

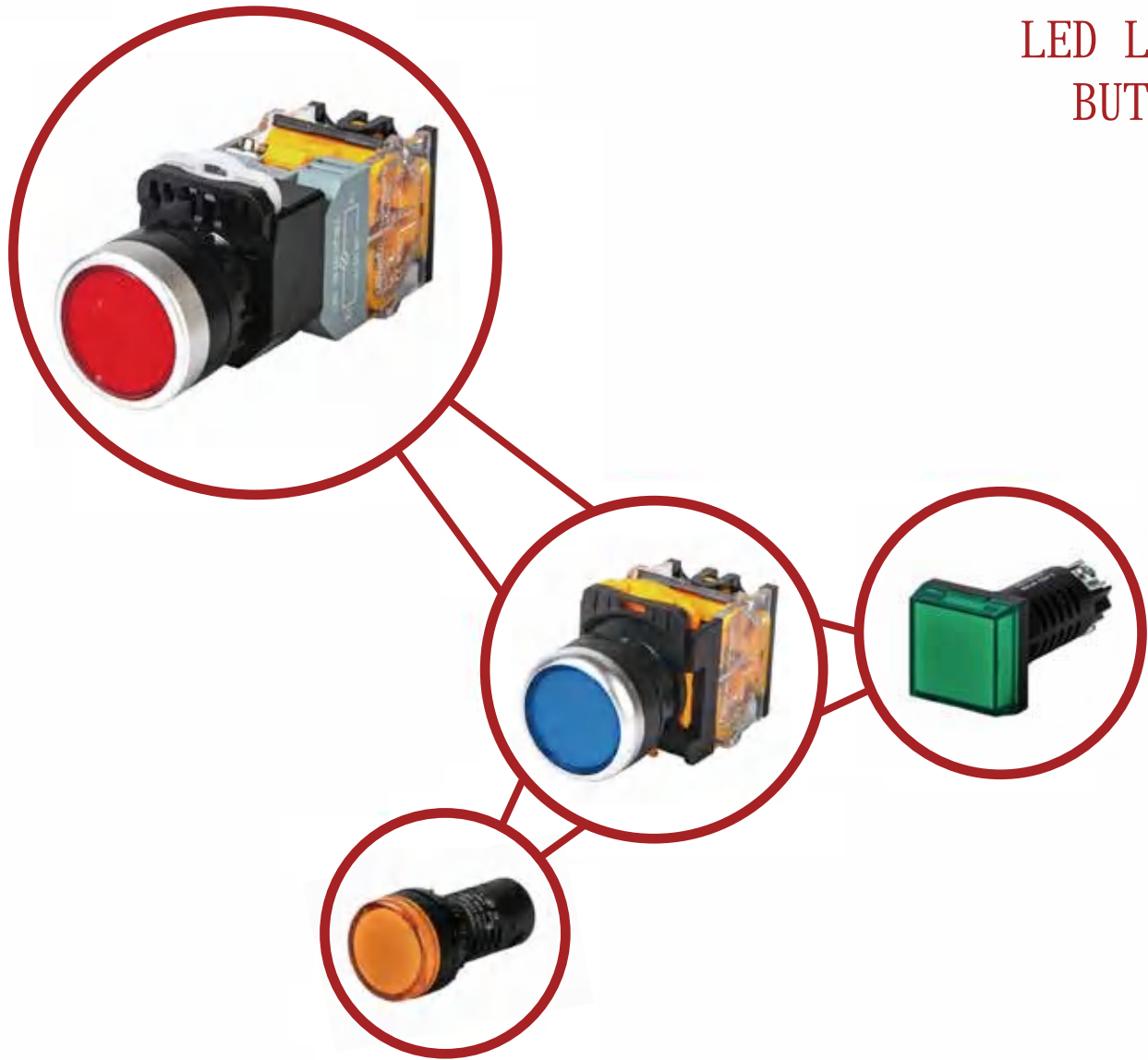
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PRODUCT SELECTION GUIDE

LED LAMP BUTTON

Quality - Achieving the Beauty of Industry



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SUZHOU HUNTEC INT' L TRADING CO. , LTD.

Where There Is Electricity,
There Is Need for Our Products.



Industry applications: Electric power industry (thermal power, hydropower, wind power, nuclear power, solar energy, power transmission and distribution); Machinery industry (machine tools, injection molding machines, spinning machines, lifting machinery and elevators); Transportation industry (rail transit, ships, expressways and airports); Communication industry (communication base stations, communication power supplies); Process automation industry (petroleum, chemical, metallurgy, sewage treatment and building materials).

HTD / HTA
SERIES
LED LAMP / BUTTON

CATALOG

01 Enterprise Chapter

Catalog	01-02
Enterprise Profile	03-04

02 Product Chapter

HTD Series Signal Lamps	
HTD Series Signal Lamps	05-11
HTD Series Gantry Crane Indicator Lamps	12
HTA Series Buttons	
HTA1 & HTA3 Series Buttons	13-18
HTA2 Series Buttons	19-24
HTA2 Accessories	25-26
HTA1S Series Buttons	27-31
HTA1M Series Buttons	32-36
HTA6 Series Buttons	37-40
Accessories	41-42
Button &Signal lamp Printing Symbols	43
Knob Label or Label Frame Printing	43

03 Qualification Chapter

Company Qualification	44
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COMPANY PROFILE

Huntec was founded in 2003, "CHIKU" is our brand name. Huntec is a whole supply chain manufacturer integrating product design, mold design and manufacturing, stamping, turning, injection molding, assembly and testing, and its products mainly include DIN rail terminals, signal isolators, fixed connectors, relays, cable glands, explosion-proof exhaust plugs, photovoltaic and energy storage connectors, etc. The company has won the honorary titles of national high-tech enterprise and provincial scientific research center for many years. We have nearly 1,000 kinds of products, all of which have passed ISO9001, UL, CE, CQC and other certifications, have a number of independent property rights, and are widely used in industrial automation, communications, rail transit, energy storage, shipbuilding, photovoltaic new energy and other industries.

All products of the company have passed the product certification of the National Quality CQC Certification Center and the product certification of the Classification Society, as well as the leading products have obtained the EU CE safety certification. Through advanced technology and perfect product line, the company is committed to better serving the Chinese market.

ENTERPRISE CULTURE

Integrity: Strong Career Ambition, Consistent Words and Actions.

Responsibility: Shouldering Responsibility Proactively, Brave Enough to Take Responsibility, and Fulfill Responsibility Diligently.

Innovation: Keeping up with the Times, Forging Ahead, and Daring to be the First.

Dedication: Sincere Service, Giving Back to Society

◆ Business Philosophy

Committed to providing professional electrical connection for partners solution

◆ Core Values of the Company

Sail far, the same desire to win

◆ Quality Policy

Rigorous and realistic, excellent quality
Excellent service, sustainable development

◆ Enterprise Vision

We are committed to keeping China's electrical connection technology synchronized with the world and creating for global technology customers Better investment return and experience

To manufacture the best switches in the industrial control field !
HUNTEC ELECTRIC serves you sincerely.



HTD Series Signal Lamps

◆Overview

HTD series signal lamps all adopt high brightness solid color LED emitting chip as light source, with long lifespan, low energy consumption, small size and light weight. It is an updating & upgrading product of XD's various incandescent lamps and neon signal lamps. The product has passed CCC compulsory product certification by CQC, CE safety certification of EC and marine product type approval of China Classification Society.

◆Application

HTD series signal lamps are suitable to use as indicator signals, warning signals, accident signals, and other indicating signals in the power, telecommunications, machine tools, ships, textiles, printing, mining machinery, and other equipment.

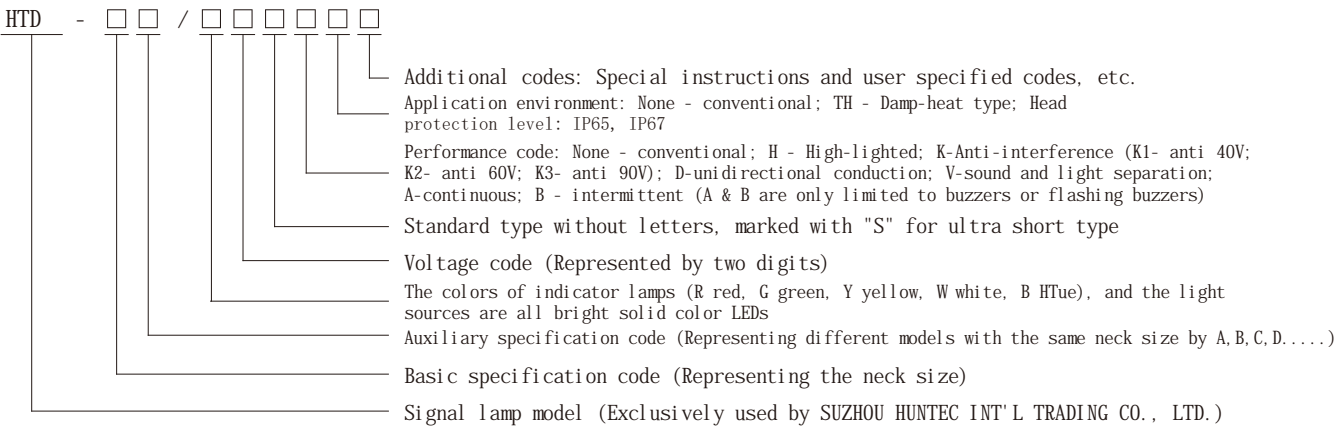
◆Product standards

GB/T 14048.5
(Current version implemented by 3C certification)
IEC 60947-5-1

◆Applicable environments

- 1.Environmental temperature:-40℃~+85℃;
- 2.Relative air humidity≤98%;
3. It can work normally under a vibration frequency of 2-80Hz and an acceleration of 0.7g;
- 4.Pollution level is Level 3 and installation category is Class III
- 5.Those with the "TH" logo can work in humid tropical environments.

◆Model and naming



◆Main technical indicators

- 1.Power frequency withstand voltage: 2.5KV (AC effective value), 1min

2. Insulation resistance≥100MΩ.

4.Continuous working life ≥100000H

6.Comparative tracking index CTI ≥ 175, flame retardant

7.Head protection level: The signal lamp is IP54, and some can be customized for IP65 or IP67; the buzzer is IP31.

8.Use frequency AC50~60Hz
- 3.Allowable voltage fluctuations of signal lamps ± 20%.

5.Luminance≥100cd/m²



◆Voltage, current, and code comparison table (conventional)

Voltage code	Power supply	Voltage	Current	Voltage code	Power supply	Voltage	Current
15	ACDC	3.5V	12mA	16	AC	210V	13mA
18		5V	15mA	31		220V	13mA
21		6V	13mA	46		230V	13mA
22		12V	13mA	45		270V	10mA
23		24V	13mA	54		277V	8mA
20		27V	13mA	32		380V	12mA
14		30V	12mA	41		400V	12mA
24		36V	13mA	33		415V	12mA
25		48V	13mA	35		415V	10mA
34		60V	12mA	39		440V	13mA
17		75V	11mA	36		480V	10mA
26		110V	10mA	42		500V	9mA
43		110V-220V universal	4mA	37		540V	10mA
51		116V	7mA	53		660V	12mA
50		120V	7mA	38		690V	12mA
27		127V	10mA	92	FD	110V	7mA
28		220V	4mA	90		220V	7mA
48		230V	4mA	29		380V	7mA
19		240V	4mA	30		500V	7mA
49		240V	4mA				
40		250V	5mA				
52		266V	4mA				
44		380V	4mA				
47		400V	4mA				

Note: "FD" in the column of the power supply indicates a discharge lamp that can be installed in a capacitor cabinet, with a current deviation range of ± 2mA.

◆HTD series anti-interference signal lamps

Due to the use of LED light sources, the sensitivity of HTD series signal lamps is much higher than that of incandescent signal lamps. Therefore, in many signal lamp indication circuits, the presence of interference induced voltage makes many LED lights seemingly bright but not bright, seriously affecting the normal judgment of operators. Therefore, our company has specially developed HTD series anti-interference signal lamps to solve this problem. A threshold circuit (usually 10-90V) is installed inside the original signal lamp, where the signal lamp does not light up below the threshold value and lights up above the threshold value.


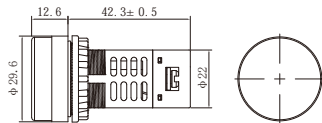

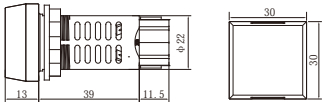

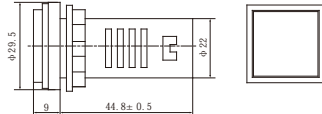

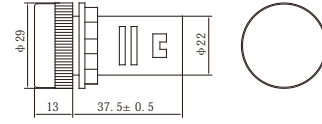

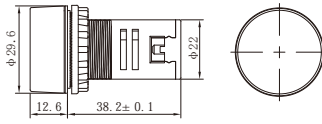

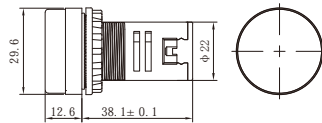
- Cautions
- 1.At present, Φ 22 and corresponding ultra short products of the company can withstand an induced voltage of 20% of the working voltage.

2.The cost of the lamp that can withstand an induced voltage of over 20% is RMB 3 to 5 yuan higher than similar signal lamps, and they all require customization, with a production cycle of three working days.

3.In the flash circuit, the working current should be above 8mA, and the anti-interference threshold value should not be too large, otherwise the signal lamp may not work.

4.By optimizing the voltage reduction scheme, ultra short signal lamps can be used for voltages of DC220V and above.


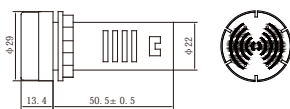

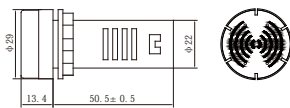

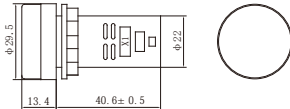

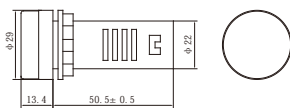

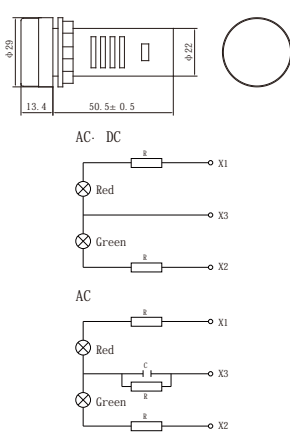
HTD series signal lamps

Name	Pattern	Model	Color	Lamp voltage	Overall dimension
Φ22D Model		HTD-22D/□■	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	18-AC. DC 5V 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 40-AC. DC 250V 31-AC 220V 32-AC 380V 33-AC 240V 29-FD 380V 30-FD 500V 90-FD 220V 91-FD 60V 92-FD 110V	
Φ22F Plug-in Type		HTD-22CF/□■			
Φ22F Model		HTD-22F/□■			
Φ22A Model		HTD-22A/□■S			
Φ22B Model		HTD-22B/□■S			
Φ22D Model		HTD-22D/□■S			

Statement:

- 1.The ultra short indicator lamp (with S added after the model) is suitable for places with narrow installation space;
- 2.The indicator lamp of DC power supply can be applied to AC power supply;
- 3.All ultra short indicator lamps are applicable to openings with diameters of Φ22 and Φ25, with no need for additional accessories;
- 4.Fill in the color in □ the column of model, and fill in voltage level code in ■ column.
- 5.After optimization of the design scheme, ultra short indicator lamps can be used for voltages of DC220V and above;



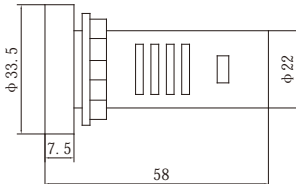









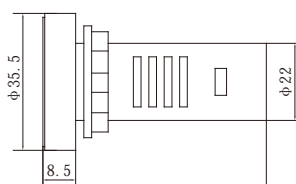






HTD Series Signal Lamps

Name	Pattern	Model	Color	Lamp voltage	Overall dimension	Statement
Buzzer		HTD-22M/K■	Ⓚ	18-AC. DC 5V 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 40-AC. DC 250V 31-AC 220V 32-AC 380V 33-AC 240V 29-FD 380V 30-FD 500V 90-FD 220V 91-FD 60V 92-FD 110V		The buzzer produces intermittent sound, with a volume of 10cm/80 dBs and a current of 15-20mA.
Flash buzzer		HTD-22SM/□■	Ⓡ			The buzzer produces intermittent sound or flashes, with a volume of 10cm/80 dBs and a current of 15-20mA.
Detachable lamp beads		HTD-22D/□■ZH	Ⓡ ⓖ Ⓨ			The plug-in structure can replace the luminous lights from the front of the panel under continuous power supply
Flash lamps		HTD-22S/□■	Ⓦ Ⓑ			This product has two wiring terminals Flash rate: 30 times/minute, customized for 60 times/minute
Circular dual color lamps		HTD-22D/RG■	Ⓡ ⓖ			Warning 1. When using AC type indicator lamps, make sure not to connect the wires incorrectly, otherwise it will damage the indicator lamps. 2. This lamp is a dual color red and green lamp. If other colors are required, please specify separately.



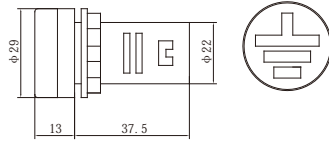






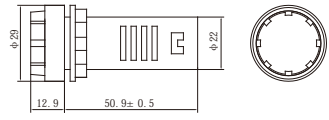

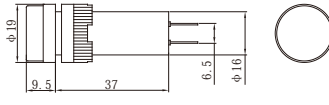

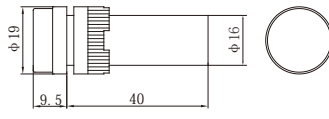

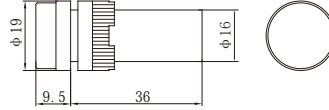

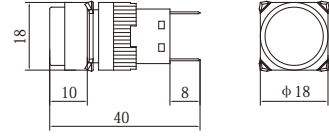
Statement

Fill Type A, B, C, D, etc. in ■ before the diagonal line of the model, fill the color in □ after the diagonal line, and fill the voltage level code in ■.


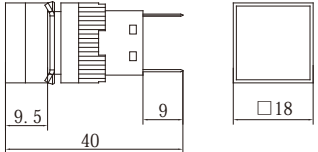

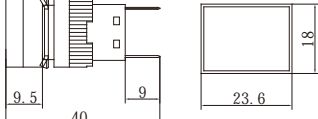

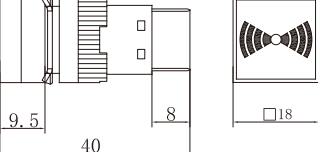

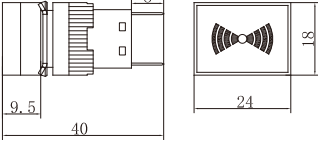

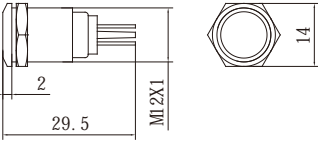

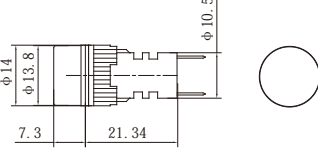
AC dual color lamps are not allowed to have wiring errors (such as X1 and X2 being directly connected to the power supply).

Name	Pattern	Model	Color	Lamp voltage	Overall dimension
Isolation switch position indicator		HTD-22W/G■	Red light is emitted when X1X3 is powered on 	18-AC. DC 5V 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 40-AC. DC 250V 31-AC 220V 32-AC 380V 33-AC 240V 29-FD 380V 30-FD 500V 90-FD 220V 91-FD 60V 92-FD 110V	
		HTD-22WF/G■	Green light is emitted when X2X3 is powered on 		
Circuit breaker position indicator		HTD-22W/D■	Red light is emitted when X1X3 is powered on 		
		HTD-22WF/D■	Green light is emitted when X2X3 is powered on 		
Grounding position indicator		HTD-22W/N■	Red light is emitted when X1X2 is powered on 		
		HTD-22WF/N■			
Grounding position indicator		HTD-22W/NB■	Red light is emitted when X1X3 is powered on 		
		HTD-22WF/NB■	Green light is emitted when X2X3 is powered on 		

Statement
The isolation switch/circuit breaker position indicator does not allow wiring errors (such as X1, X2 directly connected to the power supply), and the voltage level code is indicated at “■”.

Name	Pattern	Model	Color	Lamp voltage	Overall dimension
Grounding position indicator		HTD-22W/N■-RB (Rotundity)	Red light is emitted when X1X2 is powered on 	<div>18-AC. DC 5V</div> <div>21-AC. DC 6V</div> <div>22-AC. DC 12V</div> <div>23-AC. DC 24V</div> <div>24-AC. DC 36V</div> <div>25-AC. DC 48V</div> <div>26-AC. DC 110V</div> <div>27-AC. DC 127V</div> <div>28-AC. DC 220V</div> <div>40-AC. DC 250V</div> <div>31-AC 220V</div> <div>32-AC 380V</div> <div>33-AC 240V</div> <div>29-FD 380V</div> <div>30-FD 500V</div> <div>90-FD 220V</div> <div>91-FD 60V</div> <div>92-FD 110V</div>	
Φ22E Model		HTD-22E/□■	<div></div> <div></div> <div></div> <div></div> <div></div>		
Indicator lamps (plug-in wiring)		HTD-16A/□■			
Indicator lamps (screw type wiring)		HTD-16B/□■			
Indicator lamps (screw type wiring)		HTD-16B/□■S			
Indicator lamps (plug-in wiring)		HTD-16C/□■			

Statement
1.The color is indicated in “□” of the model column, and the voltage level code is indicated in “■”.
2.Wiring forms: Soldering type and plug-in type.
(1).Soldering type should be avoided as much as possible for wiring, and international universal sockets (4.8 x 0.5mm) should be used for connection, and a protective sheath should be applied.
(2).When using soldering , solder the terminals within 20W/5 seconds or 260 ℃/3 seconds without applying force to the terminals, and the soldering iron should not touch the casing. Prevent stress from acting on the terminals, neither lifting or bending the terminals, nor applying external forces to the terminals.

Name	Pattern	Model	Color	Lamp voltage	Overall dimension
Φ16F plug-in type		HTD-16F/□■	<div>Ⓡ</div> <div>ⓖ</div> <div>Ⓨ</div> <div>Ⓦ</div> <div>Ⓑ</div>	18-AC. DC 5V 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 40-AC. DC 250V 31-AC 220V 32-AC 380V 33-AC 240V 29-FD 380V 30-FD 500V 90-FD 220V 91-FD 60V 92-FD 110V	
Φ16CF plug-in type		HTD-16CF/□■			
Φ16F type buzzer		HTD-16SM/□■F			
Φ16CF type buzzer		HTD-16SM/□■CF			
Indicator lamps (plug-in wiring)		HTD-12/□■J			
Indicator lamps (plug-in wiring)		HTD-12/□■			

Statement

- 1.The color is indicated in “□” of the model column, and the voltage level code is indicated in “■”.
- 2.Wiring forms: Soldering type and plug-in type.

(1).Soldering type should be avoided as much as possible for wiring, and international universal sockets (4.8 x 0.5mm) should be used for connection, and a protective sheath should be applied.

(2).When using soldering , solder the terminals within 20W/5 seconds or 260 °C/3 seconds without applying force to the terminals, and the soldering iron should not touch the casing. Prevent stress from acting on the terminals, neither lifting or bending the terminals, nor applying external forces to the terminals.

HTD Series Gantry Crane Indicator lamps

◆Product Introduction

The gantry crane indicator lamps in HTD series indicator lamps are specially developed by BRUDER Electric for the locomotive industry, which serves as an indicator for opening and closing doors. The product adopts ultra-high brightness LED as the light source. It has the characteristics of high brightness, long service life, and good shake resistance. Currently, the product has two specifications to choose from.

◆Use conditions

Ambient temperature	-40℃~+85℃	Installation Category Class III
Relative humidity	≤98%	Pollution level Level 3
Anti-vibration	10-2000 H2•1mm•15g	Flame retardant level V-0
Installation limit height	≤2000m	Protection level: IP67 for exposed parts
Compliant with EMC directives, i.e. electromagnetic compatibility		

◆Main technical indicators

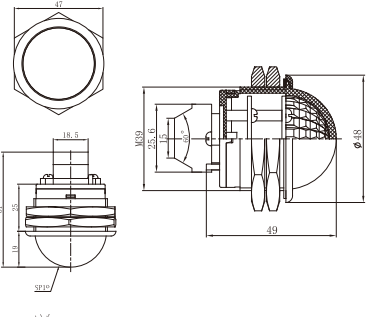
Rated insulation voltage	400V	Insulation resistance	≥2M
Power-frequency withstand voltage 2.5kV (test voltage is AC effective value)			
Ultra-high brightness	≥150mcd	Lumiance	≥75mcd
Continuous working life	≥100000h	Comparative tracking index	CTI≥100
Permissible voltage fluctuation	Voltage ≤ 48V, Allowable fluctuation ± 5% Voltage > 48V, Allowable fluctuation ± 20%		

◆Product examples

HTD-39TD



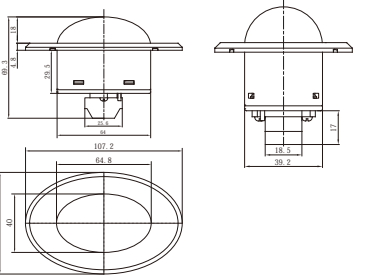
- VoltageDC70~140V
- Light sourceUltra high brightness LED
- Color of the lampRed, Yellow
- Wiring methodThe external lead wires of the product is a 0.75-1.2mm² hard conducting wire (Just insert it)
- Product applicationShanghai Metro Line 1, Line 9 & Line 11, Chengdu Metro Line 1 and Beijing Metro Line 10



HTD-84TD



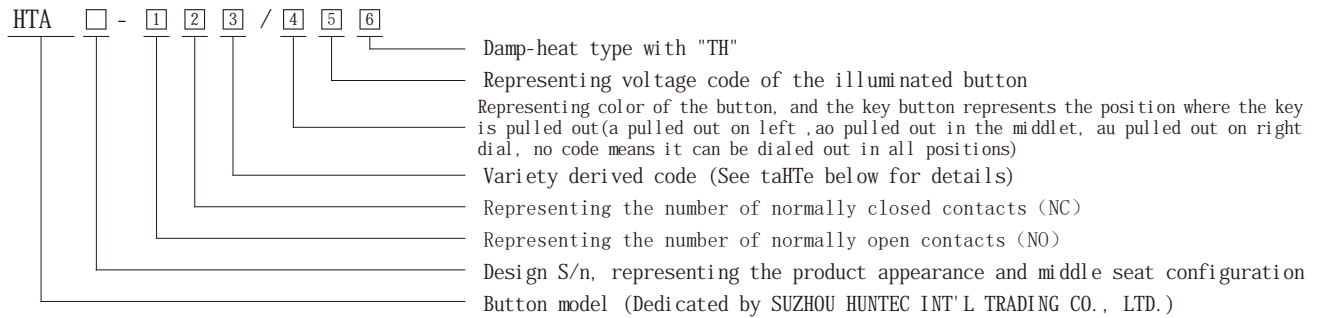
- VoltageDC70~140V
- Light sourceUltra high brightness LED
- Color of the lampRed, Yellow, Green
- Wiring methodWiring method Just insert 0.75-2.5mm² hard conducting wire
- Product applicationShanghai Metro Line 1, Line 9 & Line 11, Chengdu Metro Line 1 and Beijing Metro Line 10



HTA series buttons

HTA series buttons have complete specifications and varieties. According to the shape of the head, it can be divided into circular, square and rectangular buttons. Classified by variety, it can be divided into general buttons and illuminated buttons, etc. The button has a beautiful appearance, clear & transparent LED lighting, as well as a unique and reliable internal structure. It can better meet the user's requirements for panel miniaturization and intensive control. At present, our company has seven series of HTA (1, 1S, 1M, 2, 3, 5, 6) button specifications to choose from, fully considering the requirements of users in various industries.

HTA1& HTA3 series buttons



① Representing the number of normally open contacts (NO)

② Representing the number of normally closed contacts (NC)

③ Variety derived code

Letter	Meaning	Letter	Meaning	Letter	Meaning
	General button	M	Mushroom button	Y□	Key knob
D	Button with light	H	High position button	MKS	Rotating reset mushroom button
S	Self-locking button	X□	Short handle knob	MY	Key reset mushroom button
B	On-off button	CX□	Long handle knob		

* “□” represents the action function, as shown in the taHTe below:

2	Two-gear knob without reset	f3	Three-gear knob with left & right self reset
r	Two-gear knob with self reset	r3	Three-gear knob with right self reset
3	Three-gear knob without reset	L3	Three-gear knob with left self reset

④ Representing the button color

Red	Green	Yellow	HTue	White	HTack	Grey
R	G	Y	B	W	K	C

⑤ Voltage code of indicator lamp

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

⑥ Damp-heat type with "TH"

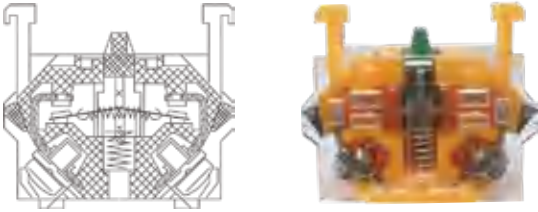
Main technical parameters

Rated capacity	Fast-action type	AC-15	220V/5.5A	380V/4A	660V/1A	DC-13					24V/3.6A	48V/2A	110V/1A	220V/0.45A	440V/0.25A			
	Slow-action type	AC-15	24V/10A	48V/10A	110V/5A	220V/6.5A	380V/4.3A	660V/2A	DC-13						24V/6A	48V/3A	110V/1.2A	220V/0.5A
Contact resistance	Hard silver contact≤50mΩ																	
Max. insulation voltage	AC 2500V 50Hz・1min																	
Mechanical lifespan	General buttons≥10×10 ⁶ times Knobs≥3×10 ⁶ times Key knobs≥5×10 ⁵ times Emergency knobs≥5×10 ⁵ times																	
Electrical lifespan	≥5×10 ⁶ times																	
Agreed heating current	Ith 10A																	
Rated insulation voltage	Ui AC690V																	
Ambient temperature	-40℃ ~ +85℃																	
Front protection level	Default IP54, if IP65 is required, please add “- IP65” after the model when placing an order; The key knob is IP40. HTA1/3 flat head round button can be configured with FJ10 to be IP67																	

Component materials


Head outer ring	Middle seat	Head	Contact	Switch housing	Contact pad
AL alloy	Zn or PBT.PA	PC	AgNi	PC	Cu

Contact structure diagram (Applicable to HTA1 and HTA3 series)



Shrapnel quick-action type

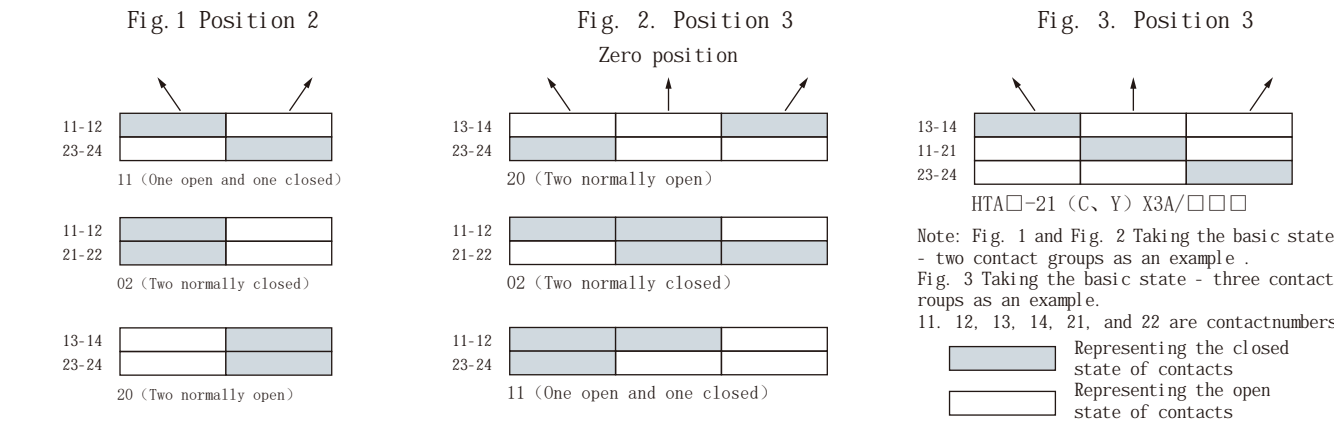
Quick-action contact with self-cleaning mechanism, quick on/off action, and more reliable contact; Good arc extinguishing performance, emitting a crisp sound during operation, providing an auditory signal to the operator.




Flat press slow-action type

Compared with the quick-action contact, the conventional translational contact has a larger electrical gap, resulting in a greater current carrying capacity than the quick action contact.

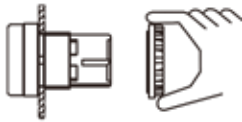
Functional diagram of selection switch contacts



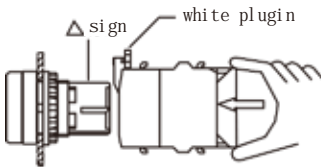
Typical installation instructions (applicable to HTA1 & HTA3 series)



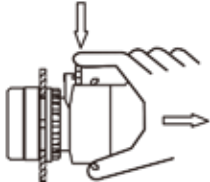
1.Before installation, press the white plug-in component vertically on the fixed seat and horizontally remove the operating component from the fixed seat.



2.Insert the operating components into the installation holes from the front of the panel, and tighten the fixing ring behind the panel (using installation sleeves or by hand).
For products with a diameter of 25: Insert the operating components into the installation holes from the front of the panel, fit the conversion ring on the back of the panel, and then tighten the fixing ring.


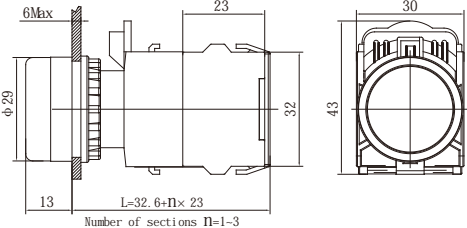

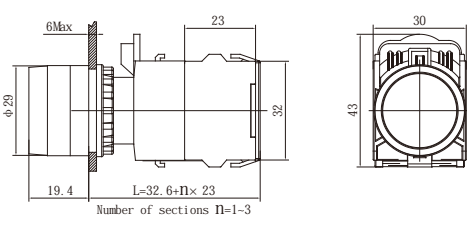

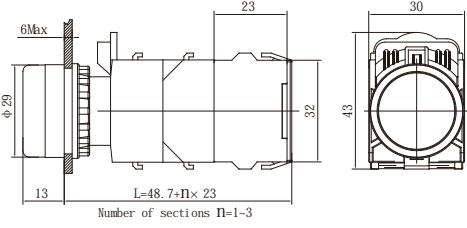

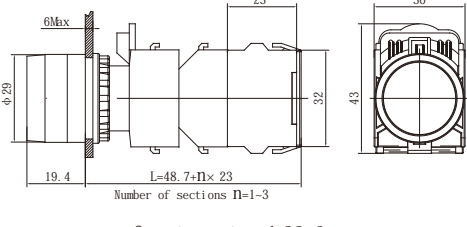

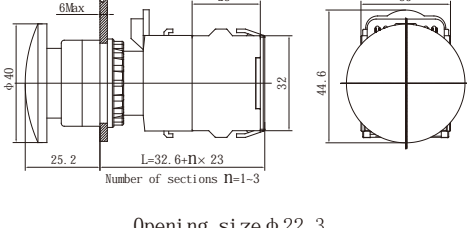


3.After aligning the middle hole position of the white plug-in component with the mark of “△”, lightly fasten the fixed seat and contact group.



4.When disassembling, first press the white plug-in component on the fixed seat to remove the fixed seat and contact group in a direction perpendicular to the panel.


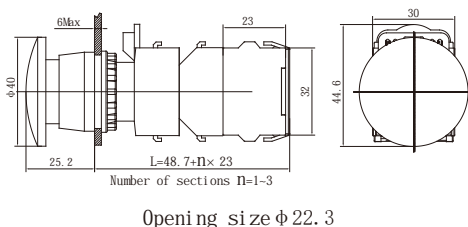

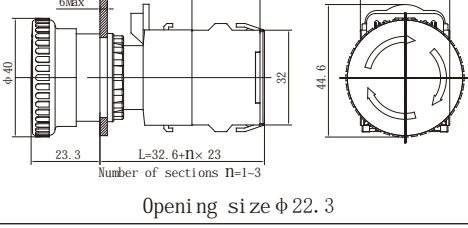

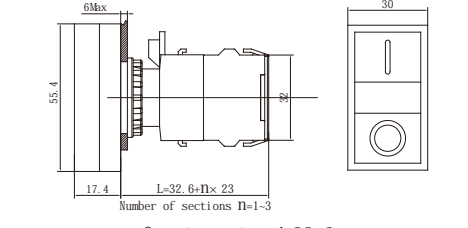

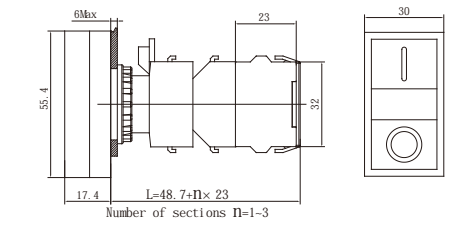

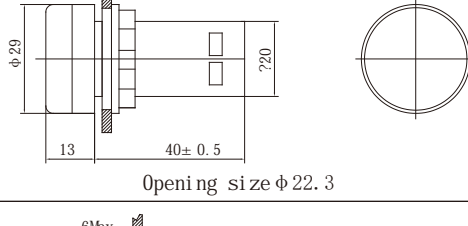

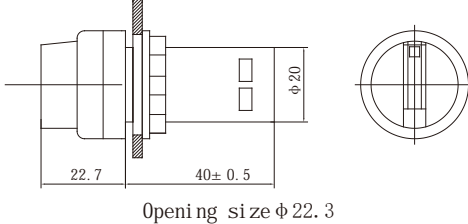
HTA1 series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Round button		Snap-Action	HTA1-■/□	● R	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■S/□	● G ● Y	
High-position round knob		Snap-Action	HTA1-■H/□	○ W	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■HS/□	● B ● K	
Round knob with light		Snap-Action	HTA1-■D/□■	● R	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■DS/□■	● G ● Y	
High-position round knob		Snap-Action	HTA1-■HD/□■	○ W	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■HDS/□■	● B	
Mushroom button		Snap-Action	HTA1-■M/□	● R	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■MS/□	● G ● Y ● K	

Statement

- Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- The light sources with light buttons are all high brightness solid color LEDs.

HTA Series buttons


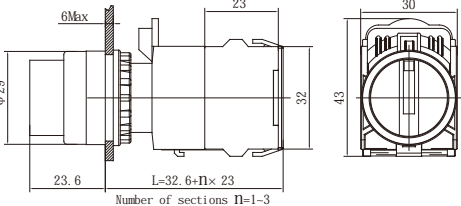

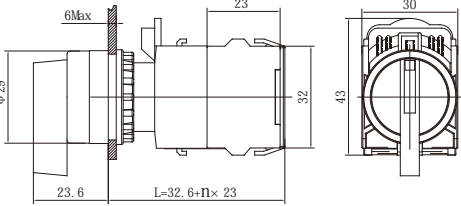

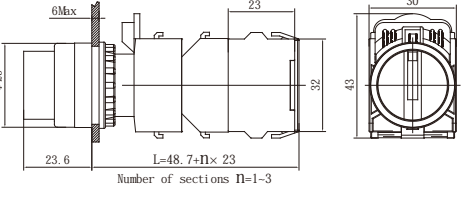

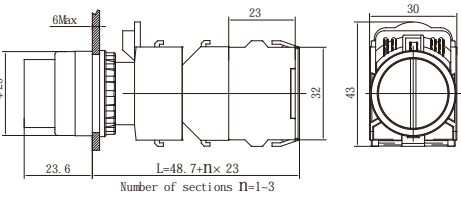
Name	Pattern	Working status	Model	Color	Overall dimension
Mushroom button with light		Snap-Action	HTA1-■MD/□■	● R ● G ● Y ○ W	 <p>Opening size $\phi 22.3$</p>
		Self-locking	HTA1-■MDS/□■		
Emergency stop button		Press to lock, rotate clockwise to reset	HTA1-■MXS/□	Opaque ● R	 <p>Opening size $\phi 22.3$</p>
Two position button		Snap-Action	HTA1-■B	● R ● G	 <p>Opening size $\phi 22.3$</p>
Dual-position with lights		Snap-Action	HTA1-■BD/□	Button ● R ● G Lamp ● Y	 <p>Opening size $\phi 22.3$</p>
ECO button		Snap-Action	HTA5-■/□	● R ● G ● Y ○ W ● B	 <p>Opening size $\phi 22.3$</p>
ECO knob		Two-position self-lock Three-position self-lock	HTA5-■X2/□ HTA5-■X3/□	● K	 <p>Opening size $\phi 22.3$</p>

Statement

- Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- The light sources with light buttons are all high brightness solid color LEDs.

Remarks


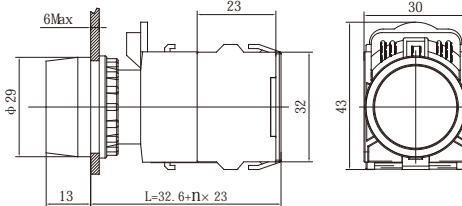

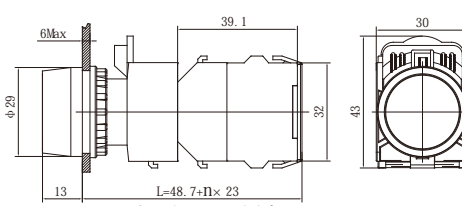

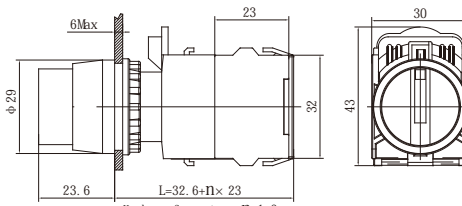

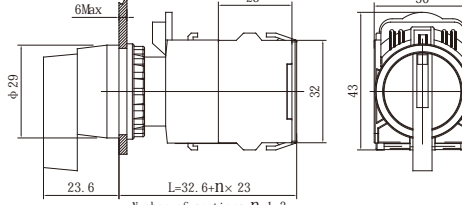
- If the mushroom head with a diameter of $\phi 60$ is needed, please add "-60" after the model, and do not indicate for the diameter of $\phi 40$.
- It is recommended to use a slow-action base for the emergency stop button.

Name	Pattern	Handle position and model	Color	Overall dimension
Short handle knob		Two-position <div><div>L R</div><div>HTA1-■X2/□</div><div>L C</div><div>HTA1-■XL2/□</div><div>C R</div><div>HTA1-■Xr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>L C R</div><div>HTA1-■X3/□</div><div>L C R</div><div>HTA1-■Xf3/□</div><div>L C R</div><div>HTA1-■XL3/□</div><div>L C R</div><div>HTA1-■Xr3/□</div></div>		
Long handle knob		Two-position <div><div>L R</div><div>HTA1-■CX2/□</div><div>L C</div><div>HTA1-■CXL2/□</div><div>C R</div><div>HTA1-■CXr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>L C R</div><div>HTA1-■CX3/□</div><div>L C R</div><div>HTA1-■CXf3/□</div><div>L C R</div><div>HTA1-■CXL3/□</div><div>L C R</div><div>HTA1-■CXr3/□</div></div>		
Knob with light		Two-position <div><div>L R</div><div>HTA1-■X2D/□■</div><div>L R</div><div>HTA1-■Xr2D/□■</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>L C R</div><div>HTA1-■X3D/□■</div><div>L C R</div><div>HTA1-■Xf3D/□■</div><div>L C R</div><div>HTA1-■XL3D/□■</div><div>L C R</div><div>HTA1-■Xr3D/□■</div></div>		
Key knob	 <div>Special requirements can be customized for a certain position to be pulled out. Note: 1.The self-reset key button cannot be removed from the self-reset action position. 2. Non compatible keys can be numbered from 1 to 20.</div>	Two-position <div><div>L R</div><div>HTA1-■Y2/□</div><div>L C</div><div>HTA1-■Y12/□</div><div>C R</div><div>HTA1-■Yr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>L C R</div><div>HTA1-■Y3/□</div><div>L C R</div><div>HTA1-■Yf3/□</div><div>L C R</div><div>HTA1-■YL3/□</div><div>L C R</div><div>HTA1-■Yr3/□</div></div>		

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

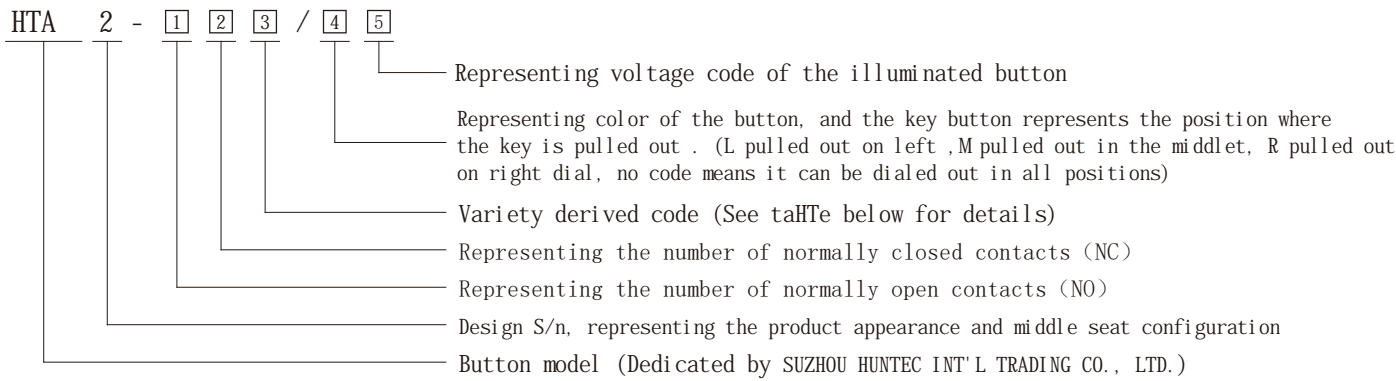
HTA3 series buttons

Name	Pattern	Working status	Model	Col or	Overall dimension
Round button		Snap-Action	HTA3-■/□	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div><div>K</div></div>	 Opening size φ 22.3
		Self-locking	HTA3-■S/ □		
Round knob with light		Snap-Action	HTA3-■D/□■	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	 Opening size φ 22.3
		Self-locking	HTA3-■DS/□■		
Name	Pattern	Handle position and model		Color	Overall dimension
Short handle knob		Two-position	<div><div>L R</div><div>HTA3-■X2/□</div><div>L C</div><div>HTA3-■XL2/□</div><div>C R</div><div>HTA3-■Xr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size φ 22.3
		Three-position	<div><div>L C R</div><div>HTA3-■X3/□</div><div>L C R</div><div>HTA3-■Xf3/□</div><div>L C R</div><div>HTA3-■XL3/□</div><div>L C R</div><div>HTA3-■Xr3/□</div></div>		
Long handle knob		Two-position	<div><div>L R</div><div>HTA3-■CX2/□</div><div>L C</div><div>HTA3-■CXL2/□</div><div>C R</div><div>HTA3-■CXr2/□</div></div>	<div><div>Y</div><div>K</div></div>	 Opening size φ 22.3
		Three-position	<div><div>L C R</div><div>HTA3-■CX3/□</div><div>L C R</div><div>HTA3-■CXf3/□</div><div>L C R</div><div>HTA3-■CXL3/□</div><div>L C R</div><div>HTA3-■CXr3/□</div></div>		

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

HTA2 series buttons



- 1

Representing the number of normally open contacts (NO)
- 2

Representing the number of normally closed contacts (NC)
- 3

Variety derived code

Letter	Meaning	Letter	Meaning	Letter	Meaning
	General button	M	Mushroom button	Y□	Key knob
D	Button with light	H	High position button	MKS	Rotating reset mushroom button
S	Self-locking button	X□	Short handle knob	MY	Key reset mushroom button
B	On-off button	CX□	Long handle knob	J	PullaHTe reset mushroom button
PA	Control switch				

* “□” represents the action function, as shown in the taHTe below:

2	Two-gear knob without reset	f3	Three-gear knob with left & right self reset
r	Two-gear knob with self reset	r3	Three-gear knob with right self reset
3	Three-gear knob without reset	L3	Three-gear knob with left self reset

- 4

Representing the button color

Red	Green	Yellow	HTue	White	HTack
R	G	Y	B	W	K

5

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

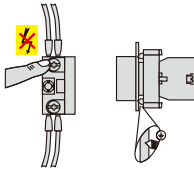
Main technical parameters

Rated capacity	AC-15 380V/25A 220V/3A	DC-13 220V/0.27A 110V/0.55A
Agreed heating current	ith 10A	Short circuit protection RT16-10A
Rated insulation voltage	Ui AC690V	Protection level Dual-position knob, illuminated knob IP40, other IP65
Contact action	Slow action (normally closed or normally open); Normally closed contacts are directly disconnected	Impact resistance ≥10g
Contact resistance	≤50mΩ	Vibration resistance <500Hz, amplitude approx. 1.0mm
Electrical lifespan	≥ 5 × 10 ⁶ times	Ambient temperature -45℃~+85℃
Mechanical lifespan	Self-reset key ≥ 100 × 10 ⁶ times Other buttons ≥ 5 × 10 ⁶ times	Wiring Spiral compression type, wiring capacity: Mini. 1×0.5mm ² ; Max.With terminal strip 2×1.5mm ² , With no terminal strip 1×2.5mm ²
Lamp module parameters	Bead type: LED light-emitting diode	
	Lamp bead lifespan: ≥ 100,000 hours	Voltage limit: 0.85Ue ≤ U ≤ 1.1Ue

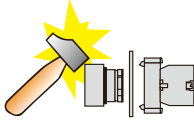
Component materials

Middle seat	Head	Contact	Switch housing
kirsite	kirsite	Silver alloy	PBT

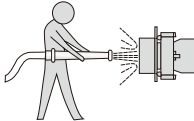
Characteristics



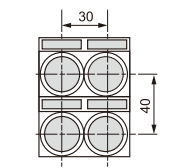
- ComfortaHTe finger press position and switch toggle operation
- Functional identification
- Automatic grounding
- Anti-finger electric shock design



- Chromium plated metal head and mounting base
- Shock-proof screw terminals
- DuraHTe, reliaHTe, with a mechanical lifespan of up to 3 million times
- LED indicator lamps with a lifespan of up to 50000 hours

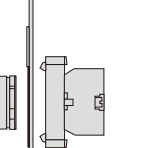


- High protection level IP65
- Installation is fast & simple, and the final form is to be decided by you

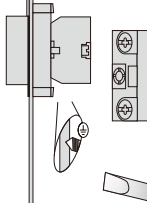


Note:
HTA2 series installation panel thickness 1-5mm

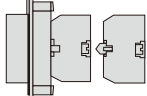
- Min. panel surface
- The shallowest installation depth



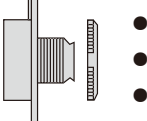
- Overall model HTA2
- Button head - contact base assemHTy
- The button head automatically remains in the opening
- Rotate the button head at a certain angle and snap it into the contact base



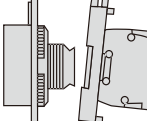
- Fixed with 2 metal screws
- Anti-vibration
- Automatic grounding
- Open terminal without the need for pre-loosening screws



- Electrical functions
- Up to 1-6 contact modules can be installed

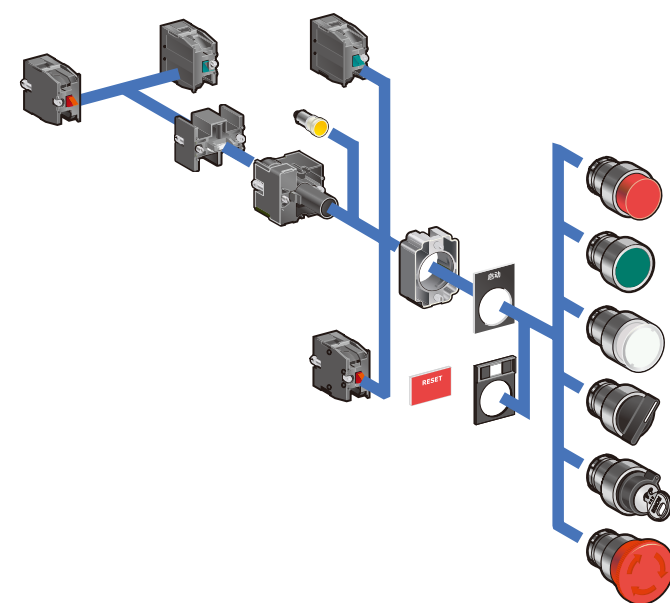


- High protection level IP65
- Installation of button heads
- Rear end screw ring fixation

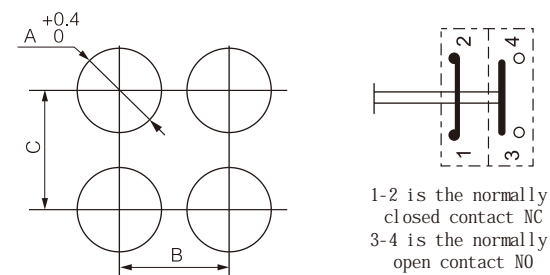


- Contact base card installation
- No tools required
- Fast and sturdy

HTA2 series product composition and accessories display



Installation panel thickness 1-6mm



Type	A	B	C
Conventional type	Φ22.3	>50	>35
Knob		>50	>35
Mushroom type		>50	>42
Big mushroom type		>70	>70

Remarks:
1. Unit: mm
2. Both B and C refer to min. size diagram

Functional diagram of selection switch contacts

Fig.1 Position 2

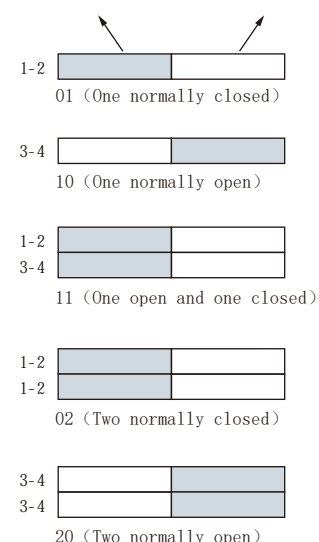


Fig. 2. Position 3

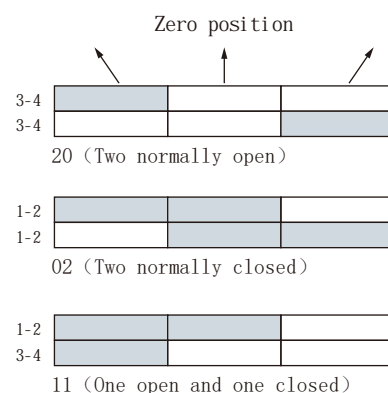
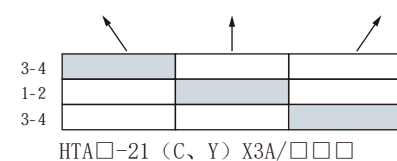


Fig. 3. Position 3



Note:
Fig. 1 and Fig. 2 Taking the basic state - two contact groups as an example.
Fig. 3 Taking the basic state - three contact groups as an example.
11, 12, 13, 14, 21, and 22 are contact numbers

Representing the closed state of contacts
Representing the open state of contacts

Indicator pattern (remark behind model when placing an order)

A1 Green side single white bar printing button	A5 HTack faced white arrow printing button	A9 HTack faced white rabbit printing button	A13 HTue faced white up and down arrows
A2 Green side double white bar printing button	A6 Red faced white circle printing button	A10 On the white faced gray elevator	A14 HTue gray up and down
A3 Green side START printing button	A7 Red stop printing button	A11 Under the HTack and gray elevator	A15 HTue gray up and down
A4 White faced HTack arrow printing button	A8 HTack faced white turtle printing button	A12 Yellow faced HTack bell	A16 Yellow faced HTack light


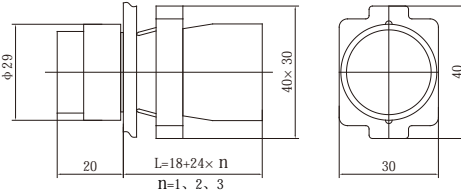

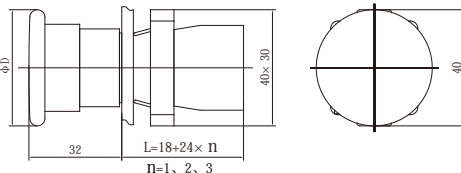

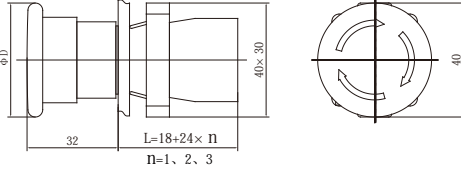

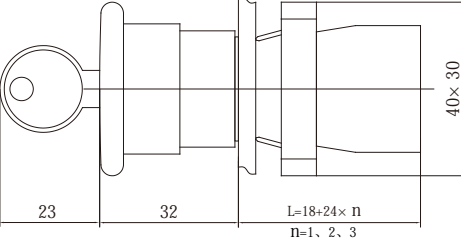
HTA Series buttons

HTA2 series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Flat head self-reset round button		Self-reset	HTA2-■/□	R G Y W	
Flat head self-locking round button		Self-locking	HTA2-■S/□	B K	
Self-reset round button with light		Self-reset	HTA2-■D/□■	R G Y W	
Self-locking circular knob with light		Self-locking	HTA2-■DS/□■	B	


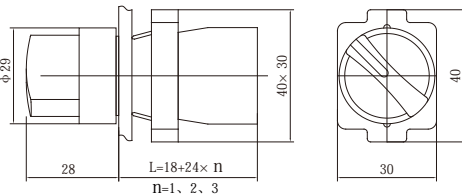

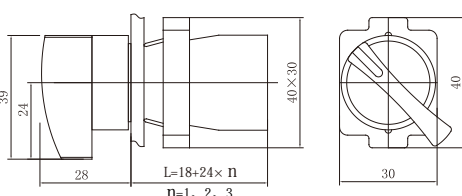

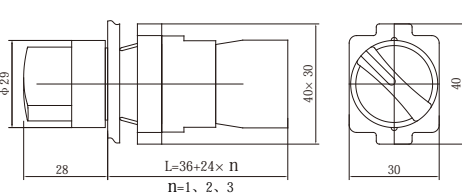

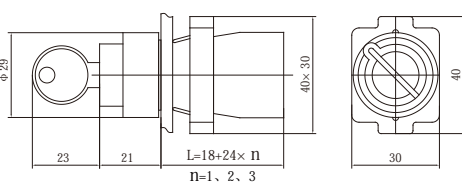

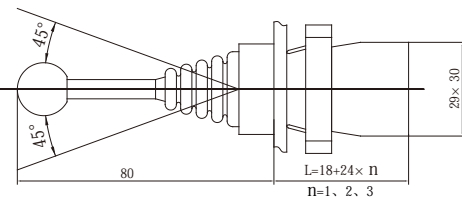
Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Name	Pattern	Working status	Model	Color	Overall dimension
High position self-reset round button		Self-reset	HTA2-■H/□	<div><div>R</div><div>G</div><div>Y</div><div>B</div><div>K</div></div>	 20 L=18+24× n 40× 30 n=1、2、3
Mushroom button		Self-locking	HTA2-■M/□	<div><div>K</div></div>	 32 L=18+24× n 40× 30 n=1、2、3 D: Two types: 40mm and 60mm 60mm can only be made in red, HTack, and green, please remark.
Emergency stop button		Press to lock, rotate clockwise to reset	HTA2-■MXS/□	<div><div>R</div><div>G</div><div>K</div></div>	 32 L=18+24× n 40× 30 n=1、2、3 D: Three types: 30mm, 40mm, and 60mm 30mm and 40mm need to be remarked
Key reset emergency stop button		Press lock, key reset	HTA2-■MXY/□	<div><div>R</div></div>	 23 32 L=18+24× n 40× 30 n=1、2、3

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Name	Pattern	Handle position and model	Color	Overall dimension
Short handle knob		<div>Two-position L R C R HTA2-■X2/□ HTA2-■Xr2/□</div> <div>Three-position L C R L C R L C R HTA2-■X3/□ HTA2-■Xf3/□ HTA2-■XL3/□</div>	<div><div>K</div></div>	 28 L=18+24× n 40× 30 n=1、2、3
Long handle knob		<div>Two-position L R C R HTA2-■CX2/□ HTA2-■CXr2/□</div> <div>Three-position L C R L C R L C R HTA2-■CX3/□ HTA2-■CXf3/□ HTA2-■CXL3/□</div>	<div><div>K</div></div>	 24 L=18+24× n 40× 30 n=1、2、3
Knob with light		<div>Two-position L R HTA2-■X2D/□■</div> <div>Three-position L C R HTA2-■X3D/□■</div>	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	 28 L=36+24× n 40× 30 n=1、2、3
Key knob		<div>Two-position L R C R HTA2-■Y2/□ HTA2-■Yr2/□</div> <div>Three-position L C R L C R L C R HTA2-■Y3/□ HTA2-■Yf3/□ HTA2-■YL3/□</div>	<div><div>L</div><div>M</div><div>R</div><div>Key removal position</div></div>	 23 21 L=18+24× n 40× 30 n=1、2、3
Control switch		<div>Two-position Self-reset HTA2-■PA2 Self-locking HTA2-■PA2S</div> <div>Four-position Self-reset HTA2-■PA4 Self-locking HTA2-■PA4S</div>	<div><div>K</div></div>	 45° 45° 80 L=18+24× n 29× 30 n=1、2、3





Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

HTA2 accessories

Sample image	Accessory model	Name and purpose	Sample image	Accessory model	Name and purpose
	HTA2-P/■	HTA2 flat round button head		HTA2-MXY	HTA2 key emergency stop button head
	HTA2-D/■	HTA2 flat-head round button head with light		HTA2-X2 HTA2-Xr2	HTA2 two-gear short handle knob head
				HTA2-X3 HTA2-Xf3 HTA2-XL3	HTA2 three-gear short handle knob head
	HTA2-H	HTA2 High-position button head		HTA2-CX2 HTA2-CXr	HTA2 two-gear long handle knob head
				HTA2-CX3 HTA2-CXf3 HTA2-CXL	HTA2 three-gear long handle knob head
	HTA2-M	HTA2 Mushroom button head <small>Default diameter of ϕ40mm, and remarks required for diameter of ϕ60mm</small>		HTA2-X2D/■	HTA2 two-gear short handle with light knob head
				HTA2-X3D/■	HTA2 three-gear short handle with light knob head
	HTA2-J	HTA2 pull-out mushroom button head <small>Default diameter of ϕ40mm, and remarks required for diameter of ϕ60mm</small>		HTA2-Y2 HTA2-Yr2	HTA2 two-gear key knob head
				HTA2-Y3 HTA2-Yf3 HTA2-YL3	HTA2 three-gear key knob head
	HTA2-MKS	HTA2 emergency stop button head <small>Default diameter of ϕ40mm, and remarks required for diameter of ϕ30mm and ϕ60mm</small>		HTA2-BE10	HTA2 normally open contact

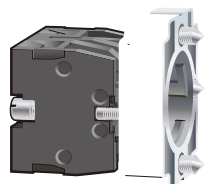
HTA Series buttons

Sample image	Accessory model	Name and purpose	Sample image	Accessory model	Name and purpose
	HTA2-BE01	HTA2 normally closed contact		HTA2-S	HTA2 self-locking module, used for self-locking buttons
	HTA2-BD/□■	HTA2 illuminated module for illuminated buttons		HTA2-Z	HTA2 middle seat, connecting contact and button head

Model Description

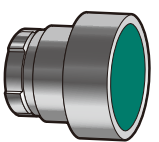
Module model
(HTA2-Z) + (HTA2-BE10) + (HTA2-BE01) + (HTA2-P/G)

Complete model
HTA2-11P/G



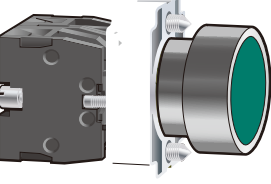
Contact base

+

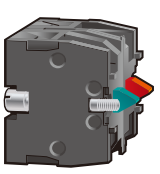


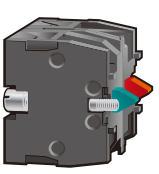
Button head

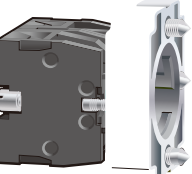
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Button



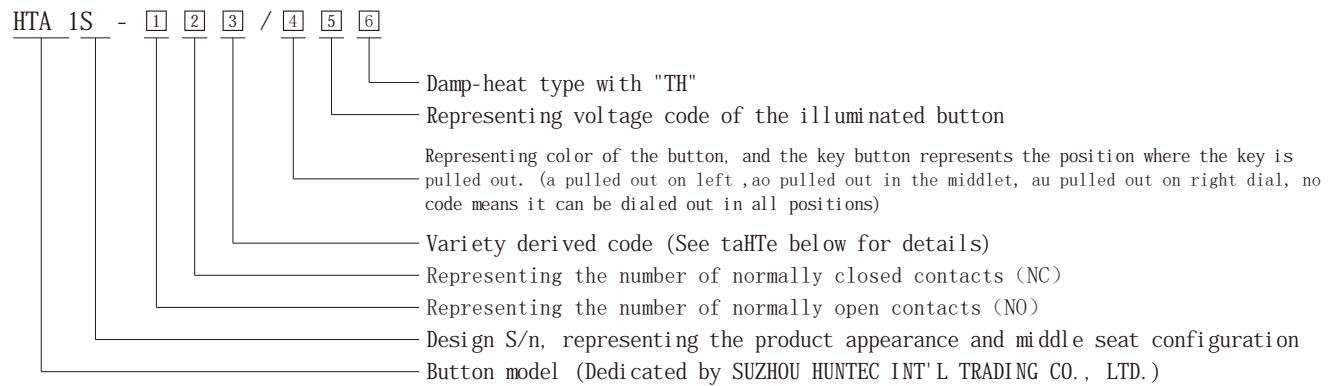




Product Supply Description

The HTA2 series products are supplied in the form of split modules, with the module model HTA2-. Please refer to the HTA2 accessory table for details

HTA1S series buttons



① Representing the number of normally open contacts (NO)
② Representing the number of normally closed contacts (NC) ③ Variety derived code

Letter	Meaning	Letter	Meaning	Letter	Meaning
	General button	M	Mushroom button	Y□	Key knob
D	Button with light	H	High position button	MKS	Rotating reset mushroom button
S	Self-locking button	X□	Short handle knob	MY	Key reset mushroom button
B	On-off button	CX□	Long handle knob		

* “□” represents the action function, as shown in the taHTe below:

2	Two-gear knob without reset	f3	Three-gear knob with left & right self reset
r	Two-gear knob with self reset	r3	Three-gear knob with right self reset
3	Three-gear knob without reset	L3	Three-gear knob with left self reset

④ Representing the button color

Red	Green	Yellow	HTue	White	HTack	Grey
R	G	Y	B	W	K	C

⑤ Voltage code of indicator lamp

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

⑥ Damp-heat type with "TH"

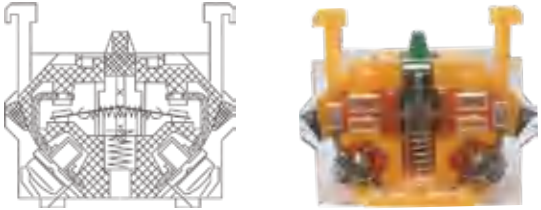
Main technical parameters

Rated capacity	Fast-action type	AC-15	220V/5.5A	380V/4A	660V/1A	DC-13	24V/3.6A	48V/2A	110V/1A	220V/0.45A	440V/0.25A		
	Slow-action type	AC-15	24V/10A	48V/10A	110V/5A	220V/6.5A	380V/4.3A	660V/2A	DC-13	24V/6A	48V/3A	110V/1.2A	220V/0.5A
Contact resistance	Hard silver contact≤50mΩ												
Max. insulation voltage	AC 2500V 50Hz. 1min												
Mechanical lifespan	General buttons≥10×10 ⁶ times Knobs≥3×10 ⁶ times Key knobs≥5×10 ⁵ times Emergency knobs≥5×10 ⁵ times												
Electrical lifespan	≥5×10 ⁶ times												
Agreed heating current	Ith 10A												
Rated insulation voltage	Ui AC690V												
Ambient temperature	-40℃ ~ +85℃												
Front protection level	Default IP54, if IP65 is required, please add “- IP65” after the model when placing an order; The key knob is IP40. HTA1/3 flat head round button can be configured with FJ10 to be IP67												

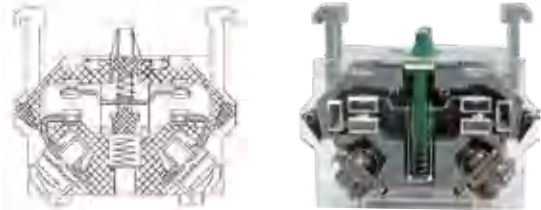
Component materials

Head outer ring	Middle seat	Head	Contact	Switch housing	Contact pad
AL alloy	PBT. PA	PC	AgNi	PC	Cu

Contact structure diagram (ApplicaHTe to HTA1S series)

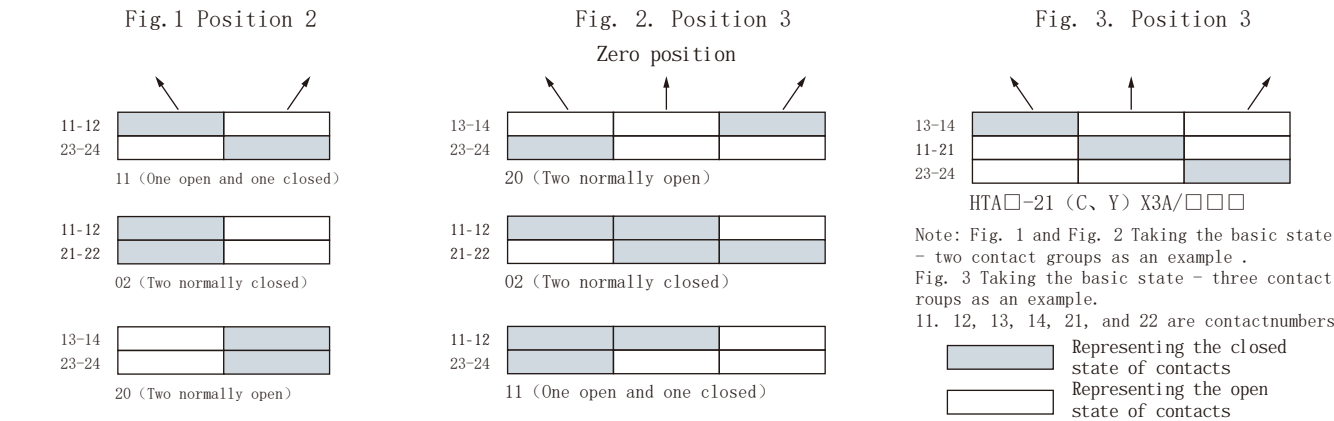


Shrapnel quick-action type
Quick-action contact with self-cleaning mechanism, quick on/off action, and more reliaHTe contact; Good arc extinguishing performance, emitting a crisp sound during operation, providing an auditory signal to the operator.

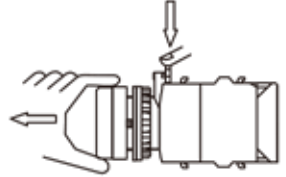


Flat press slow-action type
Compared with the quick-action contact, the conventional translational contact has a larger electrical gap, resulting in a greater current carrying capacity than the quick action contact.

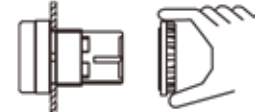
Functional diagram of selection switch contacts



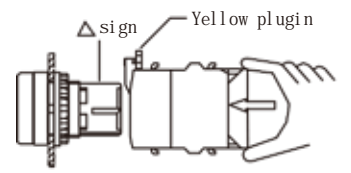
Typical installation instructions (applicaHTe to HTA1 & HTA3 series)



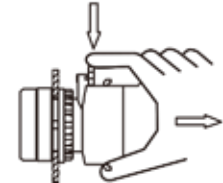
1.Before installation, press the yellow plug-in component vertically on the fixed seat and horizontally remove the operating component from the fixed seat.



2.Insert the operating components into the installation holes from the front of the panel, and tighten the fixing ring behind the panel (using installation sleeves or by hand).
For products with a diameter of 25: Insert the operating components into the installation holes from the front of the panel, fit the conversion ring on the back of the panel, and then tighten the fixing ring.


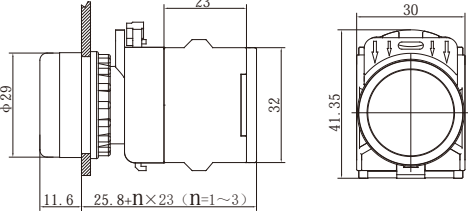

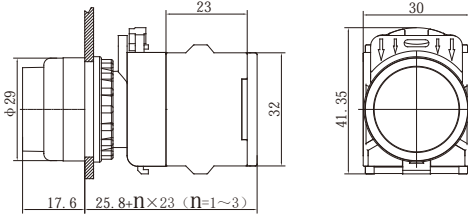

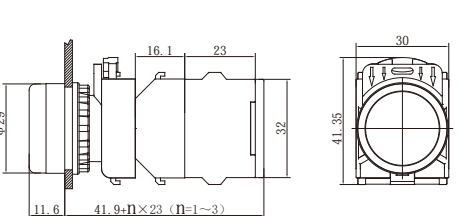

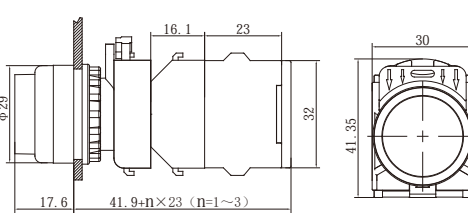

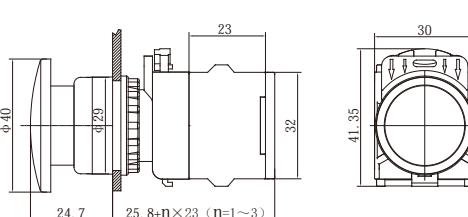


3.After aligning the middle hole position of the yellow plug-in component with the mark of “Δ” , lightly fasten the fixed seat and contact group.



4.When disassembling, first press the white plug-in component on the fixed seat to remove the fixed seat and contact group in a direction perpendicular to the panel.


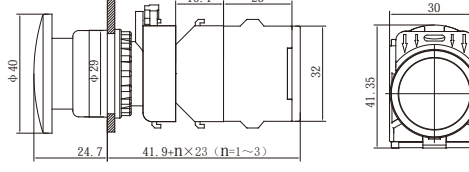

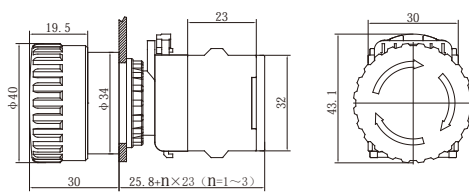

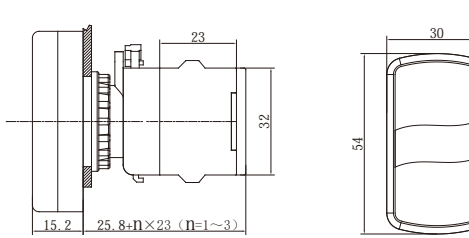

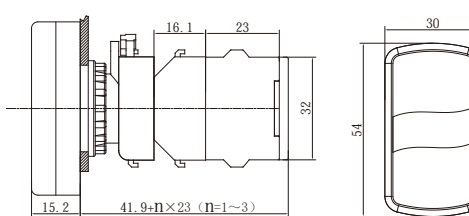
HTA1S series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Round button		Snap-Action	HTA1S-■/□	<div><div>R</div><div>G</div><div>Y</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■S/□		
High-position round knob		Snap-Action	HTA1S-■H/□	<div><div>W</div><div>B</div><div>K</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■HS/□		
Round knob with light		Snap-Action	HTA1S-■D/□■	<div><div>R</div><div>G</div><div>Y</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■DS/□■		
High-position round knob		Snap-Action	HTA1S-■HD/□■	<div><div>W</div><div>B</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■HDS/□■		
Mushroom button		Snap-Action	HTA1S-■M/□	<div><div>R</div><div>G</div><div>Y</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■MS/□		

Statement


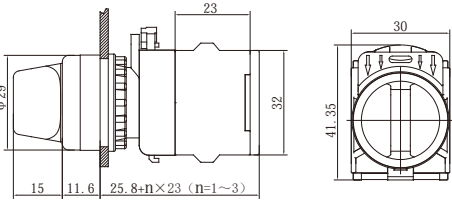

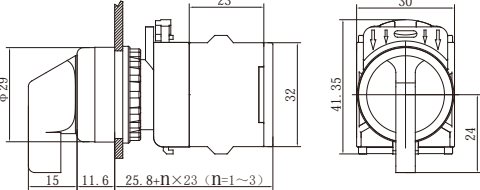

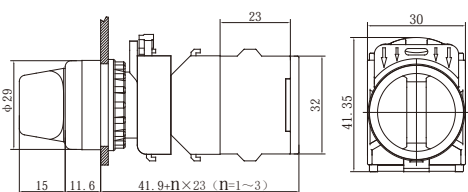

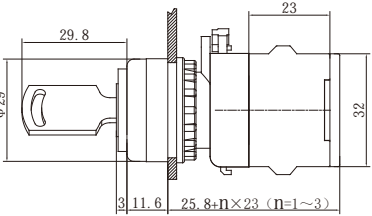
- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

HTA Series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Mushroom button with light		Snap-Action	HTA1S-■MD/□■	<div><div>R</div><div>G</div><div>Y</div><div>W</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1S-■MDS/□■		
Emergency stop button		Press to lock, rotate clockwise to reset	HTA1S-■MXS/□	Opaque <div><div>R</div></div>	 Opening size $\phi 22.3$
Two position button		Snap-Action	HTA1S-■B/□	<div><div>R</div><div>G</div><div>Y</div></div>	 Opening size $\phi 22.3$
Dual-position with lights		Snap-Action	HTA1S-■BD/□■	<div><div>W</div><div>B</div></div>	 Opening size $\phi 22.3$

Statement

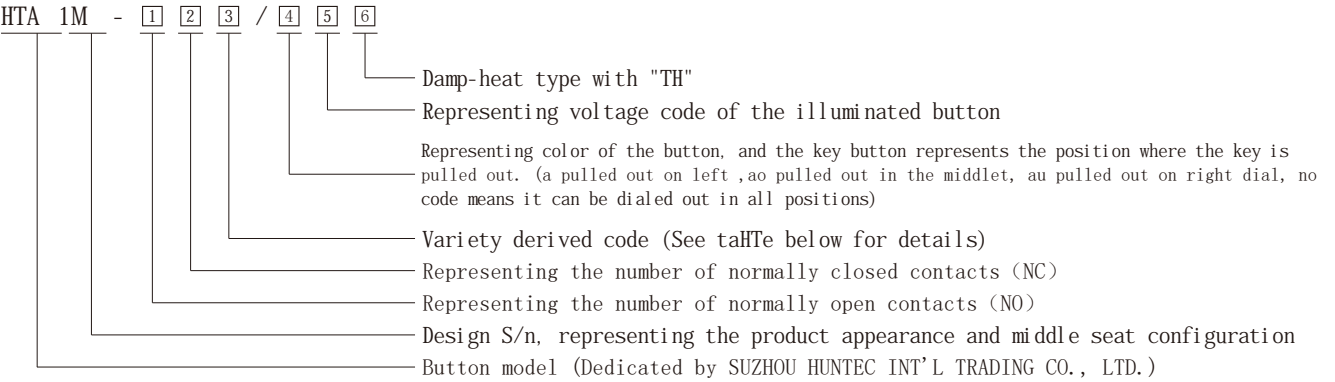
- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Name	Pattern	Handle position and model		Color	Overall dimension
Short handle knob		Two-position	<div><div>L R</div><div>HTA1S-■X2/□</div><div>L C</div><div>HTA1S-■XL2/□</div><div>C R</div><div>HTA1S-■Xr2/□</div></div>	<div><div>R</div><div>G</div></div>	<div><div>Opening size $\phi 22.3$</div></div>
		Three-position	<div><div>L C R</div><div>HTA1S-■X3/□</div><div>L C R</div><div>HTA1S-■Xf3/□</div><div>L C R</div><div>HTA1S-■XL3/□</div><div>L C R</div><div>HTA1S-■Xr3/□</div></div>		
Long handle knob		Two-position	<div><div>L R</div><div>HTA1S-■CX2/□</div><div>L C</div><div>HTA1S-■CXL2/□</div><div>C R</div><div>HTA1S-■CXr2/□</div></div>	<div><div>Y</div><div>K</div></div>	<div><div>Opening size $\phi 22.3$</div></div>
		Three-position	<div><div>L C R</div><div>HTA1S-■CX3/□</div><div>L C R</div><div>HTA1S-■CXf3/□</div><div>L C R</div><div>HTA1S-■CXL3/□</div><div>L C R</div><div>HTA1S-■CXr3/□</div></div>		
Knob with light		Two-position	<div><div>L R</div><div>HTA1S-■X2D/□■</div><div>L R</div><div>HTA1S-■Xr2D/□■</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	<div><div>Opening size $\phi 22.3$</div></div>
		Three-position	<div><div>L C R</div><div>HTA1S-■X3D/□■</div><div>L C R</div><div>HTA1S-■Xf3D/□■</div><div>L C R</div><div>HTA1S-■XL3D/□■</div><div>L C R</div><div>HTA1S-■Xr3D/□■</div></div>		
Key knob	 <div>Special requirements can be customized for a certain position to be pulled out. Note: The self-reset key button cannot be removed from the self-reset action position.</div>	Two-position	<div><div>L R</div><div>HTA1S-■Y2/□</div><div>L C</div><div>HTA1S-■YL2/□</div><div>C R</div><div>HTA1S-■Yr2/□</div></div>	<div>Key removal position</div> <div><div>Left a</div><div>In ao</div><div>Right au</div></div>	<div><div>Opening size $\phi 22.3$</div></div>
		Three-position	<div><div>L C R</div><div>HTA1S-■Y3/□</div><div>L C R</div><div>HTA1S-■Yf3/□</div><div>L C R</div><div>HTA1S-■YL3/□</div><div>L C R</div><div>HTA1S-■Yr3/□</div></div>		

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

HTA1M series buttons



- 1 Representing the number of normally open contacts (NO)
- 2 Representing the number of normally closed contacts (NC)
- 3 Variety derived code

Letter	Meaning	Letter	Meaning	Letter	Meaning
	General button	M	Mushroom button	Y□	Key knob
D	Button with light	H	High position button	MKS	Rotating reset mushroom button
S	Self-locking button	X□	Short handle knob	MY	Key reset mushroom button
B	On-off button	CX□	Long handle knob		

* “□” represents the action function, as shown in the taHte below:

2	Two-gear knob without reset	f3	Three-gear knob with left & right self reset
r	Two-gear knob with self reset	r3	Three-gear knob with right self reset
3	Three-gear knob without reset	L3	Three-gear knob with left self reset

4 Representing the button color

Red	Green	Yellow	HTue	White	HTack	Grey
R	G	Y	B	W	K	C

5 Voltage code of indicator lamp

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

6 Damp-heat type with "TH"

Main technical parameters

Rated capacity	AC-15 24V/10A 48V/10A 110V/5A 220V/6.5A 380V/4.3A 660V/2A DC-13 24V/6A 48V/3A 110V/1.2A 220V/0.5A 440V/0.3A
Contact resistance	Hard silver contact≤50mΩ
Max. insulation voltage	AC 2500V 50Hz· 1min
Mechanical lifespan	General buttons≥10×10 ⁶ times Knobs≥3×10 ⁶ times Key knobs≥5×10 ⁵ times Emergency knobs≥5×10 ⁵ times
Electrical lifespan	≥5×10 ⁶ times
Agreed heating current	Ith 10A
Rated insulation voltage	Ui AC690V
Ambient temperature	-40℃ ~ +85℃
Front protection level	Default IP54, if IP65 is required, please add “- IP65” after the model when placing an order; The key knob is IP40. HTA1/3 flat head round button can be configured with FJ10 to be IP67

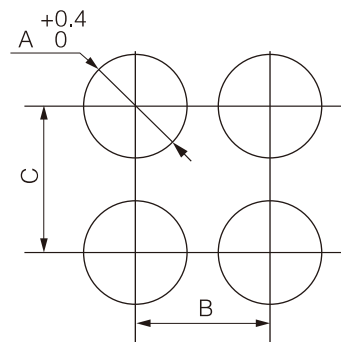
Component materials

Head outer ring	Middle seat	Head	Contact	Switch housing	Contact pad
AL alloy	PBT.PA	PC	AgNi	PC	Cu

Product characterisitics

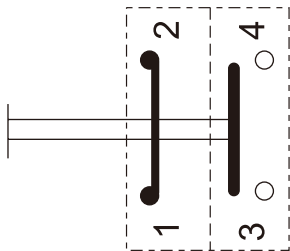
- ◆ The material meets the requirements of EU RoHS standards.
- ◆ The product adopts a modular combination, which is easy to install and has a reliable structure.
- ◆ Head protection level IP65.

Installation panel thickness 1-6mm



Type	A	B	C
Conventional type	$\Phi 22.3$	>50	>35
Knob		>50	>35
Mushroom type		>50	>42
Big mushroom type		>70	>70

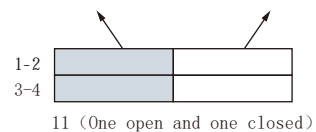
Remarks:
1. Unit: mm
2. Both B and C refer to min. size diagram



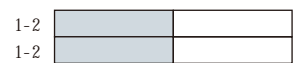
Note:
1-2 Normally closed contacts (NO)
3-4 Normally open contacts (NO)

Functional diagram of selection switch contacts

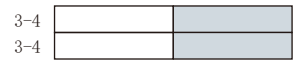
Fig.1 Position 2



11 (One open and one closed)



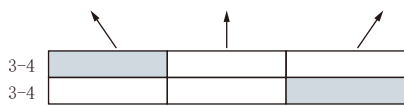
02 (Two normally closed)



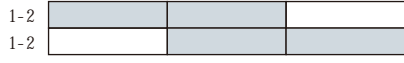
20 (Two normally open)

Fig. 2. Position 3

Zero position



20 (Two normally open)

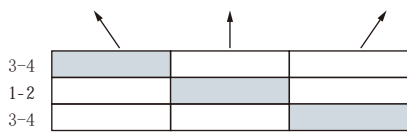


02 (Two normally closed)



11 (One open and one closed)

Fig. 3. Position 3



















HTA□-21 (C, Y) X3A/□□□

Note: Fig. 1 and Fig. 2 Taking the basic state - two contact groups as an example .
Fig. 3 Taking the basic state - three contact groups as an example.





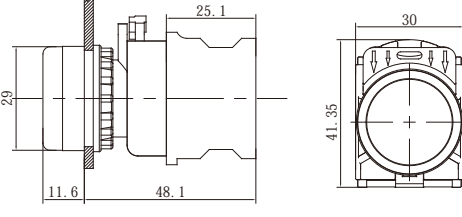




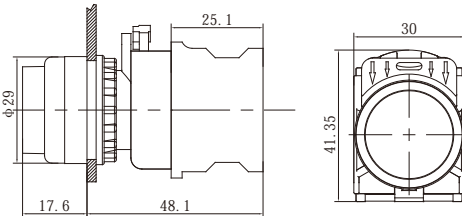




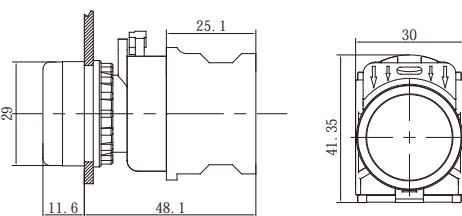



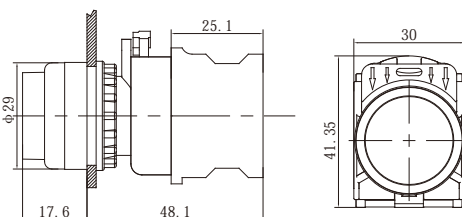




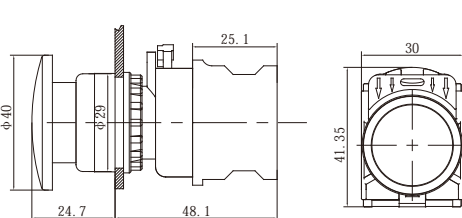
11, 12, 13, 14, 21, and 22 are contact numbers

Representing the closed state of contacts
Representing the open state of contacts

Indicator pattern (remark behind model when placing an order)


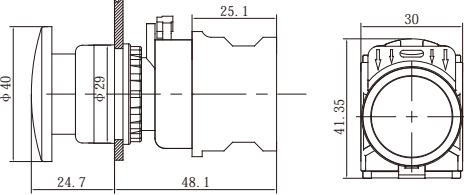

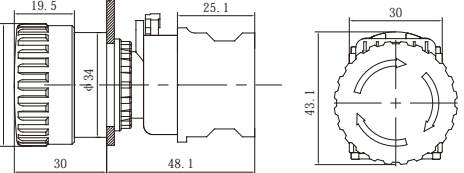

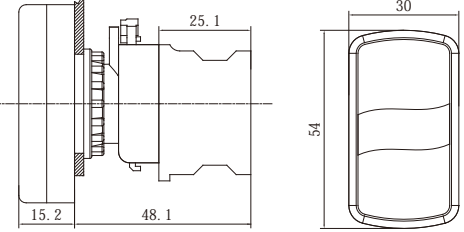

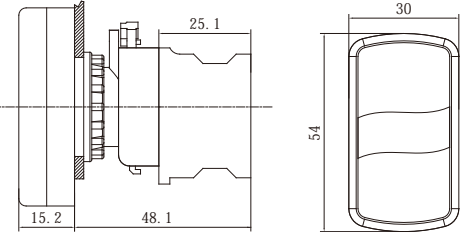
- | | | | |
|--|---|---|---|
| A1  Green side single white bar printing button | A5  HTack faced white arrow printing button | A9  HTack faced white rabbit printing button | A13  HTue faced white up and down arrows |
| A2  Green side double white bar printing button | A6  Red faced white circle printing button | A10  On the white faced gray elevator | A14  HTue gray up and down arrows |
| A3  Green side START printing button | A7  Red stop printing button | A11  Under the HTack and gray elevator | A15  HTue gray up and down arrows |
| A4  White faced HTack arrow printing button | A8  HTack faced white turtle printing button | A12  Yellow faced HTack bell | A16  Yellow faced HTack light |

HTA1M series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Round button		Snap-Action	HTA1M-■/□	  	 Opening size $\Phi 22.3$
		Self-locking	HTA1M-■S/□		
High-position round knob		Snap-Action	HTA1M-■H/□	  	 Opening size $\Phi 22.3$
		Self-locking	HTA1M-■HS/□		
Round knob with light		Snap-Action	HTA1M-■D/□■	  	 Opening size $\Phi 22.3$
		Self-locking	HTA1M-■DS/□■		
High-position round knob		Snap-Action	HTA1M-■HD/□■	 	 Opening size $\Phi 22.3$
		Self-locking	HTA1M-■HDS/□■		
Mushroom button		Snap-Action	HTA1M-■M/□	  	 Opening size $\Phi 22.3$
		Self-locking	HTA1M-■MS/□		

Statement


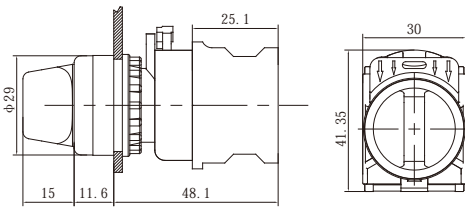

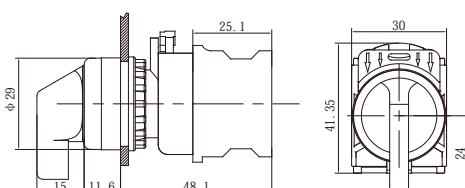

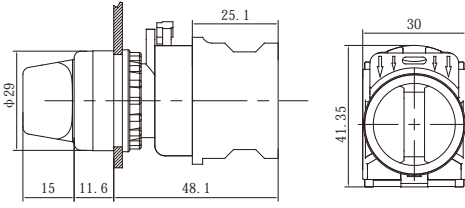

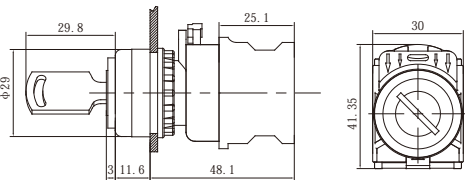
- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Name	Pattern	Working status	Model	Color	Overall dimension
Mushroom button with light		Snap-Action	HTA1M-■MD/□■	<div><div>R</div><div>G</div><div>Y</div><div>W</div></div>	 Opening size $\phi 22.3$
		Self-locking	HTA1M-■MDS/□■		
Emergency stop button		Press to lock, rotate clockwise to reset	HTA1M-■MXS/□	Opaque <div><div>R</div></div>	 Opening size $\phi 22.3$
Two position button		Snap-Action	HTA1M-■B	<div><div>R</div><div>G</div><div>Y</div><div>W</div></div>	 Opening size $\phi 22.3$
Dual-position with lights		Snap-Action	HTA1M-■BD/□■	<div><div>W</div><div>B</div></div>	 Opening size $\phi 22.3$

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

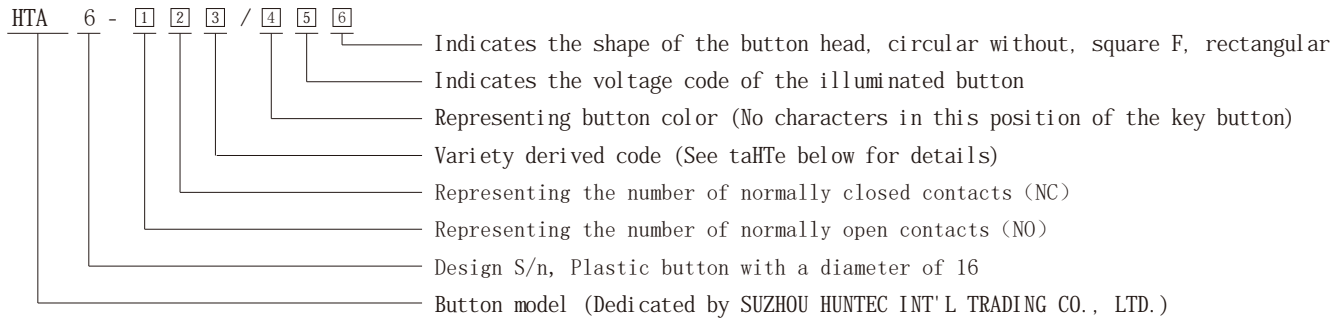
HTA Series buttons

Name	Pattern	Handle position and model	Color	Overall dimension
Short handle knob		Two-position <div><div>L R</div><div>LC CR</div><div>HTA1M-■X2/□ HTA1M-■XL2/□ HTA1M-■Xr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>LCR</div><div>HTA1M-■X3/□ HTA1M-■Xf3/□</div><div><div>LCR</div><div>HTA1M-■XL3/□ HTA1M-■Xr3/□</div></div></div>		
Long handle knob		Two-position <div><div>L R</div><div>LC CR</div><div>HTA1M-■CX2/□ HTA1M-■CXL2/□ HTA1M-■CXr2/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>K</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>LCR</div><div>HTA1M-■CX3/□ HTA1M-■CXf3/□</div><div><div>LCR</div><div>HTA1M-■CXL3/□ HTA1M-■CXr3/□</div></div></div>		
Knob with light		Two-position <div><div>L R</div><div>HTA1M-■X2D/□ HTA1M-■Xr2D/□</div></div>	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div></div>	 Opening size $\phi 22.3$
		Three-position <div><div>LCR</div><div>HTA1M-■X3D/□ HTA1M-■Xf3D/□</div><div><div>LCR</div><div>HTA1M-■XL3D/□ HTA1M-■Xr3D/□</div></div></div>		
Key knob		Two-position <div><div>L R</div><div>HTA1M-■Y2/□</div><div><div>LC CR</div><div>HTA1M-■YL2/□ HTA1M-■Yr2/□</div></div></div>	Key removal position Left a In ao Right au	 Opening size $\phi 22.3$
		Three-position <div><div>LCR</div><div>HTA1M-■Y3/□ HTA1M-■Yf3/□</div><div><div>LCR</div><div>HTA1M-■YL3/□ HTA1M-■Yr3/□</div></div></div>		

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

HTA6 series buttons



1 Representing the number of normally open contacts (NO)
2 Representing the number of normally closed contacts (NC)3 Variety derived code

Letter	Meaning	Letter	Meaning	Letter	Meaning
	General button	M	Mushroom button	Y2	Two-gear key knob without reset
D	Button with light	X2	Two-gear short handle knob without reset	Y3	Three-gear key knob without reset
S	Self-locking button	X3	Three-gear short handle knob without reset	MKS	Rotating reset mushroom button

4 Representing the button color5 Voltage code of indicator lamp

Red	Green	Yellow	White	HTue	HTack	Code	21	22	23	26	28
R	G	Y	W	B	K	Voltage (AC • DC)	6V	12V	24V	110V	220V

Main technical indicators

Rated capacity	AC-15220V/2A110V/3A	DC-13220V/0.27A110V/0.55A
Agreed heating current	ith 5A	Operation travelAround 3mm
Rated insulation voltage	Ui 250V	Protection levelIP40, customizaHTe IP65
Insulation resistance	≤100mΩ	Impact resistance>10g
Contact resistance	≤30mΩ	Vibration resistance50Hz, amplitude approx. 1.2mm
Electrical lifespan	50万次以上	Ambient temperature-25℃~+55℃45~85%RH (No condensation)
Mechanical lifespan	100万次以上	Resistance to soldering heatNot exceeding 3 s at 230 ℃
Wiring	Welding wire diameter: 2×0.8mmMax. copper wire area: 0.75mm²Wiring inserts: 2.8×0.5mm	
Lamp module parameters	Bead type: Bidirectional LED BeadsLamp bead lifespan: approx. 40,000 hoursRated voltage (AC • DC) : 6V、12V、24V、110V、220V	

Installation and wiring

Category	Φ16 Round	Φ16 Square	Φ16 Rectangle	Φ16 Small mushroom shaped	Φ16 Large mushroom shaped
A	≥18mm	≥18mm	≥18mm	≥24mm	≥30mm
B	≥18mm	≥18mm	≥24mm	≥24mm	≥30mm

Φ16^{+0.2}₀

A

B


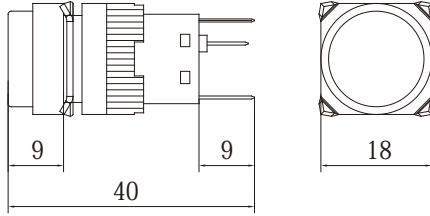

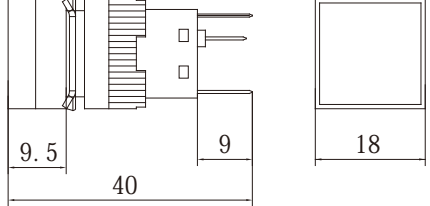

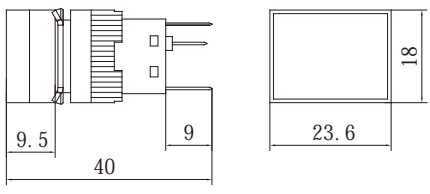

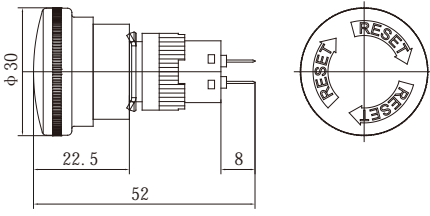
One normally open and one normally closed

Wiring diagram

Two normally open and two normally closed



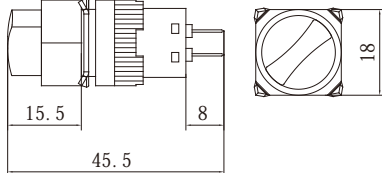



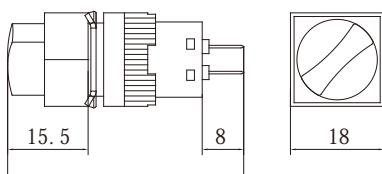



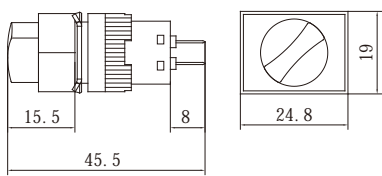



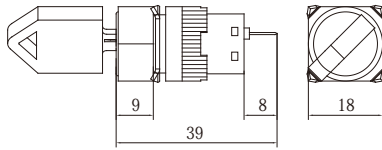

Wiring diagram

HTA6 series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Flat head round button		Self-reset	HTA6-■/□	<div><div>R</div><div>G</div><div>Y</div><div>W</div><div>B</div><div>K</div></div>	
		Self-locking	HTA6-■S/□		
		Self-reset with light	HTA6-■D/□■		
		Self-locking with light	HTA6-■DS/□■		Note: HTack is not used with lights
Flat head square button		Self-reset	HTA6-■/□F		
		Self-locking	HTA6-■S/□F		
		Self-reset with light	HTA6-■D/□■F		
		Self-locking with light	HTA6-■DS/□■F		Note: HTack is not used with lights
Flat headed rectangular button		Self-reset	HTA6-■/□C		
		Self-locking	HTA6-■S/□C		
		Self-reset with light	HTA6-■D/□■C		
		Self-locking with light	HTA6-■DS/□■C		Note: HTack is not used with lights
Emergency stop button		Press lock, key reset	HTA6-■MXS/□	<div><div>R</div></div>	

Statement



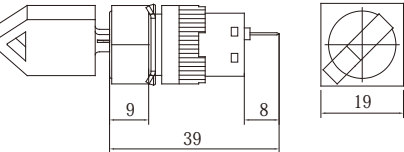


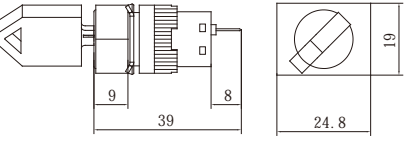


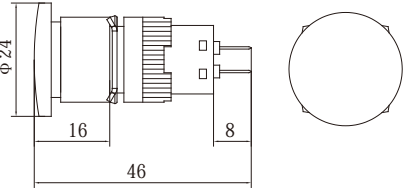

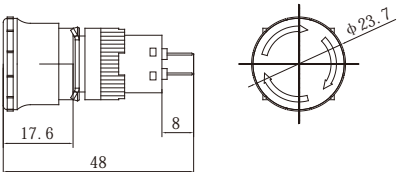
- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Name	Pattern	Handle position and model		Color	Overall dimension	
Short handle knob		Two-position	Without lights HTA6-■X2/□		 Note: HTack is not used with lights	
			With lights HTA6-■X2D/□■			
		Three-position	Without lights HTA6-■X3/□			
			With lights HTA6-■X3D/□■			
Short handle knob		Two-position	Without lights HTA6-■X2/□F			 Note: HTack is not used with lights
			With lights HTA6-■X2D/□■F			
		Three-position	Without lights HTA6-■X3/□F			
			With lights HTA6-■X3D/□■F			
Short handle knob		Two-position	Without lights HTA6-■X2/□C		 Note: HTack is not used with lights	
			With lights HTA6-■X2D/□■C			
		Three-position	Without lights HTA6-■X3/□C			
			With lights HTA6-■X3D/□■C			
Key knob		Two-position	HTA6-■Y2			
		Three-position	HTA6-■Y3			

Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.


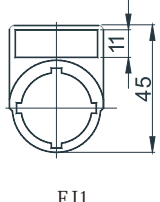


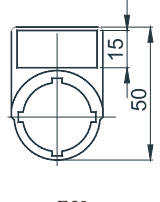

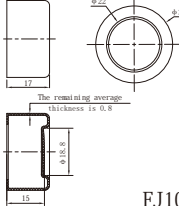

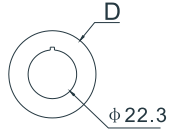

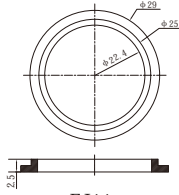

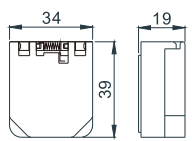

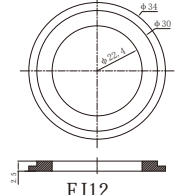

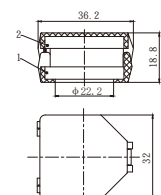

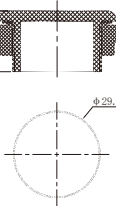

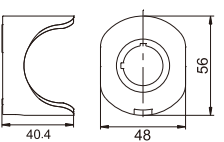

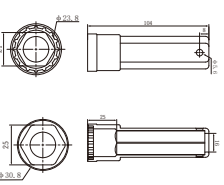

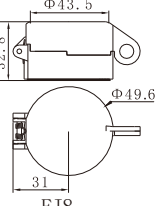

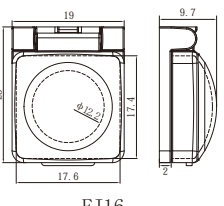
HTA Series buttons

Name	Pattern	Working status	Model	Color	Overall dimension
Key knob		Two-position Lock	HTA6-■Y2/F		
		Three-position Lock	HTA6-■Y3/F		
Key knob		Two-position Lock	HTA6-■Y2/C		
		Three-position Lock	HTA6-■Y3/C		
Mushroom button		Self-reset	HTA6-■M/□		 Note: HTack is not used with lights
		Self-locking	HTA6-■MS/□■		
		Self-reset with light	HTA6-■MD/□		
		Self-button with light	HTA6-■MDS/□■		
Emergency stop button		Press to ock, rotate to reset	HTA6-■MXS/□S		



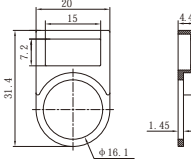

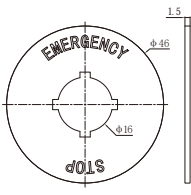

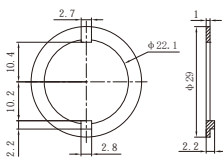

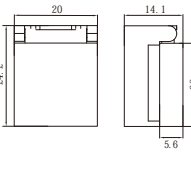

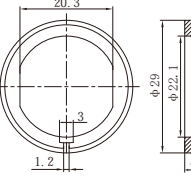

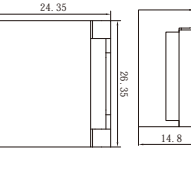

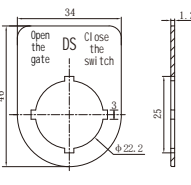

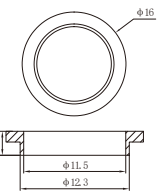

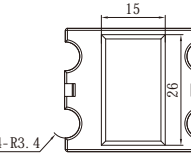

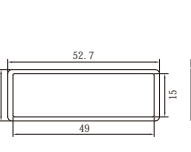

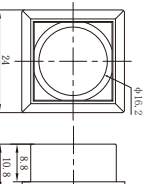

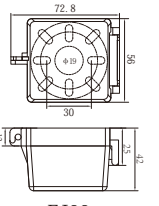

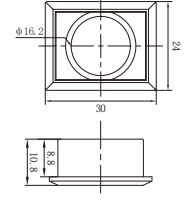
Statement

- 1.Fill the number of normally open and normally closed contacts in ■ before the diagonal line.
- 2.Fill the color in □ behind the diagonal line, and fill the voltage level with the light in ■.
- 3.The light sources with light buttons are all high brightness solid color LEDs.

Accessories

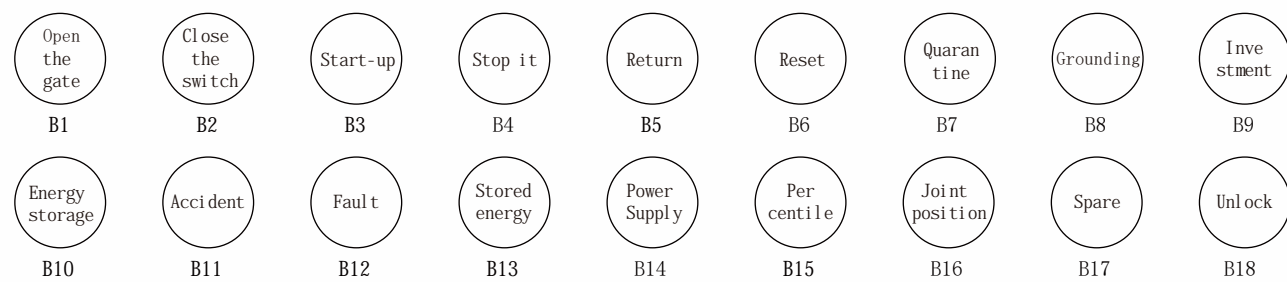
Sample image	Model and size	Purposes	Sample image	Model and size	Purposes
	 FJ1	Installed on the signal lamp and button with a diameter of Φ22, for symbol indication or textual explanation. Pull-out structure and replaceable marking paper.		FJ9	Used for panels with a hole diameter of Φ30 and producing ultra-thin button effects.
	 FJ2			 FJ10	Installed on the head of the signal lamp and button with a diameter of Φ22, enhancing waterproof effect, and with a protection level of IP67.
	 FJ3 D: Φ40 FJ4 D: Φ60 FJ5 D: Φ90	Used for the emergency stop button with a diameter of Φ22, with warning function added.		 FJ11	The button and signal lamp with a diameter of Φ22 can be installed on the panel with a diameter of Φ25.
	 FJ6	Installed on the head of Φ22 button, it can prevent collision & mis-operation, and can be HTocked.		 FJ12	The button and signal lamp with a diameter of Φ22 can be installed on the panel with a diameter of Φ30.
	 FJ6-C			 FJ13	Used for decorating reserved or excess holes.
	 FJ7	Installed on the head of Φ22 mushroom button, it can prevent collision and accidental movement.		 FJ15	Used to install Φ22 indicator lamp, button and single hole conversion switch, which can improve the installation efficiency of workers.
	 FJ8	Installed on the head of Φ22 button and mushroom button, it can prevent collision & mis-operation, and can be HTocked.		 FJ16	Installed on the head of Φ12 metal button, it can prevent collision & mis-operation, and can be HTocked.

FJ Series Accessories

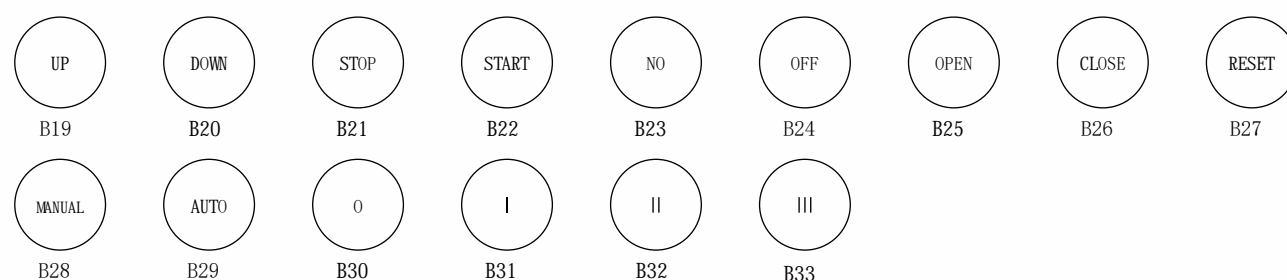
Sample image	Model and size	Purposes	Sample image	Model and size	Purposes
	FJ17-1 (2.8×0.5) FJ17-2 (4.8×0.5)	Used for HTA6 2.8 plug-in sheath		 FJ25	Installed on Φ16 signal lamp and button for symbol indication or textual explanation. Pull out structure and replaceable marking paper.
	 FJ18	Used for the emergency stop button with a diameter of Φ16, with warning function added.		 FJ27	Installed on the neck of Φ22 button, it plays a positioning role on the
	 FJ19-1	Installed on the head of a square button with a diameter of Φ16, it can prevent collision & mis-operation, and can be		 FJ28	Installed on the neck of Φ22 button, it plays a positioning role on the
	 FJ19-2	Installed on the head of a rectangular button with a diameter of Φ16, it can prevent collision & mis-operation, and can be HTocked.		 FJ30	Installed on the signal lamp and button with a diameter of Φ22 for functional indication, the text adopts silk screen printing technology, which is clear and beautiful.
	 FJ20	Installed at the neck of Φ12 signal lamp, enhancing waterproof effect, with a protection level of IP67.		 FJ31	Installed at the bottom of Φ22 button for dust-proof decoration.
	 FJ21	Independently installed on the panel, it serves as an indicator for the functions, positions, and other aspects of various components.		 FJ35	Installed on the head of Φ16 square signal lamp and button, ensuring that the button is flush with the panel.
	 FJ22	Installed on the head of the panel size 48 × 48 conversion switch, it can prevent collision & mis-operation, and can be HTocked.		 FJ36	Installed on the head of a rectangular signal lamp and button with a diameter of Φ16, achieving the effect of the button being flush with the panel.

Button and signal lamp printing symbols

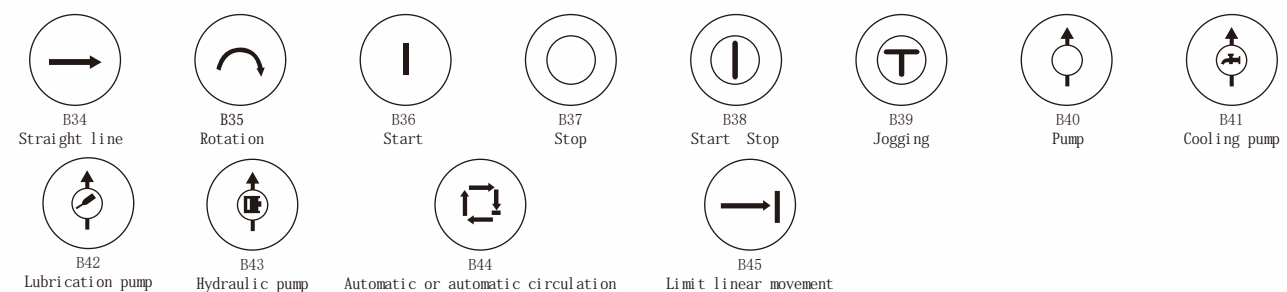
Chinese symbols



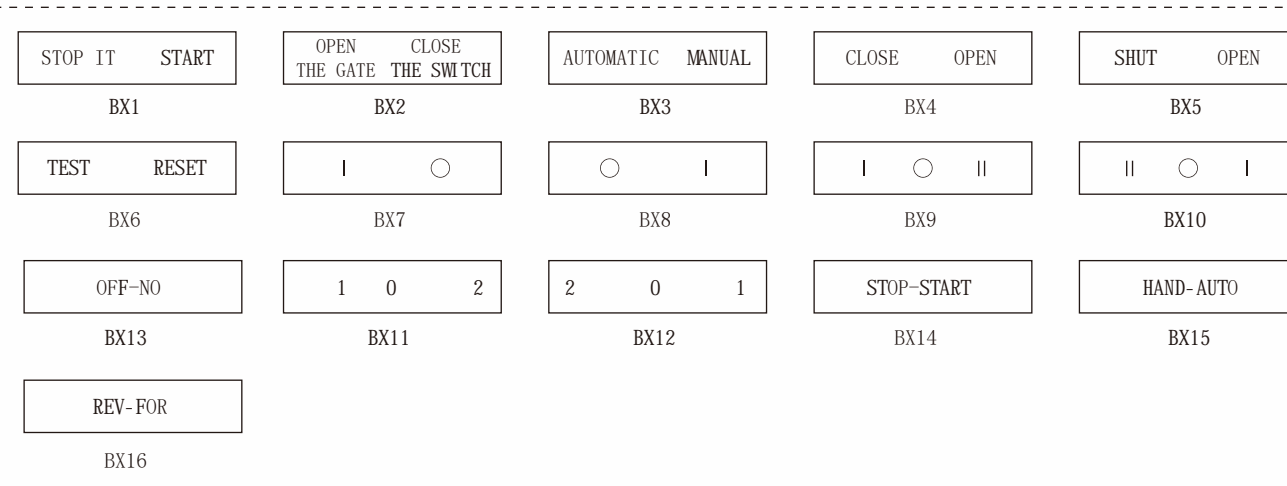
Standard symbols



ISO symbols



Knob Label or Label Frame Printing



Company Qualification:



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