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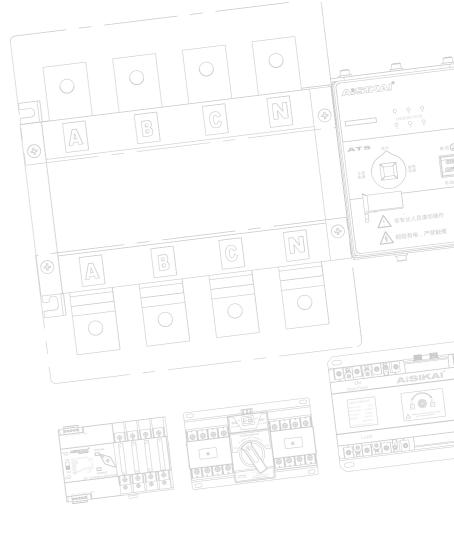




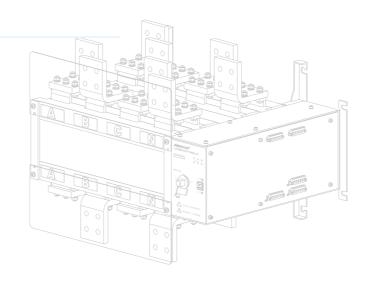














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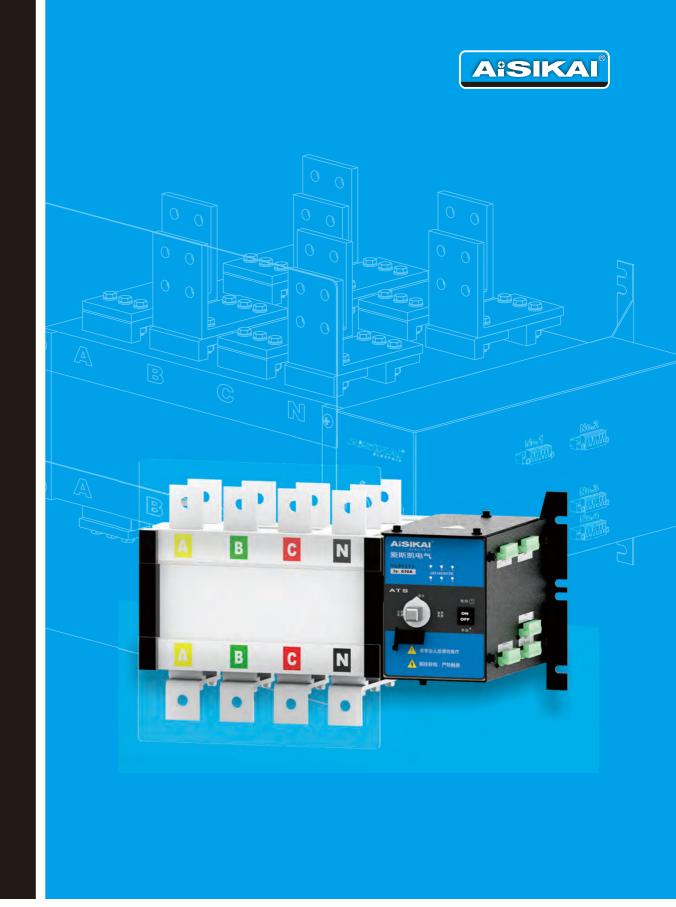
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## COMPANYPROFILE

Since established in 2007, JIANGSU AISIKAI ELECTRIC CO.,LTD has been committed to the R&D, manufacture and marketing of the high-quality low voltage electric switch. Our product line covers level I、II、III power distribution field. We are awarded as the "National High Tech Enterprise" and "Contract-respecting and Promise-keeping Enterprise" and own UKAS ISO9001 Quality Management System Certification, the European Certification CE and SGS Global Qualified Supplier Certification. So far, We have several invention patents, utility model patent,appearance patent All products have Chinese Compulsory Certification CCC. From 2014, we have been recognized as "Yangzhou City Engineering Technology Center"and" Chinese Adopting International Standard Unit".

"QUALITY 、SERVICES 、REPUTATION 、INNOVATION" is AISIKAI company everlasting enterprise development concepts, we actively pursue progress, always standing inthe customer's point of view and improvement, we believe, AISIKAI IN your support and love, will flourish, vibration of wings and fly!













## **Intelligent Dual Power Automatic Transfer Switch**

#### Wide Range & Perfect Function

AISIKAI Automatic Transfer Switch consists of SKT, SKQ and ASKQ series. We provide perfect solution with product from general performance CB class to high performance PC class, from none-frequently transfer to frequently transfer. Our product covers a wide current range from 6A to 6300A innovatively, and easily meets the various requirements of load in civil, industrial and commercial fields. Our product is suitable for 1, 2, 3 classes of low voltage power distribution system. Our perfect feature configuration satisfies the power switching between utility-utility, utilitygenerator, generator-generator and more load's uninterruptible backup power supply. Our product is in compliance with related IEC/GB technical standards, is manufactured according to international standards, and has obtained Chinese compulsory certificate (CCC) and European certificate (CE).







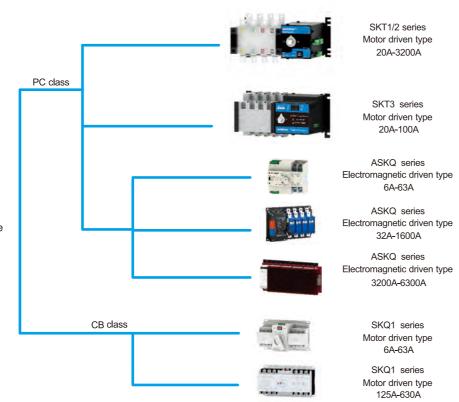




ATS product line

### Applicable standard

GB10963.1-2005 IEC60898-1-2002













#### **High Technology Product**

SKT series ATS with leading structural design and innovative patented technology, has obtained the National High-Technology Product Certificate (Reference Number 141081G0537N), is in accordance with the standards of IEC60947-1/ IEC60947-3/ IEC60947-6-1/GB14048.1/GB14048.3/ GB14048.11, follows international production standards and has obtained Chinese compulsory certificate (CCC) and European certificate (CE).

#### **Ultra-thin Volume, Residential Star Product**

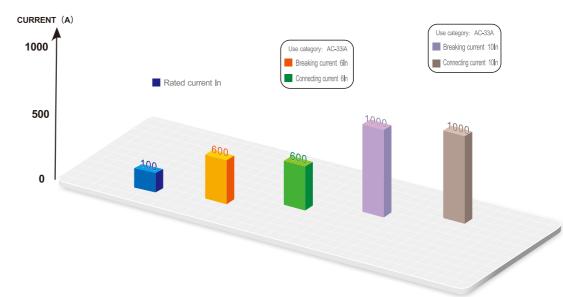
ASKQ series (6A~63A) ATS is our new product developed according to the international residential demand. It has four working modes: Automatic, Remote control, Manual and Lock. When companied with mini-type generator, ASKQ satisfies the uninterruptible backup power supply requirements of places like family residence, villa, private club and etc.

#### **Ultra-high Current, Industrial Specialized Product**

ASKQ (3200A~6300A) series ATS is one high performance product developed for the low voltage high current special industrial equipment. It is suitable for industries like mining, oil exploitation and so on, and also works as main power switch in the civil/commercial primary distribution system.

#### **Highest Grade Usage Category AC-33A**

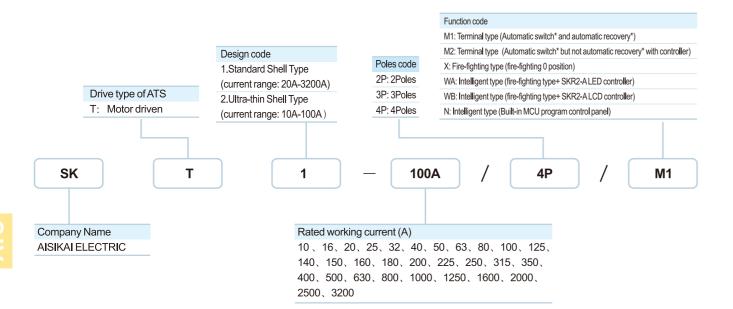
SKT series automatic transfer switch(ATS) reaches the highest AC-33A, covers most of the mixed loads requirements in areas like civil, industry, aviation, traffic, etc. ATS can be operated frequently. Its breaking and connecting capacity is up to 10 times the rated current, which is 67% higher than the Grade AC-33iA ATS.







## SKT1, SKT2 series PC class intelligent ATS (motor driven type) quick selection table



## **Qualification documents**



#### **PRODUCT OVERVIEW**



 SKT series dual power automatic transfer switch is the most advanced third generation product. Its class is PC and its usage category is AC-33A frequently operate electrical transfer switch.

It's suitable to be used in 50/60Hz 10A-3200A low voltage AC power distribution system for reliable transfer between two power supplies. It has four working modes: Automatic, Electric, Emergency Manual and Locking.

#### Classification

#### Classify by volume

Standard type: Type 1, 20A-3200A, 5 kinds volume specification Ultra-thin type: Type 2, 10A-100A, 1 kind volume specification Note: Ultra-thin type is 50% smaller than the standard type.

#### Classify by function

M1: Terminal type (Automatic switch\* and automatic recovery\*)

M2: Terminal type (Automatic switch\* but not automatic recovery\* with controller)

X: Fire-fighting type (fire-fighting 0 position)

WA: Intelligent type (fire-fighting type+ SKR2-A LED controller)

WB: Intelligent type (fire-fighting type+ SKR2-ALCD controller)

Normal working conditions and installation methods

N: Intelligent type (Built-in MCU program control panel)

#### Classify by poles

2P: 2 poles, 1 phase and 2 lines

3P: 3 poles, 3 phases

4P: 4 poles, 3 phases and 4 lines

### Application field







Commercial

#### Applicable standard

GB/T14048. 11 IEC60947-6-1

Category	Requirements
Operating temperature	-20 to 45 $^{\circ}\! C$ . The average value for 24 hours shall not exceed +35 $^{\circ}\! C$ ;
Operating humidity	The average humidity at +40°C shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
IP rating	IP20
Storage requirements	To be stored under -30 to 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year
Packing	630A and below packed in carton boxes; 800A and above packed in wooden boxes
Stacking	630A and below stacked no more than 5 layers; 800A and above stacked no more than 3 layers.
Installation	Vertically or horizontally. Upside down installation is not allowed
Wiring	Standard wiring is upper in and lower out. Wiring reversely (lower in and upper out) can be customized.





#### **ADVANTAGE OF RAW MATERIALS**



99.9% High Purity T2 Copper Material

● 99.9% High Purity T2 Copper Material

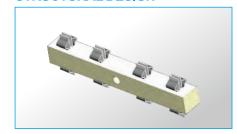
The moving and fixed contacts are manufactured with T2 copper material. The surfaces are processed with pure silver electroplating technology, achieving a much higher breaking capacity than the wielding silver-point switches.

The main body is made of glass fiber reinforcing unsaturated polyester material(DMC), which has extremely high mechanical strength and insulation performance. Compared with the ordinary ABS, DMC has advantages in high strength, corrosion resistance and fire retardancy.

Select polychloroprene rubber insulation damp & heat type motor or permanent-magnet synchronous motor (patent technology), which is large in torque, low in noise, long in service life. Motor is provided with overheating and over-current self-restoring protection, and is better than that of the electromagnet in the comprehensive performance.

The electronic components adopted are those of the well-known brands. The master control boards are produced in the domestic first-tier electronic OEM factory. The boards are treated with three-proofing process, thus making them reliable in use, high in performance and long in service life.

#### STRUCTURAL DESIGN



Double-row composite contacts

#### Double-row composite contacts

A double-row composite design is adopted for the moving contacts, the conductive area of which is twice as much as that of the single-sided contact switches.

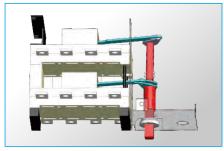
The moving contact makes reciprocating motion in the transverse direction, which has the advantages of zero arc and high safety factor as compared with the longitudinal separation type switches.

#### Double interlocking mechanically and electrically

The precise mechanical design ensures complete separation between the two power supplies and the logical management of the control circuit board achieves the electrical interlocking.

All the products of this series have a safety zero position, which is used to cut off both the two power supplies simultaneously, thus making them better than the two-stage switches in the safety performance.

#### **FUNCTIONAL ADVANTAGES**



Mechanical interlocks

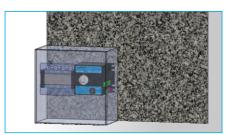
#### Prevention of early failure and damage to equipment

In each piece of the moving contact, a high strength spring leaf made of the silicon manganese steel is fixed reliably in the base and the pressure between the moving and the fixed contacts is kept constant during the transfer process and after the closing of the switch.

The precise safe distance can isolate effectively the power supply from the load and meet the creepage requirements, is provided with the obvious on-off position display and can be operated under a load.

This patented function is used to prevent the equipment from being damaged caused by the zero line potential drift, when the switch is switching (optional function)

### **PERFORMANCE ADVANTAGES**



Ultra-thin design

#### Service life

Mechanical life: ≥12000 times; Electrical life: ≥7500 times

#### High breaking and making capacity

10 times rated current breaking capacity, 10 times rated current making capacity, 8kV rated withstand impulse voltage, 75kA rated limit short-circuit current

#### High-grade use category

AC-33A use category, can be frequently operated, has a much wider scope of application than AC-33B none-frequently operable type.

The good electrical properties can meet the technical requirements of the Grade I and  $\, \mathrm{II}$  power distribution systems and have a higher impact resistance than that of the circuit breaker type ATS to avoid the master switch from tripping caused by the short-circuit of a single load.

The precise mechanical design achieves an ultra-thin volume and the volume of an electrical box assembled is only 25% of a floor tile (60\*60) in size.

#### STRUCTURE INTRODUCTION

Switch body the standard equipped with upper incoming lines and lower outgoing lines

Main powe input copper Used for fixing power cable or busbar

Standby power input copper bar Used for fixing the main power cable or busbar

Electronic control unit of transfer switch: including main control circuit board and driving motor Patent No. ZL 2011 2 0161985.8

ZL 2012 2 0263204.1

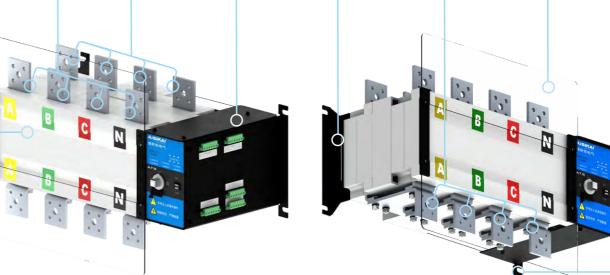
Left installation bracket: Matched with the right installation bracket and used for fixing

switches

Load power output integrated copper bars, used for fixing the load cables or busbars Patent No. ZL 2010 3 0242257.0 ZL 20102 0664285.6

Safety guard installation hole, used for fixing the safety guard plate

Right installation Matched with the left installation bracket and used for fixing



Manual emergency handle interface: used to turn the switch manually to switchove the power supply at an emergency situation

For LED indicators. see ATS-14 for details

Electric/emer manual mode selection button

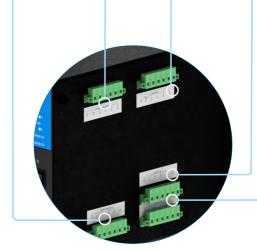
Terminal No.5: Expansion port, no signal output for standard type, optional to install selfstartup signal output and locking-up indication and

Terminal No.1: Electronic control unit power supply

Terminal No.2: Transferring control signal input (passive control)

Terminal No.3: Position feedback signal output 1 (active output for M type and passive output for other types)





No 1-5 wiring terminals are equipped according to the different types of the switches. See the Terminal **Functions** Introduction for details.

Terminal No.4: Position feedback signal output 2 (passive output)





#### **FUNCTION CODE TABLE**

Application type	Terminal type	Fire-fighting type	Intelligent type	
Function Code	M	X	W(External controller type)	N(Built-in MCU program control panel)
Structure				
Electrical two-Stage type	Υ			
Electrical three-Stage type		Υ	Y	Υ
Manual three-Stage type	Υ	Υ	Υ	Υ
Control mode				
Controller manual/ automatic control			Υ	Υ
Remote electric control (external control)		Υ		
Emergency manual	Υ	Υ	Υ	Υ
Fully automatic switching	Y(without fault detection)	External control	Y(with three phases fault detection)	Y(with three phases fault detection)
Locking mode	Optional	Optional	Optional	Optional
Fire-fighting signal (forced to zero)		Passive closed signal	See ATSC-03 for details	Active DC24V signal
Main/standby power monitoring and protect	ction			
Overvoltage protection	Single phase (optional)	Single phase (optional)	Three phases (adjustable range)	Three phases (adjustable range)
Undervoltage protection	Single phase (optional)	Single phase (optional)	Three phases (adjustable range)	Three phases (adjustable range)
Lost phase protection			Υ	Υ
Frequency protection			See ATSC-03 for details	Υ
Phase angle detection				Υ
N-phase fault alarm				Υ
Phase sequence inconsistency alarm				Υ
Application function				
Automatic switch* and automatic recovery*	M1 (Standard products)	External control	Υ	Υ
Automatic switch but not automatic recovery	M2 (Customized)	External control	See ATSC-03 for details	Settable
Main power supply is priority	Υ	External control	Υ	Υ
Standby power supply is priority	0s或2s(Undervoltage optional)	Optional	Settable	Settable
Generator self-start signal (passive)		Optional	Υ	Υ
Transfer delay		External control	Adjustable	Adjustable
Power failure delay setting			Υ	Υ
Power recovery delay setting			Υ	Υ
Alarm records storage			See ATSC-03 for details	Υ
Communication			See ATSC-03 for details	Υ
Feedback signal	AC220V(I, II)	Passive(I、II、0)	DC5V(I, II, 0)	
Display function				
Switch position status display	External indicator light	External indicator light	Υ	Υ
Voltage display			See ATSC-03 for details	Υ
Frequency display			See ATSC-03 for details	Υ
Current display			See ATSC-03 for details	Υ

Note: The W-type is composed of a controller of corresponding functions and an X-type switch.

Y means having this function.

Automatic switch means automatic switch to standby power when main power fails.

Automatic recovery means automatic switch back to main power when main power recovers.

#### MAIN TECHNICAL PARAMETERS

	SKT2 SERIES	SKT2 SERIES SKT1 SERIES													
Shell frame grade current (Inm)	100A	160A		250A	630A			160	0A		3200	4			
Rated current (In)	100	125A	160	250 400 6		630	800	1000 12	50 1600	2000	2500	320			
Conventional thermal current (lth)	10,16,20,25, 32,40,50,63, 80,100A	63,80,10 125,140 150,160		160,180,200, 225,250A		160,180,200, 225,250,315, 350,400,500, 630A			,1000,1 0A	250,	, 2000,2500,3200 <i>A</i>				
Rated insulation voltage of copper bar (Ui)		660V				800V									
Rated impulse withstand voltage (Uimp)			6KV				8KV								
Rated operating voltage of copper bar (Ue)		AC400V													
Use category					AC-3	3A									
Rated operating current of copper bar (le)	10,16,20,25,32,40,50	,63,80,100,	125,140,15	0,160,180,200,225,	250,3°	50,315,350,400,500,630 800,1000,1250,1600,2000,250						,2500,	3200		
Rated making capacity					1	10le									
Rated breaking capacity			10le												
Rated limit short-circuit current	7KA	13	13KA 35KA						50K	<b>KA</b>		75KA			
Transferring time I – II or II – I		1.	1.28 0.6				S		1.2	;		2.48			
Rated operating voltage of the control power supply (Us)	AC220V(Special vo	Itage DC24	age DC24V、DC110V、DC220V、AC110V、AC280V				V)								
Start		4	40W		325W		325W		325W		V 40	W 440V	1	600W	
Normal		1	8W			62W		74W	9	W 98W		120W			
Net weight(kg) 4 poles	3.5	5.3	5.5	7	7 17 17.5		37		44		98				

Note: The parameters of SKT1 series 20A-100A is exactly same as the SKT1 125A product.

#### SCHEMATIC DIAGRAM OF CORRECT INSTALLATION METHOD



Best (front installation)



Right (vertical installation)



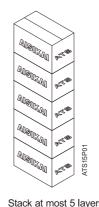
Right (back installation)

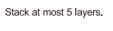


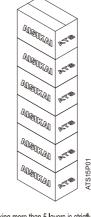
Wrong (inverted installation) 



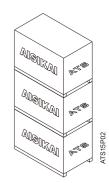
### SCHEMATIC DIAGRAM OF PACKAGING STACKED



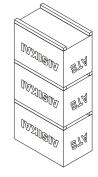




Stacking more than 5 layers is strictly prohibited.



Schematic diagram of wooden box packaging stacked



Upside-down stacking is strictly prohibited.







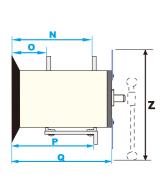


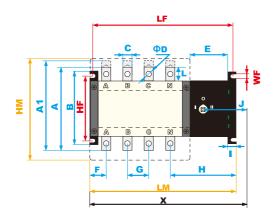


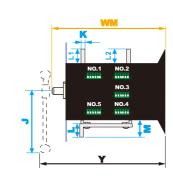


#### **OUTLINE DRAWING 1**

20A-1600A outline dimensions

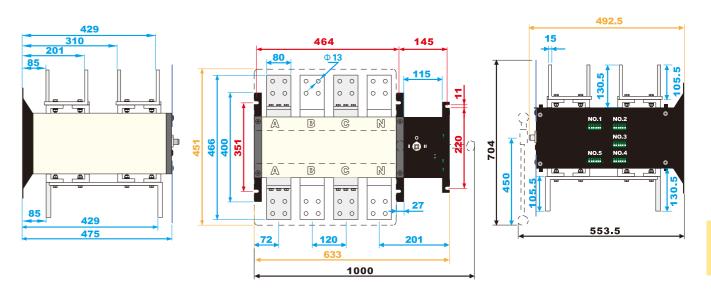






#### **OUTLINE DRAWING 2**

2000A-3200A outline dimensions



#### 20A-1600A outline and installation dimensions table

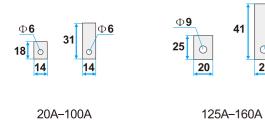
Series	Current range	l l	nstallatio	n data	Maximu	ım size of t	the body		Ot	her deta	iled dime	ensions	of switch	ı				Other	detailed	dimensi	ons of s	witch						Refere	nce dim	nensions
		LF	WF	HF	LM	WM	НМ	A	A1	В	С	Φ <b>D</b>	E	F	G	Н	l I	J	K	L	L1	L2	M	N	0	P	Q	X	Υ	Z
SKT2	20-100A	225	6.5	84	244	138	136	126	115	106	14	6	103	20	30	134	16	142	2. 5	20	18	31	26	87.5	37.5	89	114	303.5	173	210
	125-160A	271	6.5	110	290	188	180	155	140	130	20	9	103	30	36	152	18	188	3. 5	25	25	41	31	133	56	133.5	167	392.5	220	279
	250A	334	6.5	110	348	194	216	192	166	130	25	11	103	38	50	160	18	188	3. 5	28. 5	30	51	36	136	56	138	171	460	227	303
	400A	416	8.5	180	435	262	324	270	-	200	40	13	125.5	48	64	195	24	188	5	45	51	51	59	187	77	205	237	522	293	365
	630A	416	8.5	180	435	262	324	270	-	200	40	13	125.5	48	64	195	24	188	6	45	51	51	59	187	77	205	237	522	293	365
01/74	800A	608	11	220	633	321	451	350	-	250	63	15	120	72	120	201	27	473	7	72	66	66	88	247	103	254	298.5	1000	381	704
SKT1	1000A	608	11	220	633	321	451	350	-	250	63	15	120	72	120	201	27	473	7	72	66	66	88	247	103	254	298.5	1000	381	704
	1250A	608	11	220	633	320.5	451	350	-	250	63	16	120	72	120	201	27	473	7	72	66	66	88	247	103	254	298.5	1000	381	704
	1600A	608	11	220	633	320.5	451	392	-	250	80	13	120	72	120	201	27	473	10	100	80	80	125	247	103	254	298.5	1000	381	704

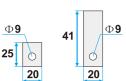
Note: X, Y and Z are the maximum width, depth and height of the switch assembled with a manual emergency handle.

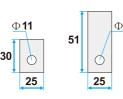
Depending on the angle of the handle when installing or the difference of positions of the slider moving, the corresponding dimensions will be smaller than the data listed in the table above, which are listed for reference only.

The parameters of SKT1 series 20A-100A is exactly same as the SKT1 125A product.

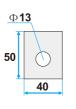
#### Input and output copper bar dimensions chart





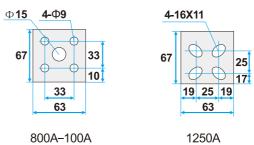


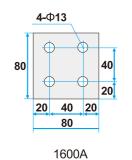
250A

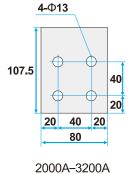


400A-630A













### TERMINAL FUNCTIONS INTRODUCTION

Terminal Serial No.	Access point serial No.	Function	Notes				
	101、106	Power supply neutral wire and live wire output for feedback	Active output, 1A AC220V				
Terminal No. 1	102、103	Power 1 supply live wire and neutral wire input	>5A AC 220V				
	104、105	Power 2 supply live wire and neutral wire input	>5A AC 220V				
	201、206	Passive control when disconnected and active control when closed	See SKT Type Principle Diagram for details				
	202	Common terminal of external passive control signal input					
Terminal No. 2	203	When closed with 202, Line I is switched on	B				
	204	When closed with 202, Line 0 is switched on	Passive control signals				
	205	When closed with 202, Line II is switched on					
	301、306	Not used	Not assembled on 20A-250A				
	302	Common terminal of passive position feedback signal output	M type is active output, the other				
Terminal No. 3	303	Closed with 302 when Line I is switched on.	types are passive output, see the				
	304	Closed with 302 when Line 0 is switched on.	principle diagram for details.				
	305	Closed with 302 when Line II is switched on.	1A AC 220V				
	401、406	Not used	Assembled on 400A and above				
Terminal No. 4	402、403	Closed when Line I is switched on	Passive 3A AC 220V				
	404、405	Closed when Line II is switched on	Passive 3A AC 220V				
	501	Not used					
	502	Not used	Optional parts, passive 3A AC 220V				
Terminal No. 5	503	Not used					
Terrinia No. 3	504	Not used					
	505	Not used	Optional parts, passive 3A AC 220V				
	506	Not used					

### **TERMINAL LOCATION DRAWING**



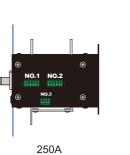
M type 20A-100A

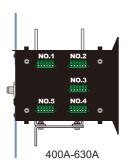


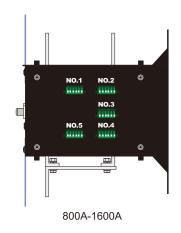
X type 20A-100A

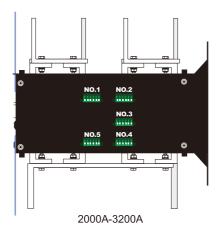


125A-160A

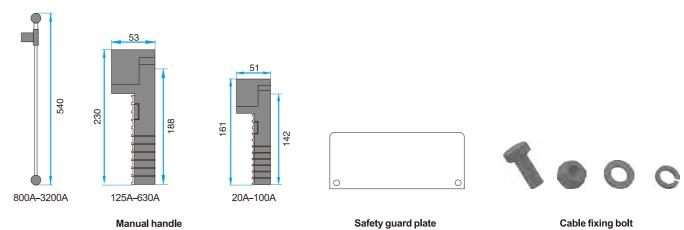








#### STANDARD ACCESSORIES



Current(A)	Number of wiring terminals (pieces)	Manual handle number/material	Safety guard plate number/material	Users Manual quantity	Cable fixing bolt number/specifications(set)
2000-3200	5	1 pc/steel			M12*45/48
1600	5	1 pc/steel			M12*40/48
1250	5	1 pc/steel			M10*35/48
800-1000	5	1 pc/steel	2 pcs/PMMA	1 copy	M8*35/48
400-630	5	1个/ABS	_ p		M12*30/12
250	3	1个/ABS			M10*25/12
125-160	3	1个/ABS			M8*25/12
20-100	3 (M type is equipped with only one)	1个/ABS			M6*20/12

### **INSTRUCTIONS FOR USE OF LED INDICATORS**



Model	No. 1	No.2	No. 3	No. 4	No. 5	No. 6
20-250A	Line I control power supply is powered-on. (There is AC 220V between the access points 102 and 103 of No. 1 terminal)	Line I control power supply fuse is normal	Line I control relay is normal (the relay is mounted on the internal circuit board. No. 3 light is used for this function, only when No. 4 light is not lit up).	Line II control power supply is powered-on (There is AC 220V between the access points 104 and 105).	Line II control power supply fuse is normal.	125A-250A switch, key lock or button is in AUTO position (the key lock or the button is mounted on the front side of the switch).
400-3200A	If the light is on, the voltage of Line I power is normal (There is AC 220V between the access points 102 and 103 of No. 1 terminal). If the light flashes, the voltage of Line I power is abnormal.	If the light is on, the switch is in Automatic mode (key lock or button is in AUTO position)	If the light is on, the voltage of Line II power is normal (There is AC 220V between the access points 104 and 105 of No. 1 terminal, measure voltage range AC220V±15%). If the light flashes, the voltage of Line II power is abnormal.	Light on indicates Line I closed	Light on indicates both Line I and Line II are open	Light on indicates Line Ⅱ closed

Note: SKT2 type has no LED indicator equipped.





#### **SKT-M** type automatic transfer switch

#### M Type Internal Principle Schematic Diagram The electrical part-2 Stage type The mechanical part-3 Stage type I POWER SUPPLY Electronic control unit I position feedback C1 Fixed contact Position switch Positive rotation $\cap$ N1 Common zero line input \_W LOAD Reverse rotation Electrical interlocking relay

 $\bigcirc$ 

C2

□ POWER SUPPLY

□ position feedback

B2

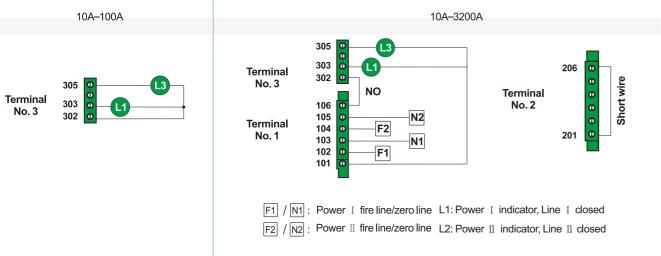
• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

Secondary Wiring Schematic Diagram: M Type Full-Auto Transfer (Electrical 2-Stage)

control firewire inpu

Position feedback signal

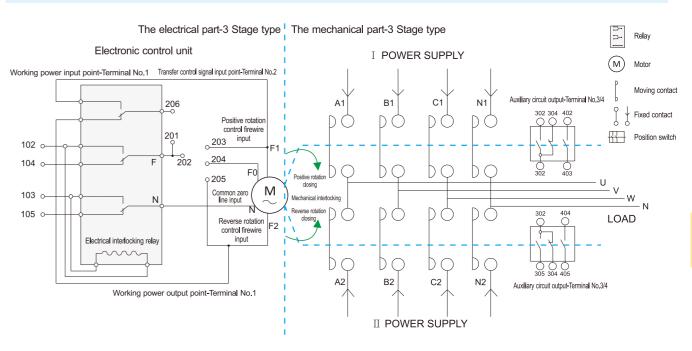
Common zero line output-302



Note: M1\M2 type ATS is suitable for the end places that have no requirements for transfer delay.

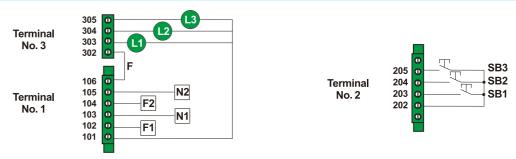
#### **SKT-X** type automatic transfer switch

#### X Type Internal Principle Schematic Diagram



• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

#### Secondary Wiring Schematic Diagram: X Type Remote/External Control Transfer (Passive Control, Electrical 3-Stage)



Note: X type ATS is suitable for the end places that have technical requirements for the transfer delay, and is generally used in conjunction with the generator unit. The passive control mode can achieve two/three-Stage control and the active control mode can also be used to achieve the two-Stage control. For the secondary wiring schematic diagram, see M1/M2 type 125A-3200A circuit diagram.

F1 / N1 : Power I fire line/zero line  $\lceil F2 \rceil / \lceil N2 \rceil$ : Power II fire line/zero line

L1: Main power powered on indicator light, Line I close

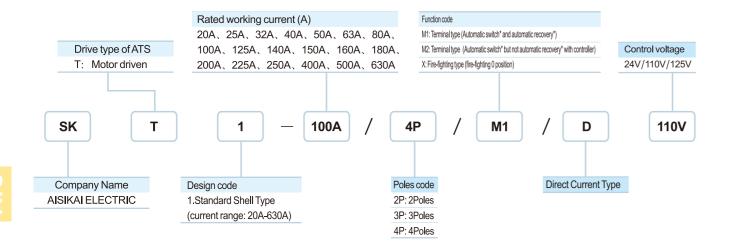
L2: Line 0 close indicator light L3: Standby power powered on indicator light, Line II close

SB3: Standby power switch on button (Line II close) SB2: Double off button (Line 0 close)

SB1: Main power switch on button (Line I close)

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## SKT1-D series DC Type ATS (motor driven type) quick selection table



分类

#### **PRODUCT OVERVIEW**



 SKT series ATS is the most advanced third generation product. Its class is PC and its usage category is DC-33B frequently operate electrical transfer switch.

It's suitable to be used in 10A-3200A DC power distribution system for reliable transfer between two power supplies. It has four working modes: Automatic, Electric, Emergency Manual and Locking.

#### Classify by volume

Standard type: Type 1, 20A-125A, 125A-250A, 400A-630A, 3 kinds volume specification.

#### Classify by function

M1: Terminal type (Automatic switch\* and automatic recovery\*)

M2: Terminal type (Automatic switch\* but not automatic recovery\* with controller)

X: Fire-fighting type (fire-fighting 0 position)

#### Classify by poles

2P: 2 poles, 1 phase and 2 lines

3P: 3 poles, 3 phases

4P: 4 poles, 3 phases and 4 lines

## **Qualification documents**



## Application field







Commercial I

#### Applicable standard

GB/T14048. 11 **I**EC60947-6-1

#### Normal working conditions and installation methods

Category	Requirements
Operating temperature	-20 to 45 °C. The average value for 24 hours shall not exceed +35 °C ;
Operating humidity	The average humidity at +40℃ shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
IP rating	IP20
Storage requirements	To be stored under -30 to 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year
Packing	630A and below packed in carton boxes; 800A and above packed in wooden boxes
Stacking	630A and below stacked no more than 5 layers; 800A and above stacked no more than 3 layers.
Installation	Vertically or horizontally. Upside down installation is not allowed
Wiring	Standard wiring is upper in and lower out. Wiring reversely (lower in and upper out) can be customized.





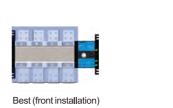
## **FUNCTION CODE TABLE**

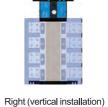
Application type	Terminal type	Fire-fighting type
Function Code	M	X
Structure		
Electrical two-Stage type	Υ	
Electrical three-Stage type		Υ
Manual three-Stage type	Υ	Υ
Control mode		' contract of the contract of
Controller manual/ automatic control		
Remote electric control (external control)		Υ
Emergency manual	Υ	Υ
Fully automatic switching	Y(without fault detection)	External control
Locking mode	Optional	Optional
Fire-fighting signal (forced to zero)		Passive closed signal
Main/standby power monitoring and protection		
Overvoltage protection	Single phase (optional)	Single phase (optional)
Undervoltage protection	Single phase (optional)	Single phase (optional)
Lost phase protection		
Frequency protection		
Phase angle detection		
N-phase fault alarm		
Phase sequence inconsistency alarm		
Application function	·	·
Automatic switch* and automatic recovery*	M1 (Standard products)	External control
Automatic switch but not automatic recovery	M2 (Customized)	External control
Main power supply is priority	Υ	External control
Standby power supply is priority	0s或2s(Undervoltage optional)	Optional
Generator self-start signal (passive)		Optional
Transfer delay		External control
Power failure delay setting		
Power recovery delay setting		
Alarm records storage		
Communication		
Feedback signal	DC125V(I、II)	Passive(I、II、0)
Display function		
Switch position status display	External indicator light	External indicator light
Voltage display		
Frequency display		
Current display		

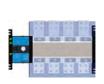
### MAIN TECHNICAL PARAMETERS

Shell frame grade current (Inm)			125A								250A							
Rated operating current of copper bar (le)	20	25	32	40	50	63	80	100	125	140	150	160	180	200	225	250	400	630
Rated insulation voltage of copper bar (Ui)	800V	V																
Rated impulse withstand voltage (Uimp)	8KV(	Main loop),4KV(Control loop)																
Rated operating voltage of copper bar (Ue)	DC12	25V																
Rated limit short-circuit current 7KA																		
Maximum Peak Current	11.9K	(A																
Use category	DC-3	81B																
l <sup>2</sup> t	148k	48kA <sup>2</sup> S																
SCPD	RT36	6																
ATSE Grade	ATSE Grade PC grade																	
Applicable Standards GB/T 14048.11-2016																		

### SCHEMATIC DIAGRAM OF CORRECT INSTALLATION METHOD





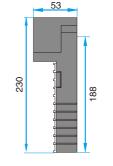




Right (back installation)

Wrong (inverted installation)













Manual	handle
--------	--------

Safety guard plate

Cable fixing bolt

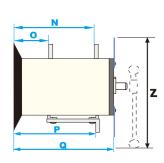
Current(A)	Number of wiring terminals (pieces)	Manual handle number/material	Safety guard plate number/material	Users Manual quantity	Cable fixing bolt number/specifications(set)
400-630	5	1个/ABS			M12*30/12
125-250	3	1个/ABS	2 pcs/PMMA	1 copy	M10*25/12
20-125	3 (M type is equipped with only one)	1个/ABS			M6*20/12

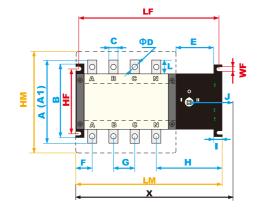
ATS - 19

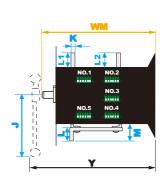
# INTELLIGENT AUTOMATIC TRANSFER SWITCH SKT1-D SERIES

#### **OUTLINE DRAWING**

20A-630A outline dimensions





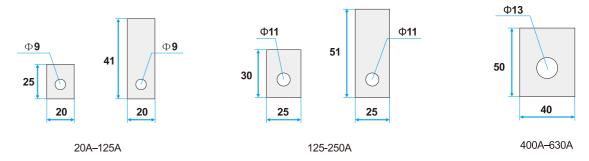


Series	Current range	125–160A	250A	400A	630A
	LF	271	334	416	416
Installation data	WF	6.5	6.5	8.5	8.5
uata	HF	110	110	180	180
Mandananata	LM	290	348	435	435
Maximum size of the body	WM	188	194	262	262
	HM	180	216	324	324
	A	155	192	270	270
	A1	140	166	-	-
	В	130	130	200	200
	С	20	25	10	10
	D	9	11	13	13
	Е	103	103	125.5	125.5
	F	30	38	48	48
	G	36	50	64	64
	Н	152	160	195	195
Other detailed		18	18	24	24
imensions of switch	J	188	188	188	188
	K	3.5	3.5	5	6
	L	25	28.5	45	45
	L1	25	30	51	51
	L2	41	51	51	51
	М	31	36	59	59
	N	133	136	187	187
	0	56	56	77	77
	Р	133.5	138	205	205
	Q	167	171	237	237
	X	392.5	460	522	522
Reference dimensions	Υ	220	227	293	293
anticiolotio	Z	279	303	365	365

Note: X, Y and Z are the maximum width, depth and height of the switch assembled with a manual emergency handle.

Depending on the angle of the handle when installing or the difference of positions of the slider moving, the corresponding dimensions will be smaller than the data listed in the table above, which are listed for reference only.

### Input and output copper bar dimensions chart

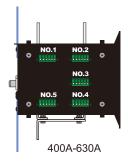


#### TERMINAL FUNCTIONS INTRODUCTION

Terminal Serial No.	Access point serial No.	Function	Notes			
	101、106	Power supply neutral wire and live wire output for feedback	Active output, 1A AC125V			
Terminal No. 1	102、103	Power 1 supply live wire and neutral wire input	>5A AC 125			
	104、105	Power 2 supply live wire and neutral wire input	>5A AC 125V			
	201、206	Passive control when disconnected and active control when closed	See SKT Type Principle Diagram for details			
	202	Common terminal of external passive control signal input				
Terminal No. 2	203	When closed with 202, Line I is switched on	Descive control signals			
	204	When closed with 202, Line 0 is switched on	Passive control signals			
	205	When closed with 202, Line II is switched on				
	301、306	Not used	Not assembled on 20A-250A			
	302	Common terminal of passive position feedback signal output	M type is active output, the other			
Terminal No. 3	303	Closed with 302 when Line I is switched on.	types are passive output, see the principle diagram for details.			
	304	Closed with 302 when Line 0 is switched on.				
	305	Closed with 302 when Line $ \mathbb{I} $ is switched on.	3A DC 125V			
	401、406	Not used	Assembled on 400A and above			
Terminal No. 4	402、403	Closed when Line I is switched on	Passive 3A DC 125V			
	404、405	Closed when Line II is switched on	Passive 3A DC 125V			
	501	Not used				
Terminal No. 5	502	Not used	Optional parts, passive 3A AC 220V			
	503	Not used	1			
Terrimar NO. J	504	Not used	Optional parts, passive 3A DC 125V			
	505	Not used				
	506	Not used				

#### **TERMINAL LOCATION DRAWING**



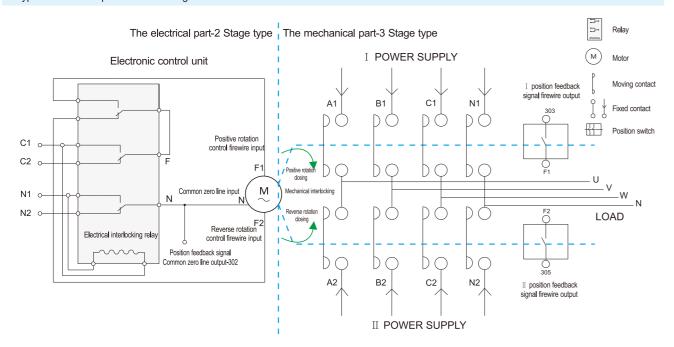






#### **SKT-M** type automatic transfer switch

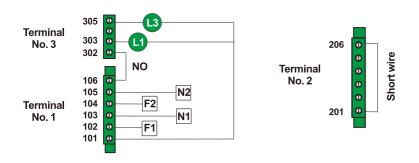
#### M Type Internal Principle Schematic Diagram



• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

#### Secondary Wiring Schematic Diagram: M Type Full-Auto Transfer (Electrical 2-Stage)

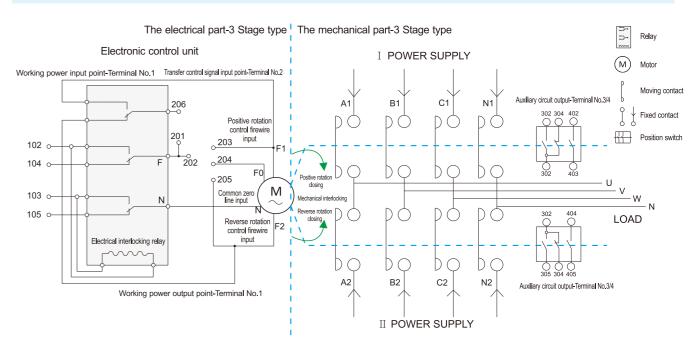
20A-630A



Note: M1\M2 type ATS is suitable for the end places that have no requirements for transfer delay.

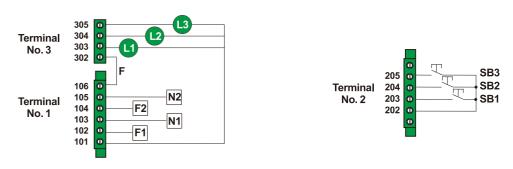
#### SKT-X type automatic transfer switch

#### X Type Internal Principle Schematic Diagram



• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

#### Secondary Wiring Schematic Diagram: X Type Remote/External Control Transfer (Passive Control, Electrical 3-Stage)



Note: X type ATS is suitable for the end places that have technical requirements for the transfer delay, and is generally used in conjunction with the generator unit. The passive control mode can achieve two/three-Stage control and the active control mode can also be used to achieve the two-Stage control.

F1 / N1 : Power I fire line/zero line F2 / N2 : Power II fire line/zero line

L1: Main power powered on indicator light, Line I close

L2: Line 0 close indicator light

L3: Standby power powered on indicator light, Line II close SB1: Main power switch on button (Line I close)

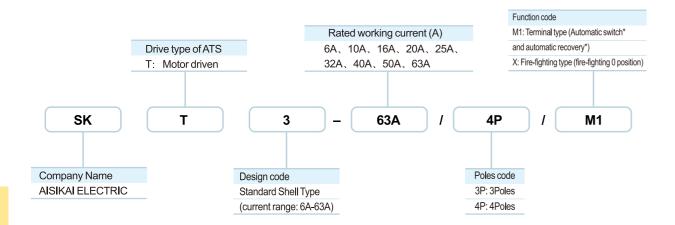
SB3: Standby power switch on button (Line II close)

SB2: Double off button (Line 0 close)





## SKT3 series PC class ATS (motor driven type) quick selection table



#### **PRODUCT FEATURES**

#### High Safety Performance

Adopt the double-row composite contact design, transverse-pull moving mechanism, micro motor pre-storage energy method and microelectronic control technology, achieving almost zero arc (no arc distinguishing chamber); Adopt reliable mechanical interlocking and electrical interlocking; Adopt zero position technology, in case of emergency can force to zero position (cut off two power supplies); Have functions like obvious indicating of ON/OFF position, padlock and so on. thus realizing reliable isolation between the power and the load.

#### Mechanical-electronic integration design

Transfer process is accurate, flexible and smooth.

#### Good Electromagnetic Compatibility

Strong anti-interference capability, no external interference.

Beautiful in appearance, small in volume and light in weight

#### High Degree of Automation

Switches have multiple input and output interfaces, easy to achieve remote PLC control and system automation. Switches work without any external control units.

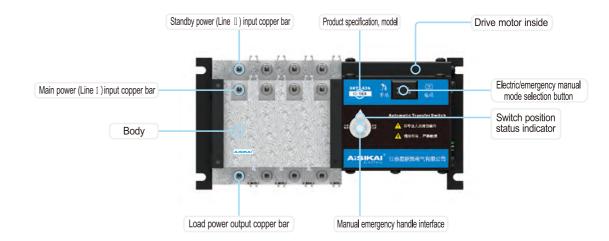
#### Normal working conditions and installation methods





Category	Requirements
Operating temperature	-20 to 45 $^{\circ}\!\!$ C. The average value for 24 hours shall not exceed +35 $^{\circ}\!\!$ C ;
Operating humidity	The average humidity at +40°C shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
IP rating	IP20
Storage requirements	To be stored under -30 to 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year
Packing	Packed in carton boxes
Wiring	Wiring is upper in and lower out

#### STRUCTRE INTRODUCTION











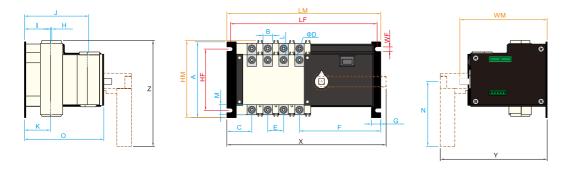
#### MAIN TECHNICAL PARAMETERS

Shell fram grade	Conventional thermal current Ith	Rated insulation voltage Ui	Rated impulse withstand voltage Uimp	Rated operating voltage Ue	Rated operating current le	Rated making capacity	Rated breaking capacity	Rated limit short-circuit current	Electrical control unit working voltage
63A	6A、10A、16A、 20A、25A、32A、 40A、50A、63A	800V	8kV	400V	6A、10A、16A、 20A、25A、32A、 40A、50A、63A	8kA	5kA/30ms	35kA	AC220V

#### TERMINAL FUNCTIONS INTRODUCTION

Terminal Serial No.	Access point serial No.	Function	Notes		
Terminal No. 1	102、103	Power 1 supply live wire and neutral wire input	>5A AC220V		
(Working power input)	104、105	Power 2 supply live wire and neutral wire input	>5A AC220V		
	201、206	See Internal Type Principle Diagram for details	Active control		
	202	Common terminal of external passive control signal input			
Terminal No. 2	203	When closed with 202, Line I is switched on	External passive control		
(Control signal input)	204	When closed with 202, Line 0 is switched on ( $\ensuremath{\mathbb{I}}\xspace/\ensuremath{\mathbb{I}}\xspace$ break)			
	205	When closed with 202, Line ${\mathbb I}$ is switched on			
	301、306	Optional			
	302	Common terminal of passive position feedback signal output			
Terminal No. 3	303	Closed with 302 when Line $ \mathrm{I} $ is switched on.	Passive output		
(Position feedback signal output)	304	Closed with 302 when Line 0 is switched on.			
	305	Closed with 302 when Line II is switched on.			

#### **OUTLINE DRAWING**

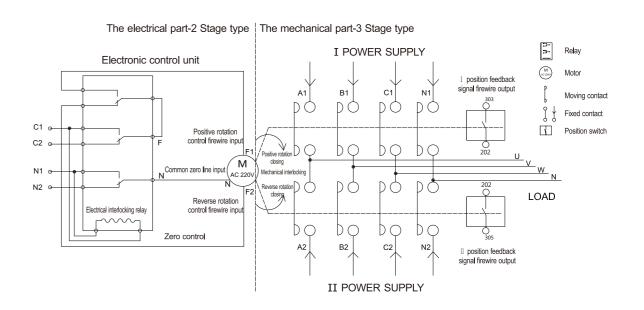


Instal	lation	data	Maximu	n size of t	he body		Other detailed dimensions of switch																
LF	HF	WF	LM	НМ	WM	Α	В	С	D	Е	F	G	Н		J	K	L	M	N	0	Х	Υ	Z
203	85	6	213	106	121	105	13	34.5	6	22	112.5	13	2	36	89	36	16	14	90	110	220	148	147

Note: X, Y and Z are the maximum width, depth and height of the switch assembled with a manual emergency handle.

Depending on the angle of the handle when installing or the difference of positions of the slider moving, the corresponding dimensions will be smaller than the data listed in the table above, which are listed for reference only.

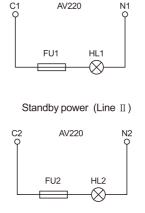
#### M Type Internal Principle Schematic Diagram



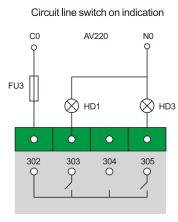
• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

#### Secondary Wiring Schematic Diagram

#### Full-auto control transfer

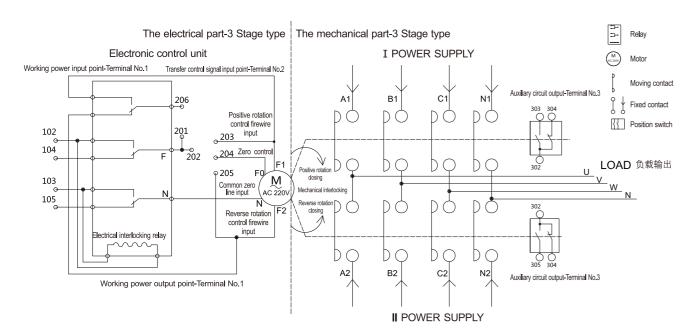


Main power (Line I )





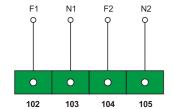
#### X Type Internal Principle Schematic Diagram

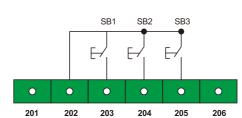


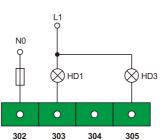
• Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

#### Secondary Wiring Schematic Diagram

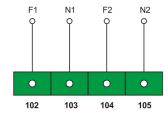
## Remote/external control electrically transfer

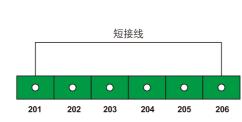


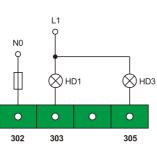




#### Full-auto control transfer







Note: X type ATS is suitable for the end places that have technical requirements for the transfer delay, and is generally used in conjunction with the generator unit.

The passive control mode can achieve two/three-Stage control and the active control mode can also be used to achieve the two-Stage control.

F1/N1: Main power live wire/neutral wire; F2/N2: Main power live wire/neutral wire;

Hd1: Main power powered on indicator light, Line I close; HD3: Standby power powered on indicator light, Line II close

SB1: Main power switch on button (Line I close); SB2: Double off button (Line 0 close)(Fire-fighting zero position);

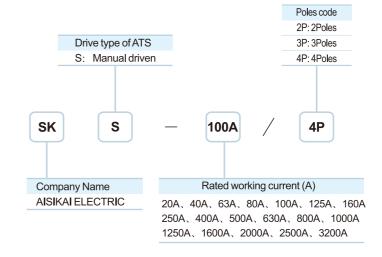
SB3: Standby power switch on button (Line  ${\rm I\hspace{-.1em}I}$  close)

#### SKS SERIES PC CLASS MANUAL ATS

#### **PRODUCT OVERVIEW**

SKS series dual power manual transfer switch is PC Class and its usage category is AC-33B non-frequently operable electrical transfer switch. It is suitable to be used in the 50/60Hz 20A-3200A low voltage AC power distribution systems for reliable manual transfer between two power supplies.

#### **Quick selection table**



#### PERFORMANCE CHARCTERISTICS

- ♠ A composite moving contact design is used, a spring energy-storage and instantaneous-release operating mechanism is adopted for instantly making and breaking and an obvious on-off position display is equipped, thus realizing reliable isolation between the power source and the load.
- The shell is made of unsaturated polyester fibers, which is high in the fire, pressure and high temperature resistance.
- High reliability: Accurate, flexible and smooth in transfer process and long in service life up to more than 10,000 times.
- Beautiful in appearance, small in volume and light in weight.
- Operations inside or outside the cabinet will be provided as required.

#### Normal working conditions and installation methods

Category	Requirements
Operating temperature	-20 to 45 $^{\circ}$ C. The average value for 24 hours shall not exceed +35 $^{\circ}$ C;
Operating humidity	The average humidity at +40℃ shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
IP rating	IP20
Storage requirements	To be stored under -30 to 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year
Packing	630A and below packed in carton boxes; 800A and above packed in wooden boxes
Stacking	630A and below stacked no more than 5 layers; 800A and above stacked no more than 3 layers.

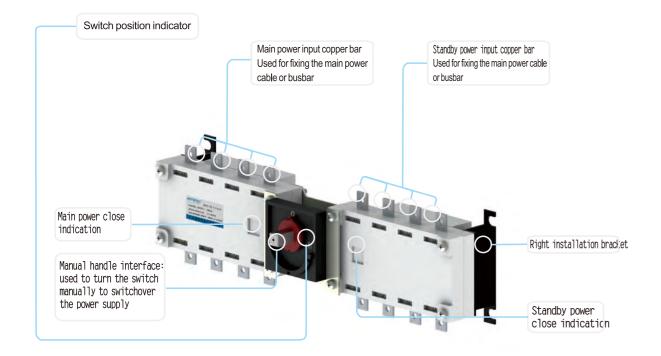


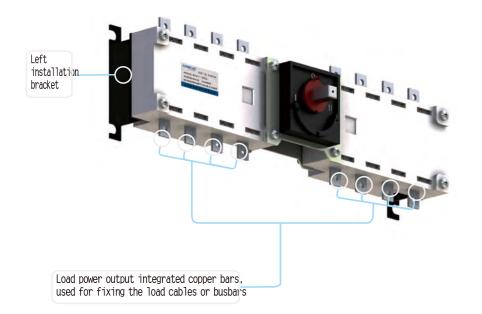


#### **MAIN TECHNICAL PARAMEFERS**

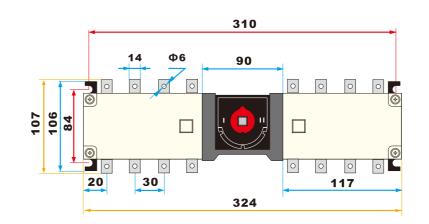
The manual ATS and the automatic ATS are identical in basic structure, see ATS-10 for details.

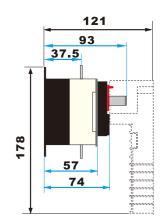
### **STRUCTURE INTRODUCTION (20A-100A)**





#### **OUTLINE DIMENSIONS DIAGRAM (20A-100A)**

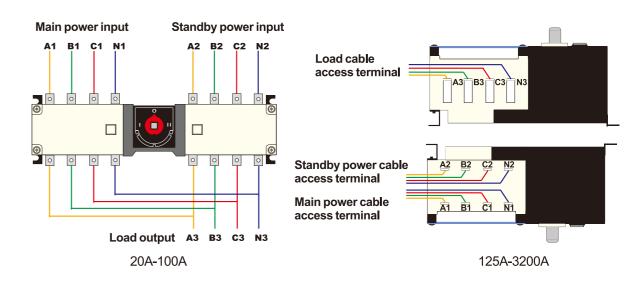




Note: 125A-3200A manual switch ATS and SKT series ATS 125A-3200A are fully identical in appearance, see ATS-11 for details.

#### **TYPICAL WIRING**

Primary wiring schematic diagram



Note: When installing the 20A-100A switch, first connect the main power and standby power input terminals properly and, having verified that the phase sequences of both power supplies are consistent, connect the load output terminal in parallel.

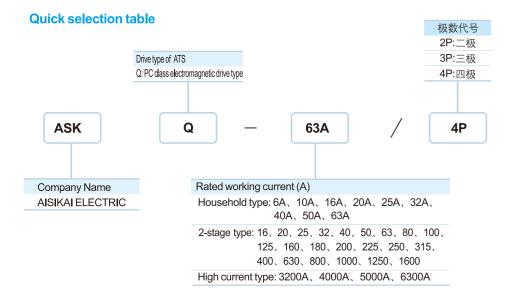




## ASKQ SERIES PC CLASS ATS (ELECTROMAGNETIC DRIVEN TYPE)

#### **PRODUCT OVERVIEW**

• ASKQ series dual power automatic transfer switch is PC Class non-frequently operable electrical transfer switch. It has 3 working modes: Fully Automatic, Electric and Emergency Manual. It is suitable to be used in the 50/60Hz 6A-6300A low voltage AC power distribution systems for reliable transfer between two power supplies.



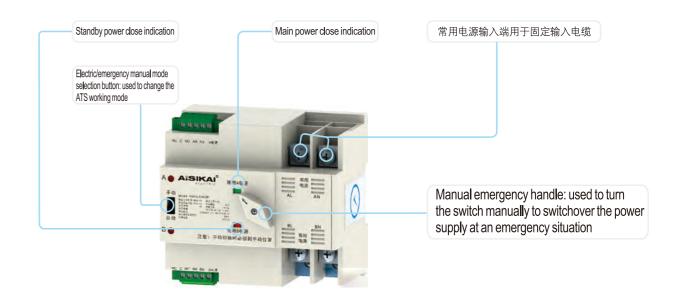
#### PERFORMANCE CHARACTERISTICS

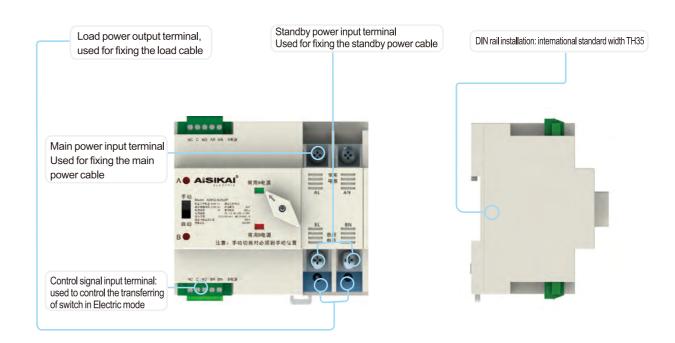
- The excitation type electromagnet drive is adopted, which is extremely fast in transferring.
- lacktriangle The 6A-63A switch is suitable for home use, which meets the requirements of the level- $\Pi$  power distribution system and the DIN rail installation is quick and easy.
- 3200A-6300A switch is suitable in the industrial places for large current switching and meets the Level- I power distribution requirements.

### Normal working conditions and installation methods

Category	Requirements
Operating temperature	-5 to 40 $^{\circ}\!$
Operating humidity	The average humidity at +40°C shall not exceed 50%; higher humidity is allowed at a lower temperature, for example, 90% at +25°C. Special measures should be taken when occasionally there is condensation on the products due to temperature changes
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class Ⅲ in accordance with GB/T14048.11
Installation category	Category III in accordance with GB/T14048.11
Installation method	Vertically installed in control cabinet, power distribution cabinet

#### STRUCTURE INTRODUCTION (6A-63A)





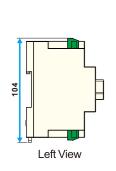


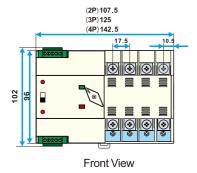


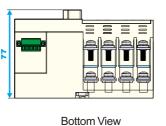
### MAIN TECHNICAL PARAMETERS (6A-63A)

Rated operating voltage of copper bar Ue	AC 400V
Rated operating current of copper bar le	6A、10A、16A、20A、25A、32A、40A、50A、63A
Rated insulation voltage of copper bar Ui	690V AC
Rated impulse withstand voltage Uimp	8kV
Use category	33B
Electrical Class	PC class
Use frequency	50Hz~60Hz
Applicable standards	IEC60947.1 GB/T14048.11

#### OUTLINE DIMENSIONS DIAGRAM (6A-63A)

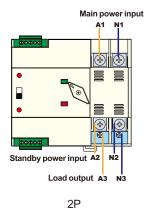


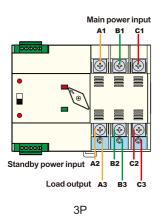


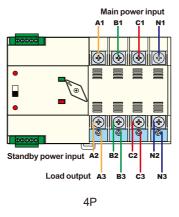


#### TYPICAL WIRING DIAGRAM(6A-63A)

Primay wiring schematic diagram







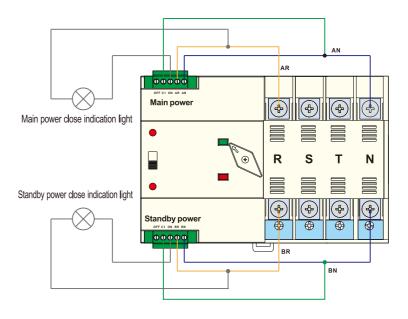
#### Note:

1. When in Manual mode, first connect the main power and standby power input terminals properly and, having verified that the live wires and neutral wires of both power supplies are consistent, connect the load output cable.

2. When needing manual operation, first set the button in Manual position, then turn the handle to transfer.

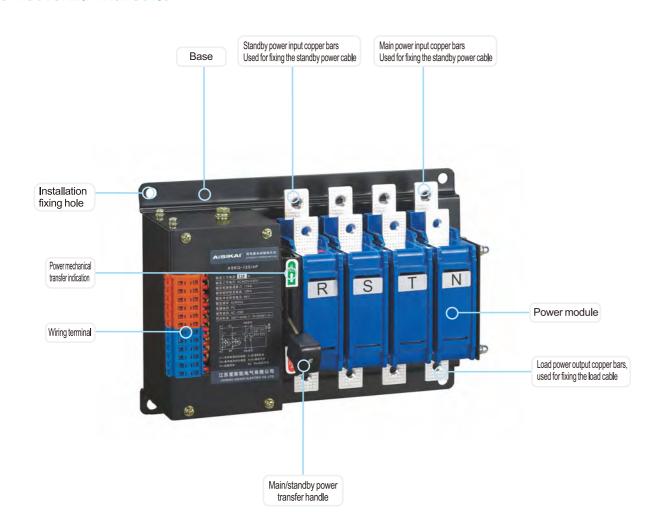
#### Secondary wiring schematic diagram

Full-auto control method electrical diagram





#### STRUCTURE INTRODUCTION



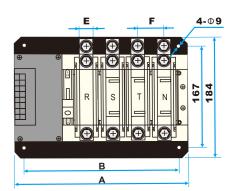
### MAIN TECHNICAL PARAMETERS

Specification	models	ASI	<b>(Q-</b> 3	2	ASI	KQ-12	25	ASKQ	-250	ASKC	Q <b>-4</b> 00	ASK	Q-630	ASKQ	-800	ASKO	Q-1000	ASK	Q-1250	ASK	Q-1600
Rated operatir	ed operating current (A) 16,20,25,32 40,50,63,80, 160,180,20 225,250					, ,	250,3	15,400	630 800 1000 1250							1600	1600				
Rated control por	ed control power current (A) 5 7									12											
Rated short-time with:	stand current (kA)	10									32										
Rated impulse withst	and voltage (kV)	8										8									
	Mechanical	800	0									3000									
Service life	Electrical	300	0									1000									
Pole numbers		2P 3P 4P 2P 3P 4P 3P 4P 3P 4P								4P	3P	4P	3P	4P	3P	4P	3P	4P	3P	4P	
Weight(kg)		3.2	3.7	4.2	4	4.5	5.5	18	19	18.5	20.5	37	42.5	39	46	41	48	48	57	56	67
Operating cycle (se	conds per time)			1	0				1	5		15 20 25									

### **Outline and installation dimensions (16A-125A)**



- ☐ ASKQ-32 ☐ Rated current: 16A-32A
- 110 155





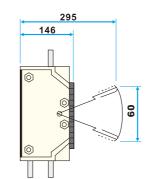
☐ ASKQ-125 ☐ Rated current: 40A~125A

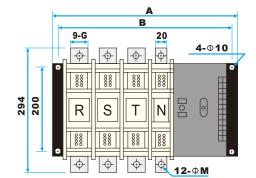
Codo	Delea	46KO 33	A S.V.O. 425				
Code	Poles	ASKQ-32	ASKQ-125				
	2P	170	191				
Α	3P	197	228				
	4P	224	265				
	2P	150	171				
В	3P	177	208				
	4P	204	245				
E		12	20				
F		27	37				

### Outline and installation dimensions (250A-400A)



☐ ASKQ-400 ☐ Rated current: 160A~400A





Code	Poles	ASKQ-250	ASKQ-400			
^	3P	322		352		
Α	4P 372		402			
В	3P	302 332				
В	4P	352	382			
G		20	30			
E		8	10			
F	4P	49	3P	59	4P	54

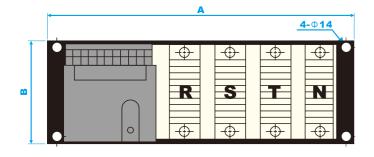


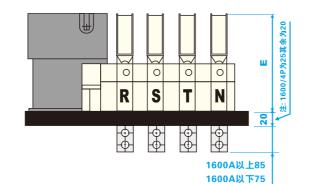
# INTELLIGENT AUTOMATIC TRANSFER SWITCH ASKQ SERIES

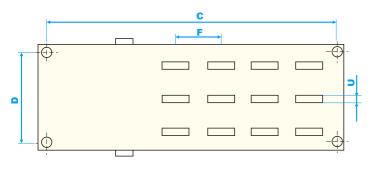
### Outline and installation dimensions (630A-1600A)

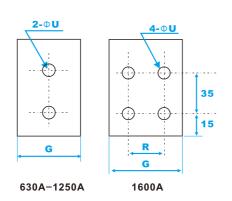


- ☐ ASKQ-1600
- ☐ Rated current:630A~1600A



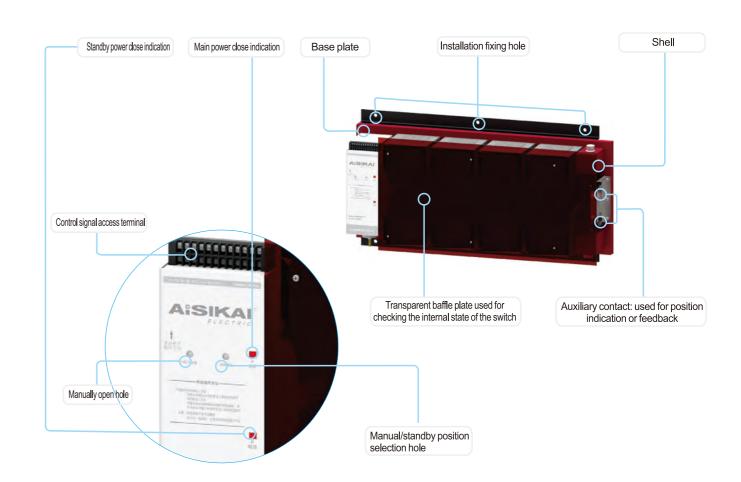






Code	Poles	ASKQ-630	ASKQ-800	ASKQ-1000	ASKQ-1250	ASKQ-1600	
^	3P			530		640	
Α	4P		600				
С	3P			490		580	
C	4P		560				
В			280				
D			210				
E			250				
F		90	90	90	90	130	
G		30	30 40 45 55				
R							
U			12				

#### **STRUCTURE INTRODUCTION (3200A-6300A)**





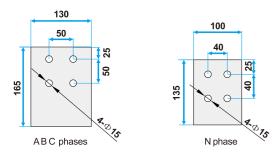




#### MAIN TECHNICAL PARAMETERS (3200A-6300A)

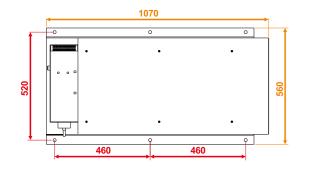
Conventional the	rmal current Ith		3200A、3600A、4000A、4500A、50	0004 63004	
	oltage of copper bar	Hi	AC1000V		
			12kV		
			AC400V		
			3200A、3600A、4000A、4500A、5000A、6300A		
Mechanical struct			3-stage		
Wiring method			Rear wring (front wiring is special su	pply)	
Pole numbers			3P	4P	
Weight(kg)			121	190	
	DC110V/125V		36	38	
Operating current(A)	AC100V/110V		36	38	
	AC200V/220V/230V		18	20	
	DC110V/125V		6		
Tripping current(A)	AC100V/110V		6		
	AC220V		2		
Short time withsta	and current(A)		60kA		
	Rated limit short-circuit curr	ent (fuse for protection)	180KA		
	Use category		AC-33A		
Performance	Transfer time	A-B	≤ 0.2s		
i cironnanoc		B-A	<b>0.25</b>		
	Service life		Electrical: 6000 times, Mechanical: 10000 times		
	Operating cycle frequ	ency	120 times/hour		
Auxiliary switch	1		A and B power supply sides are 2 normally open and 2 normally closed; Switching capacity: AC 110V 5A/AC 220V 3A DC:220V 0.2A		
Accessories			Operating handle		

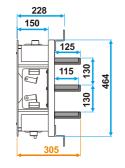
#### INPUT AND OUTPUT COPPER BAR DIMENSIONS CHART (3200A-6300A)

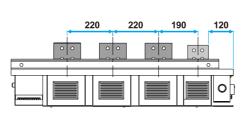


Dimensions	Copper bar dimensions			
Model	A, B, C phease	N phease		
3200A-5000A	20mm	20mm		
6300A	30mm	20mm		

#### **OUTLINE DIMENSIONS DIAGRAM (3200A-6300A)**







Note: ATS is equipped with four lifting rings. Before lifting, it is necessary to check the lifting rings to find out whether they are tightened up onto the mounting rail of the switch, to check the carrying capacity of the ropes to find out whether it is not less than 500kg. A trial lifting must be carried out to determine the position of the center of gravity of the ATS, so as to prevent any rollover or slipping accident occurring due to the asymmetry of center of gravity.

#### **INTERNAL PRINCIPLE DIAGRAM (3200A-6300A)**

## 

C=Switch-on coil
SC=Selection coil
TC=Tripping coil
SI=Rectifier

LS=Selector switch

K4.5 7

ATS1, ATS2=A power break terminal BTS1, BTS2=B power break terminal AX, BX=Control switch AUX=Auxiliary switch

Q K2-1

AT2

Q | K3-3

A1–A2=A power side swich-on terminal B1–B2=B power side swich-on terminal BT1–BT2=B power side tripping terminal AT1–AT2=A power side tripping terminal

II POWER SUPPLY

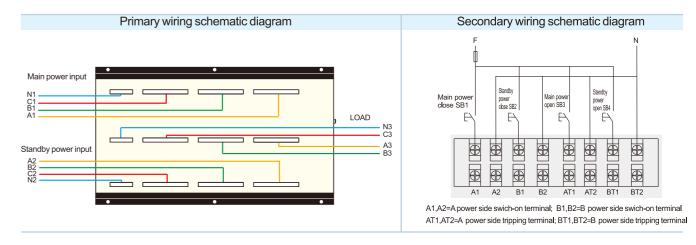
Moving contacts

BSW

AUX(SW)

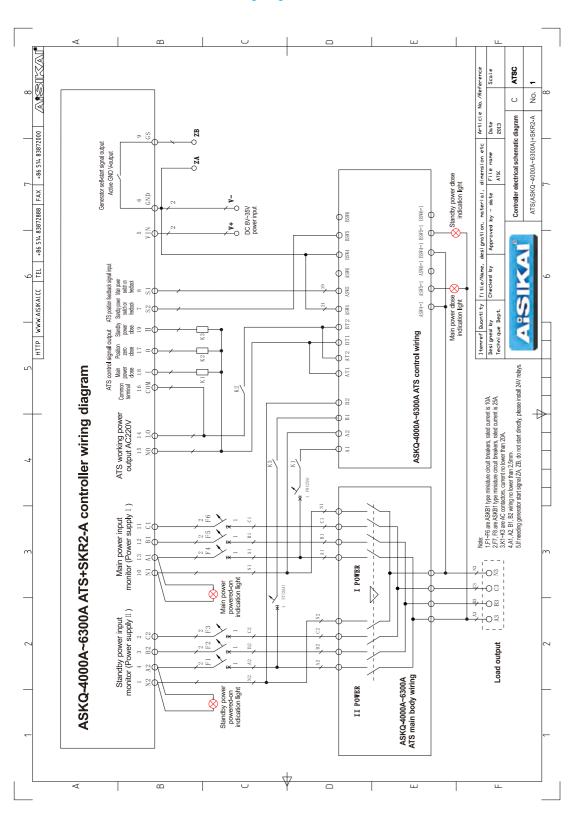
Fixed contacts

#### **TYPICAL WIRING DIAGRAM(3200A-6300A)**

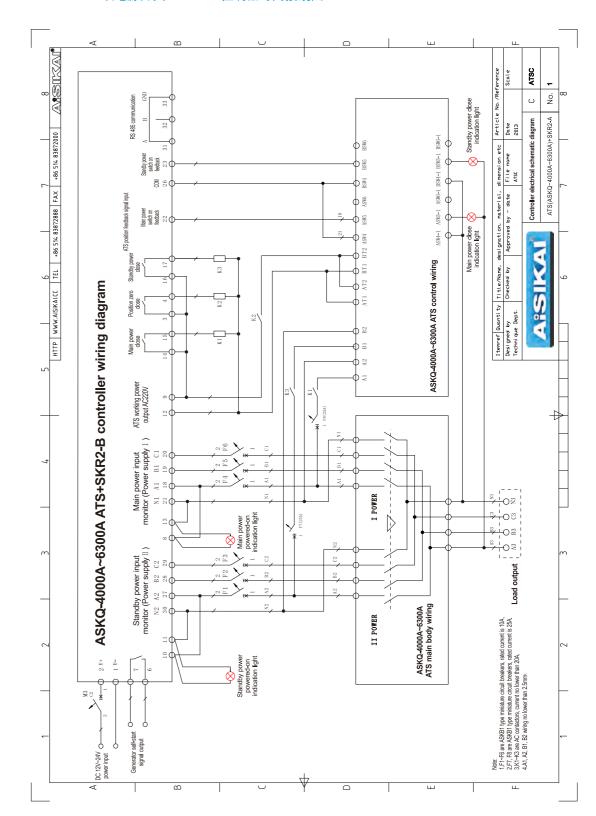




#### ASKQ-4000A~6300AATS+SKR2-A controller wiring diagram



#### ASKQ-3200A~6300A双电源开关+SKR2-B控制器专用接线图



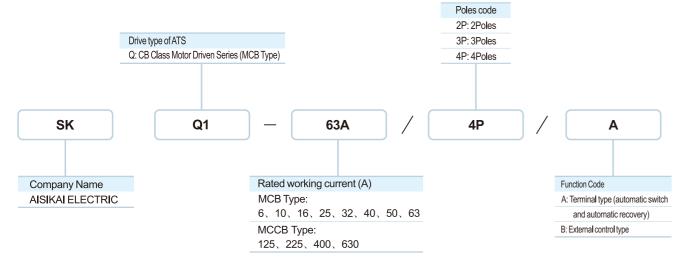


## **SKQ1 SERIES CB CLASS ATS (MOTOR DRIVEN TYPE)**

#### **PRODUCT OVERVIEW**

SKQ1 series dual power automatic transfer switch is the second generation ATS. It is CB Class and its usage category is AC-33B non-frequently operable electrical transfer switch. It has 3 working modes: Automatic(Type A), Electric(Type B) and Emergency Manual. ASKQ is suitable to be used in the 50/60Hz low voltage AC power distribution systems for the reliable transfer between two power supplies.

#### **QUICK SELECTION TABLE**



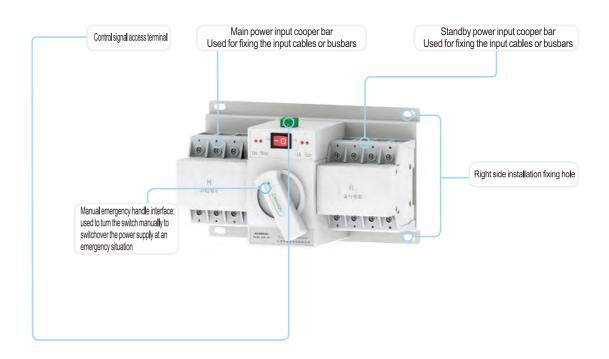
#### PERFORANCE CHARACTERISTICS

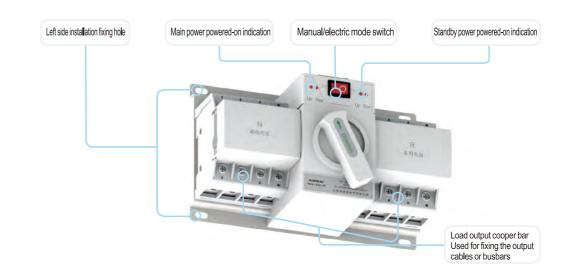
- Reasonable in structure, small in volume, beautiful in appearance. Much safer and more reliable in power supply with the protective cover.
- $\blacksquare \mbox{Complete protection functions, provided with protection of short-circuit, overload and etc. }$
- Noise-free operation, energy saving and consumption reducing, convenient in installation, easy in operation, reliable and stable in performance.
- The interior adopts D type miniature circuit breaker .

#### Normal working conditions and installation methods

Category	Requirements
Operating temperature	-5 to 40°C. The average value for 24 hours shall not exceed +35°C;
Operating humidity	The average humidity at +40°C shall not exceed 50%; higher humidity is allowed at a lower temperature, for example, 90% at +25°C. Special measures should be taken when occasionally there is condensation on the products due to temperature changes
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use reduce product rated value for use
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class Ⅲ in accordance with GB/T14048.11
Installation category	Category III in accordance with GB/T14048.11

#### STRUCTURE INTRODUCTION (SKQ1 6A~63A)









#### **MAIN TECHNICAL PARAMETERS**

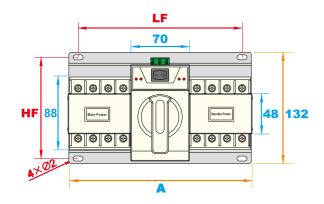
B ( 1 1 ( ) 2 2 1 1 2 2	FIZA
Rated short-circuit breaking capacity	5KA
Rated short-circuit making capacity	5KA
Transfer time	<b>≼3s</b>
Control voltage of transfer switch	230V
Service life of transfer switch	Mechanical: 3000 times; Electrical: 1500 times
Rated insulation voltage of copper bar Ui	U=400V
Rated operating voltage of copper bar Ue	2P switch is AC220V
Rated operating current of copper bar le	10A、16A、20A、25A、32A、40A、63A

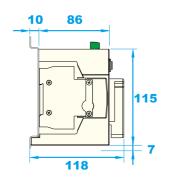
#### Making and breaking capacity

Usage category	Making and breaking test conditions					
AC-33iB	L/le	u/ue	cosΦ	Power-on time (s)	Cycle period (min)	Operating cycles
AC-33ID	6.0	1.05	0.5	0.05	≤5	12

Note: The motor load under the non-frequent operation of AC-33iB may include the hybrid load of the motor and the resistance load.

#### **OUTLINE DIMENSIONS DIAGRAM**

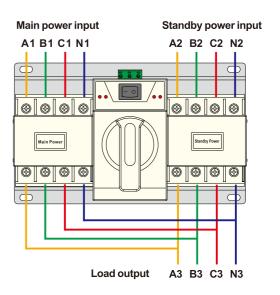




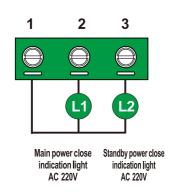
	LF	HF	A
4P	200	120	220
3P	164	120	184
2P	128	120	148

#### TYPICAL WIRING DIAGRAM

#### Primary wiring schematic diagram



#### Secondary wiring schematic diagram



#### Note

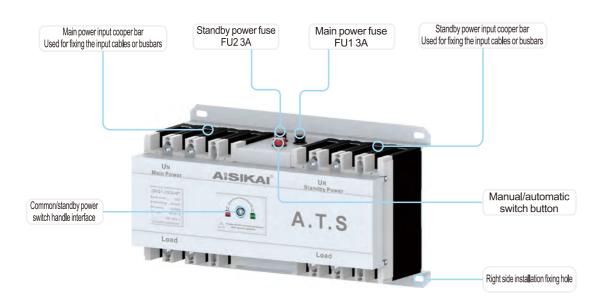
1.According to the actual requirements of distribution line, connect the main power and standby power input terminals properly and, having verified that the phase sequences of both power supplies are consistent, connect the load output terminals in parallel.

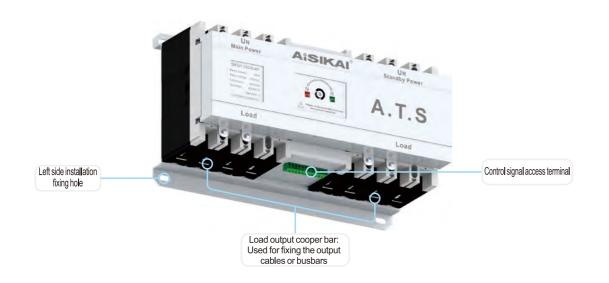
2. When needing manual operation, first set the button in Manual position, then turn the handle to transfer.

ATS - 47



#### STRUCTURE INTRODUCTION (SKQ1 125A~630A)

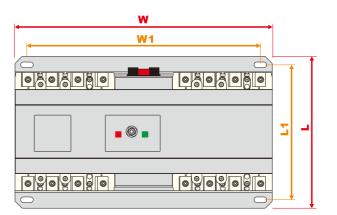


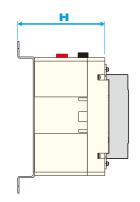


#### **MAIN TECHNICAL PARAMETERS**

	SKQ1-125	SKQ1-225	SKQ1-400	SKQ1-630		
Usage category	AC-33iB	AC-33iB				
Rated current le	63A、80A、100A、125A	140A、160A、200A、225A	400A	400A、500A、630A		
Rated working voltage Ue	AC400V					
Rated insulation voltage Ui	690V					
Rated short time withstand voltage lcw	10kA	10kA	12.6kA	12.6kA		
Rated short-circuit making capacity Icm	17kA	17kA	25.2kA	25.2kA		
Service life Mechanical	10000		5000			
Electrical	5000		2500			
Pole numbers	3P、4P	3P、4P				
Test operating cycles(seconds/time)	15s					
Transfer time	1~99s(delay)					

#### **Outline and installation dimensions**



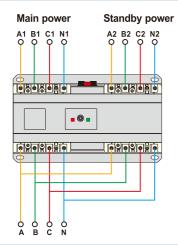


Specification Dimension	W	L	Н	W1	L1
125A/3P	290	205	120	253	186
125A/4P	320	205	120	282	186
225A/3P	330	215	140	296	195
225A/4P	365	215	140	333	195
400A/3P	465	310	190	410	285
400A/4P	505	310	190	455	285
630A/3P	528	318	195	478	295
630A/4P	588	318	195	535	295

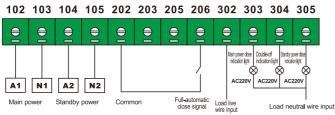


#### **WIRING DIAGRAM**

Primary wiring schematic diagram

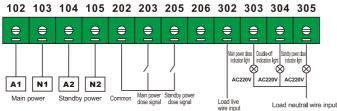


Secondary wiring schematic diagram: full-automatic transfer



Working power input terminal Control signal input terminal Close status indication light signal output terminal

Secondary wiring schematic diagram: remote control electrical transfer



Working power input terminal Control signal input terminal Close status indication light signal output terminal



INTELLIGENT AUTOMATIC TRANSFER SWITCH **SKQ1 SERIES**