

★This manual is a general information publication, and we reserve the right to change the product technology and instructions at any time. It is subject to changes without further notice (In case of any error or uncertainty, please understand). The copyright and interpretation rights of the technical dimension booklet of this product are reserved by SUZHOU HUNTEC INT'L TRADING CO., LTD.



CAM SWITCH

MODEL SELECTION MANUAL

Quality - Achieving the Beauty of Industry



SUZHOU HUNTEC INT'L TRADING CO., LTD.
Add.: 36 zijing street, Mudu Town, Wuzhong District, Suzhou,
Jiangsu Province, China
Factory: Jiangxi Huntect Electrical Technology Co., Ltd.
Add.: 1829th Yangguang Avenue, Xinyu, Jiangxi Province, China

Email: info@cnhuntect.com
Tel: +86-0512-65122750
Website: www.cnhuntect.com
www.chikucontact.com



Suzhou • Jiangsu • China
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).

HTW Series
CAM Switch

CATALOG

01 Enterprise Chapter

Catalog	01-02
Enterprise Profile	03-04

02 Product Chapter

Technical data of HTW series change-over switches	05-06
Meaning of HTW series change-over switch model	07-09
HTW1-16 (20) series	10-14
HTW1-16 (20) series/C	14-16
HTW2-16 (20) series	17-18
HTW3 (4) -16 series	19-20
HTW1 (3) -16/WD series	21
HTW1-DT series	22
HTW1-16 (20) -DT-0 series	22-24
HTW2-16 (20) -DT-0 series	24-25
HTW1-16 (20) -DT series	26-27
HTW1-10 series	27
HTW1-16 (20) -DT-0 special band plate series for relay protection cabinets	28-32
Type of change-over switch handle	32-33
Common printing codes	34-36
Common contact list	37-44

03 Qualification Chapter

Company Qualification	45
-----------------------	----



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.





HTW Series CAM Switch

◆Overview

HTW Series CAM Switches are one of the series products launched by SUZHOU HUNTEC INT'L TRADING CO., LTD.to meet customer needs.

HTW Series CAM Switches are suitable for remote control of electrical control conversion and distribution equipment, conversion of electrical measuring instruments, and control of servo motors and micro motors in electrical circuits such as CNC machining equipment with AC 50Hz to 60Hz, voltage up to 380 and below, or DC 220V and below. It can also be used for control of small capacity squirrel cage stepper motors. Currently, our company has four such major series as 1, 2, 3 and 4 with four such specifications as 10A、16A、20A and 63A to be chosen, fully considering the requirements of users from various industries.

◆Technical Data

WORKING CONDITIONS

- Altitude not exceeding 2000 meters
- Ambient temperature -40 ℃~+80 ℃
- Relative humidity of the air not exceeding 90%
- Installation category is III
- Pollution level is Level 3

◆Standards

GB/T 14048.5

EN60947-5-1

◆Electric Data

Model				HTW□-10	HTW□-16	HTW□-20	HTW□-63	
Rated insulation voltage Ui				440V	690V	690V	690V	
Conventional thermal current Ith				10A	16A	20A	63A	
Power frequency withstand voltage for 1 minute				1890V	1890V	1890V	1890V	
Working Alternating Current Ie	AC-21 on/off resistive load			10A	16A	20A	63A	
	AC-15 Control electromagnetic load COS Φ=0.4	24V		10A	16A	20A	28A	
		48V		5A	8A	13A	25A	
		110V		4A	5A	9A	22A	
		220V		2A	4.6A	5A	16A	
		380V		1.2A	2.6A	4A	8A	
Working direct current Ie	DC-21 on/off resistive load	Series contact points	1 2 3 4					
			24 48 70 95	10A	16A	20A		
			48 60 95 110	6A	12A	15A		
		Voltage	110V	0.56A	1.6A	2A		
			220V	0.24A	0.8A	1A		
			440V	0.1A	0.27A	0.4A		
	DC-13 Control electromagnetic load T=300ms	Series contact points	1 2 3 4					
			24 48 70 95	8A	12A	20A		
			48 60 95 110	1.2A	2A	6A		
		Voltage	24V	8A	16A	20A		
			48V	1.2A	8A	12A		
			110V	0.25A	1A	1.6A		
			220V	0.12A	0.45A	0.8A		
			440V		0.1A	0.2A		
	AC-3 squirrel cage asynchronous motor start, operation interrupted, three-phase and three-stage			380V	1.5KW	3KW	4KW	15KW
	AC-4 squirrel cage asynchronous motor start, braking, reversing, inching, three-phase and three-stage				0.37KW	1.2KW	3KW	6KW
AC lifespan				300,000 times	300,000 times	300,000 times	300,000 times	
DC lifespan				200,000 times	200,000 times	200,000 times		
Mechanical lifespan (Positioning type)				500,000 times	500,000 times	500,000 times	500,000 times	

◆Model Meaning

□ □ □ □ □ 1 - 2 3 4 5 / 6 7 8 9 10 11 12 13 - 14 - 15 - 16 - 17 - 18 / 19

Remarks

When ordering HTW series, please provide the specific model. There are three ways to determine specific models:

- Choose from the commonly used change-over switch models. If there are further requirements, please specify them when placing an order:
- Fill in the detailed model according to the model description.
- Contact customer service of the company (Customer service hotline 86-0512-65122750), and we will help you confirm the model.

No.	
1	Series code, select based on pictures
2	Conventional thermal current
3	Angle gear code
4	Positioning feature code
5	Contact point code
6	Represent section number
7	Mounting type: C-Single-hole mounting, U-Base mounting, Omitted- Four-hole mounting
8	Functional type: Y-Key type, YS-Handle/key separation, G-Power switch, T-DetachHTe type, L-Push-pull Self-reset type, Omitted - No special function
9	Wiring mode: H-Rear wiring, Omitted - Side wiring
10	Panel form: W-No panel mounting, P-With small badge board, Omitted - Ordinary panel, D-Illuminated panel
11	Number of lamp holders with lights: 2-2-lamp type, 3-3-lamp type, 4-4-lamp type
12	Light box color codes: G-Green, R-Red, Y-Yellow, W-White
13	Lightbox voltage code: "23" represents ACDC24V; "25" represents ACDC48V; "26" represents ACDC110V; "28" represents ACDC220V; "31" represents AC220V
14	Key compatibility: Universal type has no code, Not compatiHTe-DAN
15	Handle style code, for the default handle, it is omitted; Please indicate the handle code for other handles
16	Customer code, add as needed; omit when not needed
17	Dust prevention function: DT -Dust proof type with ball, Omitted - No such a function
18	Wiring method: O-Connected to O-shaped wire nose, Omitted - U-shaped wire nose
19	Represent inline or external connection

Note: Inline or external connections are confirmed and filed by our company based on customer needs, and there is no regularity.

Explanation of lightbox color code and voltage code:

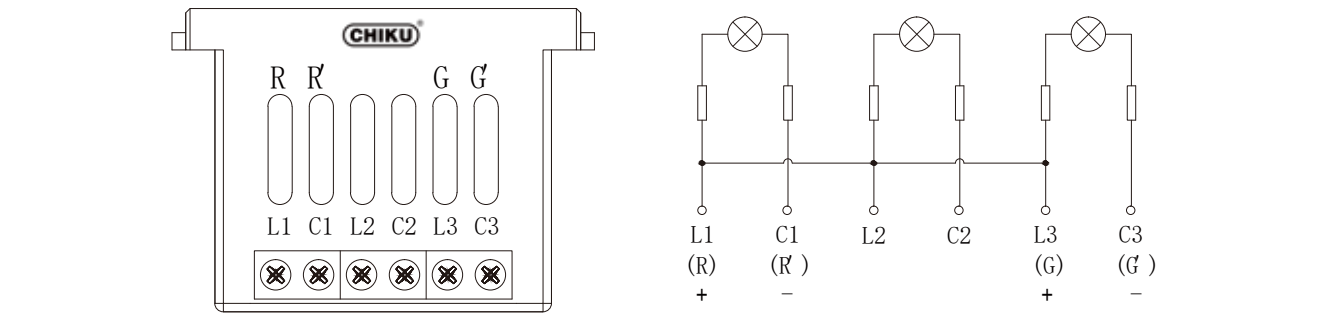
"G" represents green, "R" represents red.
"23" represents AC/DC24V, "26" represents AC/DC110V, "28" represents AC/DC220V, and "31" represents AC220V.

◆Note: Color codes have sequential requirements for CAM switch with light. Mark from left to right with the panel facing forward.

◆e.g: "- GR23" indicates a green light on the left and a red light on the right. "- RG23" indicates a red light on the left and a green light on the right.

HTW Series CAM Switch

◆Wiring schematic diagram of the universal change-over light box with light



Six terminal posts, L1, L2 and L3 have internally linked, as common terminal,with any terminal connected to the positive pole of the power supply; When equipped with two lights, C1 and C3 are connected to the negative pole of the power supply; When equipped with three lights, C1, C2, and C3 are connected to the negative pole of the power supply.

◆Positioning feature codes

The positioning feature code represents the gear feature of the change-over switch and is divided into two types: positioning and Self-reset types.

Positioning type

- The positioning type does not have a self-reset operation function. HTW series change-over switch can provide multiple positioning angles such as 30° , 45° , 60° and 90° , etc.
- Please note the applicaHTe models for various positioning angles, and fill in the positioning feature code of the ordered change-over switch according to the angle code and gear code.

		Angle Code																																									
		3												4								6								9													
Self-reset type	A						0°	←	30°								0°	←	45°																								
	B						30°	→	0°	←	30°							45°	→	0°	←	45°																					
	C						0°		30°									0°		45°					0°		60°				0°	90°											
	D						30°		0°		30°							45°		0°		45°				60°		0°		60°		90°	0°	90°									
	E						30°		0°		30°		60°					45°		0°		45°		90°			90°	30°	30°	90°		90°	0°	90°	180°								
	F						60°		30°		0°		30°		60°				90°		45°		0°		45°		90°		30°	30°	90°	150°											
	G						60°		30°		0°		30°		60°		90°			90°		45°		0°		45°		90°		135°		150°											
	H						90°		60°		30°		0°		30°		60°		90°			90°		45°		0°		45°		90°		135°	180°		120°	60°	0°	60°	120°				
	I						90°		60°		30°		0°		30°		60°		90°		120°				90°		45°		0°		45°		90°	135°	180°	225°	120°	60°	0°	60°	120°	180°	
	J						120°		90°		60°		30°		0°		30°		60°		90°		120°			135°		90°		45°		0°		45°		90°	135°						
	K						120°		90°		60°		30°		0°		30°		60°		90°		120°		150°		135°		90°		45°		0°		45°		90°	135°	180°				
	L						150°		120°		90°		60°		30°		0°		30°		60°		90°		120°		150°																
	M						150°		120°		90°		60°		30°		0°		30°		60°		90°		120°		150°		180°														
	N							30°			30°									45°			45°																				
	P							30°	→	0°			60°							90°		0°	←	45°																			
	Q																		135°	→		90°		0°	←	45°																	
	FB																			90°	→	45°		0°		45°	←	90°															
	EA																				45°		0°		45°	←	90°																

Special case of angle code + gear code: Current conversion type is "LH", voltage conversion type is "YH". If unlimited universal conversion is required, add "X" after the angle gear code.

Self-reset type

- One or several gears of the Self-reset type have a Self-reset function. HTW series change-over switch provides users with 36 options for Self-reset modes and can meet their special needs.
- The table below lists the commonly used self-reset functions and their positioning feature codes. Please note the models they are applicable to.

Self-reset code	Self-reset angle	HTW1-10 Series	HTW1-16 HTW1-20 Series	HTW1-16/C HTW1-20/C Series	HTW2-16 HTW2-20 Series	HTW3-16 Series	HTW4-16 Series	HTW1-16/DT Series
3A	0° ← 30°	Y*	Y	Y	Y	Y	Y	Y
4A	0° ← 45°	N	Y	Y	Y	Y	Y	Y
4AB	45° ← 45°	N	Y	Y	Y	N	N	N
4AC	45° → 0°	N	Y	Y	Y	Y	Y	Y
9A	0° → 90°	N	Y	Y	Y	Y	Y	Y
3B	-30° → 0° ← 30°	Y*	Y	Y	Y	Y	Y	Y
4B	-45° → 0° ← 45°	N	Y	Y	Y	Y	Y	Y
4FA	-90° -45° 0° 45° ← 90°	N	Y	Y	Y	Y	Y	Y
4EA	-90° -45° 0° ← 45°	N	Y	Y	Y	Y	Y	Y
4GA	-90° → -45° 0° 45° 90° 135°	N	Y	Y	Y	Y	Y	Y
4FC	-90° -45° 0° 45° 90°	N	Y	Y	Y	Y	Y	Y
4FD	-45° → 0° 45° 90° 135°	N	Y	Y	Y	Y	Y	Y
4GB	-45° → -45° 45° 90° 135° 180°	N	Y	Y	Y	Y	Y	Y
BC	-45° → 0° 0° ← 45°	N	Y	Y	Y	Y	Y	Y
BD	-30° → 0° 0° ← 30°	N	Y*	Y*	Y*	Y	Y	Y
4Q	-135° → 90° 0° ← 45°	N	Y	Y	Y	Y	Y	Y
4Q1	-45° → 0° 90° ← -135°	N	Y	Y	Y	Y	Y	Y
4FB	-90° → -45° 0° 45° ← 90°	N	Y	Y	Y	Y	Y	Y
4ZB	-90° → -45° 0° 45°	N	Y	Y	Y	Y	Y	Y
4ZC	-45° 0° 45° ← 90°	N	Y	Y	Y	Y	Y	Y
4ZD	-90° 0° ← 45°	N	Y	Y	Y	Y	Y	Y
4ZE	0° 45° ← 90°	N	Y	Y	Y	Y	Y	Y
4ZF	-45° 0° ← 45°	N	Y	Y	Y	Y	Y	Y
4ZG	-45° → 0° 45°	N	Y	Y	Y	Y	Y	Y
4ZK	-45° → 0° 45° 90°	N	Y	Y	Y	Y	Y	Y
4FA	-45° → 0° 45° 90° 135°	N	Y	Y	Y	Y	Y	Y
3W	-120° → 90° 0° ← 30°	Y*	Y*	Y*	Y*	N	N	N
3WA	-90° 0° ← 30°	Y*	Y	Y	Y	N	N	N
3WB	-30° → 0° 90°	Y*	Y	Y	Y	N	N	N
3WC	0° 90° ← 120°	Y*	Y*	Y*	Y*	N	N	N
3WR	-120° → -90° 0° 90° ← 120°	Y*	Y*	Y*	Y*	N	N	N
3WS	-90° 0° 90° ← 120°	Y*	Y*	Y*	Y*	N	N	N
3WT	-120° → -90° 0° 90°	Y*	Y*	Y*	Y*	N	N	N
3WU	-90° -30° → 0° ← 30°	N	Y*	Y*	Y*	N	N	N
3WV	-90° 0° ← 30° 90°	N	Y*	Y*	Y*	N	N	N
3WW	-90° -30° → 0° ← 30° 90°	N	Y*	Y*	Y*	N	N	N

Note: Y represents that this code can be produced; Y * represents that this code can be produced, up to three sections at most; N represents that this code cannot be produced.

◆ HTW1-16 (20) series

Product features

Compact & novel in appearance, and reliable in structure. Adopting internationally popular built-in wiring method, with finger touch resistant design, safe and reliable.

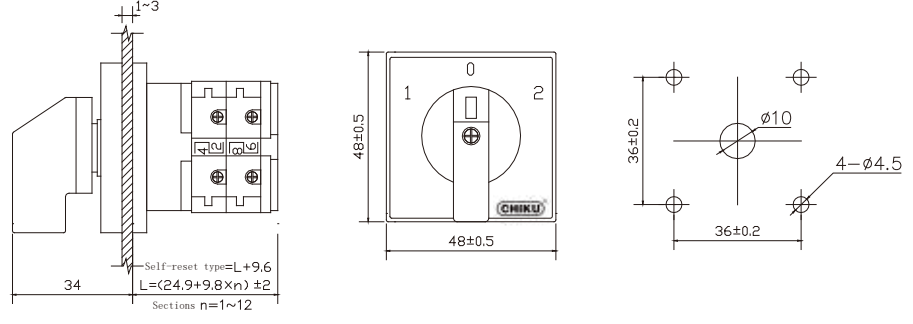
- Conventional thermal current is 16A and 20A
- Operating angles 30 ° , 45 ° , 60 ° & 90 °
- The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30 °)
- General type and label type can be customized with a front panel protection level of IP65

Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

General type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R, T-type handles

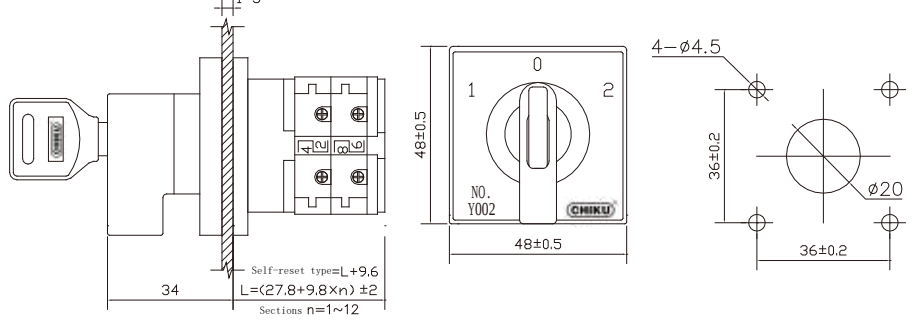


Ordered model: HTW1-16 (20) □□□/□

Keyed type



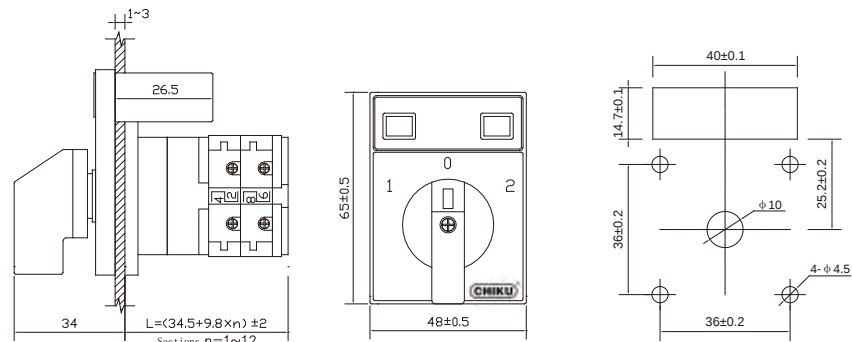
Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, &T-type handles



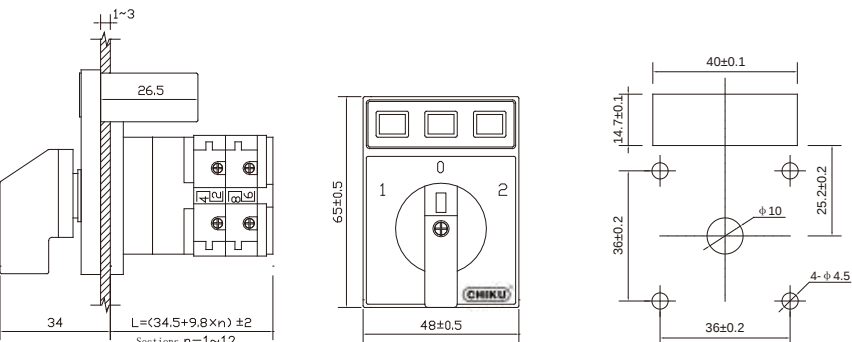
Ordered model: HTW1-16 (20) □□□/□Y

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

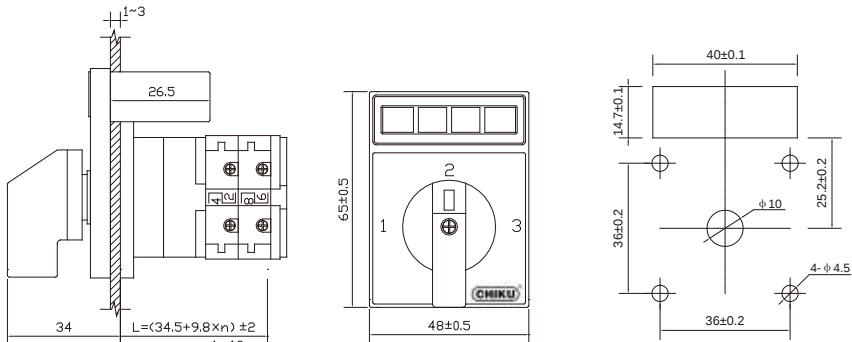
2-lamp type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R, T-type handles 
Ordered model: HTW1-16 (20) □□□/□D2□□	

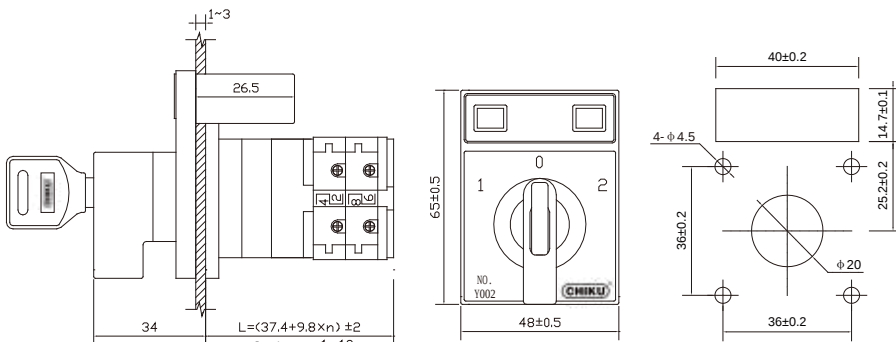
3-lamp type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R, T-type handles 
Ordered model: HTW1-16 (20) □□□/□D3□□	

4-lamp type

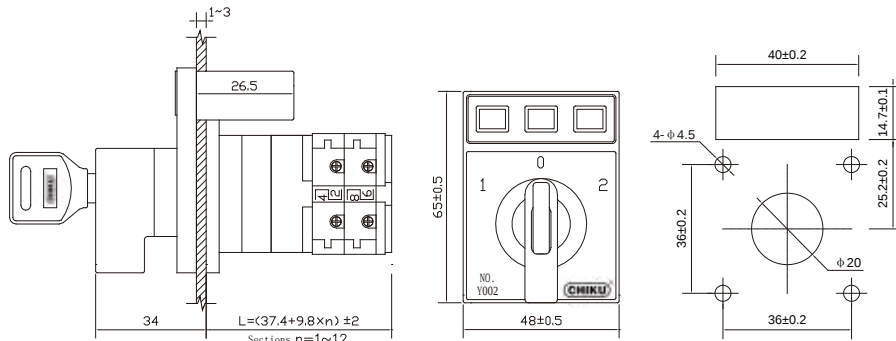
	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R, T-type handles 
Ordered model: HTW1-16 (20) □□□/□D4□□	

2-lamp key type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, &T-type handles 
Ordered model: HTW1-16 (20) □□□/□YD2□□	

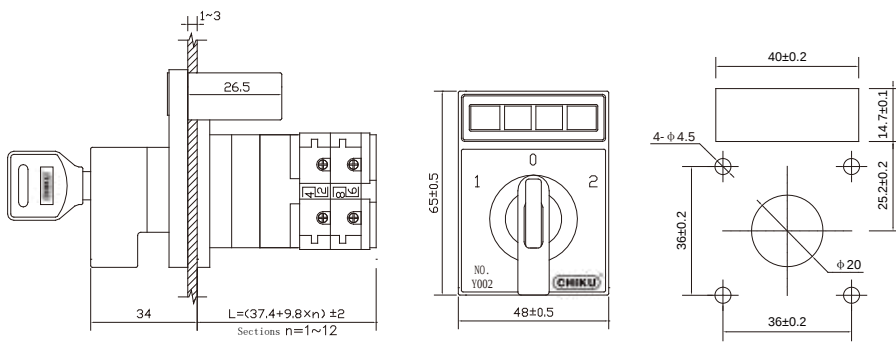
Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

3-lamp key type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, &T-type handles 
Ordered model: HTW1-16 (20) □□□/□YD3□□	

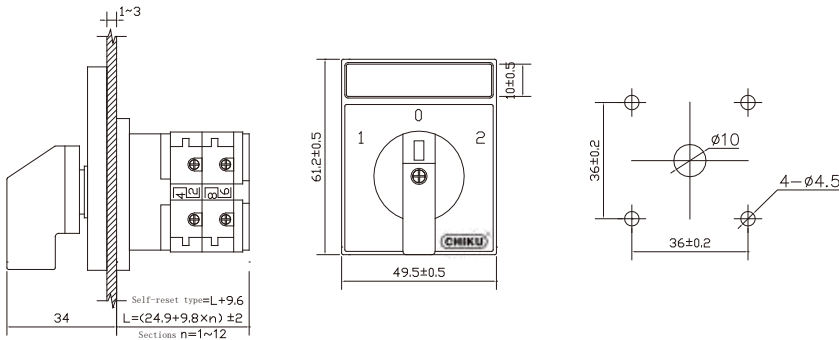
Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

4-lamp key type

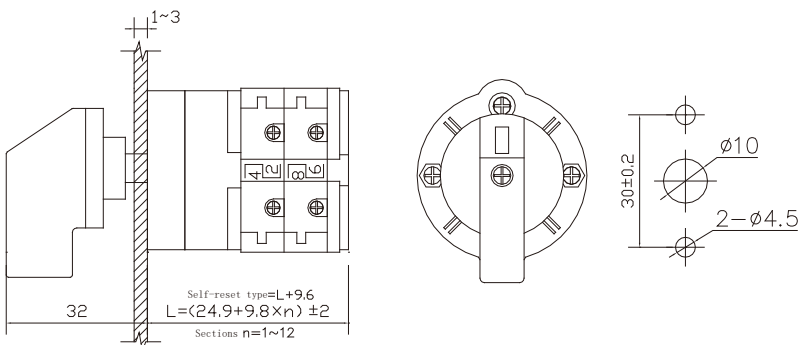
	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, &T-type handles 
Ordered model: HTW1-16 (20) □□□/□YD4□□	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

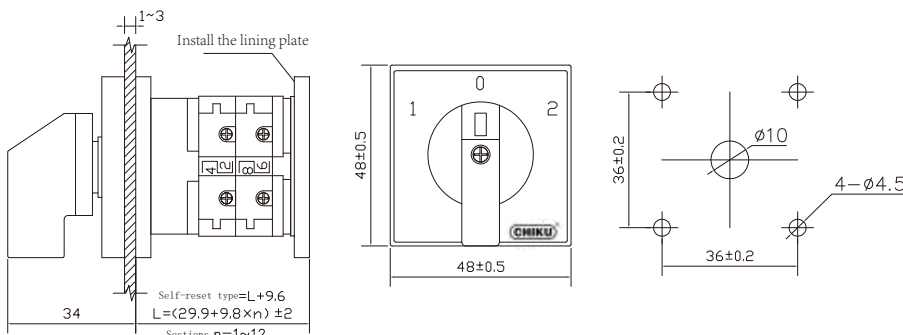
Label type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: I, R, T-type handles
	
Ordered model: HTW1-16 (20) □□□/□P	

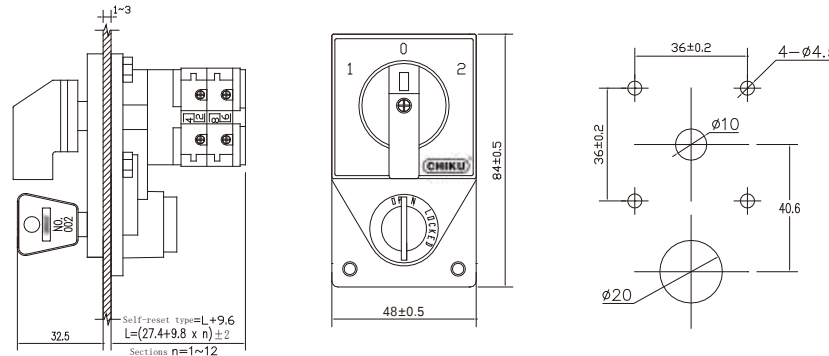
No-panel type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: I, R, T-type handles
	
Ordered model: HTW1-16 (20) □□□/□W	

Base mounting type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: I, R, T-type handles
	
Ordered model: HTW1-16 (20) □□□/□U	

Handle-key separation type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: I, R, T-type handles
	
Ordered model: HTW1-16 (20) □□□/□YS	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

◆ HTW1-16 (20) /C series

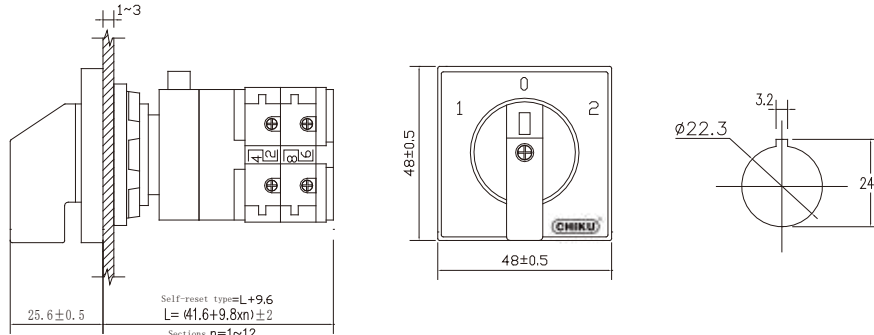
Product features

Single-hole mounting method, the contact system is the same as HTW1-16 (20) series, with internationally popular built-in wiring method and finger touch resistant design, it is safe and reliable.

- Conventional thermal current is 16A and 20A
- Operating angles 30 °, 45 °, 60 ° & 90 °
- The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30 °)
- General type, key type, no-panel type, and label type can be customized with a front panel protection level of IP65.
- Patent design lock handle automatic reset function for easy installation, with patent number: ZL202122133492.X

Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

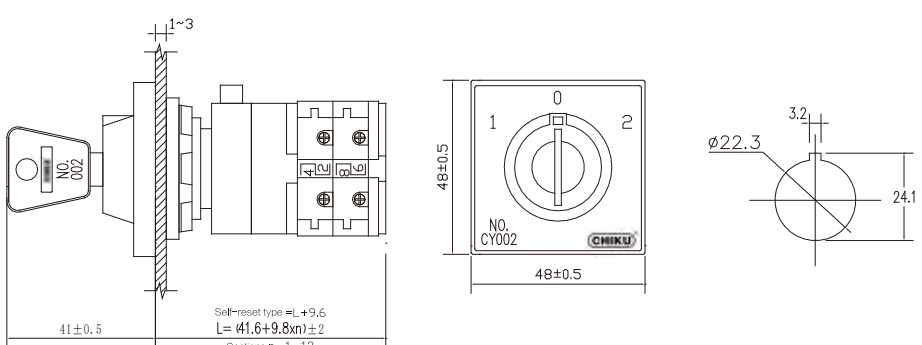
Single-hole general type

	Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: I-type handles
	
Ordered model: HTW1-16 (20) □□□/□C	

Single-hole key type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: No handle



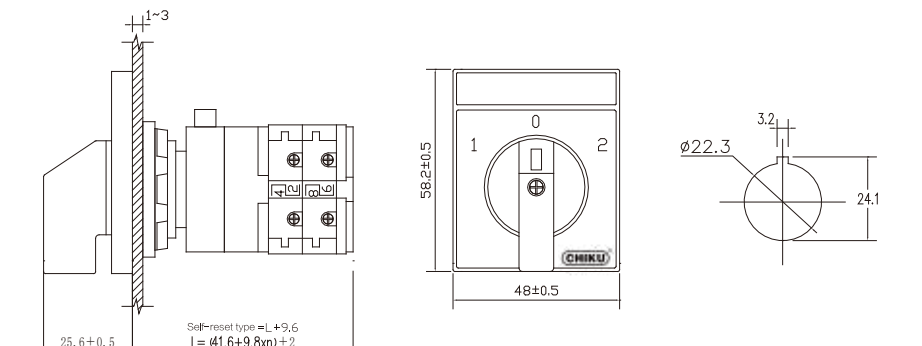
Ordered model: HTW1-16 (20) □□□/□CY

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

Single-hole label type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I-type handles

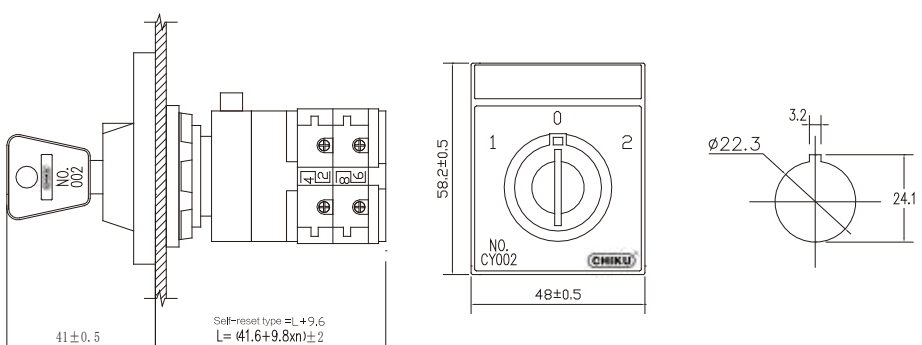


Ordered model: HTW1-16 (20) □□□/□CP

Single-hole label & key type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: No handle



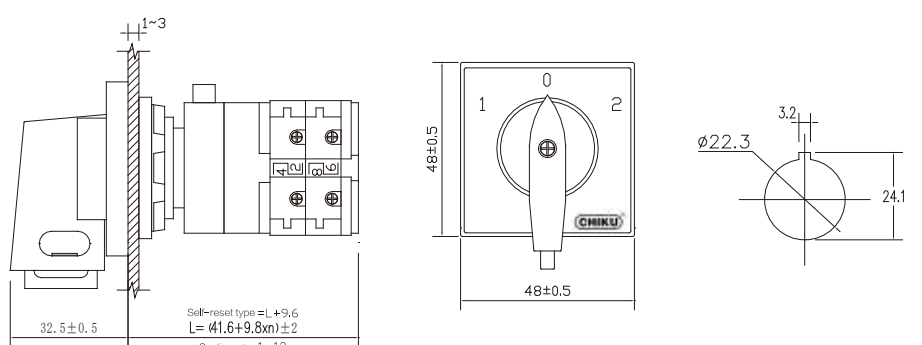
Ordered model: HTW1-16 (20) □□□/□CYP

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

Single-hole padlock type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I-type handles

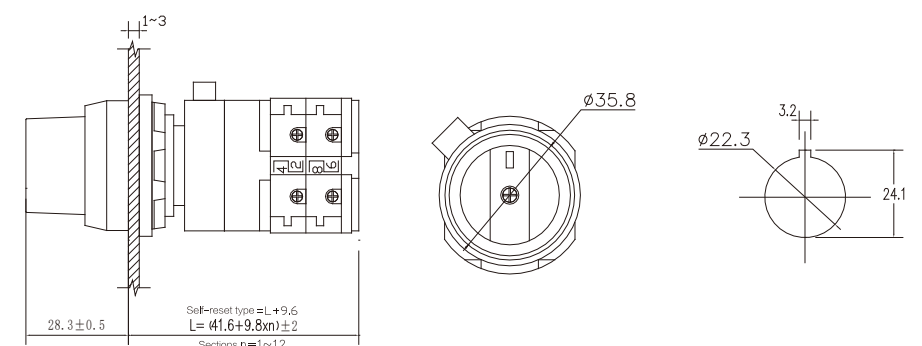


Ordered model: HTW1-16 (20) □□□/□CS

Single-hole non-panel type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, &B-type handles

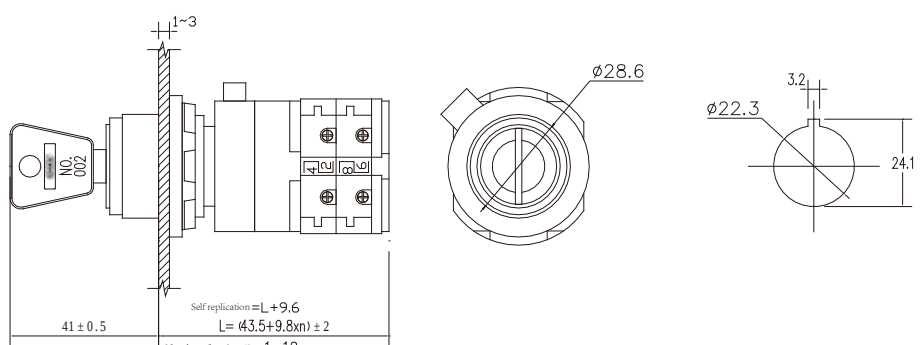


Ordered model: HTW1-16 (20) □□□/□CW

Single-hole non-panel & key type



Positioning angle: 30 ° 45 ° 60 ° 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: No handle



Ordered model: HTW1-16 (20) □□□/□CYW

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

◆ HTW1-16 (20) Series

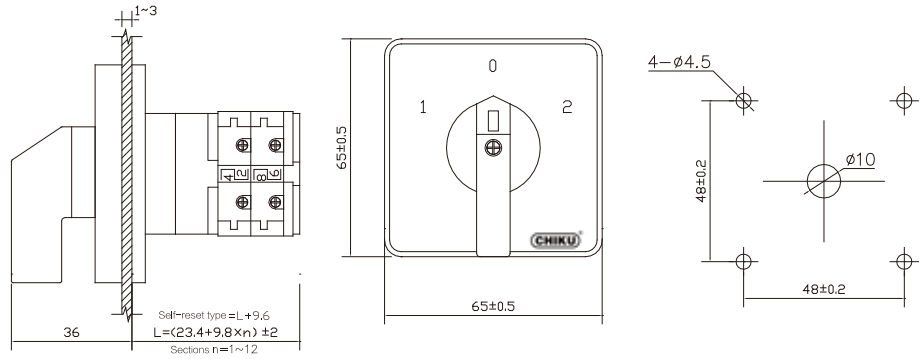
Product features

Beautiful appearance and convenient use. Adopting internationally popular built-in wiring method, with finger touch resistant design, safe and reliable.

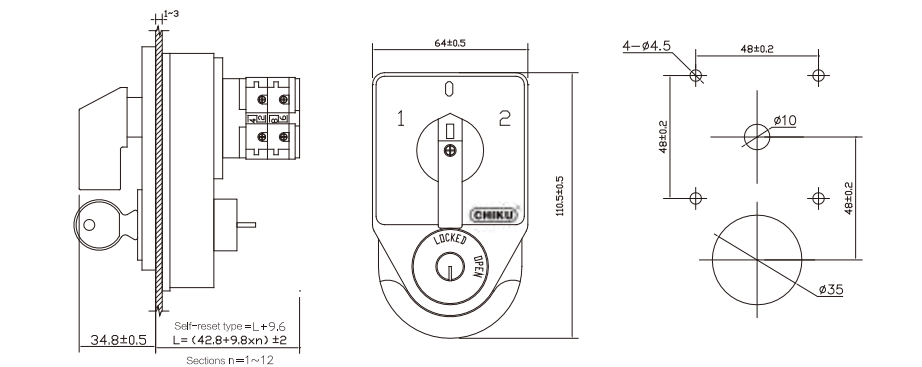
- Conventional thermal current is 16A and 20A
- Operating angles 30°, 45°, 60° & 90°
- The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30°)
- General type and label type can be customized with a front panel protection level of IP65

Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

General type

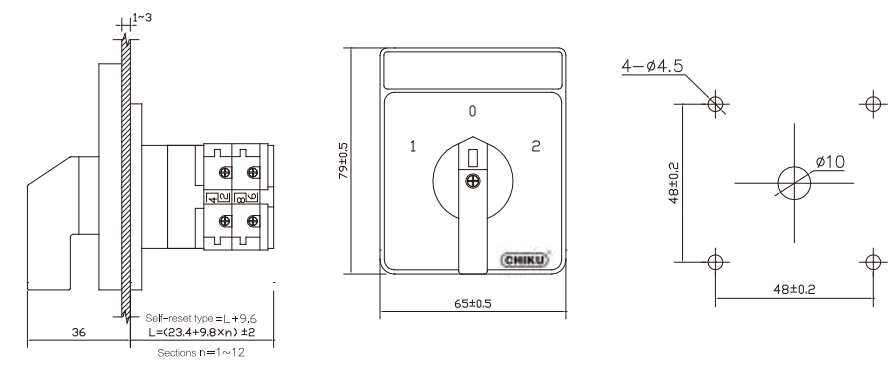
	Positioning angle: 30° 45° 60° 90° 12 sections at the most, recommended within 8 sections Applicable handles: I, &R-type handles
	
Ordered model: HTW2-16 (20) □□□/□	

Handle-key separation type

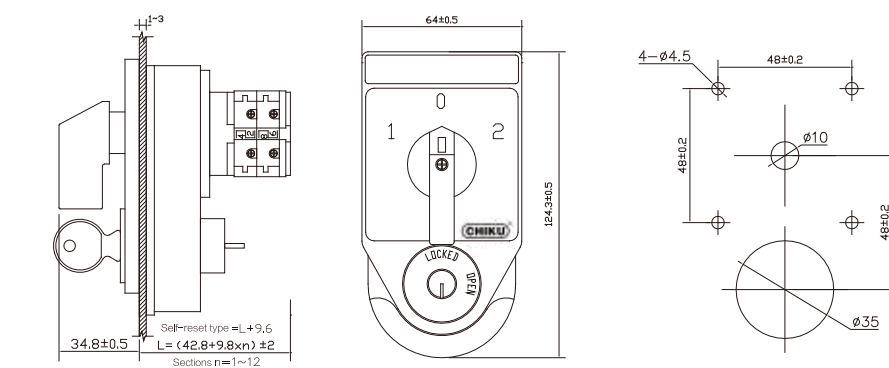
	Positioning angle: 30° 45° 60° 90° 12 sections at the most, recommended within 8 sections Applicable handles: I, &R-type handles
	
Ordered model: HTW2-16 (20) □□□/□YS	

Note: ① Key operation method: The handle is locked after the key is removed. ② 1000 keys, not compatible. ③ The pull-out position is customizable.

Label type

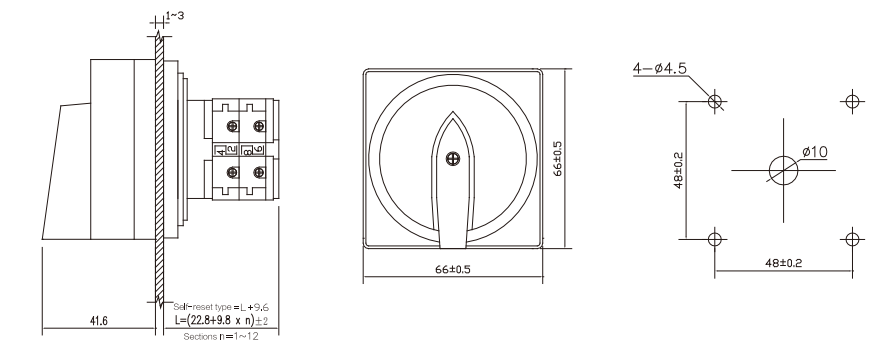
	Positioning angle: 30° 45° 60° 90° 12 sections at the most, recommended within 8 sections Applicable handles: I, &R-type handles
	
Ordered model: HTW2-16 (20) □□□/□P	

Handle-key separation & label type

	Positioning angle: 30° 45° 60° 90° 12 sections at the most, recommended within 8 sections Applicable handles: I, &R-type handles
	
Ordered model: HTW2-16 (20) □□□/□YSP	

Note: ① Key operation method: The handle is locked after the key is removed. ② 1000 keys, not compatible. ③ The pull-out position is customizable.

Power Switch

	Positioning angle: 30° 45° 60° 90° 12 sections at the most, recommended within 8 sections Applicable handles: Gr-type handles
	
Ordered model: HTW2-16 (20) □□□/□F	

◆ HTW3(4)-16 series

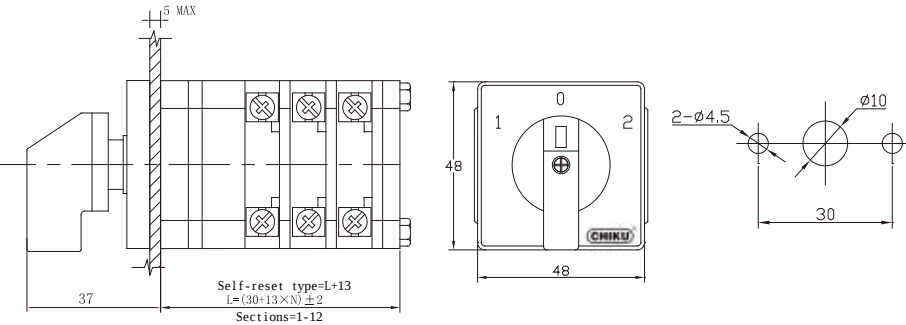
Product features

Three-hole mounting, beautiful and novel, and reliable in structure. Adopting the popular domestic external wiring method, it can be connected to an O-shaped wire lug.

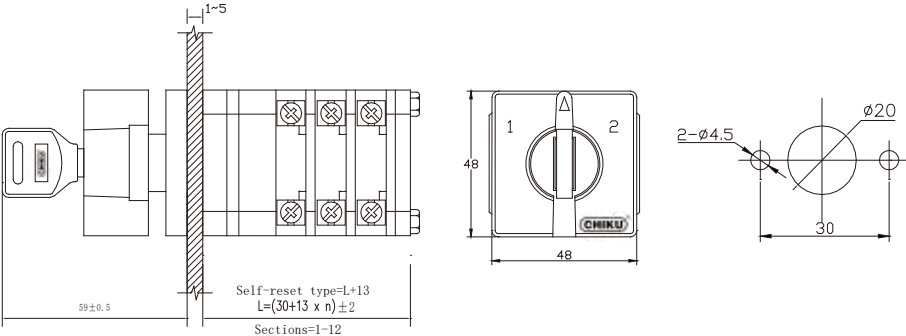
- Widely replace traditional domestic products such as LW12 and LW38A
- Conventional thermal current is 16A
- Operating angles 45 ° & 90 °
- The maximum number of sections in the contact system is 12;
- General type and label type can be customized with a front panel protection level of IP65

Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

General type

Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R & T type handles	
	 Self-reset type=L+13 L=(30+13×N)±2 Sections=1-12
Ordered model: HTW3-16□□□/□	

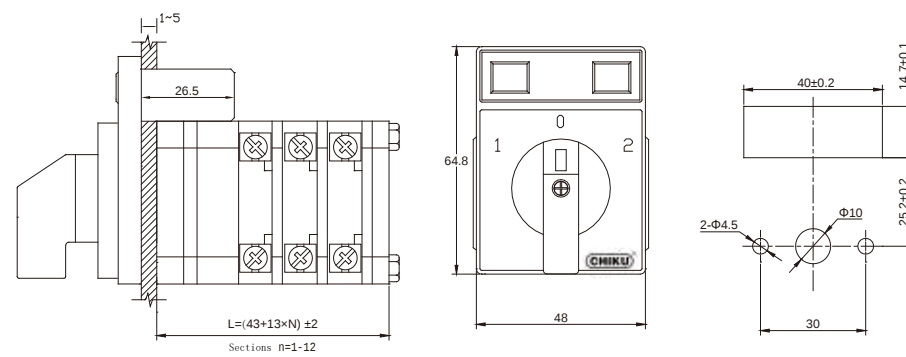
Handle-key type

Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: T & I type handles	
	 Self-reset type=L+13 L=(30+13×n)±2 Sections=1-12
Ordered model: HTW3-16□□□/□Y	

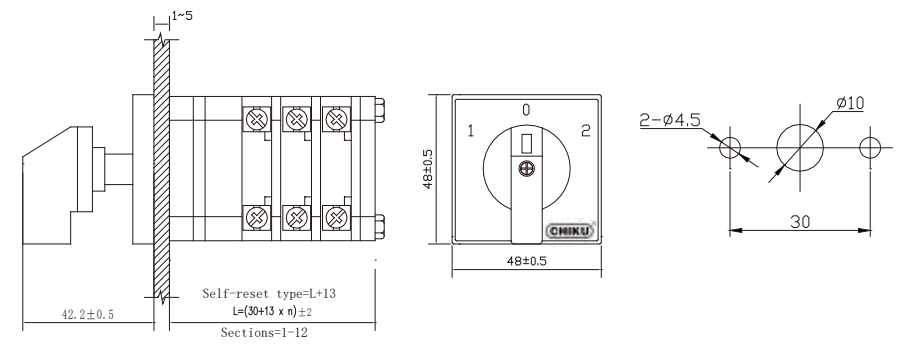
Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③ The pull-out position is customizable.

HTW Series CAM Switch

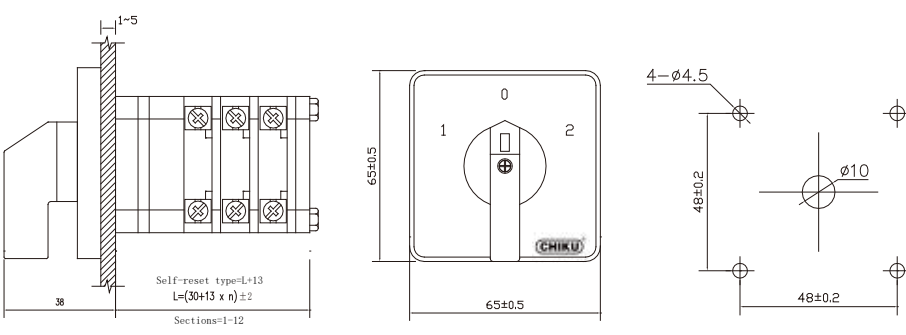
Lamp type

Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R & T type handles	
	 L=(43+13×N)±2 Sections=1-12
Ordered model: HTW3-16□□□/□D□□□	

Detachable type

Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R & T type handles	
	 Self-reset type=L+13 L=(30+13×n)±2 Sections=1-12
Ordered model: HTW3-16□□□/□T	

W4 General type

Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, R & K type handles	
	 Self-reset type=L+13 L=(30+13×n)±2 Sections=1-12
Ordered model: HTW4-16□□□/□	

◆ HTW1 (3) -16/WD Hood-type FTU special switch

Product features

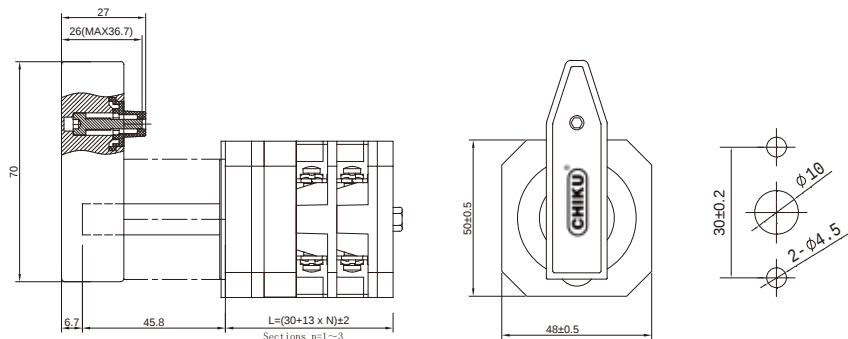
HTW1 (3) -16/WD series change-over switches are two products developed by Breede Electric specifically for configuring hood-type FTUs

- Conventional thermal current is 16A and 20A
- Operating angles 30 ° , 45 ° , 60 ° & 90 °
- The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30 °)
- General type and label type can be customized with a front panel protection level of IP65

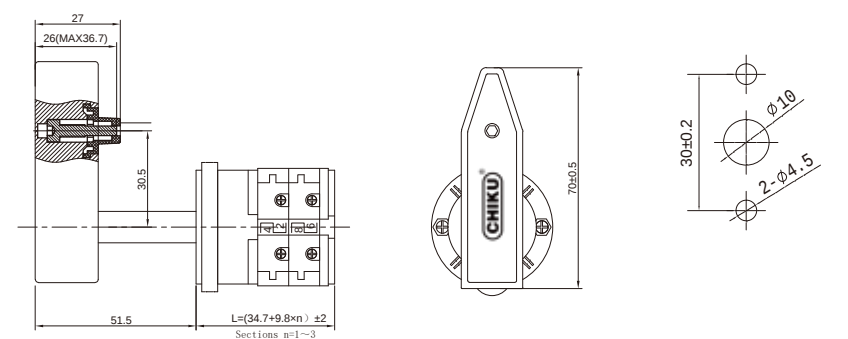
Note: HTW1-16/WD series has a smaller and more compact structure, greatly saving the internal space of hood-type FTU. It is recommended to use.

Various specialized handles can be customized according to customer requirements.

W3 Hood-type switch

	Positioning angle: 45 ° & 90 ° Recommended within 3 sections ApplicaHTE handles: FTU type handle 
Ordered model: HTW3-16□□□/□WD	

W1 Hood-type switch

	Positioning angle: 45 ° & 90 ° Recommended within 3 sections ApplicaHTE handles: FTU type handle 
Ordered model: HTW1-16□□□/□WD	

◆ HTW1-DT Series

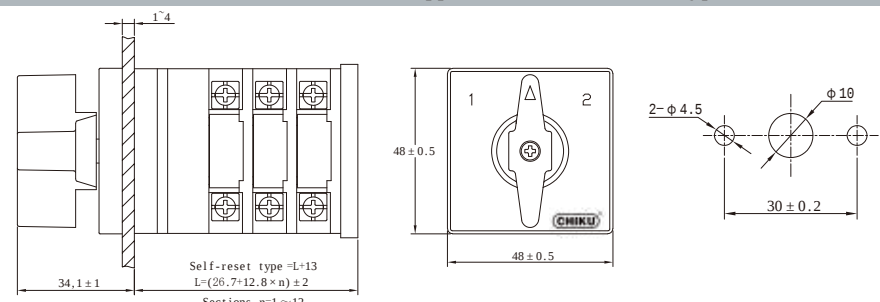
Product features

- HTW1-DT series change-over switch is a large series of products developed by HUNTEC ELECTRIC specifically for the high-voltage, ultra-high voltage, and relay protection automation industries. Its appearance is compact, beautiful & novel, and its structure is reliable, with multiple design patents. It can meet the requirements of multiple wiring methods as well as is safe and reliable. The internal structure adopts a patented ball bearing scheme, which has a soft touch and effectively improves the mechanical life. It has possessed multiple feature functions to choose from and can meet the vast majority of usage needs in relay protection cabinets, high-voltage, and ultra-high voltage GIS screen cabinets.
- HTW1-DT series change-over switch is suitable for circuits with AC frequency of 50-60Hz, voltage of 690V and below, as well as DC voltage of 440V and below. It can be used for the conversion of electrical control, remote control of electrical equipment, conversion of electrical measuring instruments, control of servo motors & micro motors, and direct control of small capacity squirrel cage motors.
- HTW1-DT-0 series change-over switch adopts a popular domestic external wiring method and can be connected to 0-shaped wire lugs.
- HTW1-DT series change-over switch adopts an internationally popular built-in wiring method, which is safe & reliable, and can be connected to U-shaped wire lugs.
 - Conventional thermal current is 16A and 20A
 - Operating angles 30 ° , 45 ° , 60 ° & 90 °
 - The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30 °)
 - General type and label type can be customized with a front panel protection level of IP65

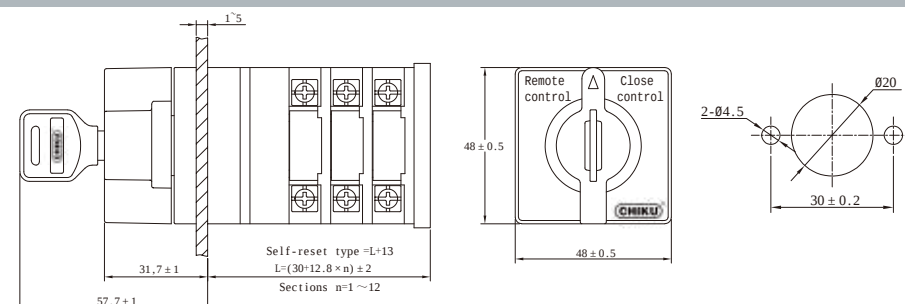
Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

◆ HTW1-16 (20) -DT-0 Series

General type

	Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: T type handles 
Ordered model: HTW1-16□□□/□-DT-0	

Handle-key type

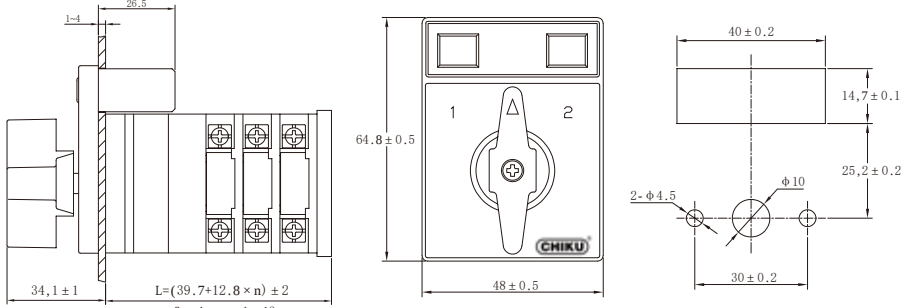
	Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTE handles: T type handles 
Ordered model: HTW1-16□□□/□Y-DT-0	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③ The pull-out position is customizable.

Lamp type



Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: T type handles

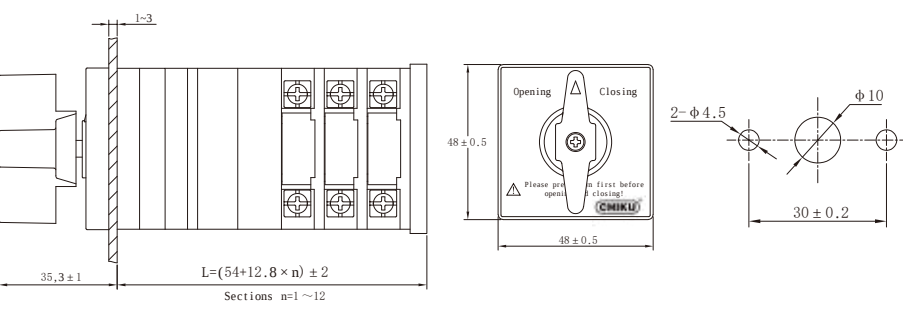


Ordered model: HTW1-16□□/□D□□□-DT-0

Push-pull self-reset type



Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: T type handles

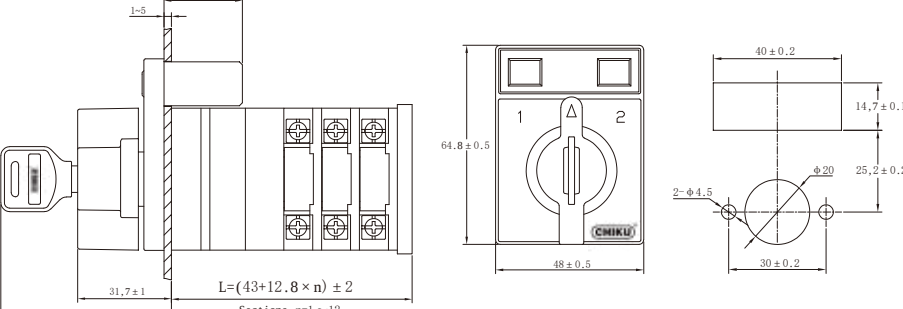


Ordered model: HTW1-16□□/□L-DT-0

Lamp & key type



Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: T type handles



Ordered model: HTW1-16□□/□YD□□□-DT-0

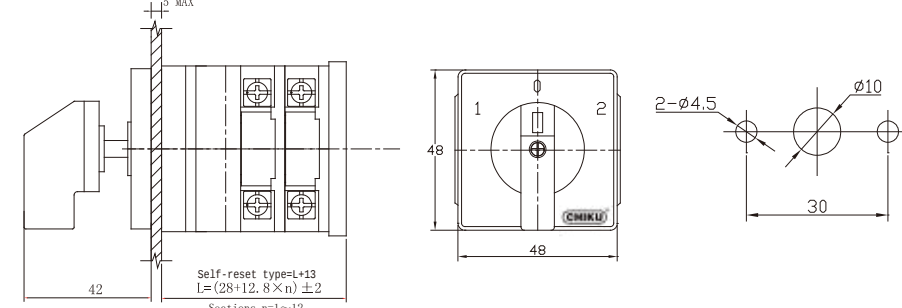
Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

HTW Series CAM Switch

Detachable type



Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, & T-type handles



Ordered model: HTW1-16□□/□T-DT-0

◆ HTW2-16 (20) -DT-0 Series
Product features

Beautiful appearance and convenient use. Adopting domestic popular external wiring methods, with finger touch resistant design, safe and reliable.

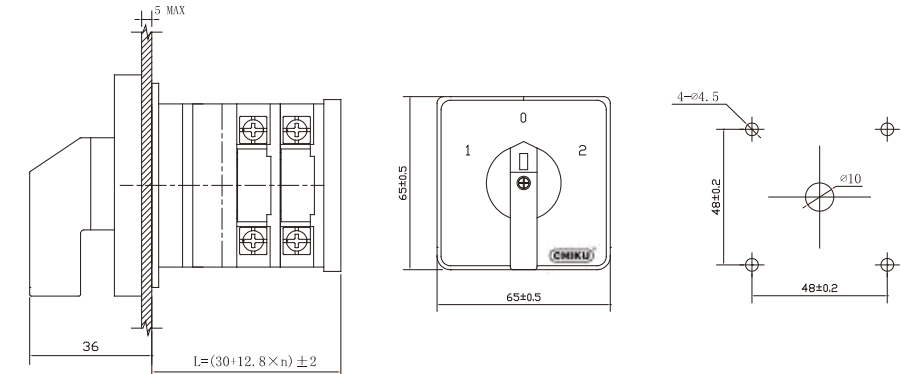
- Conventional thermal current is 16A and 20A
- Operating angles 30 ° , 45 ° , 60 ° & 90 °
- The maximum number of sections in the contact system is 12, and it is recommended to use no more than 8 sections (with 8 sections at most at the positioning angle of 30 °)
- General type and label type can be customized with a front panel protection level of IP65
- It can be connected to O-shaped wire lug.

Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

General type

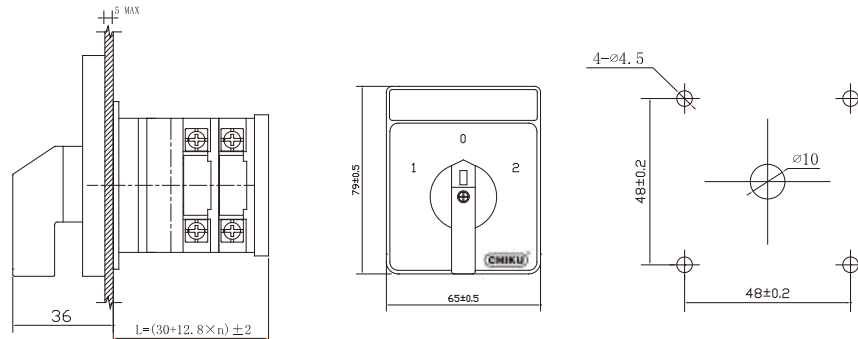


Positioning angle: 45 ° & 90 ° 12 sections at the most, recommended within 8 sections Applicable handles: I, & R-type handles

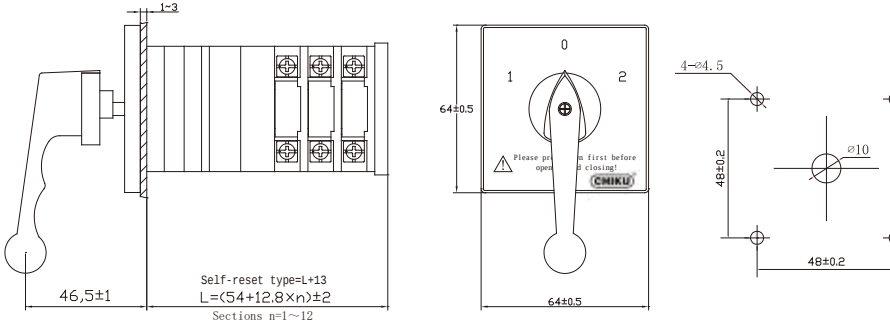


Ordered model: HTW2-16□□/□-DT-0

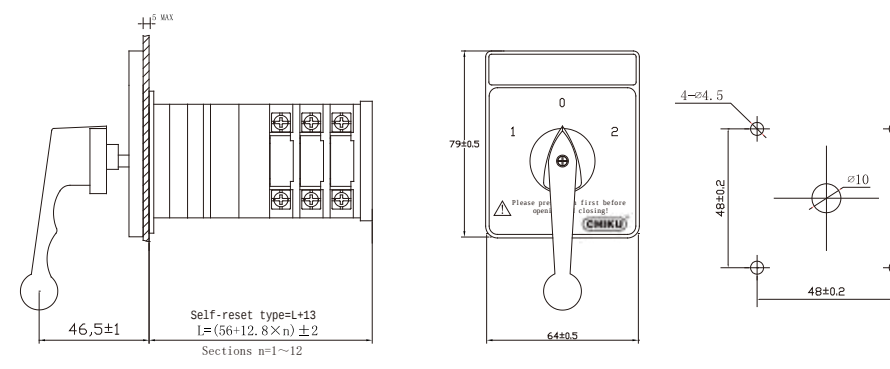
Label type

	Positioning angle: 45 ° & 90 ° recommended within 8 sections ApplicaHTe handles: I, & R-type handles
	
Ordered model: HTW2-16□□/□P-DT-0	

Push-pull self-reset type

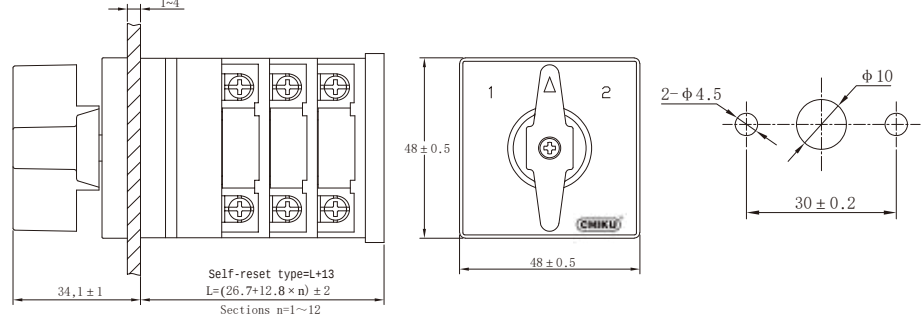
	Positioning angle: 5 ° 90 ° recommended within 8 sections ApplicaHTe handles: I, R, K-type handles
	
Ordered model: HTW2-16□□/□L-DT-0	

Push-pull self-reset & label type

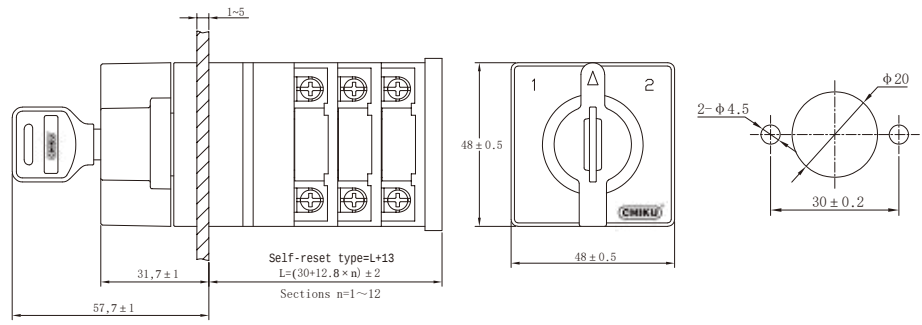
	Positioning angle: 5 ° 90 ° recommended within 8 sections ApplicaHTe handles: I, R, K-type handles
	
Ordered model: HTW2-16□□/□LP-DT-0	

◆ HTW1-16 (20) -DT Series

General type

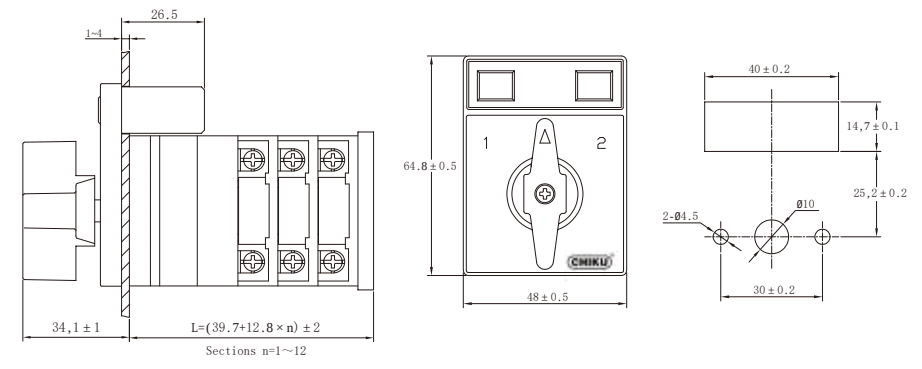
	Positioning angle: 45 ° 90 ° recommended within 8 sections ApplicaHTe handles: T-type handles
	
Ordered model: HTW1-16□□/□-DT	

Key type

	Positioning angle: 45 ° 90 ° recommended within 8 sections ApplicaHTe handles: T-type handles
	
Ordered model: HTW1-16□□/□Y-DT	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatible. ③The pull-out position is customizable.

Lamp type

	Positioning angle: 45 ° 90 ° recommended within 8 sections ApplicaHTe handles: T-type handles
	
Ordered model: HTW1-16□□/□D□□□-DT	

Product features

- To meet the needs of customers in the production of relay protection screen cabinets, HUNTEC ELECTRIC has added three types of special auxiliary panels for relay protection cabinets on the basis of HTWV1-DT-0 series change-over switch. It is novel in appearance and reliable in structure. It is convenient to disassemble and easy for the daily operation and maintenance of relay protection cabinets.
 - The change-over switch can be connected to both O-shaped and U-shaped wire lugs, meeting the requirements of various wiring methods and ensuring safety and reliability.
 - The internal structure of the change-over switch adopts a patented ball bearing scheme, which has a soft motion and feel, effectively improving the mechanical life, and has multiple feature functions to choose from.
 - Conventional thermal current is 16A and 20A
 - Operating angles 30 °, 45 & 90 ° ;
 - The maximum number of sections in the contact system is 12 sections;
 - Protection level IP6X, dustproof design, general type can be customized with IP67
- Note: If the working voltage is 24V and the current is 100mA or less, please specify in the order, and we will add a contact gold-plating process.

Naming & meaning

HTW 1 - 2 3 4 5 / 6 7 8 9 10 11 12 13-14-15-16-17-18/19-FB 20 21

◆ HTW1-10 Ultra-small change-over switch products

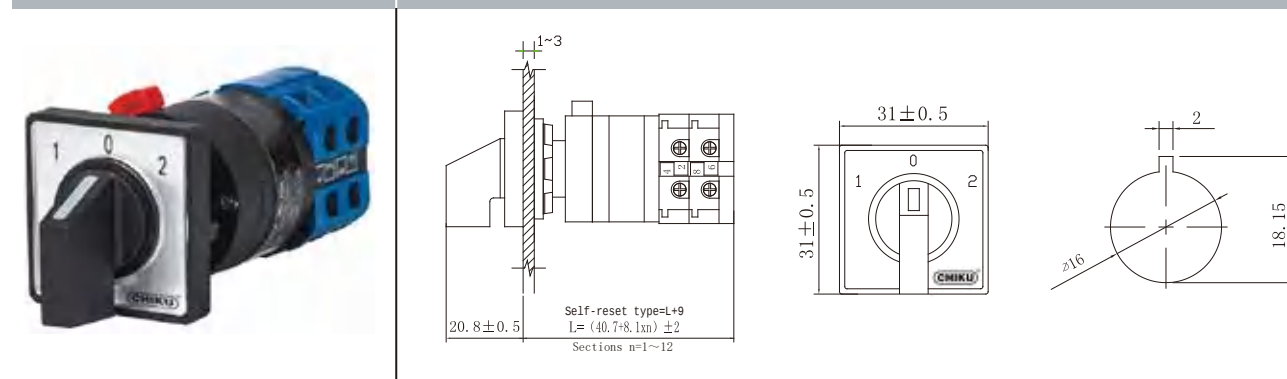
Product features

HTWL-10 is widely used in occasions with small installation space, adopting a single hole mounting method with a mounting aperture of 16mm. Adopting internationally popular built-in wiring methods for safety and reliability. The operating head is designed with sealing components, with the head protection level up to IP65.

- Conventional thermal current is 10A;
- Operating angles 30 ° , 45 & 90 ° ;
- The maximum number of sections in the contact system is 8 sections;
- The gold-plated silver alloy contact is used to greatly ensures contact reliability under low voltage and low current.
- The handle is not optional.

General type

Positioning angle: 30 ° 45 ° 90 ° 12 sections at the most,
recommended within 8 sections ApplicaHTe handles: I-type handles

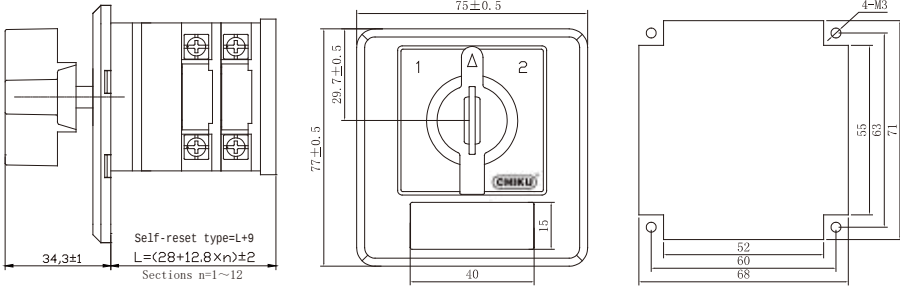


Ordered model: HTW1-10□□□/□C

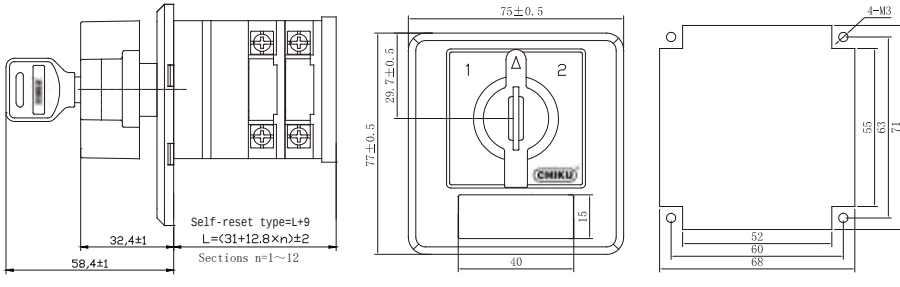
No.	
1	Series code, select based on pictures
2	Conventional thermal current
3	Angle gear code
4	Positioning feature code
5	Contact point code
6	Represent section number
7	Mounting type: C-Single-hole mounting, U-Base mounting, Omitted- Four-hole mounting
8	Functional type: Y-Key type, YS-Handle/key separation, G-Power switch, T-Detachable type, L-Push-pull Self-reset type, Omitted - No special function
9	Wiring mode: H-Rear wiring, Omitted - Side wiring
10	Panel form: W-No panel mounting, P-With small badge board, Omitted - Ordinary panel, D-Illuminated panel
11	Number of lamp holders with lights: 2-2-lamp type, 3-3-lamp type, 4-4-lamp type
12	Light box color codes: G-Green, R-Red, Y-Yellow, W-White
13	Lightbox voltage code: "23" represents ACDC24V; "25" represents ACDC48V; "26" represents ACDC110V; "28" represents ACDC220V; "31" represents AC220V
14	Key compatibility: Universal type has no code, Not compatible-DAN
15	Handle style code, for the default handle, it is omitted; Please indicate the handle code for other handles
16	Customer code, add as needed; omit when not needed
17	Dust prevention function: DT -Dust proof type with ball, Omitted - No such a function
18	Wiring method: O-Connected to O-shaped wire nose, Omitted - U-shaped wire nose
19	Represent inline or external connection
20	Represent the auxiliary panel series, customized according to customer requirements. Currently, there are three major series of auxiliary panels: 1, 2, and 3
21	Auxiliary panel types: P-Small label-type, L-Lamp-type, PL-Small label & lamp-type, Omitted - Ordinary type

◆ Panel type: FB1 series

Label type

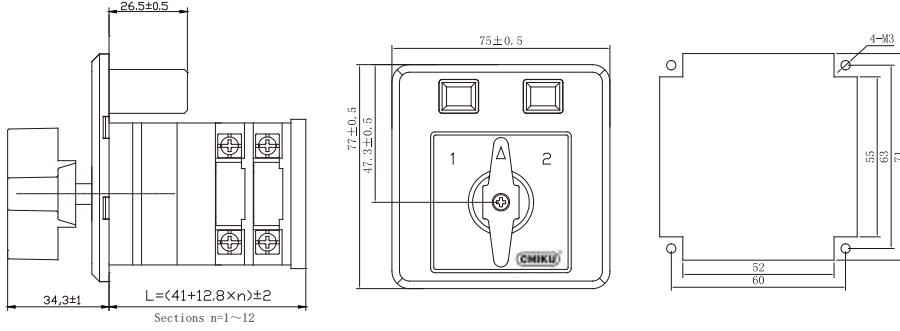
	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  Self-reset type=L+9 L=(28+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□-DT-0-FB1P	

Key & label type

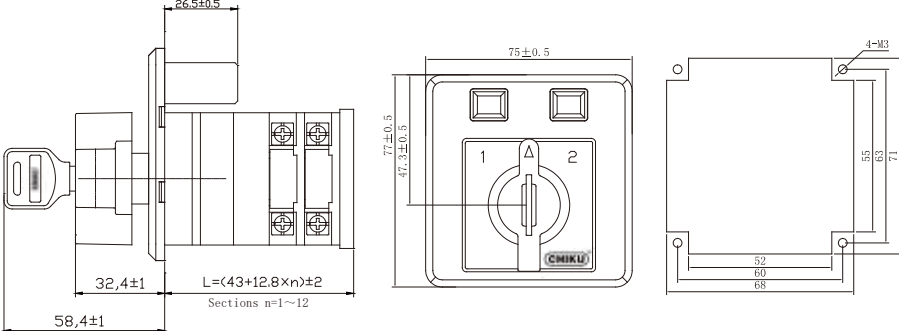
	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  Self-reset type=L+9 L=(31+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□Y-DT-0-FB1P	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatiHTe. ③The pull-out position is customizaHTe .

Lamp-type

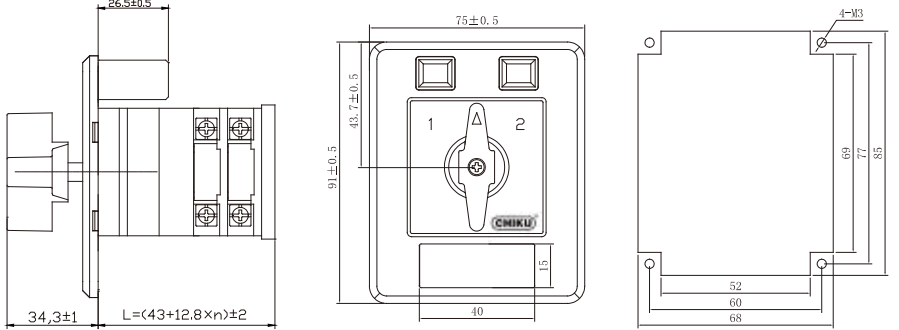
	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  L=(41+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□D□□□-DT-0-FB1L	

Lamp & key type

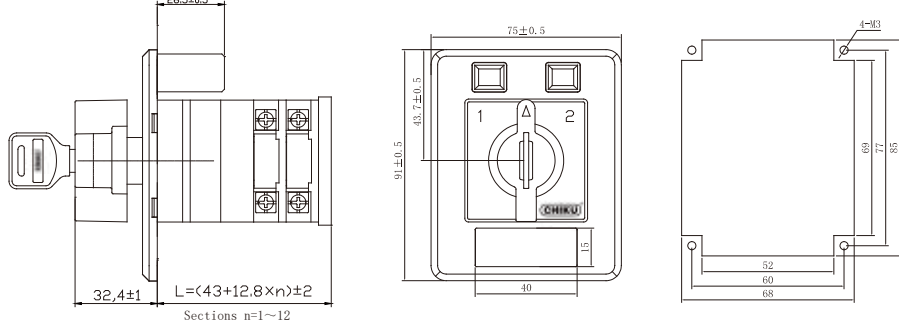
	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  L=(43+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□YD□□□-DT-0-FB1L	

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatiHTe. ③The pull-out position is customizaHTe .

Lamp & label type

	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  L=(43+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□D□□□-DT-0-FB1PL	

Lamp, key & label type

	Positioning angle: 45 ° 90 ° 12 sections at the most, recommended within 8 sections ApplicaHTe handles: T-type handles  L=(43+12.8×n)±2 Sections n=1~12
Ordered model: HTW1-16□□/□YD□□□-DT-0-FB1PL	

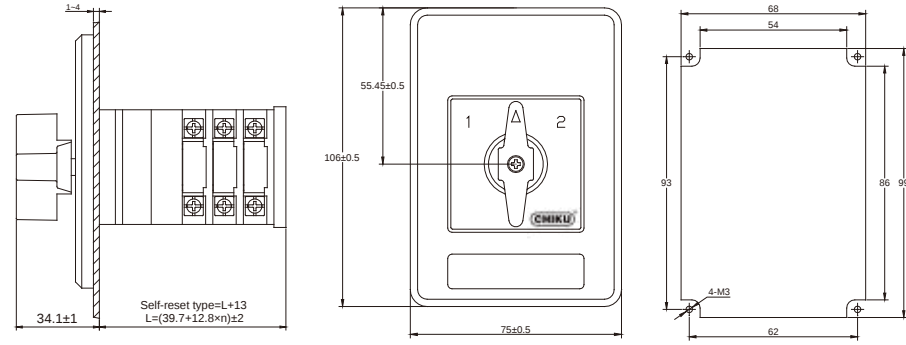
Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatiHTe. ③The pull-out position is customizaHTe .

◆ Panel type: FB2 series

Label type



Positioning angle:45 ° , 90 ° 12 sections at the most,
ApplicaHTe handles: T-type handles

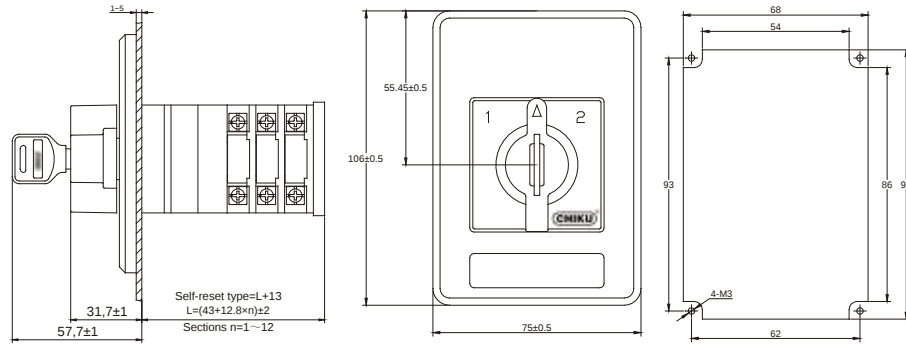


Ordered model: HTW1-16□□/□-DT-0-FB2P

Key & label type



Positioning angle:45 ° , 90 ° 12 sections at the most,
ApplicaHTe handles: T-type handles



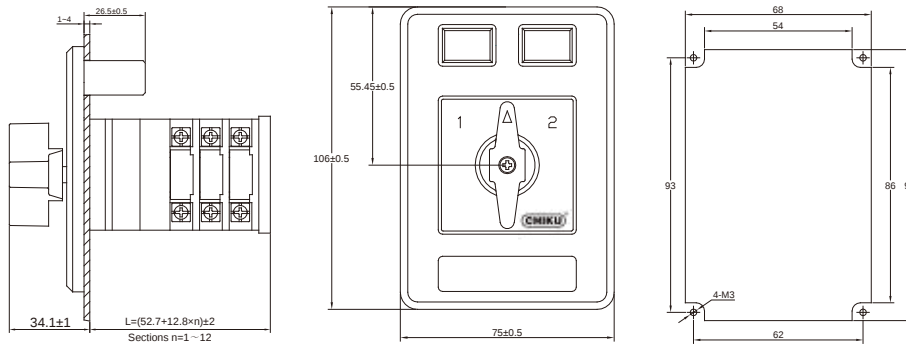
Ordered model: HTW1-16□□/□Y-DT-0-FB2P

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatiHTe. ③The pull-out position is customizaHTe .

Lamp & label type



Positioning angle:45 ° , 90 ° 12 sections at the most,
ApplicaHTe handles: T-type handles



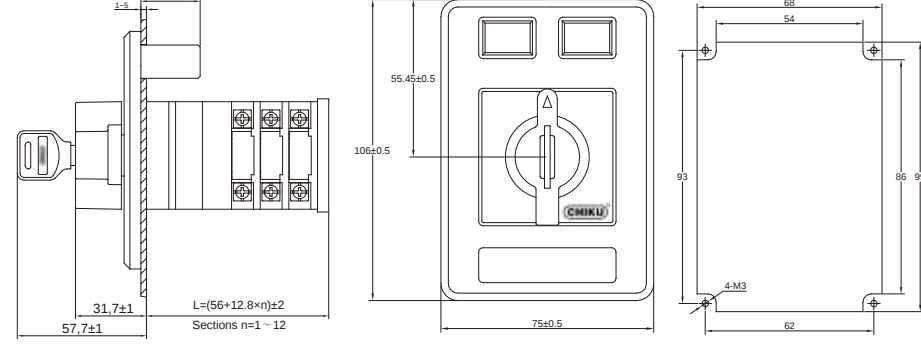
Ordered model: HTW1-16□□/□D□□□-DT-0-FB2PL

HTW Series CAM Switch

Lamp, label & key type



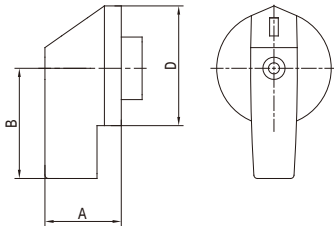
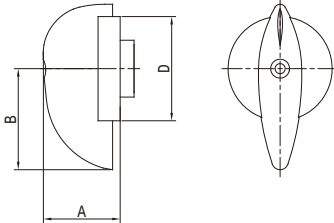
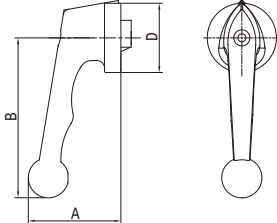
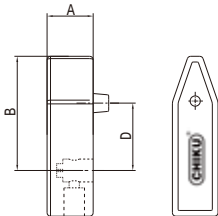
Positioning angle:45 ° , 90 ° 12 sections at the most,
ApplicaHTe handles: T-type handles



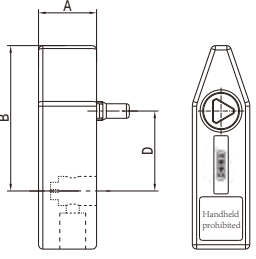
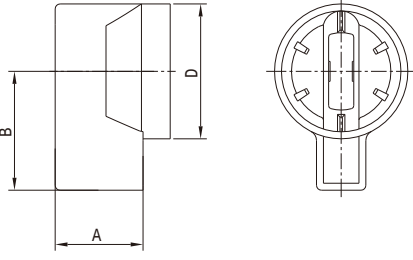
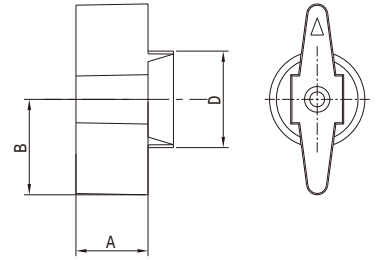
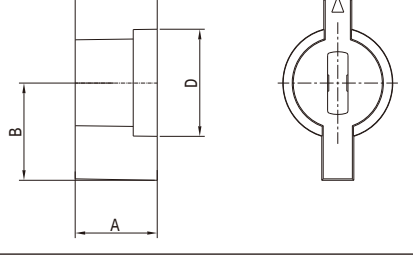
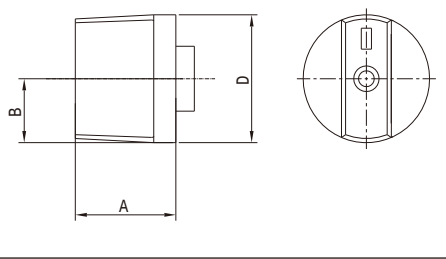
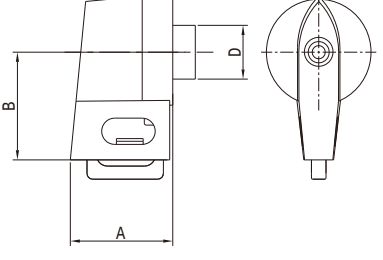
Ordered model: HTW1-16□□/□YD□□□-DT-0-FB2PL

Note: ① Key operation method: The handle is locked after the key is removed. ② 500 keys, not compatiHTe. ③The pull-out position is customizaHTe .

◆ Handle types

Type	Panel Specification		Outline Dimension		A	B	DΦ
I type 	☐ 48	●		22	27.5	23.5	
	☐ 64	●		22	33	31.7	
R type 	☐ 48	●		21.3	26	27.5	
	☐ 64	●		24.4	32	33	
K type 	☐ 48	●		24.4	32	33	
	☐ 64	●		24.4	32	33	
FTU Handle 	☐ 48	●		20.2	50	29.5	
	☐ 64	-		/	/	/	

Unit: mm

Type	Panel Specification		Outline Dimension	A	B	DΦ
FTU Customized handle 	□48	●		20.2	50	27.5
	□64	-		/	/	/
I-type key handle 	□48	●		17.8	23.8	27
	□64	-		/	/	/
T-type handle 	□48	●		17	22.25	22.5
	□64	-		/	/	/
T-type key handle 	□48	●		20.5	24	26.45
	□64	-		/	/	/
B-type non-panel mounting handle 	□48	●		20.5	24	26.45
	□64	-		/	/	/
Padlock handle 	□48	●		26.8	27.85	14
	□64	-		/	/	/

◆Contact code

There are two ways to write the contact code in the model column:

- Check and write in Contact Code TaHTe of our company;
- We will write it for you, but we need you to provide a contact taHTe, wiring diagram, or fill out a HTank contact taHTe (Page 46).

e.g:

Requirement: The 3rd gear, the 1st gear has 3 pairs of contacts connected, the 2nd gear has 0 pairs of contacts connected, the 3rd gear has 3 pairs of contacts connected, as found in the Contact Code TaHTe:

The contact code: 3R48

Contact code	3R48		
Panel lettering	1	0	2
Handle angle	45°	0°	45°
1-2	×		
3-4			×
5-6	×		
7-8			×
9-10	×		
11-12			×

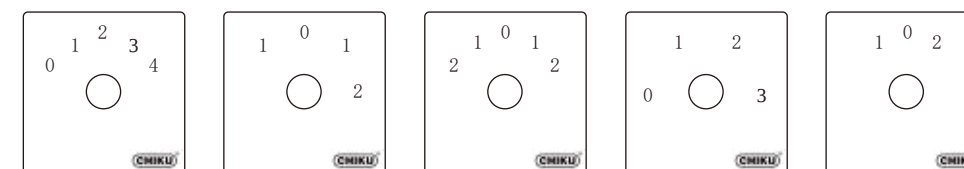
Note: In the contact taHTe “ × ” represents the status of the contact being connected.

◆Panel printing code

The panel printing code represents the specific requirements for change-over switch panel printing. Users can choose according to "commonly used panel printing code" or provide customized requirements. If there is no panel printing code in the ordered model, the factory will provide the panel according to the default printing rules.

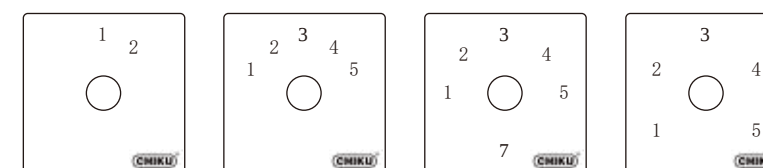
- If all contacts of a certain gear are disconnected, the gear is printed as "0", and then the gears on both sides are printed in sequence according to the Arabic numerals "1", "2", "3". Among them, for 3-gear change-over switch, there is no printing method of 1-0-1, but the printing method of 1-0-2 is adopted.

e.g:



- If there is no "0" gear, each gear will be printed in sequence according to the Arabic numerals "1", "2", "3"... (In clockwise direction).

e.g:

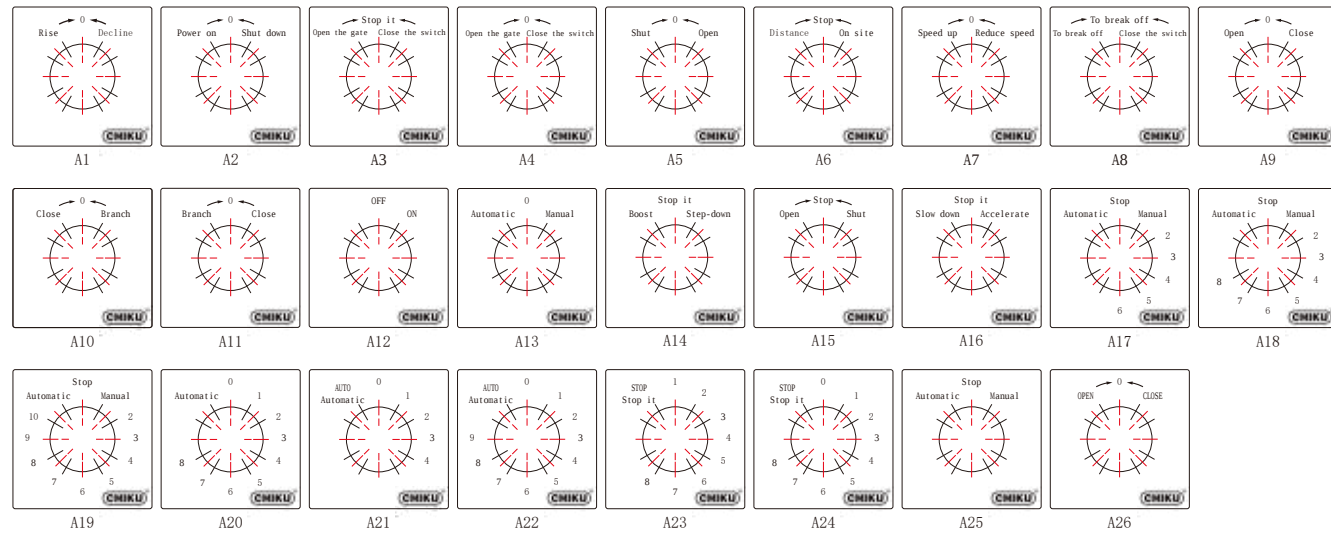


The default printing rules

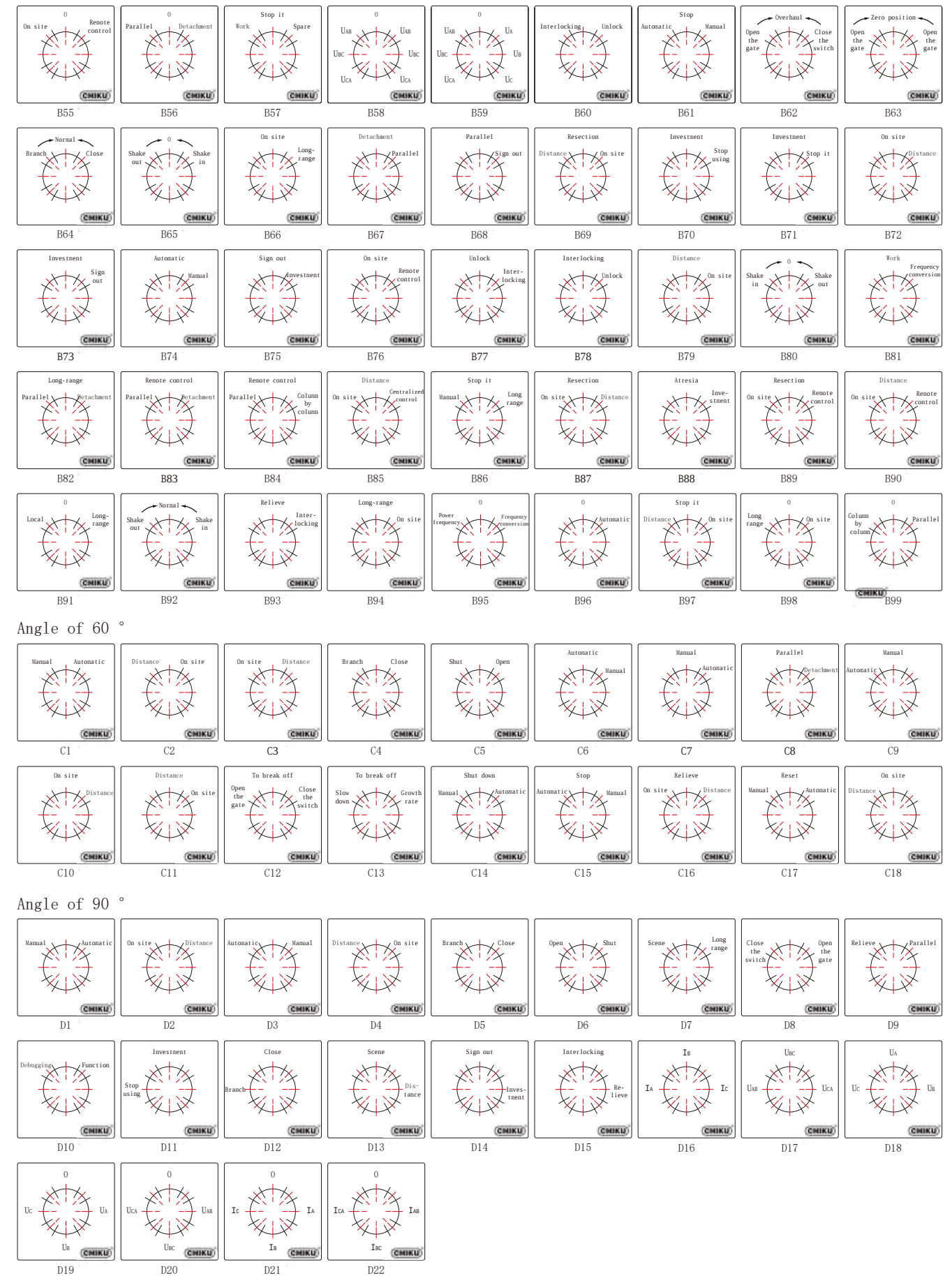
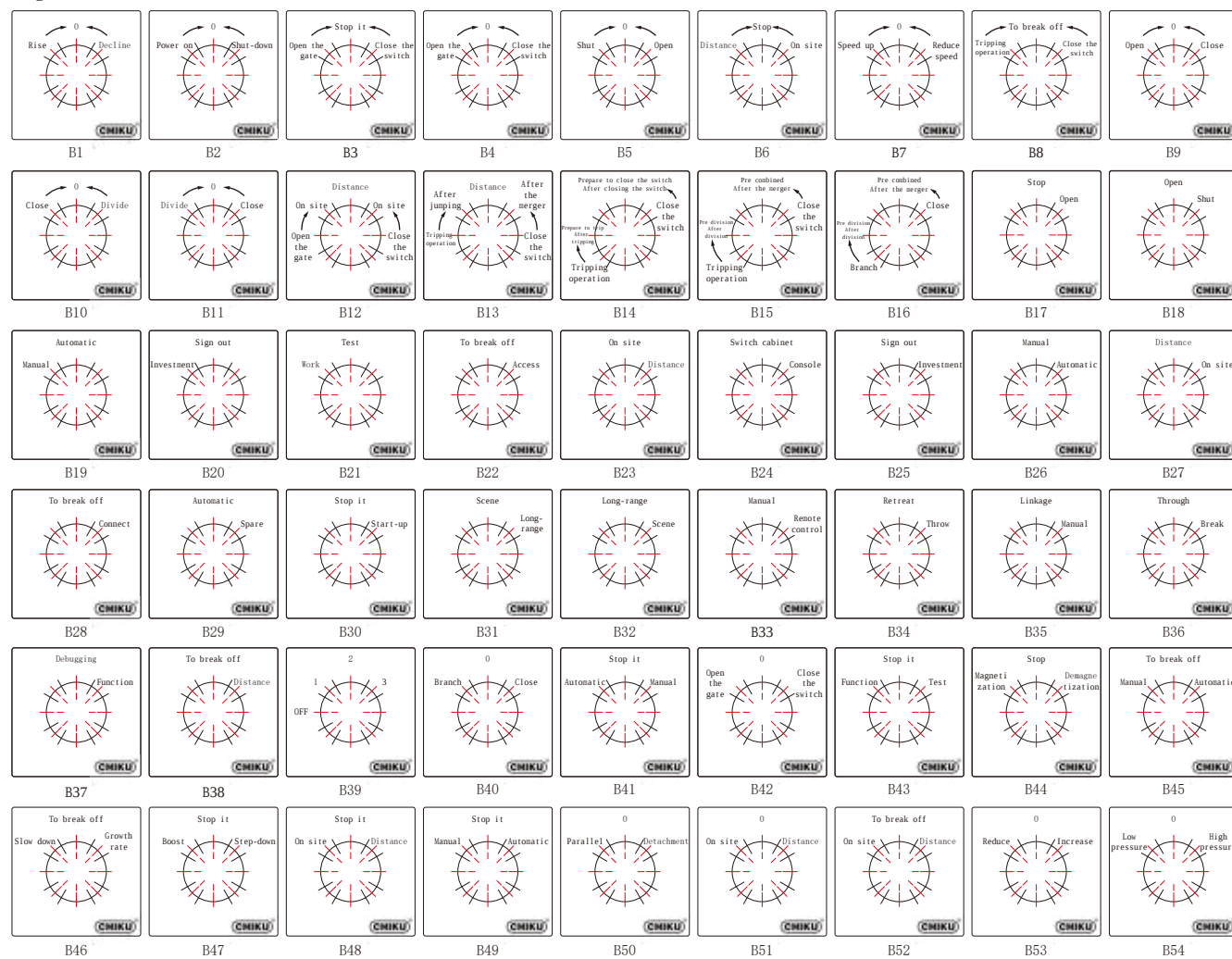
◆Note:

The code starting with A indicates a rotation angle of 30° The code starting with B indicates a rotation angle of 45°
 The code starting with C indicates a rotation angle of 60° The code starting with D indicates a rotation angle is 90°

Angle of 30°



Angle of 45°



Power transmission and distribution opening and closing control switch (I)

Switch Model	HTW□-164Q6915/2						
Replacement	LW2-Z-4. 1a/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-2		×				
	3-4					×	
4	5-6	×		×			
	7-8	×			×		

Switch Model	HTW□-164Q6319/2						
Replacement	LW2-Z-4. 4/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
4	1-2		×				
	3-4					×	
4	5-6		×				
	7-8					×	

Switch Model	HTW1-164Q6918/3						
Replacement	LW2-Z-4. 1a. 4/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
4	1-2		×				
	3-4					×	
10	5-6	×		×			
	7-8	×		×			
4	9-10		×				
	11-12					×	

Switch Model	HTW□-164Q6783/5						
Replacement	LW2-Z-1a. 4. 20. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-2	×		×			
	3-4	×			×		
4	5-6		×				
	7-8				×		
20	9-10		×	×			
	11-12	×			×		
20	13-14	×				×	
	15-16		×	×			
20	17-18	×			×		
	19-20	×				×	

Switch Model	HTW1-164Q6964/5						
Replacement	LW2-Z-4. 4. 40. 40/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
4	1-2	×	×				
	3-4				×		
4	5-6		×				
	7-8				×		
40	9-10	×			×		
	11-12	×				×	
40	13-14		×	×			
	15-16	×			×		
40	17-18	×				×	
	19-20		×	×			

Switch Model	HTW□-164QJ6963/6						
Replacement	Switch Model						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-3	×		×			
	2-4	×			×		
4	5-8		×				
	6-7					×	
6a	9-10		×	×			
	10						
6a	9-12		×				
	11-10	×			×	×	
20	13-14	×			×		
	13-15		×	×			
20	16-14	×				×	

Switch Model	HTW1-164Q6943/4						
Replacement	LW2-Z-4. 4. 40/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
4	1-2		×				
	3-4					×	
4	5-6		×				
	7-8					×	
40	9-10	×			×		
	11-12	×				×	
40	13-14		×	×			
	15-16						

Switch Model	HTW□-164QJ6777/4						
Replacement	LW2-Z-1a. 4. 6a/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-3	×		×			
	2-4	×			×		
4	5-8		×				
	6-7					×	
6a	9-10		×	×			
	10						
6a	9-12		×				
	11-10	×			×	×	

Switch Model	HTW□-164Q6118/4						
Replacement	LW2-Z-1a. 4. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-2	×		×			
	3-4	×			×		
4	5-6		×				
	7-8					×	
20	9-10		×	×			
	11-12		×		×		
20	13-14	×				×	
	15-16						

Switch Model	HTW□-164Q6775/6						
Replacement	LW2-Z-1a. 4. 6a. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-2	×		×			
	3-4	×			×		
4	5-6		×				
	7-8					×	
6a	9-10	×		×			
	11-12						
6a	13-14		×				
	15-16	×			×	×	
20	17-18		×	×			
	19-20	×			×		
20	21-22	×				×	
	23-24						

Switch Model	HTW□-164QJ6773/7						
Replacement	LW2-Z-1a. 4. 6a. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-3	×		×			
	2-4	×			×		
4	5-8		×				
	6-7					×	
6a	9-10		×	×			
	10						
6a	9-12		×				
	11-10	×			×	×	
40	13-14	×			×		
	15-14	×				×	
20	13-16		×	×			
	17-19		×	×			
20	20-18		×		×		
	17-18	×				×	

Switch Model	HTW□-164Q6773/7						
Replacement	LW2-Z-1a. 4. 6a. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-2	×		×			
	3-4	×			×		
4	5-6		×				
	7-8					×	
6a	9-10	×		×			
	11-12						
6a	13-14		×				
	15-16	×			×	×	
40	17-18	×			×		
	19-20	×				×	
20	21-22		×	×			
	23-24		×	×			
20	25-26	×			×		
	27-28	×				×	

Switch Model	HTW□-164QJ6951/4						
Replacement	LW2-Z-1a. 4. 6a/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-3	×		×			
	2-4	×			×		
4	5-8		×				
	6-7					×	
6a	9-10		×	×			
	10						
6a	9-12		×				
	11-10	×			×	×	

Switch Model	HTW□-164QJ6962/4						
Replacement	LW2-Z-1a. 4. 20/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45°	0°	-90°	-135°	
1a	1-3	×		×			
	2-4	×			×		
4	5-8		×				
	6-7					×	
20	9-10		×	×			
	9-11			×	×		
20	12-10	×				×	

Switch Model	HTW□-164QJ6943/4						
Replacement	LW2-Z-4. 4. 40/F8						
Panel Mark	After opening	Pre-closing	Closing	After closing	Pre-opening	Opening	
Handle Direction	←	↑	↗	↑	←	↘	
Handle Angle	-90°	0°	45° →	0°	-90°	-135° →	
1a	1-3		×				
	2-4					×	
4	5-8		×				
	6-7					×	
40	9-10		×		×		
	11-10	×					×
	9-12			×	×		

Adjusting switch of capacitor cabinet

Adjusting switch of 6-way capacitor main cabinet

Switch Model	HTW□-163F8133/5							
Panel Mark	Automatic	0	1	2	3	4	5	6
Handle Angle	30°	0°	30°	60°	90°	120°	150°	180°
1-2		×	×	×	×	×	×	×
3-4	×							
5-6	×							
7-8			×	×	×	×	×	×
9-10				×	×	×	×	×
11-12					×	×	×	×
13-14						×	×	×
15-16							×	×
17-18								×
19-20								

Adjusting switch of 6-way capacitor auxiliary cabinet

Switch Model	HTW□-163F7291/3						
Panel Mark	0	1	2	3	4	5	6
Handle Angle	90°	60°	30°	0°	30°	60°	90°
1-2		×	×	×	×	×	×
3-4			×	×	×	×	×
5-6				×	×	×	×
7-8					×	×	×
9-10						×	×
11-12							×

Adjusting switch of 8-way capacitor main cabinet

Switch Model	HTW□-163FA048/6									
Panel Mark	Automatic	0	1	2	3	4	5	6	7	8
Handle Angle	30°	0°	30°	60°	90°	120°	150°	180°	210°	240°
1-2		×	×	×	×	×	×	×	×	×
3-4	×									
5-6	×									
7-8			×	×	×	×	×	×	×	×
9-10				×	×	×	×	×	×	×
11-12					×	×	×	×	×	×
13-14						×	×	×	×	×
15-16							×	×	×	×
17-18								×	×	×
19-20									×	×
21-22										×
23-24										

Adjusting switch of 8-way capacitor auxiliary cabinet

Switch Model	HTW□-163F9092/4								
Panel Mark	0	1	2	3	4	5	6	7	8
Handle Angle	90°	60°	30°	0°	30°	60°	90°	120°	150°
1-2		×	×	×	×	×	×	×	×
3-4			×	×	×	×	×	×	×
5-6				×	×	×	×	×	×
7-8					×	×	×	×	×
9-10						×	×	×	×
11-12							×	×	×
13-14								×	×
15-16									×

Adjusting switch of 10-way capacitor main cabinet

Switch Model	HTW□-163TM706/7											
Panel Mark	Automatic	0	1	2	3	4	5	6	7	8	9	10
Handle Angle	30°	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°
1-2		×	×	×	×	×	×	×	×	×	×	×
3-4	×											
5-6	×											
7-8			×	×	×	×	×	×	×	×	×	×
9-10				×	×	×	×	×	×	×	×	×
11-12					×	×	×	×	×	×	×	×
13-14						×	×	×	×	×	×	×
15-16							×	×	×	×	×	×
17-18								×	×	×	×	×
19-20									×	×	×	×
21-22										×	×	×
23-24											×	×
25-26												×
27-28												

Adjusting switch of 10-way capacitor auxiliary cabinet

Switch Model	HTW□-163FB058/5											
Panel Mark	0	1	2	3	4	5	6	7	8	9	10	
Handle Angle	90°	60°	30°	0°	30°	60°	90°	120°	150°	180°	210°	
1-2		×	×	×	×	×	×	×	×	×	×	
3-4			×	×	×	×	×	×	×	×	×	
5-6				×	×	×	×	×	×	×	×	
7-8					×	×	×	×	×	×	×	
9-10						×	×	×	×	×	×	
11-12							×	×	×	×	×	
13-14								×	×	×	×	
15-16									×	×	×	
17-18										×	×	
19-20											×	

Common on/off switches(I)

Contact TaHTe for1 to 10-section Switches				
Section Number	Panel Mark	1	2	Switch Model
	Handle Angle	0°	45°	
1 Section	1-2	×		HTW□-164C2196/1
	3-4		×	
	5-6	×		
2 Section	7-8		×	HTW□-164C2165/2
	9-10	×		
3 Section	11-12		×	HTW□-164C2169/3
	13-14	×		
4 Section	15-16		×	HTW□-164C2219/4
	17-18	×		
5 Section	19-20		×	HTW□-164C2206/5
	21-22	×		
6 Section	23-24		×	HTW□-164C2190/6
	25-26	×		
7 Section	27-28		×	HTW□-164C2192/7
	29-30	×		
8 Section	31-32		×	HTW□-164C2240/8
	33-34	×		
9 Section	35-36		×	HTW□-164C2241/9
	37-38	×		
10 Section	39-40		×	HTW□-164C2177/10

HTW Series CAM Switch

Contact TaHTe for1 to 10-section Switches				
Section Number	Panel Mark	1	2	Switch Model
	Handle Angle	0°	45°	
1 Section	1-2		×	HTW□-164C2227/1
	3-4		×	
	5-6		×	
2 Section	7-8		×	HTW□-164C2181/2
	9-10		×	
3 Section	11-12		×	HTW□-164C2217/3
	13-14		×	
4 Section	15-16		×	HTW□-164C2235/4
	17-18		×	
5 Section	19-20		×	HTW□-164C2173/5
	21-22		×	
6 Section	23-24		×	HTW□-164C2174/6
	25-26		×	
7 Section	27-28		×	HTW□-164C2239/7
	29-30		×	
8 Section	31-32		×	HTW□-164C2176/8
	33-34		×	
9 Section	35-36		×	HTW□-164C2225/9
	37-38		×	
10 Section	39-40		×	HTW□-164C2194/10

Contact TaHTe for1 to 10-section Switches				
Section Number	Panel Mark	1	2	Switch Model
	Handle Angle	0°	45°	
	1-2		×	HTW□-164C2163/1
	3-4	×		
	5-6		×	
	7-8	×		HTW□-164C2161/2
	9-10		×	
	11-12	×		HTW□-164C2185/3
	13-14		×	
	15-16	×		HTW□-164C2244/4
	17-18		×	
	19-20	×		HTW□-164C2245/5
	21-22		×	
	23-24	×		HTW□-164C2246/6
	25-26		×	
	27-28	×		HTW□-164C2243/7
	29-30		×	
	31-32	×		HTW□-164C2247/8
	33-34		×	
	35-36	×		HTW□-164C2333/9
	37-38		×	
	39-40	×		HTW□-164C2316/10

Contact TaHTe for1 to 10-section Switches				
Section Number	Panel Mark	1	2	Switch Model
	Handle Angle	0°	45°	
	1-2		×	HTW□-164A2178/1
	3-4	×		
	5-6		×	
	7-8	×		HTW□-164A2164/2
	9-10		×	
	11-12	×		HTW□-164A2216/3
	13-14		×	
	15-16	×		HTW□-164A2170/4
	17-18		×	
	19-20	×		HTW□-164A2236/5
	21-22		×	
	23-24	×		HTW□-164A2222/6
	25-26		×	
	27-28	×		HTW□-164A2223/7
	29-30		×	
	31-32	×		HTW□-164A2224/8
	33-34		×	
	35-36	×		HTW□-164A2351/9
	37-38		×	
	39-40	×		HTW□-164A2352/10

Common on/off switches (II)

Contact TaHTe for1 to 10-section Switches					
Section Number	Panel Mark	1	0	2	Switch Model
	Handle Angle	45°	0°	45°	
1 Section	1-2	×			HTW□-164D3508/1
	3-4			×	
2 Section	5-6	×			HTW□-164D3Q46/2
	7-8			×	
3 Section	9-10	×			HTW□-164D3R48/3
	11-12			×	
4 Section	13-14	×			HTW□-164D3S54/4
	15-16			×	
5 Section	17-18	×			HTW□-164D3S70/5
	19-20			×	
6 Section	21-22	×			HTW□-164D3R92/6
	23-24			×	
7 Section	25-26	×			HTW□-164D3R15/7
	27-28			×	
8 Section	29-30	×			HTW□-164D3R18/8
	31-32			×	
9 Section	33-34	×			HTW□-164D3Q34/9
	35-36			×	
10 Section	37-38	×			HTW□-164D3303/10
	39-40			×	

Contact TaHTe for1 to 10-section Switches					
Section Number	Panel Mark	1	0	2	Switch Model
	Handle Angle	45°	0°	45°	
1 Section	1-2			×	HTW□-164D3Q40/1
	3-4	×			
2 Section	5-6			×	HTW□-164D3S26/2
	7-8	×			
3 Section	9-10			×	HTW□-164D3409/3
	11-12	×			
4 Section	13-14			×	HTW□-164D3Q03/4
	15-16	×			
5 Section	17-18			×	HTW□-164D3211/5
	19-20	×			
6 Section	21-22			×	HTW□-164D3720/6
	23-24	×			
7 Section	25-26			×	HTW□-164D3Q25/7
	27-28	×			
8 Section	29-30			×	HTW□-164D3072/8
	31-32	×			
9 Section	33-34			×	HTW□-164D3301/9
	35-36	×			
10 Section	37-38			×	HTW□-164D3Q35/10
	39-40	×			

Contact TaHTe for1 to 10-section Switches					
Section Number	Panel Mark	1	0	2	Switch Model
	Handle Angle	45° →	0° ←	45°	
1 Section	1-2	×			HTW□-164B3R27/1
	3-4			×	
2 Section	5-6	×			HTW□-164B3P62/2
	7-8			×	
3 Section	9-10	×			HTW□-164B3R50/3
	11-12			×	
4 Section	13-14	×			HTW□-164B3P88/4
	15-16			×	
5 Section	17-18	×			HTW□-164B3Q09/5
	19-20			×	
6 Section	21-22	×			HTW□-164B3Q18/6
	23-24			×	
7 Section	25-26	×			HTW□-164B3R14/7
	27-28			×	
8 Section	29-30	×			HTW□-164B3R17/8
	31-32			×	
9 Section	33-34	×			HTW□-164B3V62/9
	35-36			×	
10 Section	37-38	×			HTW□-164B3V63/10
	39-40			×	

Contact TaHTe for1 to 10-section Switches					
Section Number	Panel Mark	1	0	2	Switch Model
	Handle Angle	45° →	0° ←	45°	
1 Section	1-2			×	HTW□-164B3P50/1
	3-4	×			
2 Section	5-6			×	HTW□-164B3767/2
	7-8	×			
3 Section	9-10			×	HTW□-164B3S36/3
	11-12	×			
4 Section	13-14			×	HTW□-164B3429/4
	15-16	×			
5 Section	17-18			×	HTW□-164B3709/5
	19-20	×			
6 Section	21-22			×	HTW□-164B3068/6
	23-24	×			
7 Section	25-26			×	HTW□-164B3C43/7
	27-28	×			
8 Section	29-30			×	HTW□-164B3071/8
	31-32	×			
9 Section	33-34			×	HTW□-164B3225/9
	35-36	×			
10 Section	37-38			×	HTW□-164B3V61/10
	39-40	×			

Voltage Measurement Change-over Switch (I)

Conversion measurement of three-phase phase voltage with “zero” position and N line

Switch Model		HTW□-16YH1/3			
Panel Mark		0	A	B	C
Handle Angle		0°	90°	180°	270°
A	1-2		×		
C	3-4				×
B	5-6			×	
N	9-10		×	×	×

Conversion measurement of three-phase phase voltage with “zero” position

Switch Model		HTW□-16YH2/3			
Panel Mark		0	A	B	C
Handle Angle		0°	90°	180°	270°
B	1-2		×	×	
A	5-6				×
			×		
C	11-12			×	×

Conversion measurement of three-phase phase voltage with “zero” position

Switch Model		HTW□-16YH3/3			
Panel Mark		0	AB	BC	CA
Handle Angle		0°	90°	180°	270°
A	1-2		×		
B	5-6			×	
			×		
C	9-10				×
	11-12			×	

Conversion measurement of three-phase line voltagewith no “zero” position

Switch Model		HTW□-16YH4/2		
Panel Mark		AB	BC	CA
Handle Angle		90°	0°	90°
B	1-2	×	×	
C	3-4		×	×
A	5-6			×
	7-8	×		

Conversion measurement of three-phase phase voltage with “zero” position and N line

Switch Model		HTW□-16YH11/2			
Panel Mark		0	A	B	C
Handle Angle		0°	90°	180°	270°
A	1-2		×		
C	3-4			×	
B	5-6				×
N	7-8		×	×	×

Conversion measurement of three-phase phase voltage with “zero” position andno N line

Switch Model		HTW□-16YH12/2			
Panel Mark		0	AB	BC	CA
Handle Angle		0°	90°	180°	270°
A	1-2				×
B	3-4		×		
			×	×	
C	5-6			×	×
	7-8				

Conversion measurement of three-phase phase voltage and three-phase line voltagewith “zero” position andN line

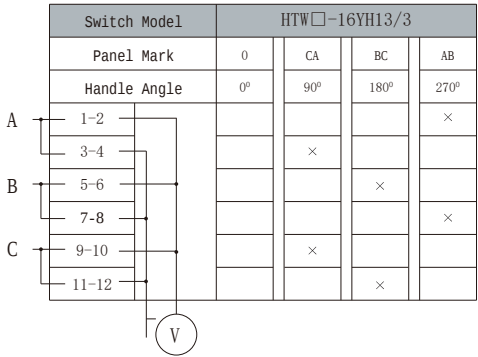
Switch Model		HTW□-16YH5A/3						
Panel Mark		UAC	UBC	UAB	0	UA	UB	UC
Handle Angle		135°	90°	45°	0°	45°	90°	135°
	1-2							×
	3-4	×	×					
	5-6		×				×	
	7-8			×				
	9-10	×		×		×		
	11-12					×	×	×

Conversion measurement of three-phase phase voltage and three-phase line voltagewith “zero” position andN line

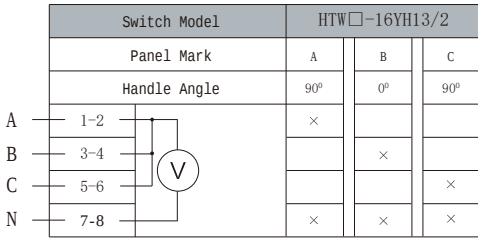
Switch Model		HTW□-16YH5/3						
Panel Mark		CA	BC	AB	0	A	B	C
Handle Angle		135°	90°	45°	0°	45°	90°	135°
C	1-2		×					×
	3-4	×						
B	5-6						×	
	7-8		×	×				
A	9-10	×		×		×		
N	11-12					×	×	×

Voltage Measurement Change-over Switch (II)

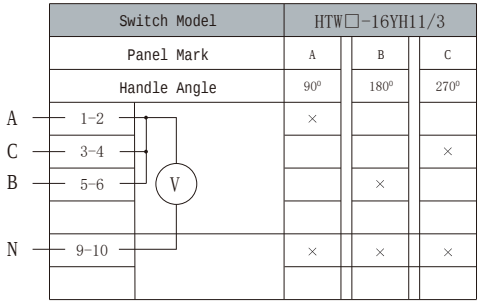
Conversion measurement of three-phase phase voltage and line voltage with “zero” position



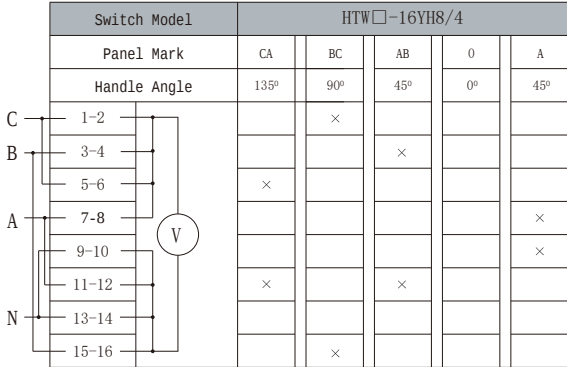
Conversion measurement of three-phase phase voltage with no “zero” position and N line



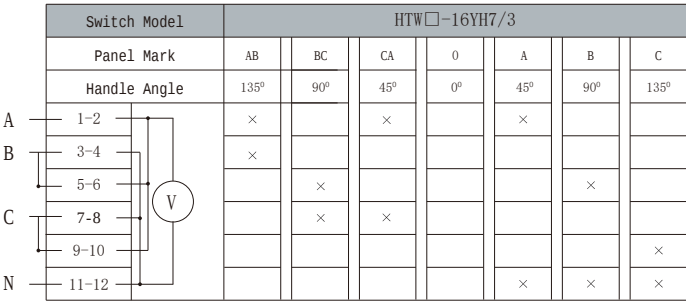
Conversion measurement of three-phase phase voltage with N line



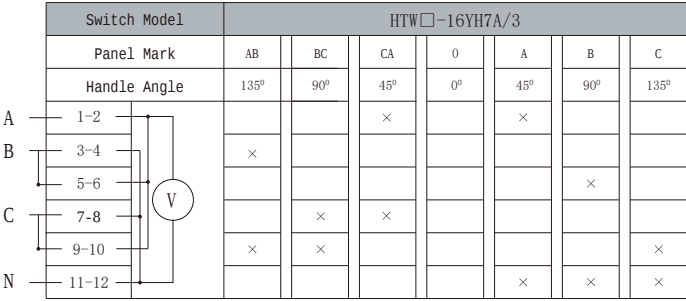
Conversion measurement of one-phase phase voltage and three-phase line voltage with “zero” position and N line



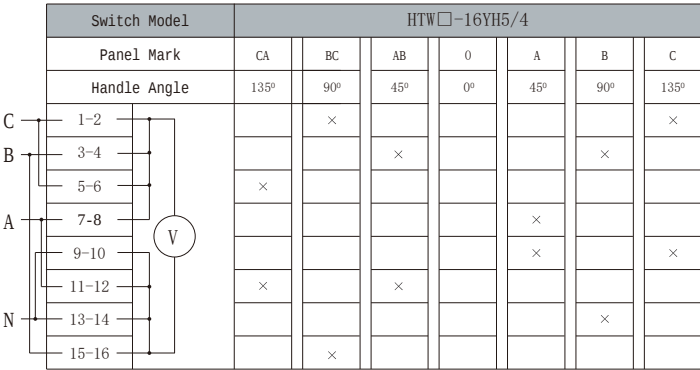
Conversion measurement of three-phase phase voltage and line voltage with “zero” position



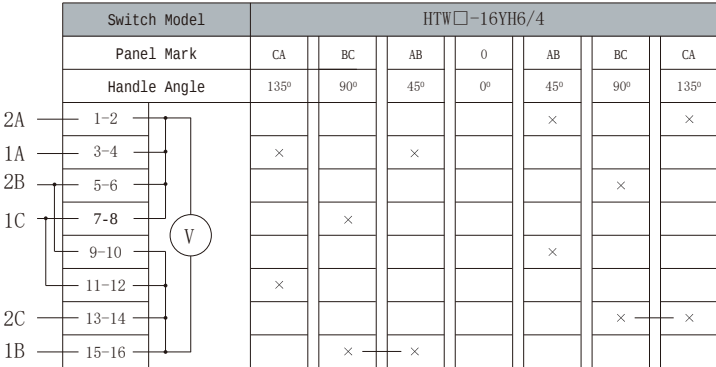
Conversion measurement of three-phase phase voltage and three-phase line voltage with “zero” position and N line



Conversion measurement of three-phase phase voltage and three-phase line voltage with “zero” position and N line

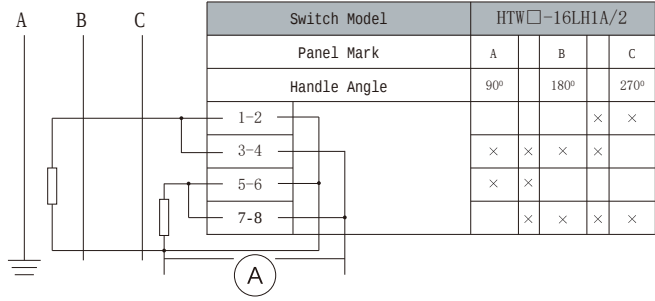


Conversion measurement of respective three-phase line voltage of the two power sources with “zero” position

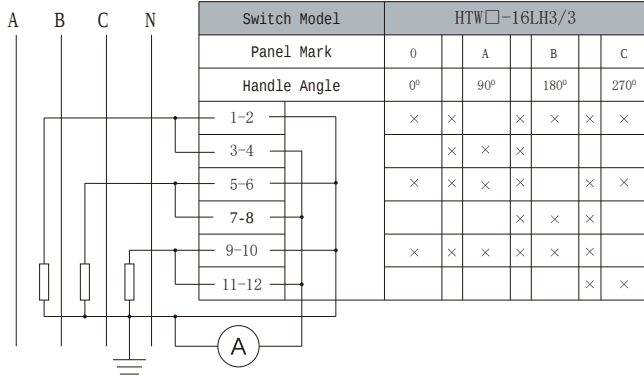


Current measurement change-over switch

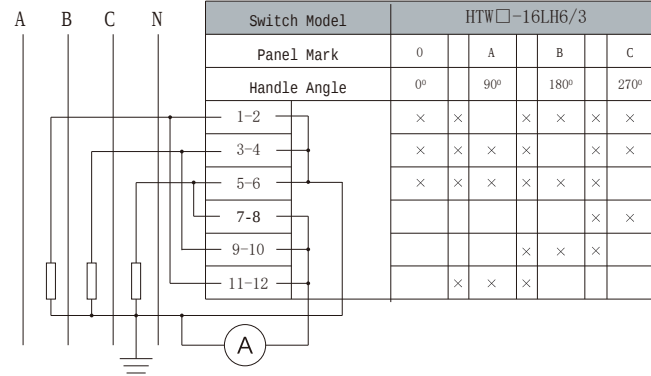
Conversion measurement of three-phase current with two transformers and no N line



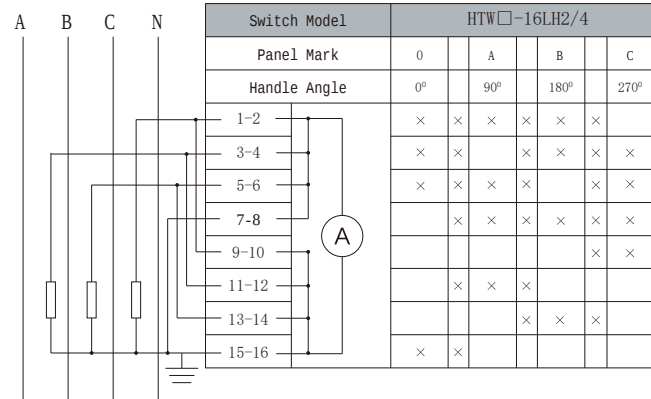
Conversion measurement of A,B, C & N three-phase four-line current with three transformers and N line



Conversion measurement of A,B & C three-phase current with three transformers and N position

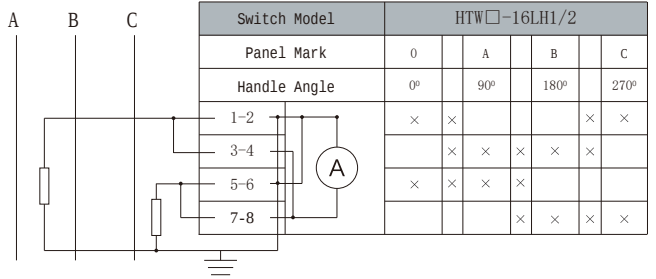


Conversion measurement of A, B & C three-phase current with three transformers and N position

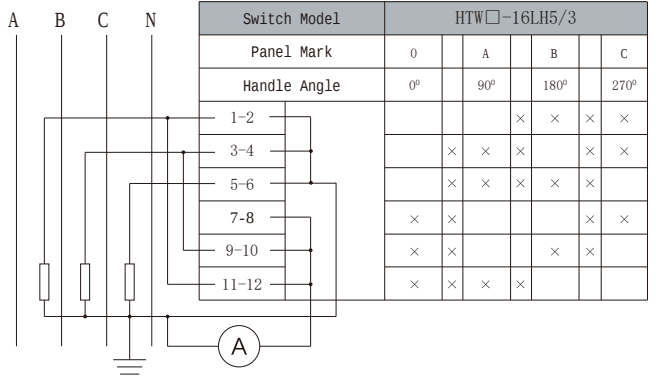


HTW Series CAM Switch

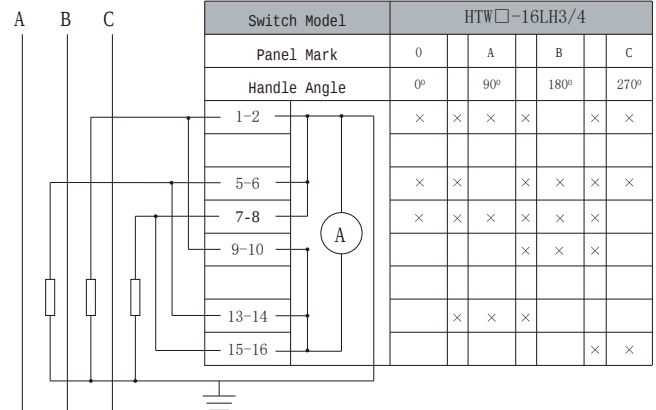
Conversion measurement of three-phase current with two transformers, “zero” position and no N line



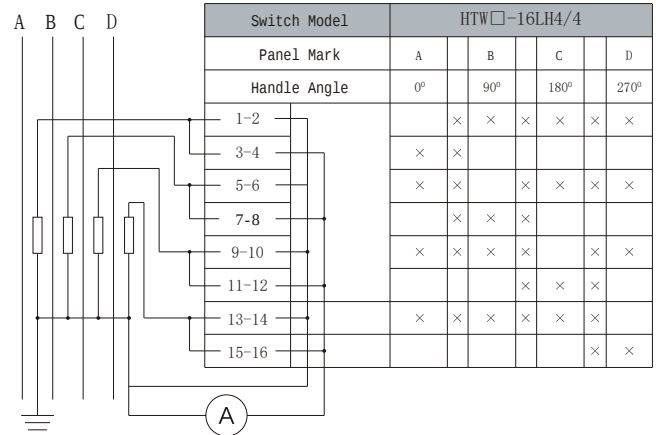
Conversion measurement of A,B & C three-phase current with three transformers and “zero” position



Conversion measurement of A, B & C three-phase current with three transformers and “zero” position



Conversion measurement of A,B, C & D four-line current with four transformers





SUZHOU HUNTEC INT'L TRADING CO., LTD.

Add.: 36 zijing street, Mudu Town, Wuzhong District,Suzhou,
 Jiangsu Province, China
 Factory: Jiangxi Huntet Electrical Technology Co.,Ltd.
 Add.:1829th Yangguang Avenue, Xinyu, Jiangxi Province, China

Email: info@cnhuntec.com
Tel: +86-0512-65122750
Website: www.cnhuntec.com
www.chikucontact.com



©Change-over Switch Ordering Template

HTank Contact TaHTe

Customer Name: _____ Contact Person: _____

Contact Method: (Tel) _____ (Fax) _____

Basic Parameter Description of Change-over Switch: _____

Conventional thermal current: A

Function Model Selection: _____ Handle Selection: _____ (Fill in Codes)

[illegible]

Change-over Switch Model (To be filled in by the manufacturer):