EXC7-M Miniature AC Contactor

Model and Meaning

EXC 7□ - M □ □ □ □ □

- N: Reversing Contactor
- Control circuit power supply voltage: AC or DC. Without the suffix "Z": AC; with the suffix "Z": DC.
- "01" and "10" respectively indicate that the 3-pole contactor is equipped with one set of normally closed auxiliary contacts or one set of normally open auxiliary contacts; "O4" and "08" respectively indicate that the 4-pole contactor is configured with four sets of normally open main contacts or two sets of normally open and normally closed auxiliary contacts.
- Rated operating current at 380V/400V under AC-3 u liza on category
- P: Pin-type
- Miniature
- Design serial number; s: Light gray upper cover
- AC Contactor

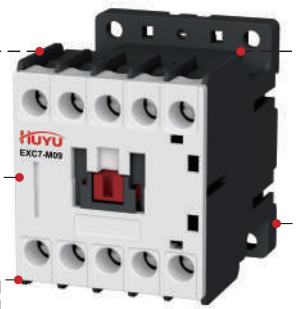
Three Key Features

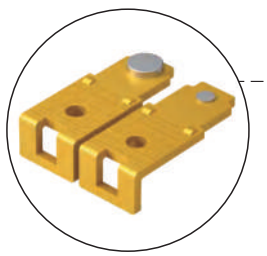
- Smaller footprint, ideal for installa on in ght spaces
- Boas ng superior cost-effectiveness, this product is priced lower than other products of the same current ra ng
- Deriva ve DC and pin-type variants are available to adapt to different working scenarios

Product Structural Analysis Diagram

Compact size for applications in confined spaces
Compared with mainstream products of the same current rating available on the market, this product boasts a volume reduction of over 40%

Derivative DC version
Suitable for DC control power supplies





Comprehensive load modes are supported, suitable for 3p/4p main circuit applications

Derivative pin-type version
Direct PCB soldering enables convenient installation

The flat wiring design allows for more convenient wiring and wire removal
Wiring can be done in any sequence, eliminating the need for rework

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Product Overview

The EXC7-M Series AC Contactors feature an innovative appearance and a compact structure, and are suitable for occasions involving frequent starting, control of AC motors, and remote circuit breaking. When used in combination with thermal relays, they form electromagnetic starters. Implementation Standards: IEC 60947-1, IEC 60947-4-1

Main Technical Parameters

- Rated working current: 6-16A;
- Rated working voltage: 220V to 690V;
- Rated insulation voltage: 690V;
- Polarities: 3P, 4P
- Installation method: rail and screw

Working Conditions and Installation Conditions

Category	Working conditions and installation conditions
Installation type	III
Pollution degree	3
Certification mark	CE
Enclosure protection rating	IP20(excluding terminals)
Ambient air temperature	The maximum operating temperature is-35℃ to +70℃,and the normal operating temperature is -5℃ to +40℃The average value within 24 hours does not exceed+35℃. If used outside the normal operating temperature range, for details, please refer to the "Instructions for Use in Abnormal Environments"
Altitude	No more than 2000m
Ambient air temperature	When the maximum temperature is +70℃, the relative humidity of the air shall not exceed 50%. Higher relative humidity is allowed at lower temperatures For example, it reaches 90% at +20℃. Special measures should be taken for condensation that occasionally occurs due to changes in humidity
Installation conditions	The inclination between the installation surface and the vertical surface shall not exceed +5°
Shock and vibration	The product should be installed and used in a place free from significant shaking, shock and vibration

Instructions for Use in Extreme Temperature Environments

● The GB/T 14048.1 standard specifies the normal operating ambient temperature for the product. When used within this normal range, the product's performance is not significantly affected.

● When the operating ambient temperature exceeds +40℃, it is necessary to consider derating the permissible temperature rise limits. In such cases, the rated operating current must be reduced, and the number of contactors installed in standard assemblies must be decreased. Failure to do so may result in product damage, a shortened service life, reduced operational reliability, and an impact on the product's operating range. When the operating ambient temperature falls below -5℃, consideration must be given to the fact that greases used for insulation and lubrication may solidify at low temperatures, potentially causing product failure. Therefore, manufacturers and users should consult each other regarding design or usage requirements.

● The table below lists the rated operating current correction factors for instances where the rated operating voltage remains constant but the operating ambient temperature exceeds 55℃.

Ambient temperature(℃)	55	60	65	70
Correction Factor	1	0.93	0.875	0.75

● The following table provides correction factors for the rated impulse withstand voltage and rated working current when the altitude exceeds 200Om with the rated working voltage unchanged:

Altitude (m)	2000	3000	4000	5000
Correction Factor for Rated Impulse Withstand Voltage	1	0.88	0.78	0.7
Correction Factor for Rated Working Current	1	0.92	0.9	0.85

Features and Performance

Main Technical Parameters						
Model			EXC7-M06	EXC7-M09	EXC7-M12	EXC7-M16
Main circuit characteristics						
Polar number			3P/4P			
Rated insulation voltage (Ui)		V	690			
Rated operating voltage(Ue)		V	380/400, 660/690			
Agreed heating current (Ith), AC-1 rated operating current			20			
Rated working current (Ie)	AC-3,380/400V	A	6	9	12	16
	AC-3,660/690V	A	3.8	4.9	4.9	4.9
	AC-4,380/400V	A	6	9	9	12
	AC-4,660/690V	A	3.8	4.9	4.9	4.9
Rated working power(Pe)	AC-3,380/400V	kW	2.2	4	5.5	7.5
	AC-3,660/690V	kW	3	4	4	4
Mechanical life			1200			
Electrical life	AC-3	10,000 times	120			
	AC-4		22			
Operating frequency	AC-3	Times per hour	1200			
	AC-4		300			
The wiring capability of the main circuit terminals						
Flexible wire With terminal blocks	1 wire	mm^2	1...2.5			
	2 wires	mm^2	1...1.5			
Hard wire No terminal blocks	1 wire	mm^2	1...2.5			
	2 wires	mm^2	1...2.5			
Fastening torque		N.m	0.8			
Coil						
Rated control circuit voltage (Us)	50Hz	V	24 36 48 110 127 220 380 415			
	50/60Hz	V	24 36 48 110 127 220 380 415			
	DC	V	12 24 36 48 110 127 220			
Allowable control circuit voltage (Us)	Operation	V	AC:75%~120%; DC:80%~120%			
	Release	V	AC:20%~65%; DC:10%~70%			
Coil power consumption	Pull-in	VA	20-40 (≤4.5W DC)			
	Holding	VA	9.0 (≤4.5W DC)			
Auxiliary contact						
Contact specification		A	1NO/1NC			
Agreed heating current (Ith)		A	10			
Rated operating voltage (Ue)	AC	V	380/400			
	SD	V	220			
Rated control capacity	AC-15	VA	360			
	DC-13	W	33			

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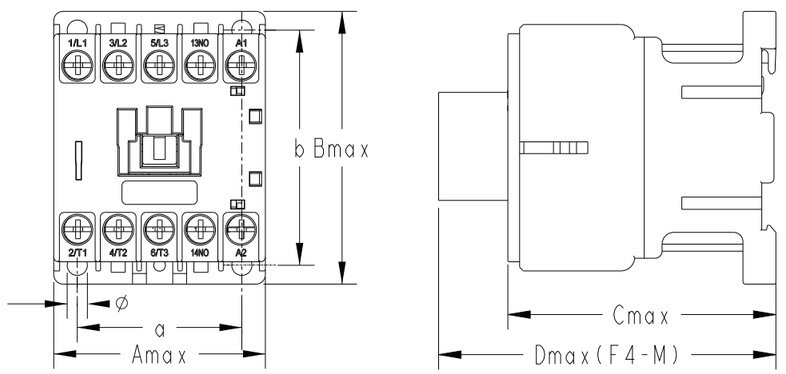
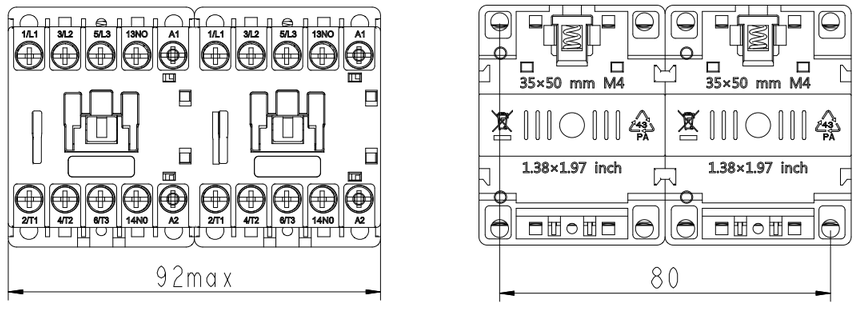
Outline and Mounting Dimensions

EXC7-M06~M16

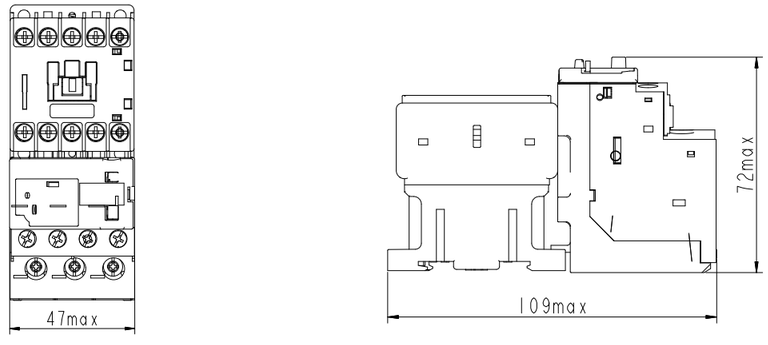


Model	Amax	Bmax	Cmax	Dmax	a	b	Φ
EXC7-M06-M16	45.5	59	58	94	35±0.35	50±0.48	4.2
EXC7-M06Z-M16Z	45.5	59	70	106	35±0.35	50±0.48	4.2
EXC7-MP06-MP16	45.5	59	66	102	/	/	/

EXC7-M06N~M16N



EXC7-M06~M16+JR28s-M



Three Key Features

- More auxiliary contacts come as standard, meeting diverse application requirements
- Suitable for wider voltage fluctuations, ensuring stable operation of the equipment
- Superior environmental adaptability, enabling reliable operation even in extreme conditions

Product Structural Analysis Diagram

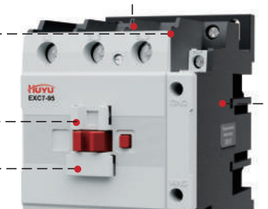
Recessed screw structure for easier wiring

Standard configuration: 1 NO + 1 NC auxiliary contact
Breaking through the limitations of traditional designs, meeting new industry demands for the product

- Features an extra set of auxiliary contacts compared to the standard configuration of traditional AC contactors

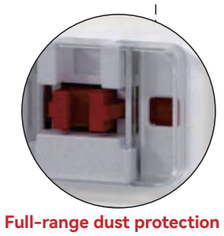
- Ideal for applications requiring 1 NO + 1 NC contacts; eliminates the need for add

-on accessories, saving both time and money while ensuring convenient, hassle-free use- Simplifies inventory management



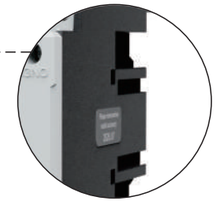
A unique slider design simplifies complex procedures and enhances installation and removal efficiency; supports tool-free installation and removal.

- The previously complex removal process has now become extremely simple.

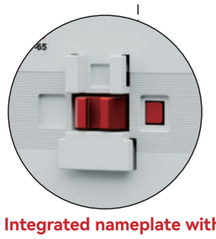


Full-range dust protection

- Transparent dust cover
- Side dust-proof scker



Seamless design



Integrated nameplate with permanent adhesion

Unique terminal shield design

- Electric shock protection for enhanced safety

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Product Overview

The all-new EXC7 series AC contactors feature a novel design and a compact structure.This series is primarily used for the frequent starting and control of AC motors and for remote circuit switching; it can also be combined with a suitable thermal overload relay to form an electromagnetic starter.

Compliant with standards: IEC60947-1, IEC60947-4-1.

Main Technical Parameters

- Rated workingcurrent:9-95A;
- Rated workingvoltage:220Vto 69OV;
- Rated insulation voltage: 690V;
- Polarities:3P
- Installation method: rail and screw

Working Conditions and Installation Conditions

Category	Working conditions and installation conditions
Installation category	III
Pollution degree	3
Certification mark	CE
Enclosure protection class	CJX2s-09~38: IP20 (excluding terminals) CJX2s-40~95: IP10; CJX2s-110: IP00
Ambient air temperature	Extreme operating temperature: -35℃ to +70℃; Normal operating temperature: -5℃ to +40℃; Average temperature over a 24-hour period: not exceeding +35℃. For use outside the normal operating temperature range, please refer to the "Instructions for Use in Non-standard Environments."
Altitude	Not exceeding 2000m
Ambient air temperature	At a maximum temperature of +70℃, relative humidity shall not exceed 50%; higher relative humidity is permissible at lower temperatures, e.g., up to 90% at +20℃. Special measures should be taken regarding occasional condensation caused by temperature fluctuations.
Installation conditions	Inclination of the mounting surface relative to the vertical plane: not exceeding ±5°
Shock and vibration	The product should be installed and used in locations free from significant swaying, shock, and vibration.

Instructions for Use in Extreme Temperature Environments

- The GB/T 14048.1 standard specifies the normal operating ambient temperature range for the product; performance remains unaffected when the product is used within this range.

- When the operating ambient temperature exceeds +40℃, the permissible temperature rise limit must be adjusted downward. In such cases, the rated operating current must be reduced, and the number of contactors installed in standard assemblies must be limited; failure to do so may result in product damage, reduced service life, compromised operational reliability, and an impact on the product's operating range.

When the operating ambient temperature falls below -5℃, consideration must be given to the fact that greases used for insulation and lubrication may solidify at low temperatures, potentially causing product malfunction. Therefore, manufacturers and users should consult regarding design or application requirements.

- The table below lists the derating factors for rated operating current when the rated operating voltage remains constant and the operating ambient temperature exceeds 55℃.

Ambient temperature(℃)	55	60	65	70
Correction Factor	1	0.93	0.875	0.75

- +55℃ to +70℃: The pick-up voltage range for the AC contactor is (90%–110%)Us. The (70%–120%)Us range represents test results obtained under cold-state conditions at an ambient temperature of 20℃.

- The following table lists the correction factors for rated impulse withstand voltage and rated operating current when the rated operating voltage remains unchanged and the altitude exceeds 2000 m:

Altitude (m)	2000	3000	4000	5000
Correction Factor for Rated Impulse Withstand Voltage	1	0.88	0.78	0.7
Correction Factor for Rated Working Current	1	0.92	0.9	0.85

Features and Performance

Main Technical Parameters													
Model(EXC7)			-09	-12	-18	-25	-32	-38	-40	-50	-65	-80	-95	-110
Main circuit characteristics														
Polar number			3P											
Rated insulation voltage (Ui)		V	690											
Rated operating voltage(Ue)		V	380/400, 660/690											
Agreed heating current (Ith), AC-1 rated operating current			20	25	32	40	50	50	60	80	80	100	125	140
Rated working current (Ie)	AC-3,380/400V	A	9	12	18	25	32	38	40	50	65	80	95	110
	AC-3,660/690V	A	6.6	8.9	12	18	22	22	34	39	42	49	49	86
	AC-4,380/400V	A	3.5	5	7.7	8.5	12	14	18.5	24	28	37	44	51
	AC-4,660/690V	A	1.5	2	3.8	4.4	7.5	8.9	9	12	14	17.3	21.3	25
Rated working power(Pe)	AC-3,380/400V	kW	4	5.5	7.5	11	15	18.5	18.5	22	30	37	45	55
	AC-3,660/690V	kW	5.5	7.5	10	15	18.5	18.5	30	37	37	45	45	80
	AC-4,380/400V	kW	1.5	2.2	3.3	4	5.4	5.5	7.5	11	15	18.5	22	25.5
	AC-4,660/690V	kW	1.1	1.5	3	3.7	5.5	6	7.5	10	11	15	18.5	21.7
Mechanical life		10,000 times	1200			1000			900			650		
Electrical life	AC-3	10,000 times	110			90			65					
	AC-4	10,000 times	22						17			11		
Operating frequency	AC-3	Times per hour	1200			600								
	AC-4	Times per hour	300			180								
The wiring capability of the main circuit terminals														
Flexible wire	1 wire	mm²	1…4			1…6			2.5…25			4…50		10…150
With terminal blocks	2 wires	mm²	1…2.5			1…4			2.5…10			4…16		10…75
Hard wire	1 wire	mm²	1…4			1.5…6		1.5…10	2.5…25			4…50		10…150
No terminal blocks	2 wires	mm²	1…4			1.5…6			2.5…10			4…25		10…75
Fastening torque		N.m	1.2			1.8			6			9		10
Coil														
Rated control circuit voltage (Us)	50Hz	V	24、36、48、110、127、220/230、240、380/400、415、440											
	50/60Hz	V	24、36、48、110、127、220/230、240、380/400、415、440											
Allowable control circuit voltage (Us)	Operation	V	70%~120%											
	Release	V	20%~65%											
Coil power consumption	Pull-in	VA	60			70			200			200		
	Holding	VA	⩽9.0			⩽14			⩽25			⩽25		
Auxiliary contact														
Contact specification		A	1NO/1NC											
Agreed heating current (Ith)		A	10											
Rated operating voltage (Ue)	AC	V	380											
	SD	V	220											
Rated control capacity	AC-15	VA	360											
	DC-13	W	33											

Shape and Installation Dimensions

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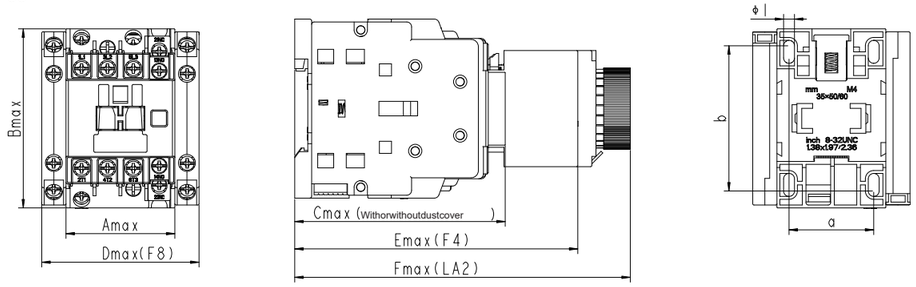
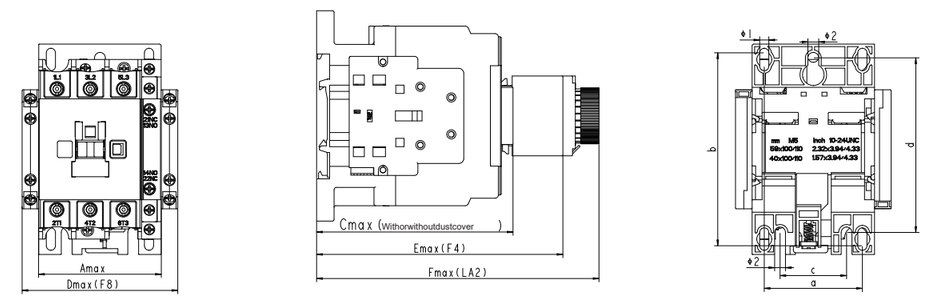
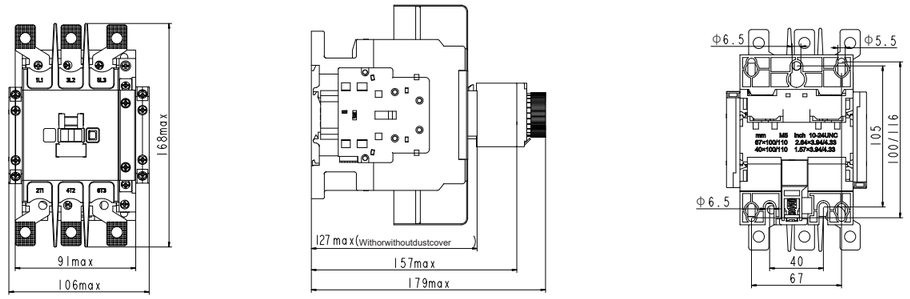
CJX2s-09~38



CJX2s-40~95

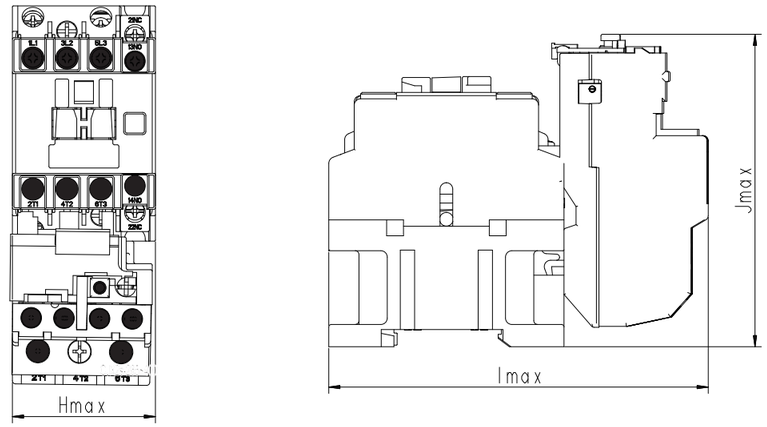


CJX2s-110



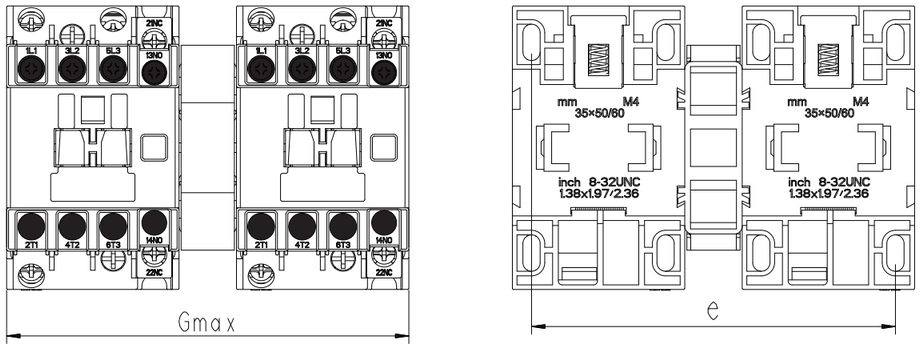
Model	Amax	Bmax	Cmax	Dmax	Emax	a	b	c	d	Φ1	Φ2
EXC7-09,12,18	74.5	45.5	89	68	119	34	50/60	-	-	4.5	-
EXC7-25,32,38	83	56.5	100	79	130	40	50/72	-	-	4.5	-
EXC7-40,50,65	127.5	74.5	120	96	150	59	116	40	105	5.5	6.5
EXC7-80,95	127.5	85.5	127	107	157	67	116	40	105	5.5	6.5

CJX2s-09~95+JR28s-25~93



Model	Hmax	Imax	Jmax
EXC7-09~18	47	122	100
EXC7-25	58	130	107
EXC7-32~38	58	143	96
EXC7-40~65	75	174	125
EXC7-80~95	86	180	128

CJX2s-09N~95N



Model	Gmax	e
EXC7-09~18	107	95
EXC7-25~38	130	110.5/111.5
EXC7-40~65	164	148
EXC7-80~95	186	166.5

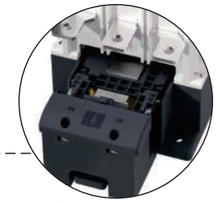
EXC7 High-current AC Contactor

Three Key Features

- Dual-coil control circuit, compliant with the trend of energy conservation and consumption reduction
- Adaptable to wider voltage fluctuations, ensuring stable equipment operation
- Superior environmental adaptability, reliable operation even in extreme conditions

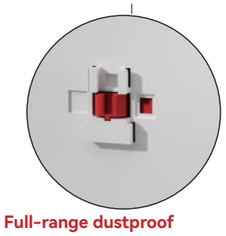
Product Structural Analysis Diagram

Dual-coil control circuit
- Lower holding power consumption,
- over 40% reduction compared with traditional contactors,
- energy-saving and highly efficient



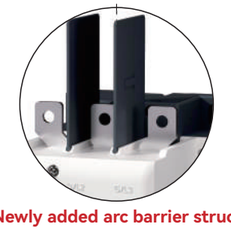
Bottom drawer-type coil
- Easy to maintain and replace,
- reducing customers' operational costs

Equipped with 2 normally open and 2 normally closed auxiliary contacts as standard
- No additional accessories need to be installed, making inventory management more convenient



Full-range dustproof
- A dust cover can be installed on the front to prevent dust from entering the product and ensure its reliability operation.

Brand-new platform design with a smaller footprint
- Its footprint is reduced by more than 20% compared with traditional contacts, effectively saving cabinet space



Newly added arc barrier structure
- Arc barriers can be retrofitted to increase the creepage distance between poles and achieve a higher insulation class

Product Overview

The new EXC7-120~80oA series AC contactors feature an innovative appearance and a compact structure. They are mainly used for frequent starting and control of AC motors, remote switching on and off of circuits, and can be combined with appropriate thermal overload relays to form electromagnetic starters

Complies with standards: GB/T 14048.1/IEC 60947-1,GB/T 14048.4/IEC 60947-4-1

Main Technical Parameters

- Rated working current: 120-800A;
- Rated working voltage: 220V to 690V;
- Rated insulation voltage: 1000V;
- Polarities: 3P
- Installation method: rail and screw

Working Conditions and Installation Conditions

Category	Working conditions and installation conditions
Installation category	III
Pollution degree	3
Enclosure protection class	IP00
Ambient air temperature	The maximum operating temperature is-35℃ to +70℃,and thenormal operating temperature is -5℃ to +40℃ The average value within 24 hours does not exceed +35℃. If used outside the normal operating temperature range, for details, please refer to the "Instructions for Use in Abnormal Environments"
Altitude	No more than 2000m
Ambient air temperature	When the maximum temperature is +70℃,the relative humidity of the air shall not exceed 50%. Higher relative humidity is allowed at lower temperatures For example, it reaches 90% at +20℃. Special measures should be taken for condensation that occasionally occurs due to changes in humidity
Installation conditions	The inclination between the installation surface and the vertical surface shall notexceed +5°.
Shock and vibration	The product should be installed and used in a place free from significant shaking, shock and vibration

Instructions for Use in Abnormal Temperature Environments

- The GB/T 14048.1 standard specifies the normal operating ambient temperature for the product.

When used within the normal operating ambient temperature range, the product's performance is not significantly affected.

- When the operating ambient temperature exceeds +40℃, it is necessary to consider derating the permissible temperature rise limit. In such cases, the rated operating current must be reduced, and the number of contactors installed in standard assemblies must be decreased. Failure to do so may result in product damage, reduced service life, diminished operational reliability, and an impact on the product's operating range.

When the operating ambient temperature falls below -5℃, consideration must be given to the fact that greases used for insulation and lubrication may solidify at low temperatures, potentially causing product failure. Therefore, the manufacturer and the user should consult regarding design or usage requirements.

- The table below lists the rated operating current derating factors for instances where the rated operating voltage remains constant but the operating ambient temperature exceeds 55℃.

Ambient temperature(℃)	55	60	65	70
Correction Factor	1	0.93	0.875	0.75

- +55℃~+70℃: The pull-in voltage range of the AC contactoris(90%~110%)Us.The range of(70% ~120%)Us is the testresult obtained under the condition of cold state atnormaltemperature of 20℃

- The following table provides correction factors for the rated impulse withstand voltage and rated workingcurrent when the altitude exceeds 20oom with the rated working voltage remains unchanged:

Altitude (m)	2000	3000	4000	5000
Correction Factor for Rated Impulse Withstand Voltage	1	0.88	0.78	0.7
Correction Factor for Rated Working Current	1	0.92	0.9	0.85

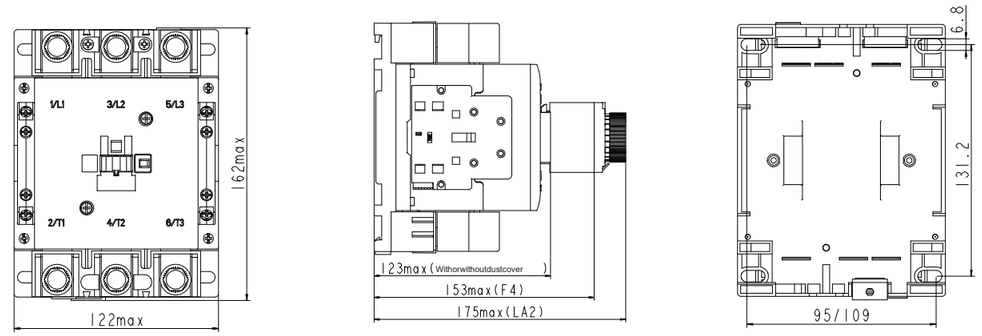
C

Features and Performance

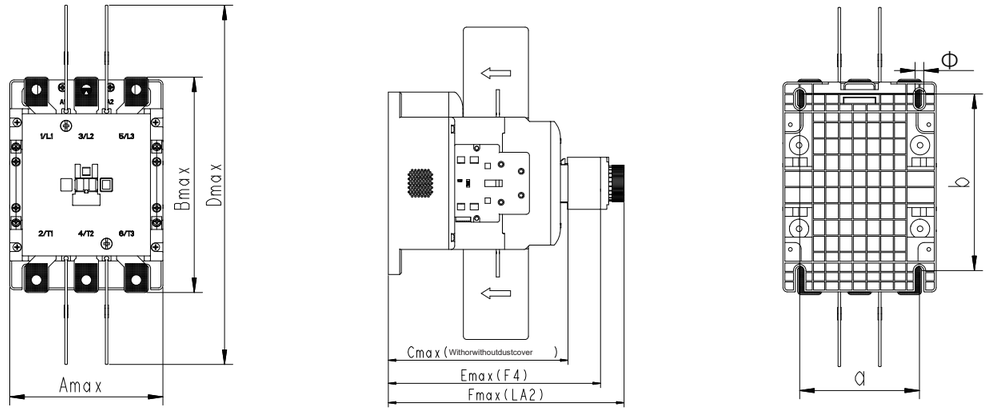
Main Technical Parameters											
Frame Size			120	160	185	225	265	330	400	500	630	800
Main circuit characteristics												
Polar number			3P									
Rated insulation voltage (Ui)		V	1000									
Rated operating voltage(Ue)		V	380/400，660/690									
Agreed heating current (Ith), AC-1 rated operating current			200	200	275	275	315	380	450	630	700	900
Rated working current (Ie)	AC-3,380/400V	A	120	160	185	225	265	330	400	500	630	800
	AC-3,660/690V	A	86	107	107	118	170	235	303	353	400	470
Rated working power(Pe)	AC-4,380/400V	kW	55	75	90	110	132	160	200	250	335	450
	AC-4,660/690V	kW	80	100	100	110	160	200	300	335	350	375
Mechanical life		10,000 times	600									
Electrical life	AC-3	10,000 times	120					80				
Operating frequency	AC-3	10,000 times	800					600				
The wiring capability of the main circuit terminals												
Flexible wire	1 wire	mm^2	10…95		10…150			/				
With terminal blocks	2 wires	mm^2	10…95		10…75			/				
Hard wire	1 wire	mm^2	10…95		10…150			50…240				
No terminal blocks	2 wires	mm^2	10…95		10…75			50…240				
Fastening torque		N.m	10					14				
Coil												
Rated control circuit voltage (Us)	50Hz	V	110V、127V、220/230V、380/400V									
	50/60Hz	V	75% ~120%									
Allowable control circuit voltage (Us)	Operation	V	20% 70%									
	Release	V										
Coil power consumption	Pull-in	VA	⩽300		⩽500			⩽600			⩽800	
	Holding	VA	⩽30		⩽11							
Auxiliary contact												
Contact specification		A	/		2NO/2NC							
Agreed heating current (Ith)		A	10									
Rated operating voltage (Ue)	AC	V	380									
	SD	V	220									
Rated control capacity	AC-15	VA	360									
	DC-13	W	33									

Shape and Installation Dimensions

CJX2s-120-160



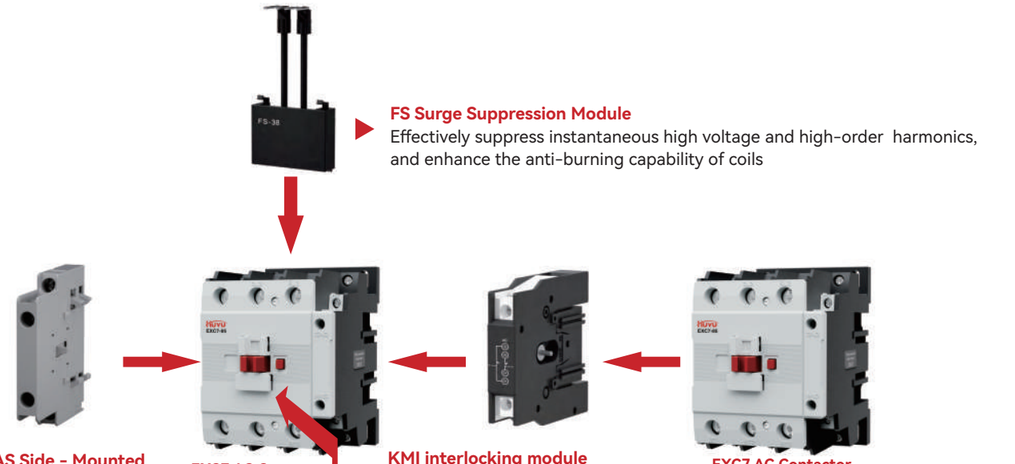
CJX2s-185-800



Model	Amax	Bmax	Cmax	Dmax	Emax	Fmax	a	b	Φ
EXC7-185-265	124	174	167	290	197	219	96	113.5/141.5	7
EXC7-330-500	156	212	210	318	239	261	120	180/186	9
EXC7-630-800	171	231	236	333	333	288	133	180/186	9

C

Product Installation Diagram



FS Surge Suppression Module
Effectively suppress instantaneous high voltage and high-order harmonics, and enhance the anti-burning capability of coils

KAS Side - Mounted Auxiliary Contact Block
Auxiliary contacts with one normally open (NO) and one normally closed (NC) can be mounted on both sides of the contactor.

KMI interlocking module
It is used for the combined assembly of reversible contactors to control motor start-stop, braking, and forward-reverse rotation, effectively avoiding short circuits.

KTD Pneumatic Time Delay Head
Passive time-delay, economical and reliable, with one normally open (NO) and one normally closed (NC) auxiliary contact to control the delayed closing and opening of the contactor.

KAT (Four Sets) Top-Mounted Auxiliary Contact Block
Equipped with four sets of auxiliary contacts,with the quantity of normally open(NO)and normally closed(NC) auxiliary contactsbeing optionally configurable.

KAT (Two Sets) Top-Mounted Auxiliary Contact Block
Equipped with two sets of auxiliary contacts,with the number of normally open(N0)and normally closed(NC) auxiliary contactsbeing optionally configurable.

KDC Dust Cover
Effectively blocks dust particles fromentering the interior of the contactorfrom the front.

Surge Suppression Module Technical Parameters

Product Appearance	Product Model	Delay Range (s)	Delay Type	Applicable Contactor Model
	KTD-C1	0.1-3	On-delay	EXC7-09~630
	KTD-C2	0.1-30		
	KTD-C3	10-180		
	KTD-D1	0.1-3	Off-delay	
	KTD-D2	0.1-30		
	KTD-D3	10-180		

Technical Parameters of Auxiliary Contact Block

Product Appearance	Product Model	NO (Normally Open)	NC (Normally Closed)	Applicable Contactor Model
	KAT-M20	2	0	EXC7-M06~M16
	KAT-M11	1	1	
	KAT-M02	0	2	
	KAT-M40	4	0	
	KAT-M31	3	1	
	KAT-M22	2	2	
	KAT-M13	1	3	
	KAT-M04	0	4	
	KAT-20	2	0	EXC7-09~630
	KAT-11	1	1	
	KAT-02	0	2	
	KAT-40	4	0	
	KAT-31	3	1	
	KAT-22	2	2	
	KAT-13	1	3	
	KAT-04	0	4	
	KAS-20	2	2	
	KAS-11	1	1	
	KAS-02	0	2	

Mechanical Linkage Matching

Product Appearance	Product Model	Applicable Contactor Model
	KMI Mechanical Chain Store	EXC7-09~38
	KMI Electrical Chain Store	EXC7-09~95

Dust Cover Matching

Product Appearance	Product Model	Applicable Contactor Model
	KDC-1	EXC7-09~38
	KDC-2	EXC7-40~95

Surge Suppression Module Technical Parameters

Product Appearance	Product Model	Matched Fuse Rang (A)	Applicable Contactor Model
	FS-M	AC/DC 24~48V AC/DC 100~250V AC/DC 380~440V	EXC7-M06~M16
	FS-18		EXC7-09~18
	FS-32		EXC7-25~32
	FS-65		EXC7-40~65
	FS-95		EXC7-80~95

Technical Parameters of Thermal Overload Relay

Product Appearance	Rated Current (A)	Matched Fuse Rang (A)		Applicable Contactor Model
		aM	gG	
JR28s-25	0.1~0.16	0.25	2	
	0.16~0.25	0.5	2	
	0.25~0.4	1	2	
	0.4~0.63	1	2	
	0.63~1	2	4	
	1~1.6	2	4	EXC7-09
	1.25~2	4	6	EXC7-12
	1.6~2.5	4	6	EXC7-18
	2.5~4	6	10	EXC7-25
	4~6	8	16	
	5.5~8	12	20	
	7~10	12	20	
	9~13	16	25	
	12~18	20	35	
	17~25	25	50	
JR28s-36	23~32	40	63	EXC7-32
	28~36	40	80	EXC7-38
JR28s-93	23~32	40	63	
	30~40	40	100	EXC7-40
	37~50	63	100	EXC7-50
	48~65	63	100	EXC7-65
	55~70	80	125	EXC7-80
	63~80	80	125	EXC7-95
	80~93	100	160	

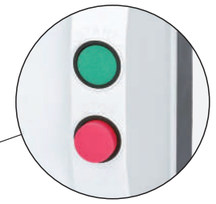
Three Key Features

- Protection Class: IP 55
- Highly reliable Highly compatible
- Convenient for maintenance and inspection

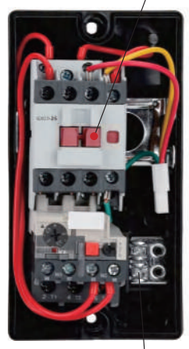
Product Structural Analysis Diagram

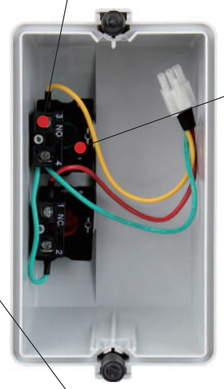
Rich selection options
Can be optionally installed on EXC7 series AC contactors.

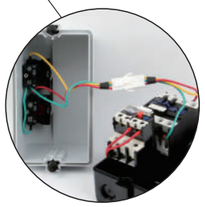
Highly reliable
Silver rivets and hot riveting process are adopted to ensure more reliable electrical contact



Highly compatible
Flat-head buttons, raised-head buttons, flat-head illuminated buttons, etc., from the XB2-E series are available for selection.







Provides motor protection
Provides overload and phase loss protection with adjustable current ratings

Convenient for maintenance and inspection
Connector-based wiring is adopted for easier component replacement

C

Scope of Application

The EXQ7 series electromagnetic starter (hereinafter referred to as the starter) is primarily designed for the direct starting and stopping of three-phase squirrel-cage induction motors—operating under the AC-3 utilization category with a rated frequency of 50Hz (or 60Hz), a rated operational voltage up to 660V, and a rated operational current up to 93A—and provides overload protection for the motor.

Compliant standards: IEC/EN 60947-4-1, GB/T 14048.4

Normal Operating Conditions and Installation Conditions

- Altitude: Not exceeding 2,000 meters
- Ambient air temperature: Range of -5℃ to +40℃; the average temperature over a 24-hour period must not exceed +35℃
- Atmospheric conditions: Relative humidity must not exceed 50% at +40℃; higher relative humidity is permissible at lower temperatures. The monthly average minimum temperature during the wettest month must not exceed +25℃, and the monthly average maximum relative humidity during that month must not exceed 90%. Additionally, consideration should be given to condensation on the product surface caused by temperature fluctuations
- Inclination from the vertical: Not exceeding 5°
- Must be used in locations free from explosion hazards, and where the surrounding medium contains no gases or conductive dust capable of corroding metal or damaging insulation
- Must be installed in a location protected from rain and snow, and free from saturated water vapor
- Must be installed in a location free from severe shaking, impact, and vibration

Structural Features

The starter features a protective enclosure design. Models EXQ7-09 through EXQ7-32 have an IP55 protection rating, while models EXQ7-40 through EXQ7-95 are rated IP20. Internally, the unit combines an EXC7 AC contactor with a JR28s thermal overload relay.

The input and output terminals utilize a knockout-style wiring design, allowing users to select and open any of the four knockout positions for wiring as needed. The starter cover can be completely detached from the base, facilitating installation and maintenance. Start and stop operations are controlled via XB2 series push-button switch assemblies, ensuring safe and reliable performance.

To ensure optimal protective performance, the starter must be mounted vertically. Mounting screws should be selected based on the mounting hole dimensions and must be at least M5 in size; spring washers, flat washers, and rubber sealing rings must be used during installation to ensure a secure fit. Additionally, appropriate waterproof cable glands should be installed at the knockout openings.

Main Parameters and Technical Performance

Main Technical Parameters of the Starter (see Table 1)

Rated control power supply voltage Us of the coil can be divided into AC 50Hz (or 60Hz)

with the following specifications: 36V, 110V, 220V, 380V.

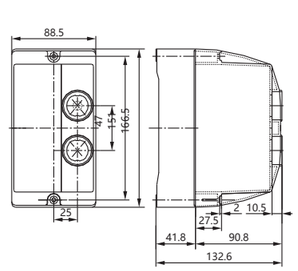
Operating Conditions: The coil pull-in voltage shall be (85%~110%) Us

the coil release voltage shall be (20%~75%) Us

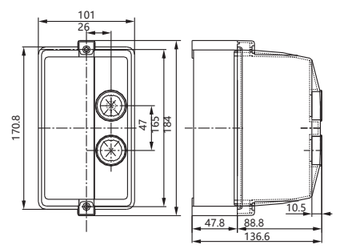
Main Parameters and Technical Performance

Model and Specification	Rated Frame Current Ie(A)	Rated Control Power of Frame Pe(kW) AC-3 660V	AC-3 380V	AC-3 220V	Model of Assembled AC Contactor	Model of Assembled Thermal Overload Relay	Setting Current Range A
EXQ7-09	9	5.5	4	2.2	EXC7-09	JR28-25 JR28s-25	0.1~0.16, 0.16~0.25 0.25~0.4, 0.4~0.63 0.63~1, 1~1.6 1.25~2, 1.6~2.5 2.5~4, 4~6, 5.5~8
EXQ7-12	12	7.5	5. 5	3	EXC7-12	JR28-25 JR28s-25	7~10, 9~13
EXQ7-18	18	10	7.5	4	EXC7-18		12~18
EXQ7-25	25	15	11	5.5	EXC7-25		17~25
EXQ7-32	32	18.5	15	7.5	EXC7-32		23~32
EXQ7-40	40	18.5	18.5	11	EXC7-40	JR28-93 JR28s-93	23~32, 30~40
EXQ7-50	50	37	22	15	EXC7-50		37~50, 48~65
EXQ7-65	65	37	30	18.5	EXC7-65		55~70, 63~80
EXQ7-80	80	45	37	22	EXC7-80		80~93
EXQ7-93	93	45	45	25	EXC7-95		

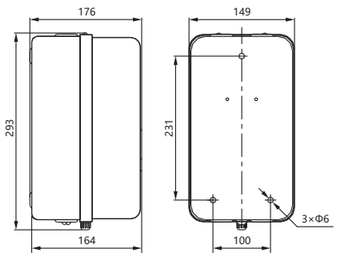
Shape and Installation Dimensions



EXQ7-09~18



EXQ7-25~32



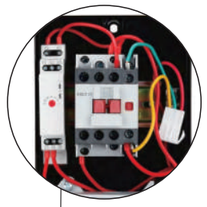
EXQ7-40~95

EXQJ7 Motor Controller

Three Key Features

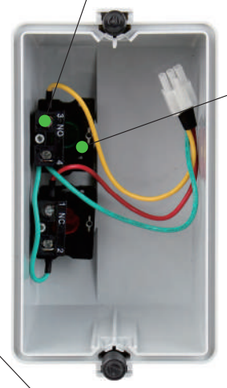
- Protection Class: IP 55
- Highly reliable
- Convenient for maintenance and inspection

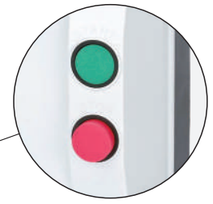
Product Structural Analysis Diagram



Automatically cut off the circuit
Connect the level switch to automatically shut off the water pump when the liquid level reaches the preset level; the sensitivity is adjustable according to ambient humidity

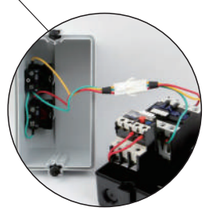
Highly reliable
Silver rivets and hot riveting process are adopted to ensure more reliable electrical contact





Highly compatible
Flat-head buttons, raised-head buttons, flat-head illuminated buttons, etc., from the XB2-E series are available for selection.

Provides motor protection
Feeds back circuit status, provides overload and phase loss protection, and indicates circuit status via indicator lights



Convenient for maintenance and inspection
Connector-based wiring is adopted for easier component replacement

Scope of Application

The EXQJ7 series motor controller(hereinafter referred to as the controller) is mainly used in circuits with AC frequency of 50Hz(or 60Hz), rated operating voltage of 380V, and rated control power up to 18.5kW(corresponding current of 38A).It is designed to directly control the start and stop of water pumps or motors, provide overload and phase failure protection for motors, and realize automatic liquid level control for domestic water towers and reservoirs.

This product is not suitable for liquid level control of low-conductivity liquids, such as petroleum, purified water. flammable and explosive chemical liguids, and high-density sewage.

The version equipped with a liquid level relay is used to control the start and stop as well as automatic pumping and draining of water pumps, while providing overload and phase failure protection. The version without a liquid level relay is designed to control the start and stop of motors, with overload and phase loss protection functions. The motor comprehensive protector of the controller shall be configured before beingconnected and put into operation.

Normal Operating Conditions and Installation Conditions

- Altitude: The altitude of the installation location shall not exceed 2000 m
- Ambient Temperature: -5℃ ~ +40℃; the average temperature within 24 hours shall not exceed +35℃.
- Atmospheric Conditions: The maximum relative air humidity at the installation location shall not exceed 50%.
- At a temperature of 40℃, the lower the temperature, the higher the relative humidity may be.

If condensation occasionally occurs on the product due to temperature variations, special measures shall be taken

- Pollution Degree: 3
- Installation Category: II
- It shall be installed in locations free from obvious vibration or impact.
- It shall be used in non-explosive media free from excessive gases or dust that may cause metal corrosion or insulation failure.
- It shall be installed in locations with rain and snow protection; the inclination relative to the vertical plane shall not exceed 5°

Main Parameters and Technical Performance

Model and Specification	Rated Frame Current Ie(A)	Rated Control Power of Frame Pe(kW) AC-3		Model of Assembled AC Contactor	Model of the Matched Motor Protector	Setting Current Range A	Protector Turns
		380V	220V				
EXQJ7 0.72A~2.4A	2.4	1.1	0.55	EXC7-09	JD-8/0.5A~5A	0.72~2.4	5
EXQJ7-W 0.72A~2.4							
EXQJ7 3.5A~11A	12	5.5	3	EXC7-12	JD-8/2A~20A	3.5~11	1
EXQJ7-W 3.5A~11A							
EXQJ7 10A~16A	16	7.5	4	EXC7-18	JD-8/2A~20A	10~16	1
EXQJ7-W 10A~16A							
EXQJ7 20A~25A	25	11	5.5	EXC7-25	JD-8/20A~80A	20~25	1
EXQJ7-W 20A~25A							
EXQJ7-W 30A~38A	38	18.5	9	EXC7-38	JD-8/20A~80A	30~38	1
EXQJ7-W 30A~38A							

- Rated Control Power SupplyVoltage Ue: AC220V,AC380V
- Protection Class:IP55
- Protection Characteristics of the Controller:

Phase Loss Protection Characteristic: When any phase of the three-phase main circuit passing through the motor comprehensive protector is lost, the motor comprehensive protector shall operate, with an operating time ≤ 5s

Overload Protection Characteristic of the Controller Under Three-Phase Balanced Load

Serial Number	Setting the Current Multiplier	Operating Time			Initial Conditions
1	1.05	No operation within 2 hours			Cold Start
2	1.2	Operation within 2 hours			Perform after Sequence 1
3	1.5	Trip Class	30	≤12min	Start after applying 1.O times the set current for 2 hours
4	7.2	Trip Class	30	9s≤Tp≤30s	Cold Start

- Maximum distance of the liquid level control electrode's down -lead: 200 m
- Mounting Method: Device Mounting

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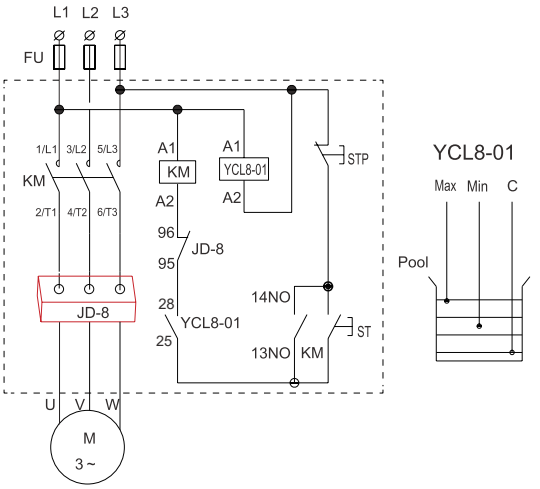
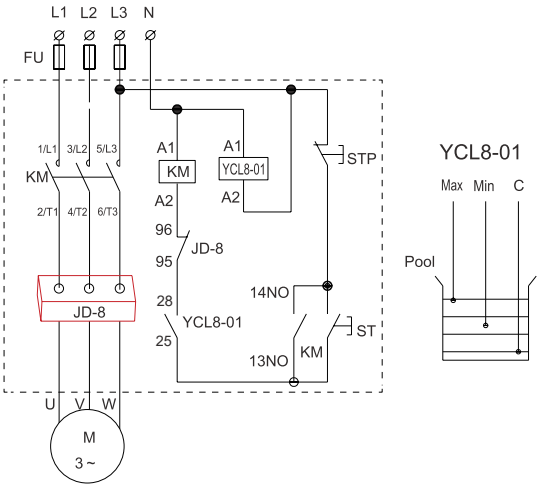
Wiring Diagram

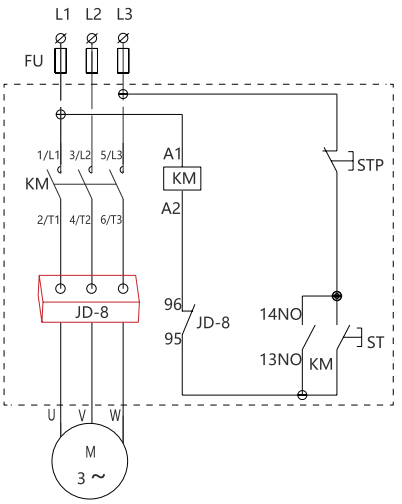
1. Wiring Diagram of EXQJ7-W When Both Control Circuit Voltage and Main Circuit Voltage Are AC380V



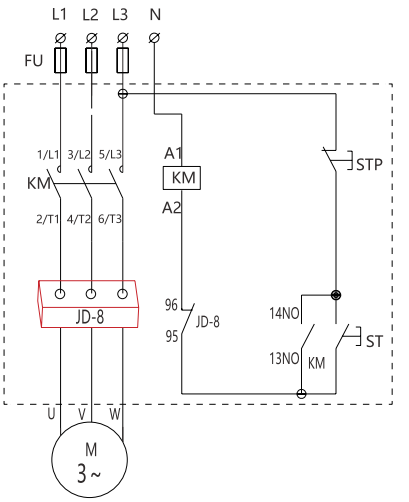
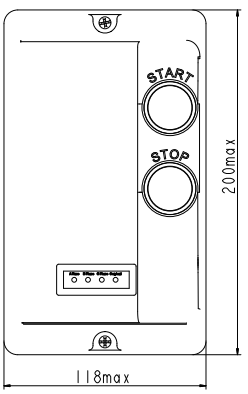
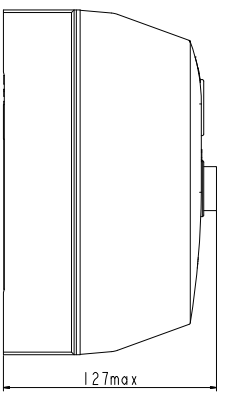
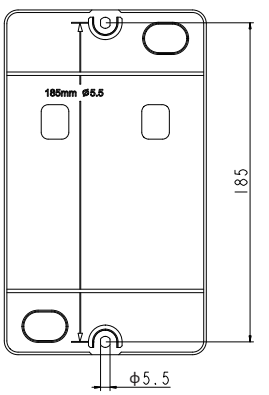
2. Wiring Diagram of EXQJ7-W When Main Circuit Voltage Is AC380V and Control Circuit Voltage Is AC220V



3.Wiring Diagram of EXQJ7 When Both Control Circuit Voltage and Main Circuit Voltage Are AC380V



4. Wiring Diagram of EXQJ7 When Its Main Circuit Voltage Is AC380V and Control Circuit Voltage Is AC220V



Shape and Installation Dimensions