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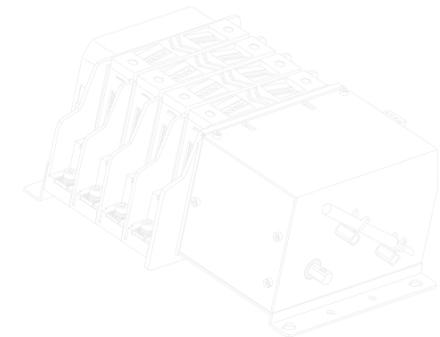
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AiSIKAI®



**ASKQ6 SERIES
AUTOMATIC TRANSFER SWITCH
SOLENOID DRIVE TYPE ATS
SELECTION GUIDE**



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P RODUCTS CONTENTS

- 01 ASKQ6 Series Intelligent Dual Power Diverter Switch
- 01 Quick Selection Chart
- 03 Performance Advantages
- 05 J basic type - structure introduction
- 06 M-end type - structure introduction
- 07 NAJ Intelligent Basic Type-Structure Introduction
- 08 X fire fighting type - structure introduction
- 09 NAX Intelligent Fire Fighting Type-Structure Introduction
- 11 Introduction to motorized operation
- 13 NAJ/X type controller panel introduction
- 15 Main technical parameters
- 17 Outline and mounting dimensions
- 19 Electrical Schematic

C OMPANY PROFILE

► Since established in 2007, AISIKAI has been committed to the manufacture, research, development and marketing of the high-quality high and low voltage electric switches. Our product lines cover level I, II, III power distribution fields. We are awarded as the National High Tech Enterprise, Double-Soft Certified Enterprise (i.e., software product certified and software enterprise certified), Little Giant Science and Technology Enterprise of Jiangsu Province, and Contract-keeping and Trustworthy Enterprise. We have invention patents, utility model patents and appearance patents. All of AISIKAI products have China Compulsory Certification (CCC) and China Quality Certification (CQC). From 2014, we have been recognized as Yangzhou City Engineering Technology Center and National Adopting International Standard Enterprise. AISIKAI products have CE certification and IEC CB certification. We have passed the ISO9001 Quality Management System and ISO14001 Environment Management System, ISO45001 Occupational Health Management System, and SGS Global Qualified Supplier Authentication.

QUALITY, SERVICE, REPUTATION, INNOVATION is AISIKAI's unchanging company principle. We're always eager to make progress to offer reliable products and impeccable services. With your support and trust, AISIKAI will thrive and work towards a brighter future.



ASKQ6 SERIES INTELLIGENT AUTOMATIC TRANSFER SWITCH

MODEL SELECTION

TYPE CLASS PC SOLENOID TYPE	Rated current In(A)
ASK	16, 20, 25, 32, 40, 50, 63, 125, 160, 200, 250, 400, 630
Q	6
—	63A
/	4P
/	J
Company AISIKAI ELECTRIC	Design code
	Number of poles
	16-250A 400-630A 2P: poles 3P: poles 3P: poles 4P: poles 4P: poles
	Function
	J: Basic type(2-position) M: End type (2-position) NAJ: Intelligent Basic type (2-position) X: Fire-fighting type (3-position) NAX: Intelligent fire-fighting type (3-position)

DESCRIPTION:

1. Function Difference:

J: basic type, there is no internal controller, the transferring control signal is provided by the external controller installed by the customer himself, and the mechanical structure of the product is 2-position.

M end type, based on the basic model, an additional control circuit board is added to enable automatic transferring. It does not detect voltage values and has no delay function.

NAJ: Intelligent basic type, based on the basic model, an integrated controller is added, which can automatically detect three-phase voltage, and has various delay functions and protection features.

X: fire-fighting type, there is no internal controller, the transferring control signal is provided by the external controller installed by the customer; and the mechanical structure of the product is 3-position.

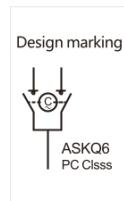
NAX Intelligent fire-fighting type, based on the fire-fighting model, an integrated controller is added, which can automatically detect three-phase voltage, and has various delay functions and protection features.

2. Mechanical Structure Difference:

2-position: only have 2 mechanical positions: Main and Standby, there is no safety ZERO(0) position;

3-position: have 3 mechanical positions: Main, Standby and safety ZERO(0) position, with higher safety level;

3. M type only has 2-position products, no 3-position products.



Model description 1:
ASKQ6-125A/4P/NAX:
1. Solenoid type dual power automatic transfer switch
2. Rated working current 125A
3. 4 poles
4. Intelligent fire-fighting type, built-in controller, 3-position structure

Model description 2:
ASKQ6-400A/4P/J:
1. Solenoid type dual power automatic power transfer switch
2. Rated working current 400A
3. 4 poles
4. Basic type, 2-position structure

CERTIFICATES



PRODUCT OVERVIEW

ASKQ6 series dual power automatic transfer switch is suitable for power distribution system with rated working voltage 400V and below, rated frequency 50Hz, rated current 16-630A. It is mainly used for dual power transferring of the power supply system in emergency situations to ensure the continuous and reliable operation of the main loads (emergency lighting, emergency staircase, fire-fighting system, etc.). It is mainly used for the Level 1 loads stipulated by the national regulations, and is widely used in the important parts of fire-fighting, post and telecommunication, hospitals, hotels, high-rise buildings, industrial assembly lines, and TV stations that need uninterrupted power supply. The main and standby power supply can be the power grid and the power grid, automatic start generator sets, battery packs and so on.

Standards-complied

GB14048.1	General Provision
GB/T14048.11	Automatic Transfer Switching Equipment
IEC60947-1	General Provision
IEC60947-6-1	Automatic Transfer Switching Equipment

Pollution Level

- ASKQ6 series switches are certified to be operated in pollution level 3 environments
- Pollution level specified for the applicable environment of industrial electrical equipment in the GB14048 standard

Electromagnetic Compatibility

• Electrostatic discharge	LEVEL 4
• Electrical fast transient pulse group	LEVEL 4
• Radio frequency radiation disturbance	LEVEL 3
• Radio frequency conducted disturbance	LEVEL 3
• Surge	LEVEL 4

Category Of Use

- AC-33A

Electrical Grade

- GB/T14048.11 (IEC60947-6-1) Standard Definition, ASKQ6 is a PC Class transfer switching equipment.

NORMAL WORKING CONDITIONS AND INSTALLATION METHODS

Items	Requirements
Operating temperature	-20 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 relative humidity is allowed at lower temperatures, for example, up to 90% at +25°C. Special measures should be taken for occasional condensation due to temperature changes
Altitude	Lower than 2000 meters and, if higher than 2000 meters, please use at reduced ratings
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
Pollution level	Level 3 according to GB/T14048.11
Class of installation	Class IV according to GB/T14048.11
Installation inclination	The product is fixedly installed in the cabinet, the maximum inclination is +22.5°
Arcing distance	AC 380V, arcing distance is 80mm; flashover 660V, arcing distance is 100mm.

PERFORMANCE ADVANTAGES

3-position or 2-position optional

- Same current frame is available in 3-position or 2-position
- 2-position
- 2-position for end type
- 3-position for fire-fighting ZERO position

- 2-position: two positions for main and standby power supply

- 1.Fire-fighting loads (e.g., fire pumps, exhaust/smoke exhaust fans, etc.)
- 2.Emergency loads and loads sensitive to power failure time

- 3-position: main power position, standby power position, open position

- 1.Fire-fighting forced cut off

- 2.High inductive or capacitive loads (high power motors, capacitors)

- 3.Power supply location and power distribution location

- 4.Utility power and generator power

Closed position indication

- Close and Open Indicator Window
- Indicator mechanical interlock
- Close and Open status with color differentiation

Dedicated dual power supply integrated design

- V-shape Interlocking Mechanism
- Equipped with Mechanical Interlock
- The two power sources will not be connected at the same time

Reliable mechanical latches

Dedicated dual power supply integrated design

- Double-sided arrangement of moving contacts
- Independent heat dissipation arc channels are installed on both sides of the arc extinguishing chamber to ensure the reliability of the contact system and extend its service life

Reduce costs

- The two power supplies are connected at the same side

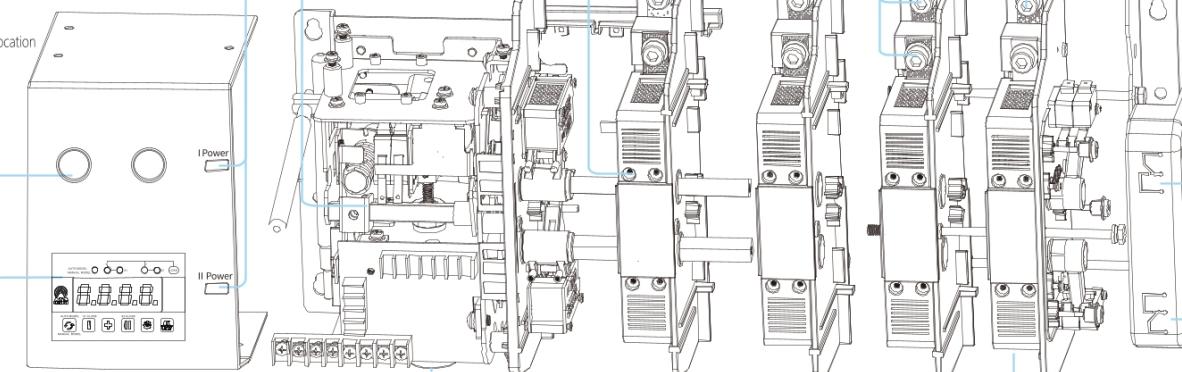
Easy to wire

Save Cables

High rated limit short-circuit current capacity

- The rated limit short-circuit current is a measure of the carrying capacity of the ATSE to withstand a fault current in the event of an overload or short-circuit in the system.

Specification	Standard	Fuse protection Rated limit short-circuit current Iq(kA)
ASKQ6-16~125A	GB/T14048.11	100
ASKQ6-160~630A	GB/T14048.11	120



AC-33A High-level use category

GB/T 31142-2014 "Transfer Switch Equipment (TSE) Selection and Use Guidelines"

8.4: According to the nature of the load to select the TSE principle, it is clearly stated that the use of the ATSE category should be corresponding to the nature of the load (Fire-fighting pump loads correspond to the use of the category of AC-33, taking into account the requirements of the daily inspection, it is appropriate to use the AC-33A)

• Can be used in harsh electrical environments

70ms fast changeover speed

• Solenoid drive, Contact changeover time ≤ 70ms.

• Wide range of applications, suitable for medical facilities, security levelsemergency lighting and other important places.

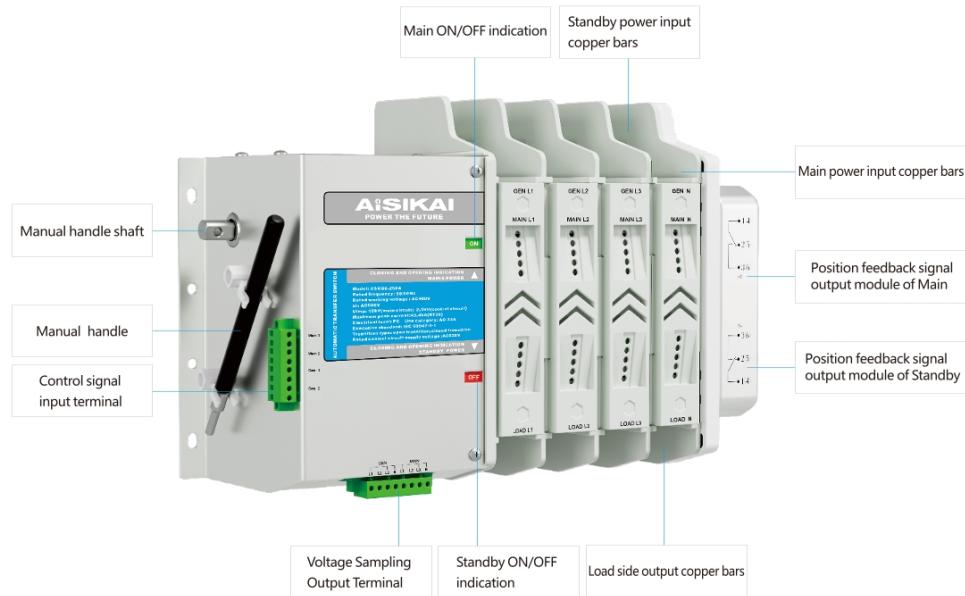
Making and breaking capacity: 10⁶

• Making and breaking capacity reaches 10 times of the rated current, 50 times cycles of operation

Test condition	Service life test conditions			Maximum allowed power failure time of load	Typical loads	ATSE rating total action time	Workplaces
	AC-33A	AC-33iA	AC-33B				
I/le	2/1	2/1	1	≤0.1s	Financial Construction Cash Counter	0.1 level	Automated Teller Machine (ATM) vaults
Ur/Ue	1.05	1.05	1.05	≤0.15s	Class 0.15 emergency power supply	0.15 level	Medical resuscitation equipment ICU
Power factor	0.8	0.8	0.8	≤0.25s	High hazard area lighting systems Emergency switchover for use	0.25 level	Hospital operating room lighting
Power-on time	50ms	50ms	50ms	≤0.5s	Medical facilities and primary loads with particularly important equipment	0.5 level	Hospital operating room lighting
Number of operation cycles	3000/3000	3000/3000	1000		Class 0.5 emergency power supply Safety lighting		High-rise buildings

Test condition	Service life test conditions		
	AC-33A	AC-33iA	AC-33B
I/le	10	6	10
Ur/Ue	1.05	1.05	1.05
Power factor	0.35	0.5	0.35
Power-on time	50ms	50ms	50ms
Number of operation cycles	50	50	5

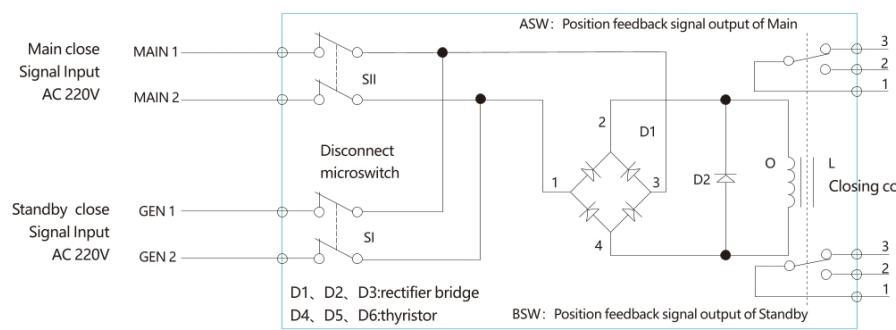
STRUCTURE OF J BASIC TYPE



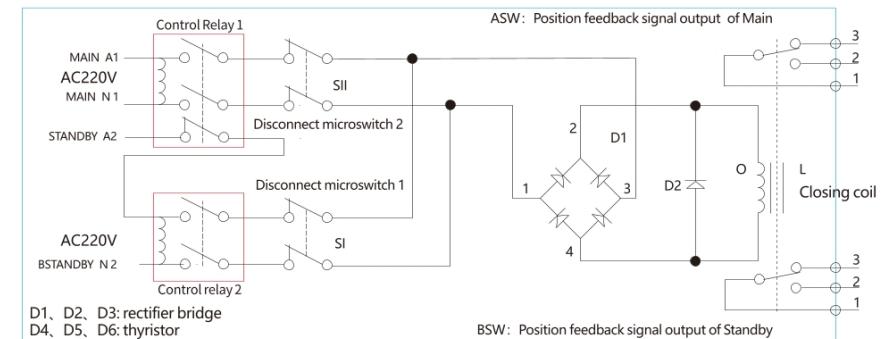
STRUCTURE:M END TYPE



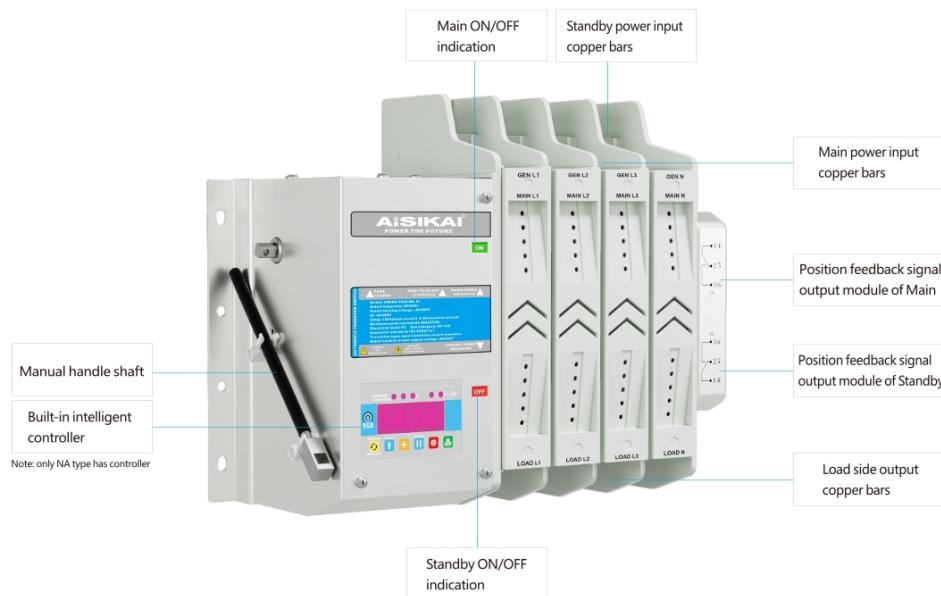
Internal Schematic



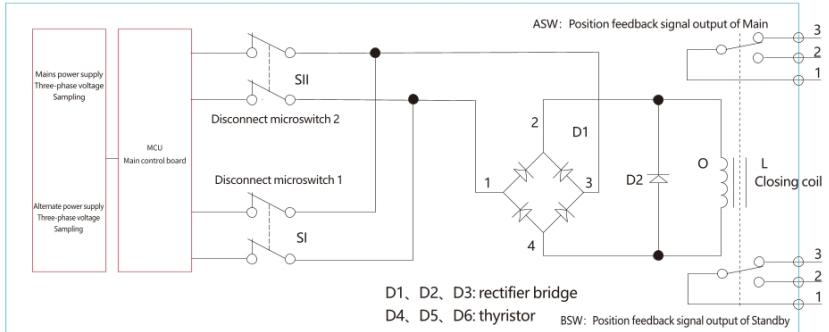
Internal Schematic



STRUCTURE OF NAJ INTELLIGENT BASIC TYPE



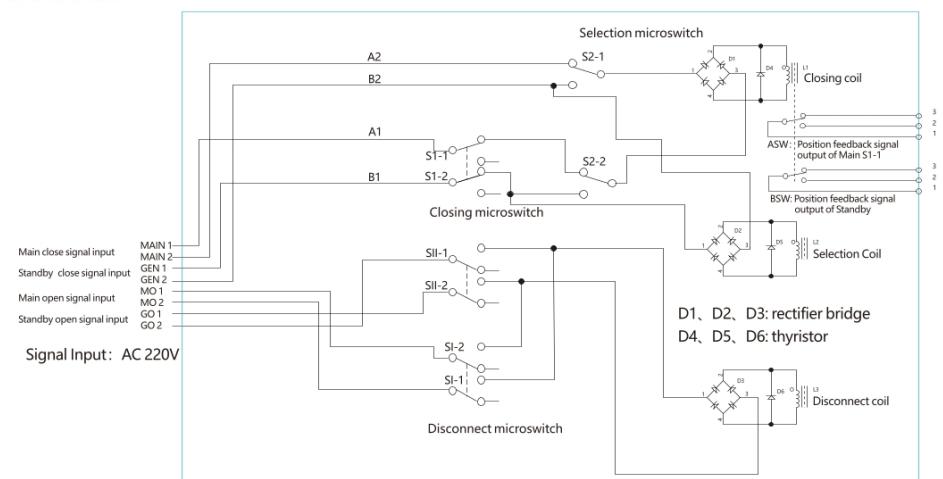
Internal Schematic



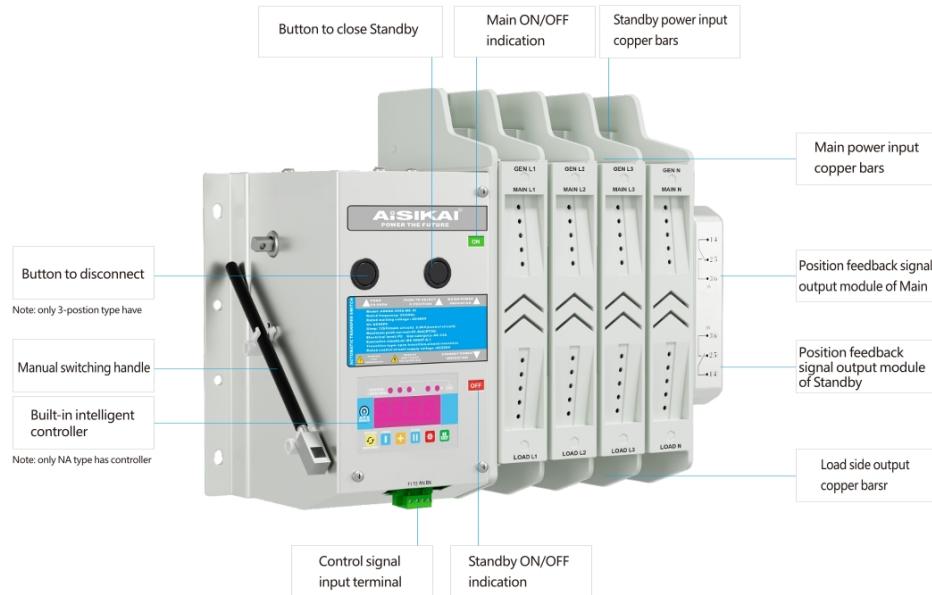
STRUCTURE OF X FIRE-FIGHTING TYPE



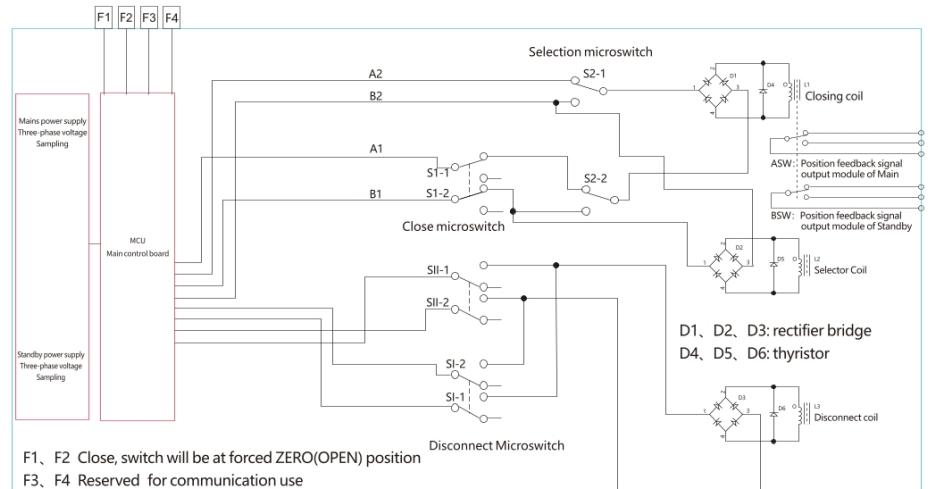
Internal Schematic



STRUCTURE OF NAX INTELLIGENT FIRE-FIGHTING TYPE

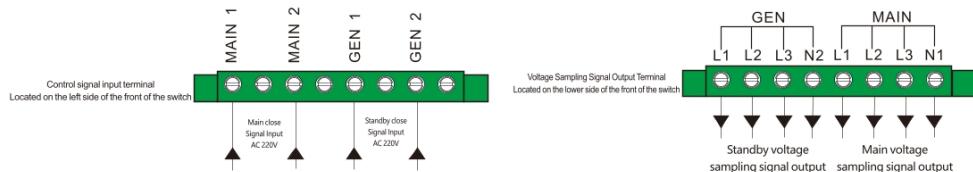


Internal Schematic

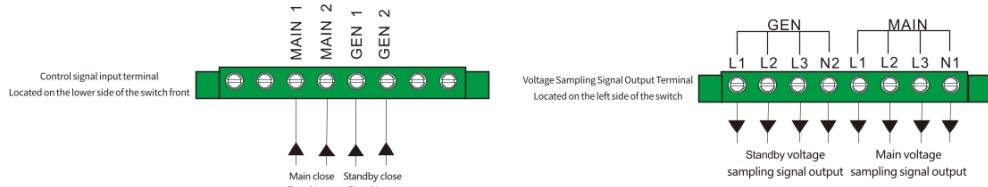


INTRODUCTION TO ELECTRIC OPERATION

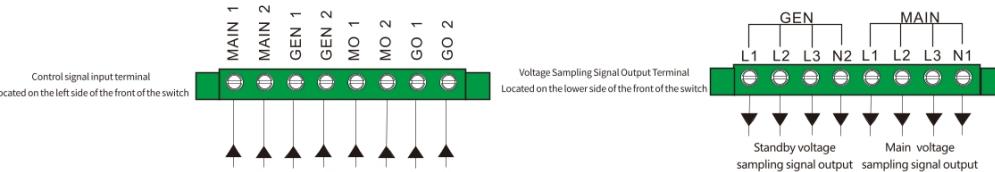
J Basic: 80F/125F/250F



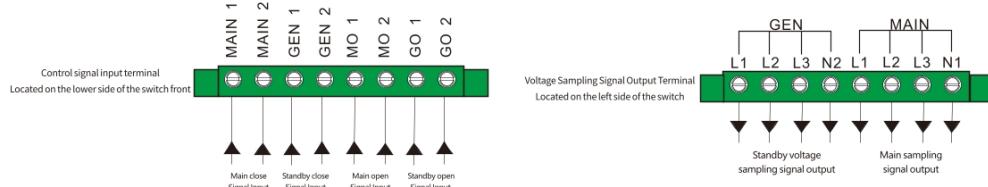
J Basic: 400F/630F shell frame



X Fire-fighting: 80F/125F/250F



X Fire-fighting: 400F/630F



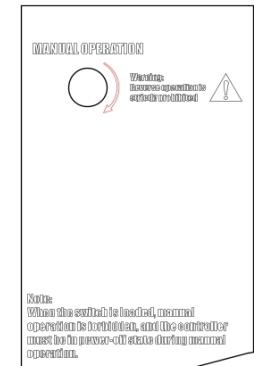
INTRODUCTION TO MANUAL OPERATION

J Basic Type / M End Type / NAJ Intelligent Basic Type (2-position) Manual Operation Instructions

To close the Main, turn the handle downwards to the limit position in the direction indicated by the arrow.

To close Standby, when in the state of Main closed, pull the handle back to the positioning position in the direction indicated by the arrow.

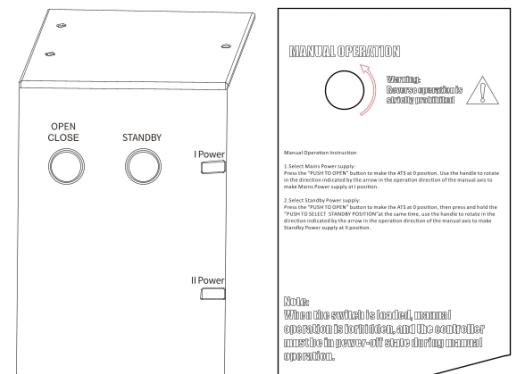
Note: Manual operation with load is prohibited. The controller must be in manual or disconnected state during manual operation. Each time the manual handle is turned, the switch changes position once.



X Fire-fighting Type/NAX Intelligent Fire-fighting Type (3-position) Manual Operation Instructions

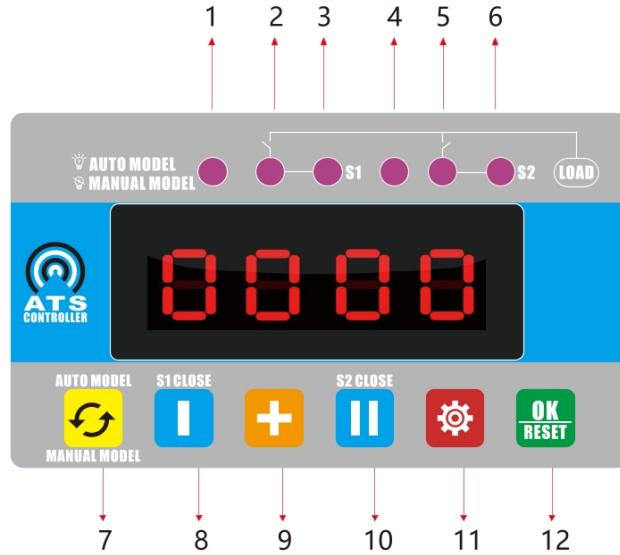
To close Main, press the "OPEN" button to make the switch at 0 position. Turn the handle upwards to the limit position in the direction indicated by the arrow.

To close Standby, press the "OPEN" button to make the switch at 0 position. Then press and hold the "STANDBY II CLOSE" while simultaneously turn the handle upwards to the limit position in the direction indicated by the arrow.



Note: ASKQ6 can be operated electrically and manually. When operated electrically, its effective breaking and closing capability can be ensured. However, when operated manually, there may be differences in the speed of breaking and closing due to human factors, which cannot guarantee reliable breaking and closing capability. Therefore, manual operation during the on-load switching will cause excessive wear on the silver alloy contacts. As a result, manual operation is only allowed for inspection, maintenance of the operating mechanism and contacts, and in case of malfunction of electric operation or emergency.

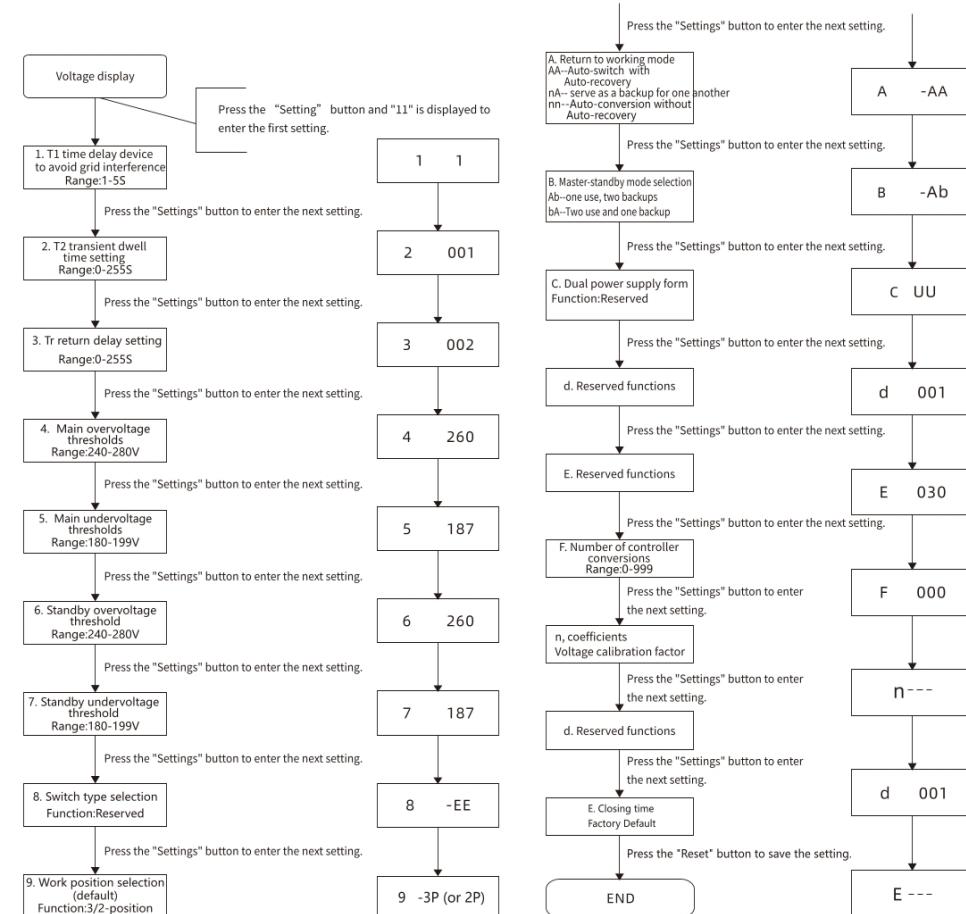
NAJ/X TYPE CONTROLLER PANEL INTRODUCTION



1. Manual/automatic status indicator. Manual/auto button press once, the indicator changes once. The light is lit indicates controller is in the automatic state. The light is off indicates controller is in the manual state.
2. Main close indicator. The light is lit after the Main closed.
3. Main power supply status indicator. When Main power supply is normal, the light is lit. When Main power fails or is lost, the light is off.
4. Disconnect (Open) position indicator. When the switch is disconnected (Dual OFF), this light is lit.
5. Standby Close Indicator. The light is lit after the Standby closed.
6. Standby power status indicator. When the Standby power is normal, the light is lit. When Standby power fails or is lost, the light is off.
7. Manual/automatic mode selection button. Switch between Manual and Automatic modes.
8. Main close button. In Auto mode, this button is invalid; in manual mode, press this button, the Load connects to Main power.
9. OPEN button, press this button, the switch turns to the OPEN(Dual power OFF) position.
10. Standby close button. In Auto mode, this button is invalid; in manual mode, press this button, the Load connects to Standby power.
11. Setting button, parameter setting selection.
12. OK/Reset button, save parameter setting and fault reset.

Note: I stands for main ; O stands for OPEN; II stands for standby.

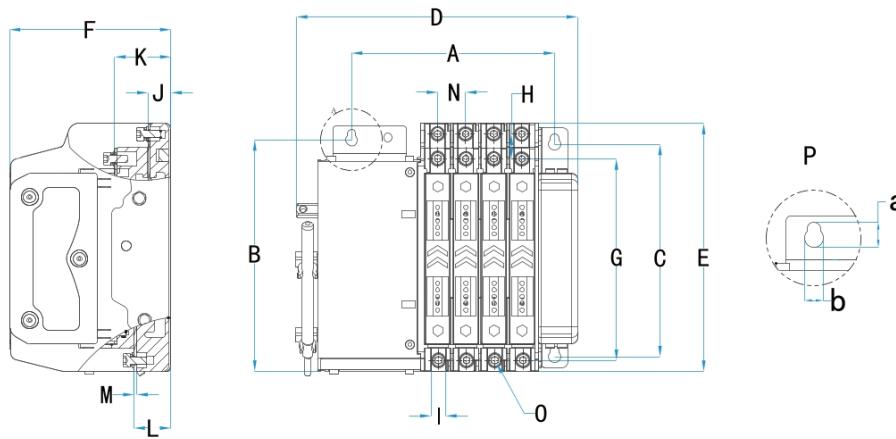
NAJ/X TYPE CONTROLLER SETTING



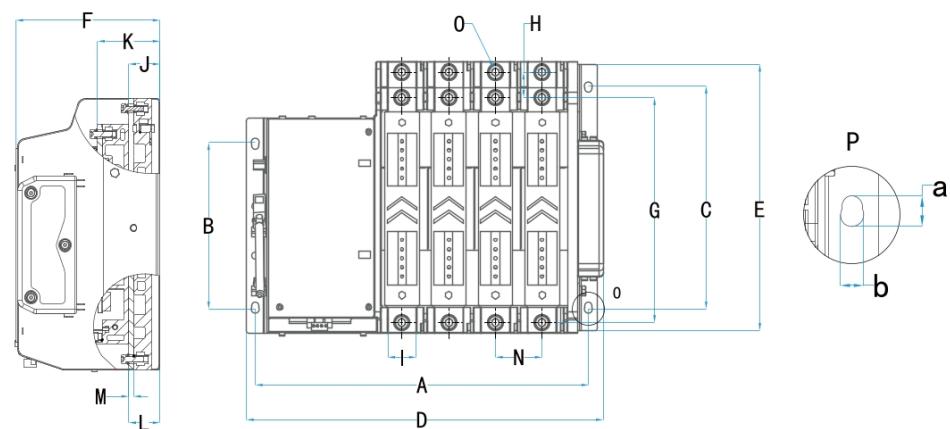
MAIN TECHNICAL PARAMETERS

ASKQ6 Double Power Automatic Transfer Switch								
Frame	80F		160F		250F		400F	630F
Rated current $I_e(A)$	16、25、32、40、50、63、80		100、125、160		125、160、200、250		250、320、400	500、630
Standards complied	IEC69047-6-1							IEC69047-6-1
Rated frequency (Hz)	50/60		50/60		50/60		50/60	50/60
Poles (P)	2	3、4	2	3、4	2	3、4	3、4	3、4
Rated operating voltage $U_e(v)AC$	230	400	230	480	230	480	480	480
Rated insulation voltage $U_i(v)AC$	690		690		690		690	690
Rated impulse withstand voltage $U_{imp}(kV)$	8		12		12		12	12
Rated limiting short-circuit current I_q (fuse protection) (kA)	100		100		100		120	120
Rated short-time withstand current $I_{cw}(kA/s)$	5kA/60ms		10 kA/60ms		10kA/60ms		17kA/60ms	17kA/60ms
Rated short-circuit switching capacity $I_{cm}(kA)$	7.65		17		17		34	34
Category of use	AC-33A		AC-33A		AC-33A		AC-33A	AC-33A
Mechanical life (times)	10000		10000		10000		10000	10000
Electrical life (times)	6000		6000		6000		4000	4000
Number of operating cycles (times/h)	120		120		120		120	120
Making and breaking capacity (kA)	0.63		17		17		34	34
Number of making and breaking (times)	50		50		50		50	50
Contact switching time (ms)≤	70		70		70		100	100
Electrical grade	PC Grade						PC Grade	
Weight(Kg)/III	7.7		6.8 / 7.7 / 8.6		7.4 / 8.6 / 9.8		17.8 / 20.8	21.2 / 24.9

ASKQ6-80A(2-position) Outline and Installation Dimensions

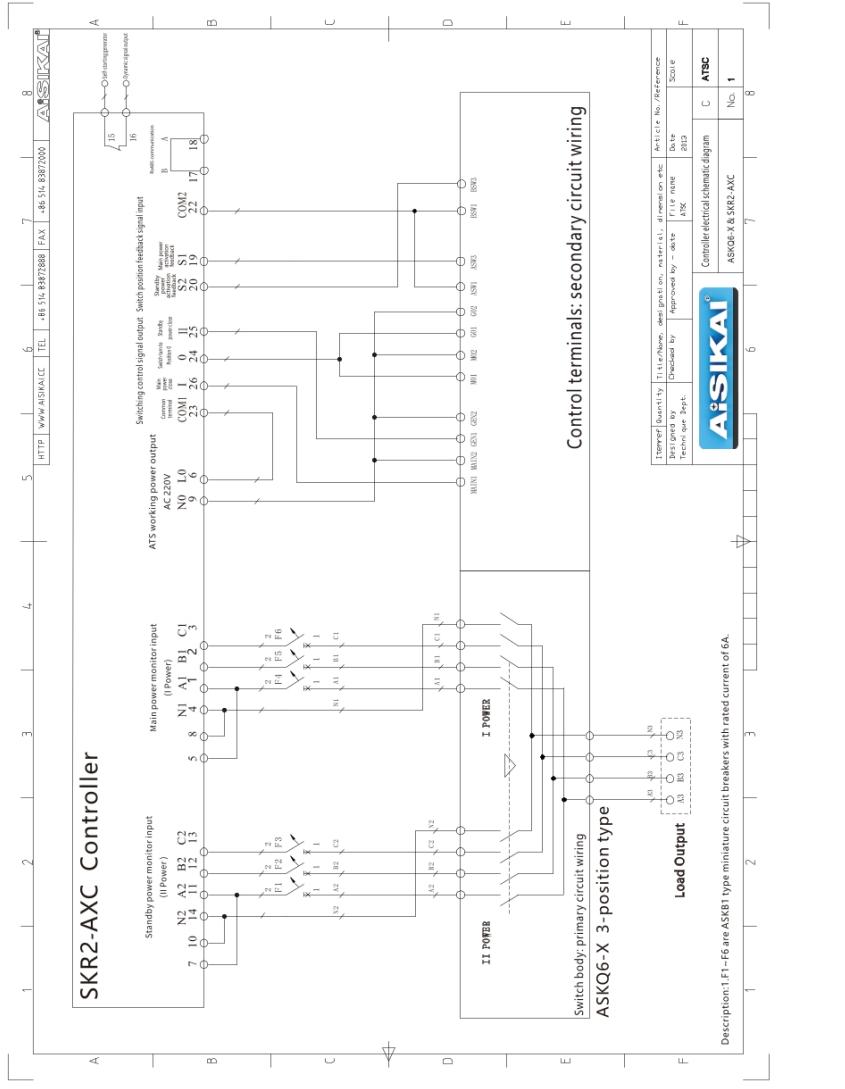


ASKQ6-80A-630A Outline and Installation Dimensions

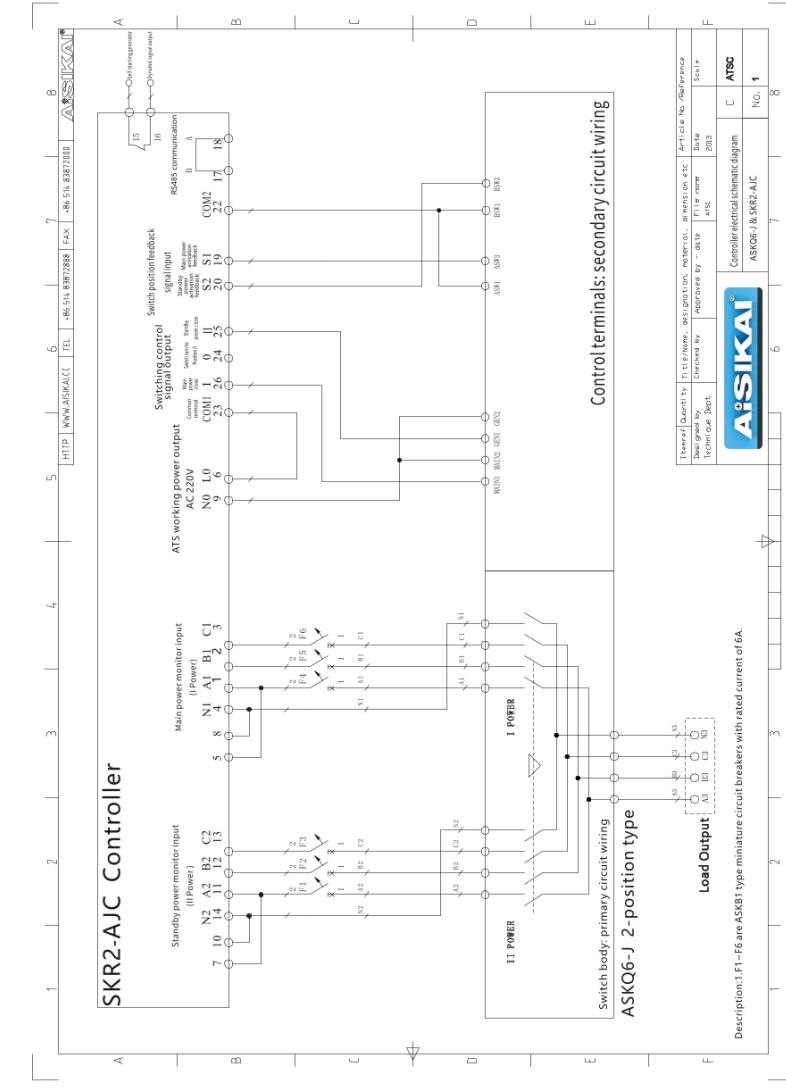


Model	Current Range	Poles	Installation Data			Maximum size of switch body			Other detailed dimensions of the switch									
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P(a*b)
ASKQ6	80A (2-position)	2P	121.1	190.5	175	185.8	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
		3P	144.3	190.5	175	209	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
		4P	167.5	190.5	175	232.2	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
	80A	2P	193.1	157	175	223.1	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
		3P	216.3	157	175	246.3	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
		4P	239.5	157	175	269.5	204	133	166	20.5	12	19	46.3	30.5	2	23.2	Ø7	13×6
	125A	2P	210	157	178	240	221	133.5	175	25	15	29	56.8	40.5	3	32	Ø9	13×6
		3P	242	157	178	272	221	133.5	175	25	15	29	56.8	40.5	3	32	Ø9	13×6
		4P	274	157	178	304	221	133.5	175	25	15	29	56.8	40.5	3	32	Ø9	13×6
	250A	2P	230	157	178	260	221	133.5	175	25	20	29	56.8	40.5	4	37	Ø9	13×6
		3P	267	157	178	297	221	133.5	175	25	20	29	56.8	40.5	4	37	Ø9	13×6
		4P	304	157	178	334	221	133.5	175	25	20	29	56.8	40.5	4	37	Ø9	13×6
	400A	2P	263.5	199.5	267.5	292.5	319.5	177.5	270	30.5	25	38.5	77	38.5	6	47.5	Ø10.5	12×8
		3P	311	199.5	267.5	340	319.5	177.5	270	30.5	25	38.5	77	38.5	6	47.5	Ø10.5	12×8
		4P	358.5	199.5	267.5	387.5	319.5	177.5	270	30.5	25	38.5	77	38.5	6	47.5	Ø10.5	12×8
	630A	2P	295.5	199.5	267.5	324.5	319.5	177.5	270	30.5	35	38.5	77	38.5	6	57.5	Ø10.5	12×8
		3P	353	199.5	267.5	382	319.5	177.5	270	30.5	35	38.5	77	38.5	6	57.5	Ø10.5	12×8
		4P	410.5	199.5	267.5	439.5	319.5	177.5	270	30.5	35	38.5	77	38.5	6	57.5	Ø10.5	12×8

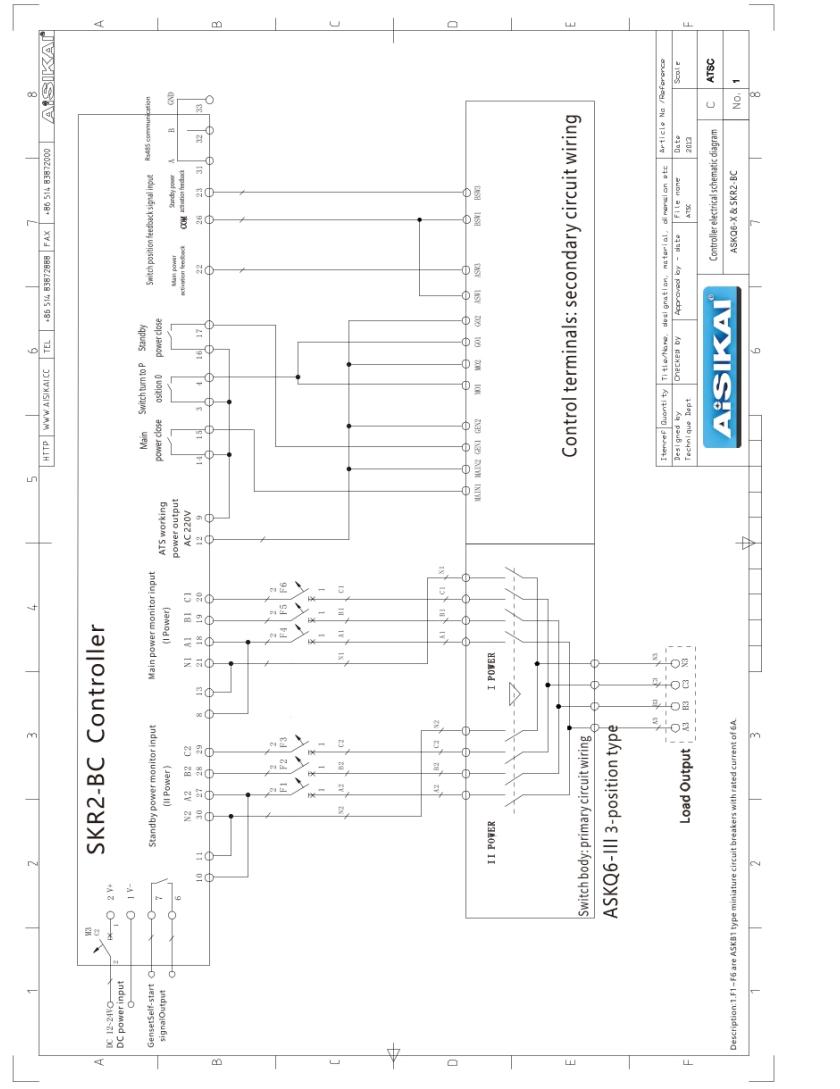
Electrical schematic: ASKQ6-X Fire-fighting type & SKR2-AXC controller



Electrical Schematics: ASKQ6-J Basic & SKR2-AJC Controllers



Electrical Schematic: ASKQ6-X Fire-fighting & SKR2-BC Controller



Electrical Schematics: ASKQ6-J Basic & SKR2-BC Controller

