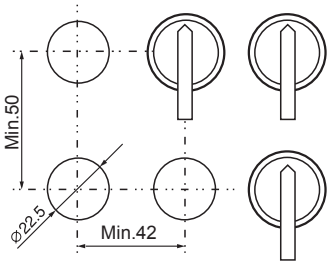
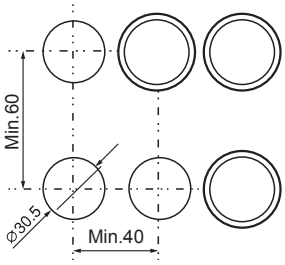
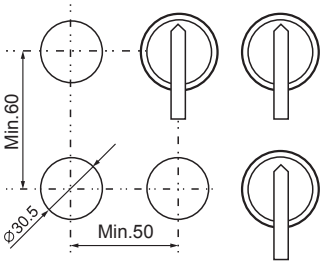
Buckle the switching elements directly. The actuator symbol can be installed directly in the front (normally, it has been installed before out of the factory). When the illuminated pushbutton is installed, buckle the lampholder first and switching elements successively.
Note: after installation, check if the buckle of the switching elements is completely locked.



Remove the switching elements or lampholder: remove the locked assemblies freely and easily by lifting the buckle of the locking system with a screwdriver.

Hint: the white point of the short handle and the tip of the long handle shall be upward during the selector switch installation.

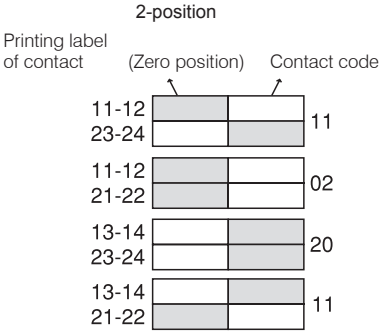
Hole Size

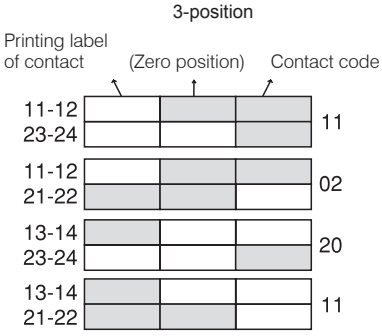
Type AB Normal Pushbuttons, Illuminated Pushbuttons, Key switches and selector switches	Type A.B Mushroom Pushbuttons and Long-handle selector switches	Type C, Normal Pushbuttons, Illuminated Pushbuttons, Key Pushbuttons and selector switches	Type C Mushroom Pushbuttons and Long-handle selector switches
 Note: the minimum size shall be 35×50 when Z_3 holder is selected for installation.			

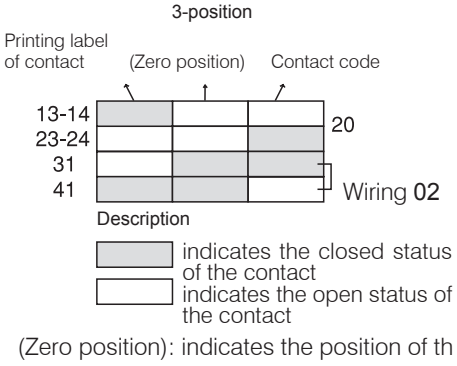
Printing Label of Contact

The figures of the contact wiring terminal are expressed by two digits, “1” at tens indicates the 1st pair of contacts on the first pitch of switching element, and “2” at tens indicates the 2nd pair of contacts on the first pitch of switching element. “1 and 2” at units indicates the two wiring terminals of the NCcontact, and “3 and 4” at units indicates the two wiring terminals of NOcontact.

Functional Diagram for Switching Elements of selector switches and Key switches







(Zero position): indicates the position of th

LA39 Series Pushbutton Accessories

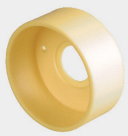
Accessories

Name	Type	Model	Material	Applications
Protective cap		F1	Silicone	It is installed on the Pushbutton actuator to resist the water and dust. The protection class reaches IP67.
Guard Cover		F2	Stainless steel	It is installed on the Pushbutton actuator to prevent bumping and misoperation.
Protective Cover		F3-1	Plastic	It is installed on the actuator of the flat round pushbutton to prevent bumping and misoperation. It can be sealed off.
		F3-2	Plastic	Plastic It is installed on the actuator of the short-handle selector switch, illuminated selector switch and key switch to prevent bumping and misoperation. It can be sealed off.
		F3-3	Plastic	It is installed on the actuator of Ø40 mushroom pushbutton, Ø40 emergency stop pushbutton, and key-reset emergency stop pushbutton to prevent bumping and misoperation. It can be sealed off.
Joint Guard Cover		F4	Plastic	It is installed behind the wiring screws of the switching element to prevent electric shock.
Ø 22 Mounting Plate		F5	Iron	The mounting plate shall be provided to improve the strength when the box panel is made of plastic.
Ø 25 Mounting Plate		F6	Iron	This mounting plate shall be provided when the hole size on the panel is Ø25.

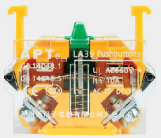
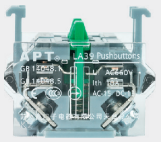
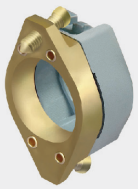
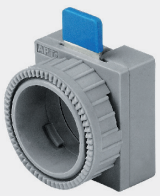
LA39 Series Pushbutton Accessories

Name	Type	Model	Material	Applications
Ø30 Diameter –altering Ring		F7	Plastic	This Diameter –altering Ring shall be provided when the hole size on the panel is Ø30.
Ø30 Diameter – altering Nu		F8	Aluminum alloy	It is used for the panel with hole size of Ø30 and also can achieve the effect of an ultrathin pushbutton.
Round inscription label		F9	Plastic	It is installed in the transparent pushbutton chip of the round Pushbutton as the symbol indication.
Square inscription label		F10	Plastic	It is installed in the transparent pushbutton chip of the square Pushbutton as the symbol indication.
Label holder		F11-10 Written Area: 25×10mm F11-18 Written Area: 25×18mm	Plastic	It is hung on the Pushbutton or indicator as the symbol indication or literal description.
Label Plate		F12 (Round) F12a (Square)	Plastic	It is hung on the Pushbutton or indicator as the symbol indication or literal description.

LA39 Series Pushbutton Accessories

Name	Type	Model		Material	Applications
Warning Ring		F13-60 F13-90	Ø60 Ø90	ABS	It is used for emergency stop pushbuttons
Yellow Guard Ring	 	F14a-40 F14a-60 F14b-60 F14b-90	Ø40 Ø60 Ø60 Ø90	ABS	It is used to highlight the visible caution and protect the mushroom pushbutton to prevent bumping and misoperation. (Note: F14a-40 cannot be used for those emergency stop pushbutton models which require resetting by rotating)
Diameter –altering Nut of Indicator		F15-25 F15-30	Ø25 Ø30	ABS	Ø22mm indicator can be installed on the panel with the hole size of Ø25 or Ø30mm when it is used.
Tightening Wrench of Indicator		F16	Ø22	PC	It can improve the installation quality and reduce the work load of the labors.
Symbol Cap of Indicator		F18		POM	It is used for the symbol printing or literal description of the indicator.

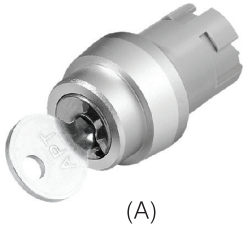
LA39 Series Pushbutton Accessories

Name	Type	Model	Material	Applications
Blanking plug		F19 ∅22	ABS	It is used to block the reserved holes or redundant holes.
Switch Seat	 (quick-action type)	C01 C10 C02 C20 C11	PC	It is installed on the end of the button to increase or reduce the contacts. The two digits in the model indicate the number of the normally open and normally closed contacts.
	 (slow-action type)	S01 S10 S02 S20 S11	PC	It is installed on the end of the button to increase or reduce the contacts. The two digits in the model indicate the number of the normally open and normally closed contacts.
Lamp holder		D/▧▤	PA	It is installed between the middle seat and base and used for the buttons with light. Model ▧ indicates the color and ▤ indicates the voltage level code.
Holder		Z_1	Zn+PBT	It is used to fix the button.
Holder		Z_2	PBT	It is used to fix the button.
Holder		Z_3	PA	It is used to fix the button.

LA39 Series Pushbutton Accessorie

Name	Type	Model		Description
Pushbutton Actuator	(A) (B) (C)	Normal pushbuttons Maintained pushbuttons	LA39-A-/▧ LA39-B-/▧ LA39-C-/▧ LA39-A-T/▧ LA39-B-T/▧ LA39-C-T/▧	The color is filled in the ▧ after the oblique line.
Pushbutton Actuator	(A) (B) (C)	High-position pushbuttons High-position Maintained pushbuttons	LA39-A-/▧-H LA39-B-/▧-H LA39-C-/▧-H LA39-A-T/▧-H LA39-B-T/▧-H LA39-C-T/▧-H	The color is filled in the ▧ after the oblique line.
Short-handle selector switch	(A) (B) (C)	Two-position Three-position	LA39-A-X/▧□ LA39-B-X/▧□ LA39-C-X/▧□ LA39-A-XS/▧□ LA39-B-XS/▧□ LA39-C-XS/▧□	The color is filled in the oblique line ▧ , □ is filled with reset form.
Long-handle selector switch	(A) (B) (C)	Two-position Three-position	LA39-A-CX/▧□ LA39-B-CX/▧□ LA39-C-CX/▧□ LA39-A-CXS/▧□ LA39-B-CXS/▧□ LA39-C-CXS/▧□	The color is filled in the oblique line ▧ , □ is filled with reset form.
Illuminated selector switch	(A)	Two-position Three-position	LA39-A-XD/▧□ LA39-B-XD/▧□ LA39-C-XD/▧□ LA39-A-XSD/▧□ LA39-B-XSD/▧□ LA39-C-XSD/▧□	The color is filled in the oblique line ▧ , □ is filled with reset form.
Twin Pushbutton		Normal pushbuttons Illuminated pushbuttons	LA39-B-R/r.g LA39-B-RD/r.g	1. The action of all contacts is Momentary. 2. The contact shall be increased or changed if necessary and the lighting is located in the middle of the two Pushbuttons. 3. It is used for the startup and stop control of the motor or load.

LA39 Series Pushbutton Accessories

Name	Type	Model		Description
Key Pushbuttons	 (A) (C)	Two-position	LA39-A-Y LA39-C-Y	Type (C) key pushbuttons are special for the trains.
		Three-position	LA39-A-YS LA39-C-YS	
Mushroom Pushbuttons	(A) (B) (C)	Normal pushbuttons	LA39-A-M/□ LA39-B-M/□ LA39-C-M/□	The color is filled in the ▧ after the oblique line.
		Maintained pushbuttons	LA39-A-MT/▧ LA39-B-MT/▧ LA39-C-MT/▧	
Illuminated Mushroom Pushbuttons	(A) (B) (C)	Normal pushbuttons	LA39-A-MD/▧ LA39-B-MD/▧ LA39-C-MD/▧	The color is filled in the ▧ after the oblique line.
		Maintained pushbuttons	LA39-A-MTD/▧ LA39-B-MTD/▧ LA39-C-MTD/▧	
Emergency Stop Pushbuttons	(A) (B) (C)	LA39-A-Z/▧ LA39-B-Z/▧ LA39-C-Z/▧		The color is filled in the ▧ after the oblique line.
Key Emergency Stop Pushbuttons	(A) (B) (C)	LA39-A-ZY/R LA39-B-ZY/R LA39-C-ZY/R		