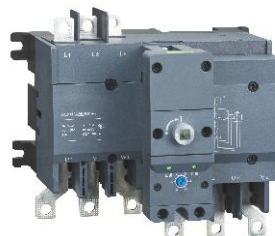




New Generation Star-Delta Starter Intelligent AC Contactor

Enjoy the digital future with smart IoT

Series Star-delta Starter



1 Application

The AX-SD Series Star Delta Starter is designed for use with 3-phase squirrel cage induction motors operating at 380/400 V AC, 50 Hz. It supports AC-3 current ratings ranging from 18 to 265 Amps. The starter features a modular design that integrates both contactors and a controller into a single unit, enabling complete motor control according to a preset program. This integrated setup enhances the efficiency and reliability of the star-delta starting function for the motor.

2 Type meanings

AX- SD

12 3 4 5 6 7 8

1: Company Code

2: Transfer Switches

3: Star Delta Stater

4: B (Basic Version), M (Manual for emergency), Z (Intelligent Controller)

5: Frame current (50, 110, 265 Amps)

6: AC3 Rated Current: 18,25,32, 40,50,65, 75,85, 95,100,110, 120, 160, 185, 225, 265 Amps

7: Aux Contact: F11, Z11, F22 (F11+Z11)

8: Door operating Handle G22: Standard handle (L-122mm),G52: (152mm), GS (140mm with lock)

3 Main technical data and functions

Item	Unit	Series																
Rated working current Ie (AC-3)	A	18	25	32	40	50	65	75	85	95	100	110	120	160	185	225	265	
Rated working voltage Ue	V	380V/400V																
Rated insulation voltage Ui	V	690					800					1000						
Poles	P	3																
Electrical life	times	60																
Mechanical life	times	600																
Manual (M) type mechanical life	times	10000																
Motor power (AC-3)	KW	11	18.5	22	30	37	45	55			75	90	110	132	160	185	235	
Applicable fuse	A	20	32		63	80	100				125		160	200	250	300	355	
Terminal wiring capacity	mm ²	16					35		50				75			150		
Coil data	Control voltage (Us)	V	220V/230V															
	Close voltage	%Us	80%~110%															
	Release voltage	%Us	20%~75%															
	Coil close power	VA	230															
	Holding power	VA	19					32					92					

Function	Basic type (auto type)	M Emergency manual type	Z Intelligent type
Star to delta conversion	●	●	●
Double speed control	□	○	○
Reversible control	□	○	○
Main-delta separate	□	○	○
Emergency type (Manual)	○	●	○
Short circuit linkage	○	○	●
Overload protection	○	○	●
Motor stall protection	○	○	●
Phase lost protection	○	○	●
Three phase unbalance	○	○	●
Over/under voltage protection	○	○	●
Fault display	○	○	●
Fault alarm	○	○	●
Fault record	○	○	●
Programmable data	○	○	●
Status display	○	○	●
Fire-linkage	○	○	□
Communication	○	○	□
Leakage protection	○	○	□
Lifecycle management	○	○	●

Note: ○ without, □ optional, ● available

4 Working conditions and Installation conditions

- 4.1 Installation altitude not more than 2000m.
- 4.2 Under normal working environment temperature max. not more than +40°C, lowest not lower than -5°C, and its average temperature not exceed + 35°C, when the ambient temperature exceeds the range, please consultant with manufacturer.
- 4.3 When the starter vertically installed, power terminal is upward and the load terminal is downward; the inclination angle between the installation surface and vertical surface shall not exceed $\pm 5^\circ$, and shall not affect its performance.
- 4.4 No abnormal vibration or impact.
- 4.5 Pollution class: 3
- 4.6 Fix method: screw installation

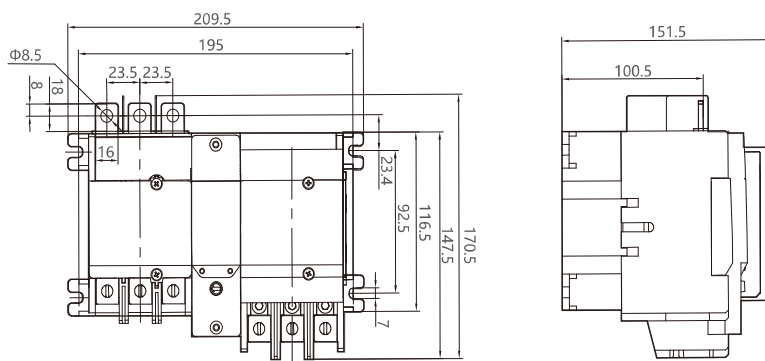
5 Structure features and working principle

Star delta starter: When the control coil is supplied with a 220V control voltage, the main contactor closed, forming a star circuit with the star contactor. The motor starts at reduced voltage. When the operating time reaches the set switching time and the motor speed approaches normal speed, the main contactor automatically open and then closes with the delta contactor again, forming a delta circuit. The motor runs at full voltage.

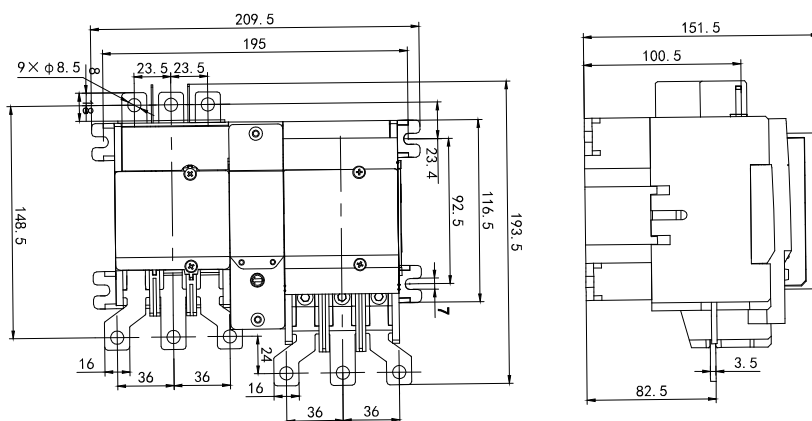
Mechanical emergency: When the signal line or control line of the fire pump control box fails, resulting in the inability to automatically or manually start the Pre pump, the main and delta contactors of the fire pump can be manually closed through the mechanical emergency start device on the door of the fire pump control box to start the fire pump

6 Outline and Installation dimensions

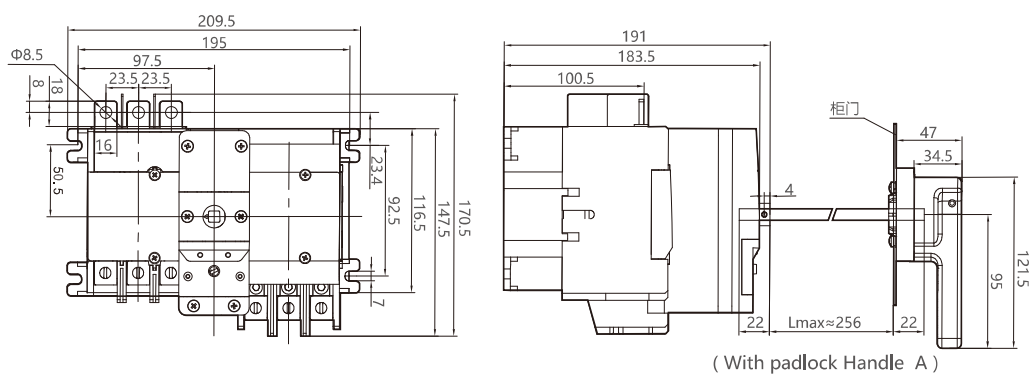
-110 65A、75A、85A、95A Basic auto type



100A、110A Basic Auto type

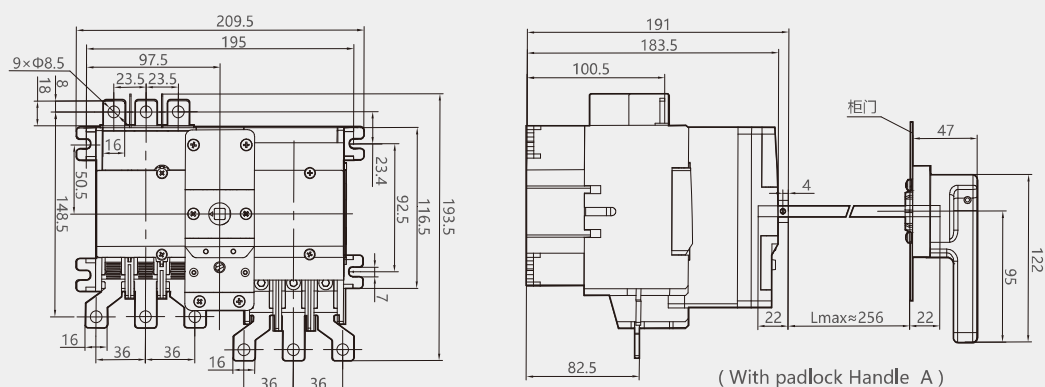


65A, 75A, 85A, 95A Mechanical Emergency Type

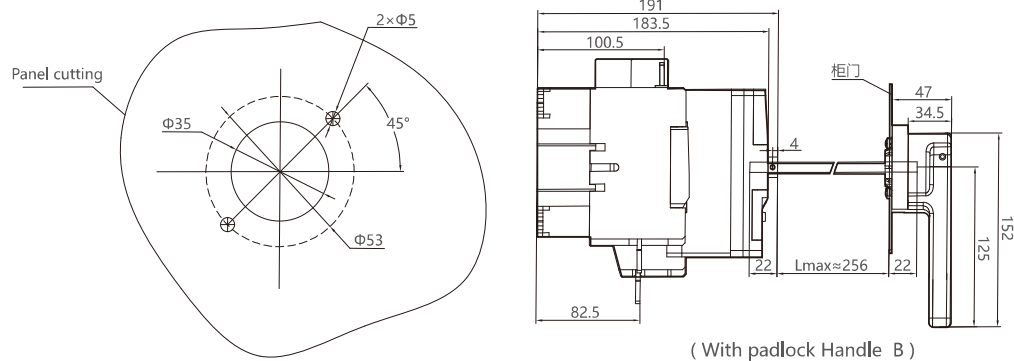


SR	Handle Type	Handle Length
1	Handle (with lock) A	L=122mm
2	Handle (with lock) B	L=152mm
3	Handle (with lock) C	L=140mm

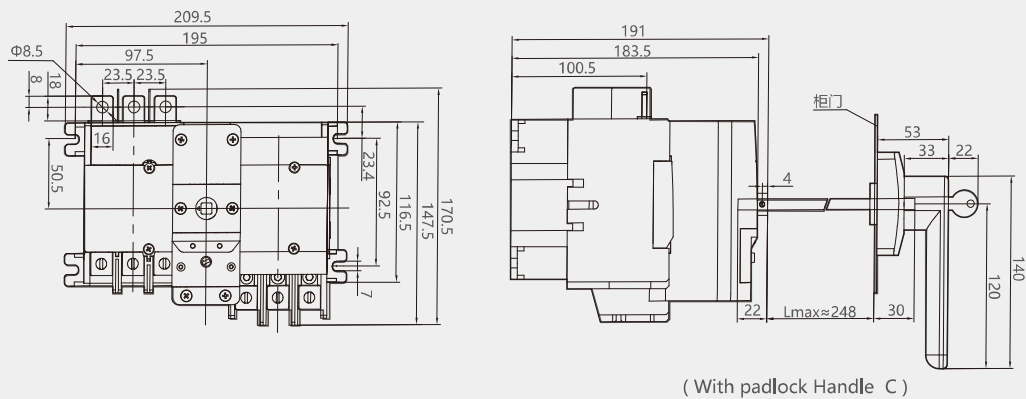
110A Mechanical Emergency Type



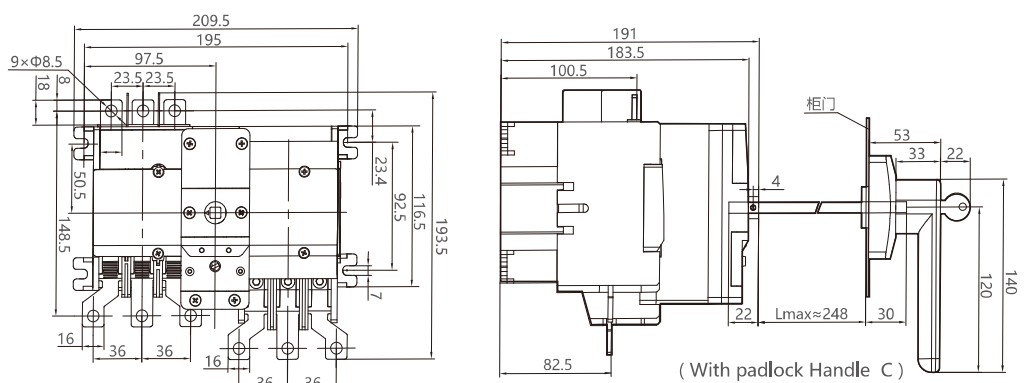
Hole cutting of Handle A, B (with padlock)



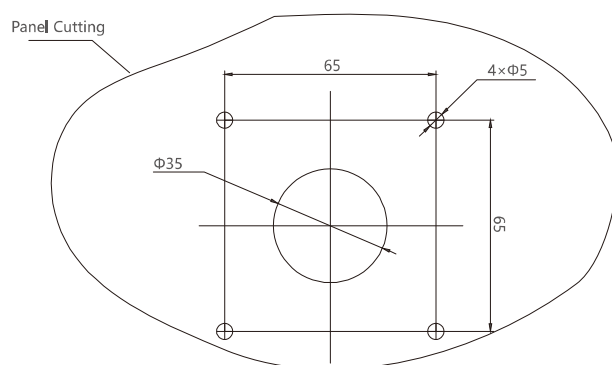
65A, 75A, 85A, 95A Mechanical emergency type



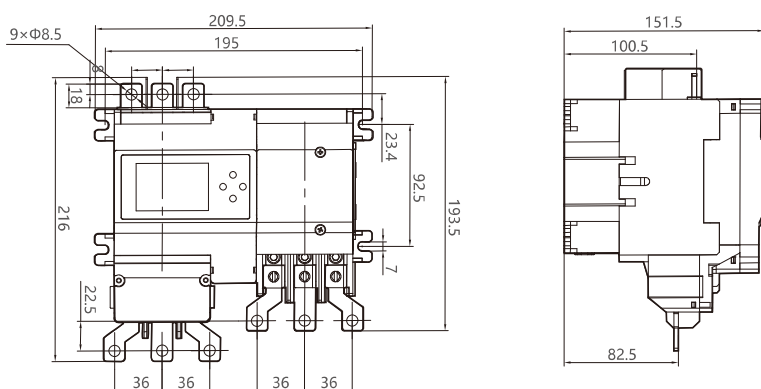
110A Mechanical Emergency Type



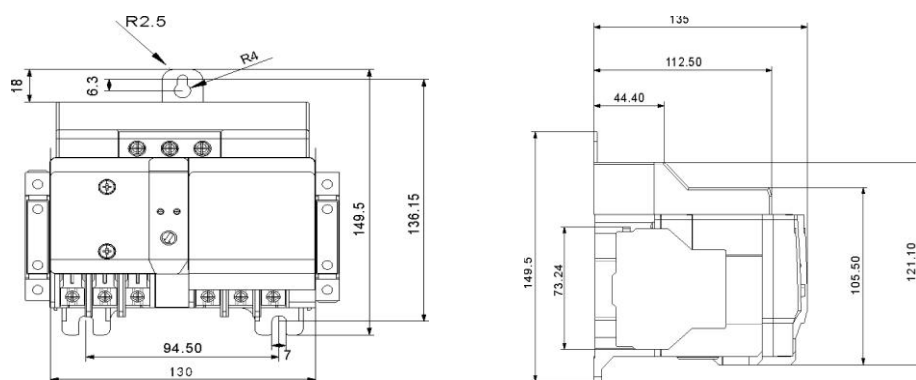
Hole cutting of handle C (with padlock)



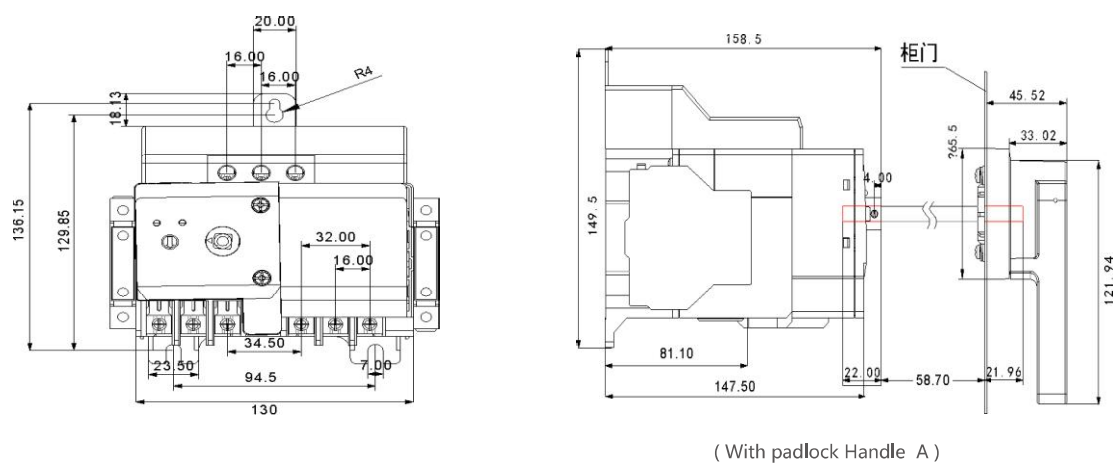
Intelligent Type



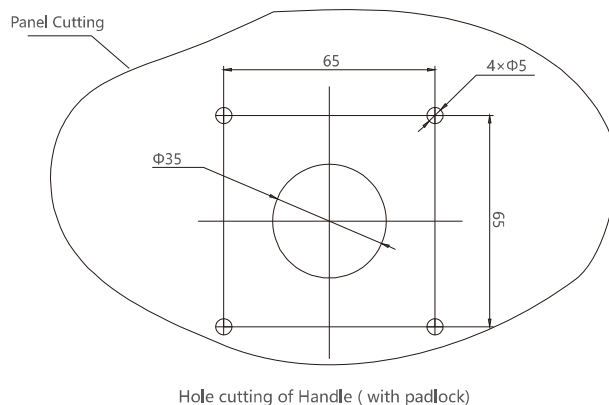
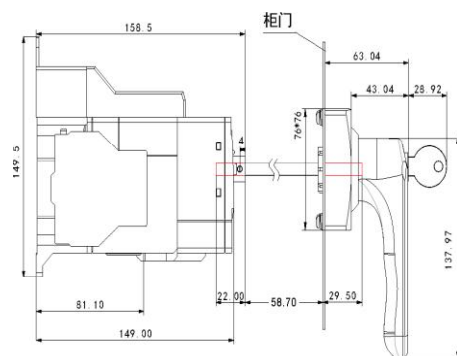
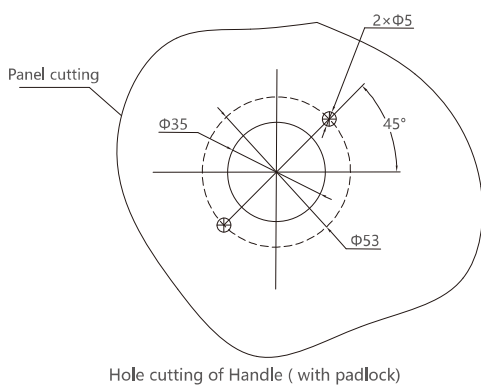
50A, 40A, 32A, 25A, 18A Basic Auto Type



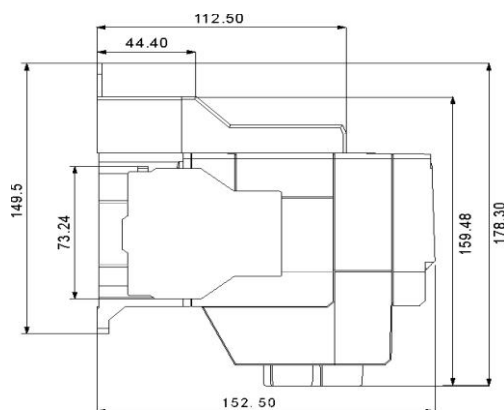
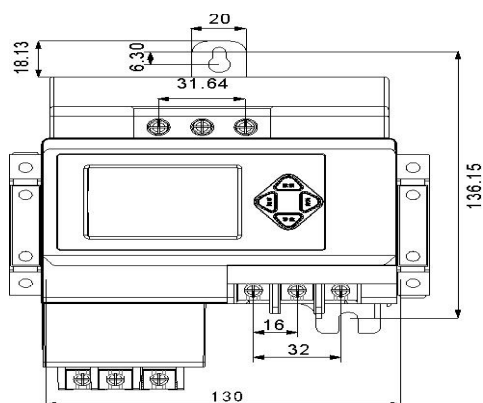
50A, 40A, 32A, 25A, 18A Mechanical Emergency Type



SR	Handle Type	Handle Length
1	Handle (with lock) A	L=122mm
2	Handle (with lock) C	L=140mm



KS2-50 50A、40A、32A、25A、18A Intelligent Type



7 Product selection and Ordering

Selection Table

☐	☐	☐	☐	☐	☐	☐
Starter: Model: AX-SD	Frame Current : 50A、110A、 265A	Function : Blank: basic auto type M: Mechanical Emergency Type Z: Intelligent Type	Rated Current : 18A、25A、32A、40A 、50A、65A、75A、 85A、95A、100A、 110A、120A、160A、 185A、225A、265A	Rated control voltage : 220V/230V	Auxiliary Contact (1NO+1NC) F11: Left installation Z11: Right installation F22:Left+Right installation	Door Handle A:With padlock (L=122mm) B:With padlock (L=152mm) C:With lock (L=140mm)

When ordering please indicate below information:

7.1 Complete name, model, specification and quantity, including requirement for the handle or aux. contact if required.

7.2 Rated control power voltage and frequency.

7.3 If there is special requirement for installation or location, please provide relative technical information or consultant with us