

# Catalogue

Distribution product

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Wenzhou Xucky Electric Co.,Ltd

[www.xucky.com](http://www.xucky.com)



**Relay&Contactor&Starter&Frequency Inverter**

## JRS2 Series Thermal Relay



JRS2-12.5/Z



JRS2-25/Z



JRS2-32/Z



JRS2-45/Z



JRS2-63/Z

### 1. Application

JRS2 thermal relay is suitable for AC 50/60Hz, voltage up to 660V and current up to 630A, general AC motor of long or discontinuous long operation, used as overload protection and has the functions of breaking phase protection, temperature compensation, and trip indication. It can automatically and manually get back. It can be fixed with contactor CJX1 together, also be independtly fixed. The product conforms to IEC60947-4-1 standard.

### 2. Motion Characteristic: Three-phase Balance Motion Time

No	Times of the setting current	Motion time			Start condition	Ambient temperature
1	1.05	>2h			Cold state	20±5℃
2	1.2	<2h			Heat state	
3	1.5	<4min			(Following the No.1 test)	
4	7.2	10A	2s<Tp≤10s	≤63A	Cold state	
		10A	4s<Tp≤10s	>63A		

### 3. Phase-losing Motion Characteristic

No	Times of the setting current		Motion time	Start condition	Ambient temperature
	Any two phases	Another phase			
1	1.0	0.9	>2h	Cold state	20±5℃
2	1.15	0	<2h	Heat state (Following the No.1 test)	

### 4. Specification

Type	Number	Setting range (A)	For contactor	Type	Number	Setting range (A)	For contactor
JRS2-12.5/Z	0A	0.1~0.16	CJX1-09 CJX1-12	JRS2-25/Z	0A	0.1~0.16	CJX1-16 CJX1-22
	0C	0.16~0.25			0C	0.16~0.25	
	0E	0.25~0.4			0E	0.25~0.4	
	0G	0.4~0.63			0G	0.4~0.63	
	0J	0.63~1			0J	0.63~1	
	0K	0.8~1.25			0K	0.8~1.25	
	1A	1~1.6			1A	1~1.6	
	1B	1.25~2			1B	1.25~2	
	1C	1.6~2.5			1C	1.6~2.5	
	1D	2~3.2			1D	2~3.2	
	1E	2.5~4			1E	2.5~4	
	1F	3.2~5			1F	3.2~5	
	1G	4~6.3			1G	4~6.3	
	1H	5~8			1H	5~8	
1J	6.3~10	1J	6.3~10				
1K	8~12.5	1K	8~12.5				
2S	10~14.5	2A	10~16				
		2B	12.5~20				
		2C	16~25				



JRS2-80/Z



JRS2-135



JRS2-150



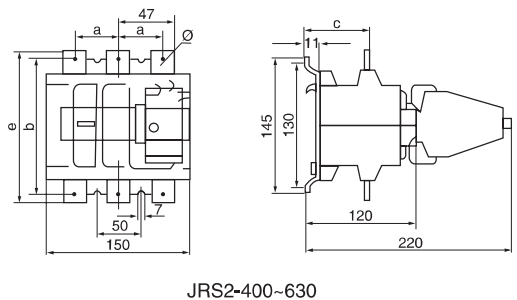
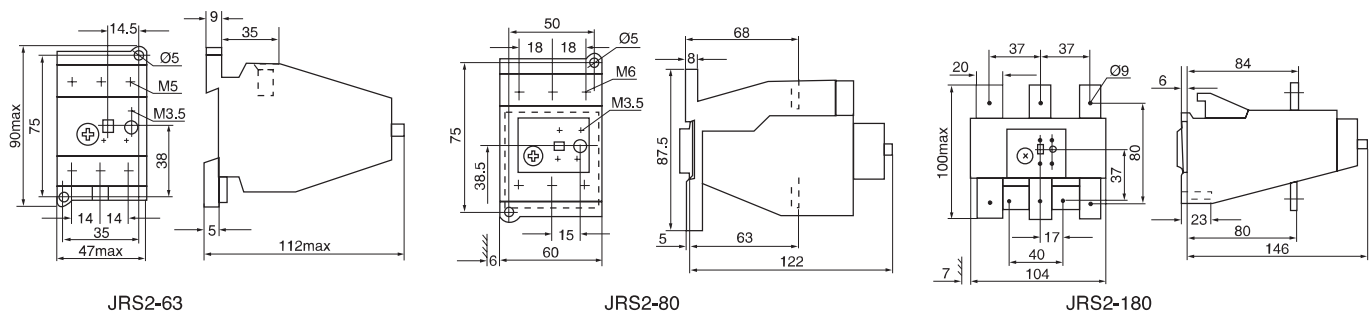
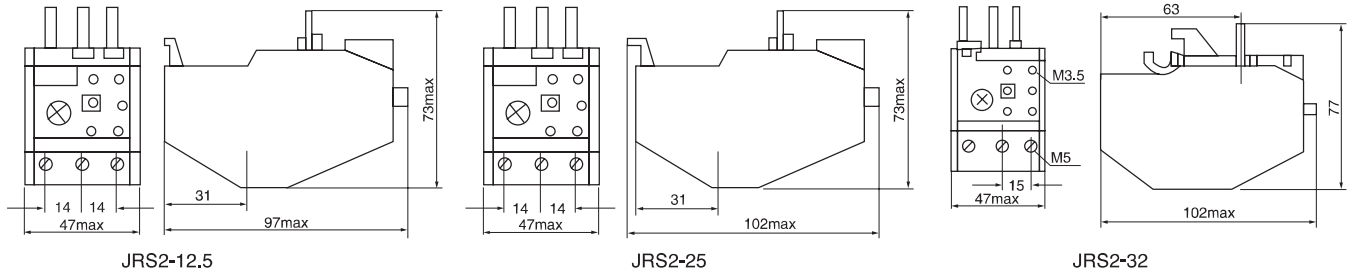
JRS2-180/F



JRS2-400/F  
JRS2-630/F

Type	Number	Setting range (A)	For contactor	Type	Number	Setting range (A)	For contactor		
JRS2-32/Z	1G	4~6.3	CJX1-32	JRS2-63/F	0K	0.8~1.25	CJX1-09~63		
	1J	6.3~10			1A	1~1.6			
	2A	10~16			1B	1.25~2			
	2B	12.5~20			1C	1.6~2.5			
	2C	16~25			1D	2~3.2			
	2D	20~32			1E	2.5~4			
	2Q	25~36			1F	3.2~5			
JRS2-45/Z	0A	0.1~0.16	CJX1-32		1G	4~6.3		CJX1-85 CJX1-110	
	0C	0.16~0.25			1H	5~8			
	0E	0.25~0.4			1J	6.3~10			
	0G	0.4~0.63			1K	8~12.5			
	0J	0.63~1			2A	10~16			
	0K	0.8~1.25			2B	12.5~20			
	1A	1~1.6			2C	16~25			
	1B	1.25~2		2D	20~32				
	1C	1.6~2.5		2E	25~40				
	1D	2~3.2		2M	32~45				
	1E	2.5~4		2T	40~57				
	1F	3.2~5		2P	50~63				
	1G	4~6.3		2H	55~80				
	1H	5~8		2W	63~90				
	1J	6.3~10		2X	80~110				
	1K	8~12.5		3H	90~120				
	2A	10~16		3J	110~135				
2B	12.5~20	JRS2-150	2H	55~80	CJX1-140				
2C	16~25		2W	63~90					
2D	20~32		2X	80~110					
2Q	25~36		3H	90~120					
2R	32~40		3J	110~135					
8M	36~45		3K	120~150					
JRS2-80/Z	1G		4~6.3	CJX1-45 CJX1-63 CJX1-75 CJX1-85		JRS2-180/F	2H	55~80	CJX1-170 CJX1-205
	8A		11~17				2W	63~90	
	2B		12.5~20				2X	80~110	
	2C		16~25				3H	90~120	
	2D	20~32	3J		110~135				
	2E	25~40	3K		120~150				
	2F	32~50	3L		135~160				
	2T	40~57	3M		150~180				
	2P	50~63	JRS2-400		2K		80~125	CJX1-110~400	
	2V	57~70			3B		125~200		
	2U	63~80			3C	160~250			
	8W	70~88			3D	200~320			
	JRS2-63/F	0A	0.1~0.16		CJX1-09~63	JRS2-630	3E	250~400	CJX1-400
0C		0.16~0.25	3F	320~500					
0E		0.25~0.4	3G	400~630					
0G		0.4~0.63							
0J		0.63~1							

**5. Outline and Mounting Dimension (mm)**



Type	JRS2-400	JRS2-630
a	50	52
b	146	156
c	70	71
Φ	11	11
e	171	186
f	25×4	30×5

**6. Accessories**

Pic				
Description	JRS2 mounting base	JRS2 mounting base	JRS2 mounting base	Terminal block box
Application	Assembled with JRS2-12.5/Z to form a complete set	Assembled with JRS2-80/Z to form a complete set	Assembled with JRS2-45/Z to form a complete set	Assembled with JRS2-135/Z to form a complete set



## JR28 Series Thermal Relay

### 1. Application

JR28 series thermal relay is suitable for using in the circuit rated voltage up to 660V, rated current 630A AC50/60Hz, for over-current protection of AC motor. The relay has the different mechanism and temperature compensation and can plug in CJX2 series AC contactor. The product conforms to IEC60947-4-1 standard.

### 2. Motion Characteristic: Three-phase Balance Motion Time

No	Times of the setting current(A)	Motion time			Start condition	Ambient temperature
1	1.05	>2h			Cold state	20±5℃
2	1.2	<2h			Heat state (Following the No.1 test)	
3	1.5	<4min				
4	7.2	10A	2s<Tp≤10s	≤63A	Cold state	
		10A	4s<Tp≤10s	>63A		

### 3. Phase-losing Motion Characteristic

No	Times of the setting current(A)		Motion time	Start condition	Ambient temperature
	Any two phases	Another phase			
1	1.0	0.9	>2h	Cold state	20±5℃
2	1.15	0	<2h	Heat state (Following the No.1 test)	

### 4. Specification

Type	Number	Setting range (A)	For contactor
JR28-25	1301	0.1~0.16	CJX2-D09
	1302	0.16~0.25	CJX2-D09
	1303	0.25~0.4	CJX2-D09
	1304	0.4~0.63	CJX2-D09
	1305	0.63~1	CJX2-D09
	1306	1~1.6	CJX2-D09
	1307	1.6~2.5	CJX2-D09
	1308	2.5~4	CJX2-D09
	1310	4~6	CJX2-D09
	1312	5.5~8	CJX2-D09
	1314	7~10	CJX2-D12
	1316	9~13	CJX2-D18
	1321	12~18	CJX2-D18
	1322	17~25	CJX2-D25
JR28-36	2353	23~32	CJX2-D32
	2355	30~40	CJX2-D40
JR28-93	3322	17~25	CJX2-D25
	3353	23~32	CJX2-D32
	3355	30~40	CJX2-D40
	3357	37~50	CJX2-D50
	3359	48~65	CJX2-D65
	3361	55~70	CJX2-D80
	3363	63~80	CJX2-D80
	3365	80~93	CJX2-D95
JR28-150	4365	80~104	CJX2-F115
	4367	95~120	CJX2-F150
	4369	110~140	CJX2-F150



JR28-25



JR28-36



JR28-93



JR28-150



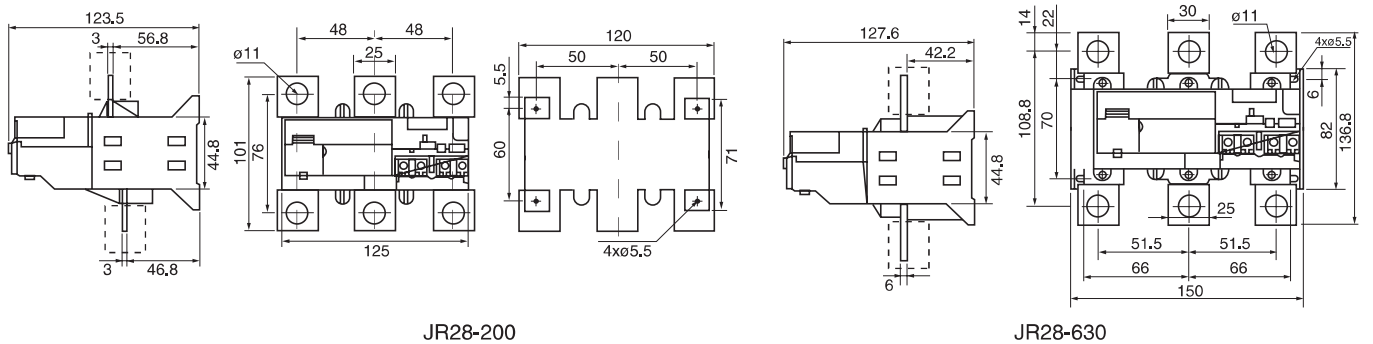
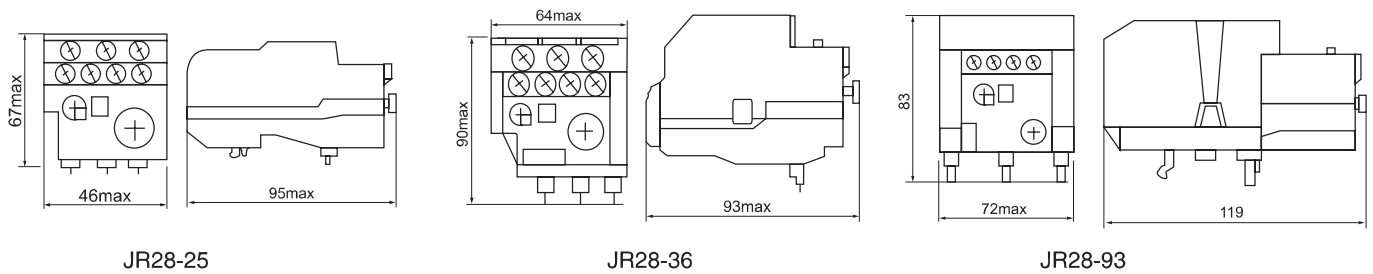
JR28-200





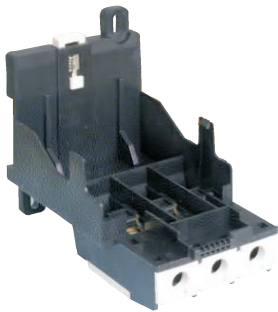
JR28-630

Type	Number	Setting range (A)	For contactor
JR28-150	5369	90~150	CJX2-F150
JR28-200	F5357	30~50	CJX2-F115
	F5363	48~80	CJX2-F115
	F5367	60~100	CJX2-F115
	F5369	90~150	CJX2-F150
	F5371	132~220	CJX2-F225
JR28-630	F7375	200~330	CJX2-F330
	F7379	300~500	CJX2-F500
	F7381	380~630	CJX2-F630

5. Outline and Mounting Dimension (mm)



6. Accessories

Pic			
Description	JR28-25 mounting base	JR28-36 mounting base	JR28-93 mounting base
Application	Assembled with JR28-25 to form a complete set	Assembled with JR28-36 to form a complete set	Assembled with JR28-93 to form a complete set

## JR28N Series Thermal Relay

### 1. Application

JR28N series thermal relay is suitable for using in the circuits rated voltage up to 660V, rated current 93A AC50/60Hz, for over-current protection of AC motor. The relay has the different mechanism and temperature compensation and can plug in CJX2N series AC contactor. The product conforms to IEC60947-4-1 standard.



JR28N-25

### 2. Motion Characteristic: Three-phase Balance Motion Time

No	Times of the setting current(A)	Motion time			Start condition	Ambient temperature
1	1.05	>2h			Cold state	20±5°C
2	1.2	<2h			Heat state	
3	1.5	<4min			(Following the No.1 test)	
4	7.2	10A	2s<Tp≤10s	≤63A	Cold state	
		10A	4s<Tp≤10s	>63A		



JR28N-36

### 3. Phase-losing Motion Characteristic

No	Times of the setting current(A)		Motion time	Start condition	Ambient temperature
	Any two phases	Another phase			
1	1.0	0.9	>2h	Cold state	20±5°C
2	1.15	0	<2h	Heat state (Following the No.1 test)	

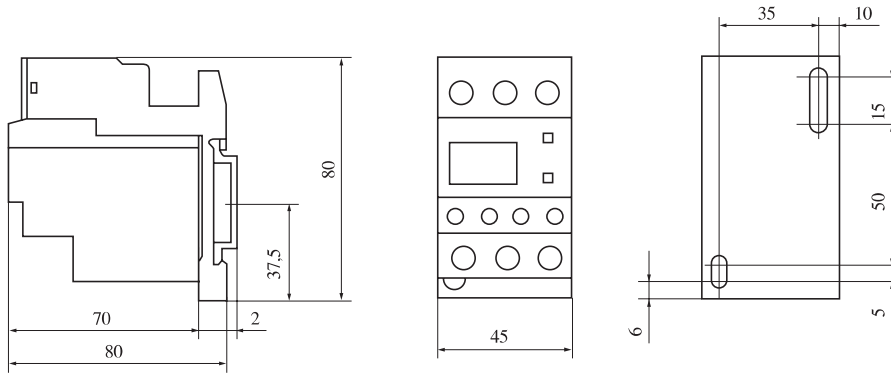


JR28N-93

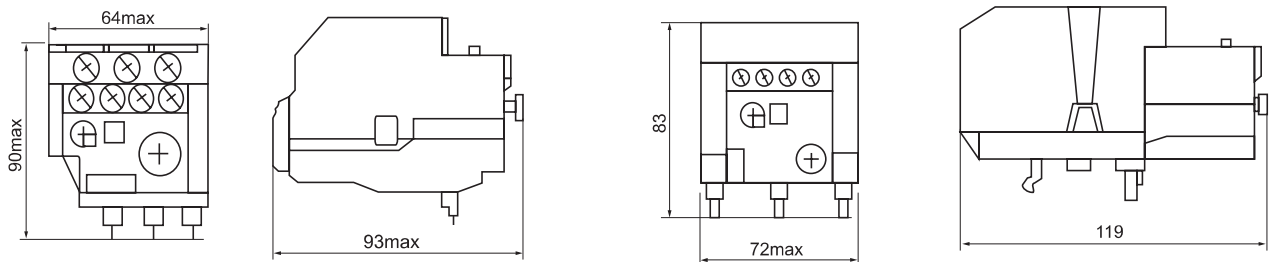
### 4. Specification

Type	Number	Setting range (A)	For contactor
JR28N-25	D01	0.10~0.16	CJX2N-09
	D02	0.16~0.25	CJX2N-09
	D03	0.25~0.40	CJX2N-09
	D04	0.40~0.63	CJX2N-09
	D05	0.63~1	CJX2N-09
	D06	1~1.7	CJX2N-09
	D07	1.6~2.5	CJX2N-09
	D08	2.5~4	CJX2N-09
	D10	4~6	CJX2N-09
	D12	5.5~8	CJX2N-09
	D14	7~10	CJX2N-12
	D16	9~13	CJX2N-18
	D21	12~18	CJX2N-18
	D22	16~24	CJX2N-25
JR28N-36	D53	30~38	CJX2N-40
	2353	23~32	CJX2N-32
	2355	30~40	CJX2N-40
JR28N-93	3322	17~25	CJX2N-25
	3353	23~32	CJX2N-32
	3355	30~40	CJX2N-40
	3357	37~50	CJX2N-50
	3359	48~65	CJX2N-65
	3361	55~70	CJX2N-80
	3363	63~80	CJX2N-80
3365	80~93	CJX2N-95	

## 5. Outline and Mounting Dimension (mm)





JR28N-25



JR28N-36

JR28N-93

## 6. Accessories

Pic		
Description	JR28N-36 mounting base	JR28N-93 mounting base
Application	Assembled with JR28N-36 to form a complete set	Assembled with JR28N-93 to form a complete set

## JR30 Series Thermal Relay

### 1. Application

JR30 series thermal relay is used in the circuit of 50/60Hz, rated insulation voltage 660V, rated current 0.1-85A for protecting the phase break when the electric motor is overloaded. The relay has different mechanism and temperature compensation. It can be plugged in CJX5 series AC contactor. The product conforms to IEC60947-4-1 standard.



JR30-40

### 2. Motion Characteristic: Three-phase Balance Motion Time

No	Times of the setting current(A)	Motion time			Start condition	Ambient temperature
1	1.05	>2h			Cold state	20±5℃
2	1.2	<2h			Heat state (Following the No.1 test)	
3	1.5	<4min				
4	7.2	10A	2s<Tp ≤10s	≤63A	Cold state	
		10A	4s<Tp ≤10s	>63A		

### 3. Phase-losing Motion Characteristic

No	Times of the setting current(A)		Motion time	Start condition	Ambient temperature
	Any two phases	Another phase			
1	1.0	0.9	>2h	Cold state	20±5℃
2	1.15	0	<2h	Heat state(Following the No.1 test)	

### 4. Specification

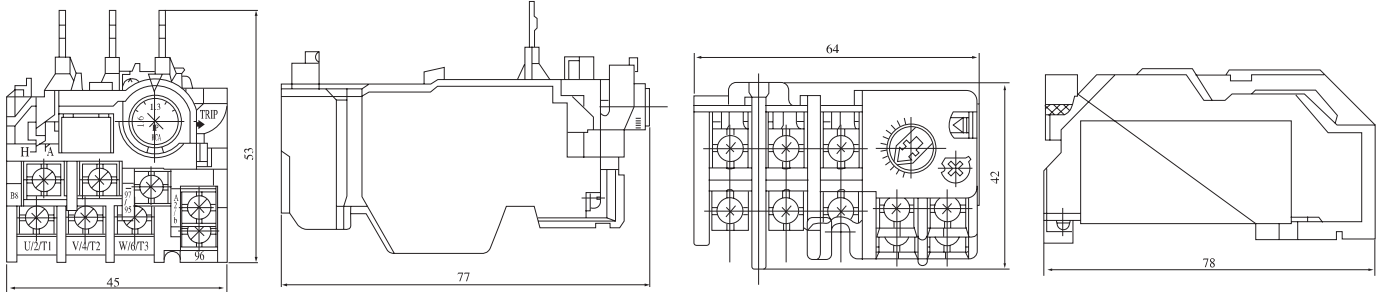


JR30-85

Ratings	Type	JR30-22			JR30-40			JR30-85		
	Nominal current	Ranges			Ranges			Ranges		
		Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.
Rated current(A)	0.14	0.1	0.14	0.16						
	0.21	0.16	0.21	0.25						
	0.33	0.25	0.33	0.4						
	0.52	0.4	0.52	0.63						
	0.82	0.63	0.82	1						
	1.3	1	1.3	1.6						
	2.1	1.6	2.1	2.5						
	3.3	2.5	3.3	4						
	5	4	5	6	4	5	6			
	6.5	5	6.5	8	5	6.5	8			
	7.5	6	7.5	9	6	7.5	9			
	8.5	7	8.5	10	7	8.5	10	7	8.5	10
	11	9	11	13	9	11	13	9	11	13
	15	12	15	18	12	15	18	12	15	18
	19	16	19	22	16	19	22	16	19	22
	22				18	22	26	18	22	26
30				24	30	36	24	30	36	
34				28	34	40	28	34	40	
42							34	42	50	
55							45	55	65	
65							54	65	75	
74							63	74	85	
Element No.	2 heaters	Standard			Standard			Standard		
	3 heaters	Option			Option			Option		
Aux. Contact		1NO 1NC			1NO 1NC			1NO 1NC		
Reset type		Auto/Manual			Auto/ Manual			Auto/Manual		
Power consumption		1.8VA/heater			1.8VA/heater			1.8VA/heater		
Separate mounting unit		AZ-22H			AZ-40H			AZ-85H		
Other model		JR30-22/3			JR30-40/3			JR30-85/3		
		JR30-22			JR30-40			JR30-85		
		JR30-22/L			JR30-40/L			JR30-85/L		
Applied contactors		CJX5-9,12,18,22			CJX5-32,40			CJX5-50,65,75,85		

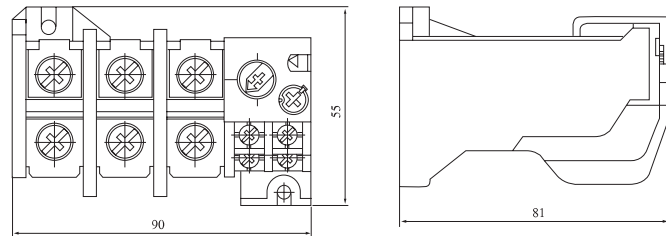


**5. JRS5 Outline and Mounting Dimension (mm)**



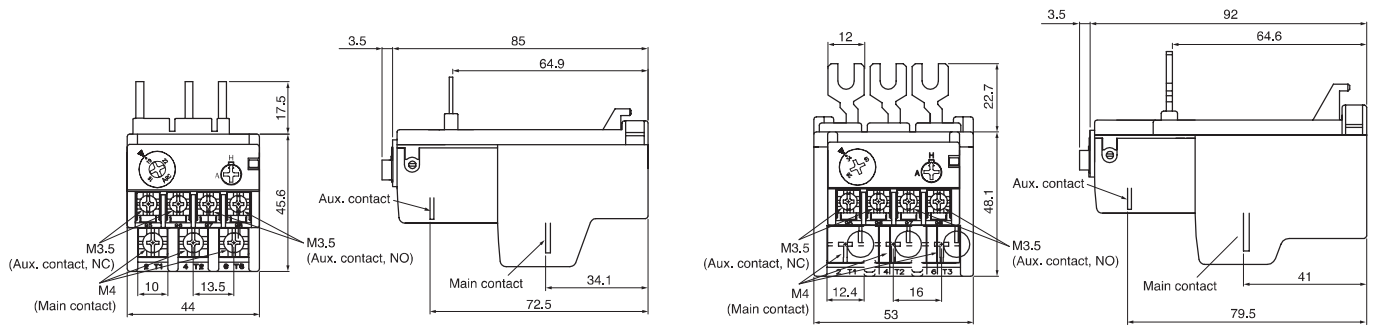
JRS5-12/Z

JRS5-20/P



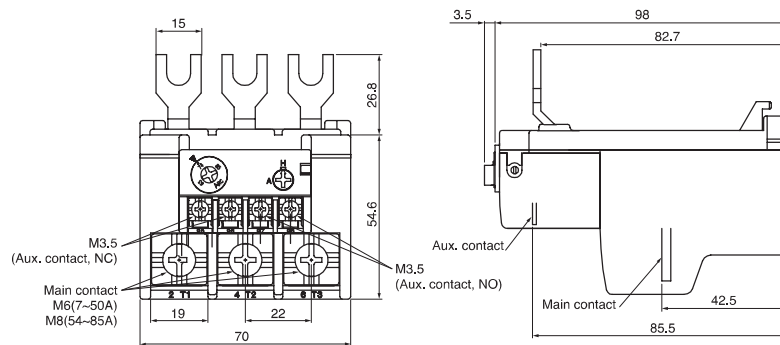
JRS5-60/F

**6. JR30 Outline and Mounting Dimension (mm)**



JR30-22

JR30-40



JR30-85

## JDB200-B Series Solid State Overload Relay

### 1. Application

The JDB200-B series solid state overload relay is suitable for protection of phase-failure and overload of AC motor of AC50/60Hz, rated voltage up to 690V, rated current up to 600A. The features are reliable, lower energy consumption and broad adjusting current. The product conforms to IEC60947-4-1 standard.



JDB200-B20J

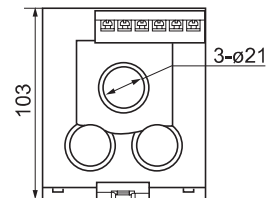
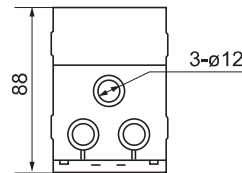
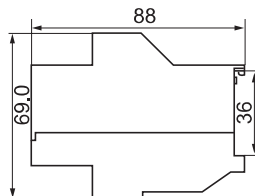
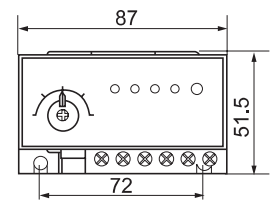
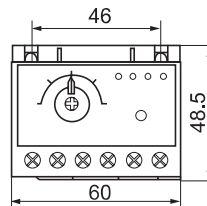
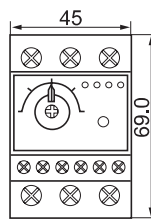
### 2. Specification

Type	Number	Rated current(A)	Setting current range(A)
JDB200-B20J	1.2A	20	0.3~1.2
	4A		1~4
	12A		3~12
	20A		5~20
JDB200-B60C	8A	60	2~8
	20A		5~20
	60A		15~60
JDB200-B200C	40A	200	10~40
	120A		30~120
JDB200-B600C	200A	600	50~200
	600A		150~600



JDB200-B200C

### 3. Outline and Mounting Dimension (mm)



JDB200-B20J

JDB200-B60C

JDB200-B200C

# General Relay

## 1. Main Technical Parameter

Model		55.02	55.04	55.32
Specifications				
Terminal layout		2Z	4Z	2Z
Contact capacity	AC	10A 250V	5A 250V	5A 250V
	DC	10A 30V	5A 30V	5A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 100MΩ	≥ 100MΩ	≥ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 240V
	DC	6 to 110V	6 to 110V	6 to 110V
Coil nominal power	AC	0.9VA to 1.2VA	0.9VA to 1.2VA	0.9VA to 1.2VA
	DC	≤ 0.9W	≤ 0.9W	≤ 0.9W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-4~+60	-40~+60
Weight(g)		≤ 35	≤ 35	≤ 35
Mounting methods		Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet
Adapter socket type		PYF08A	PYF14A	PYF08A



55.02



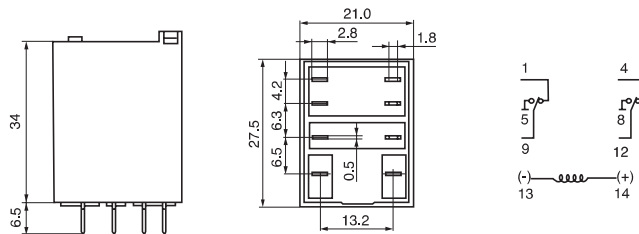
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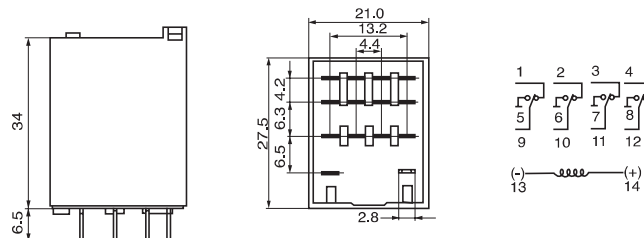
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## 2. Dimension (mm)

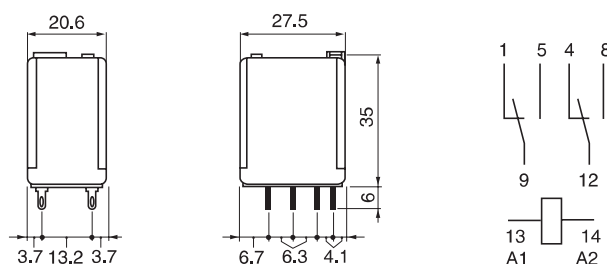
55.02



55.04



55.32



# General Relay

## 1. Main Technical Parameter

Model		55.34	57.02	57.04
Specifications				
Terminal layout		4Z	2Z	4Z
Contact capacity	AC	5A 250V	10A 250V	5A 250V
	DC	5A 30V	10A 30V	5A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 100MΩ	≥ 100MΩ	≥ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 240V
	DC	6 to 110V	6 to 110V	6 to 110V
Coil nominal power	AC	0.9VA to 1.2VA	0.9VA to 1.2VA	0.9VA to 1.2VA
	DC	≤ 0.9W	≤ 0.9W	≤ 0.9W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-40~+60	-40~+60
Weight(g)		≤ 35	≤ 35	≤ 35
Mounting methods		Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet
Adapter socket type		PYF14A	PYF08A	PYF14A



55.34

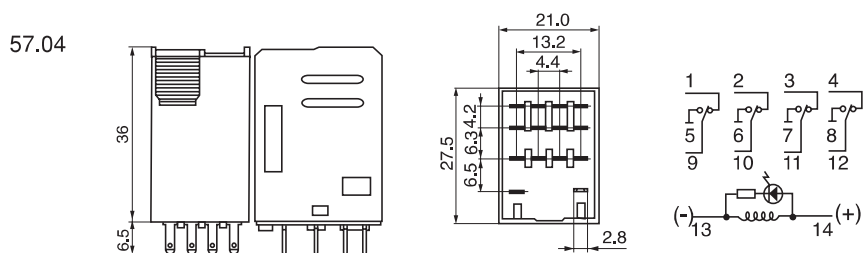
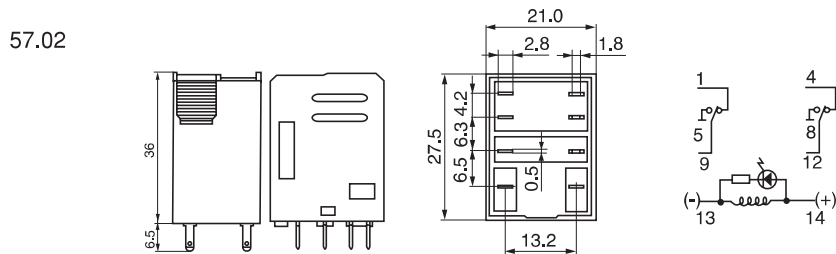
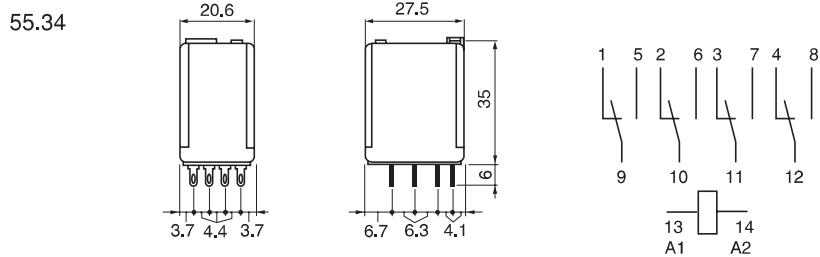


57.02



57.04

## 2. Dimension (mm)



# General Relay

## 1. Main Technical Parameter



56.02



56.04

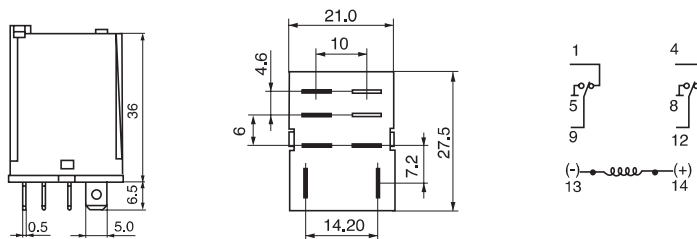


58.02

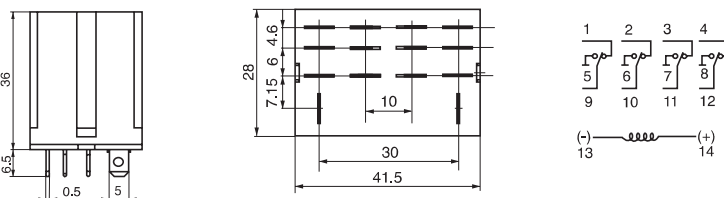
Model	56.02	56.04	58.02
Specifications			
Terminal layout	2Z	4Z	2Z
Contact capacity	AC	10A 250V	10A 250V
	DC	10A 28V	10A 28V
Contact resistance(mΩ)	≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)	≥ 100MΩ	≥ 100MΩ	≥ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V
	DC	6 to 110V	6 to 110V
Coil nominal power	AC	0.9VA to 1.2VA	≤ 2.5VA
	DC	≤ 0.9W	≤ 1.6W
Electrical life(OPS)	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)	-40~+70	-40~+70	-40~+70
Weight(g)	≤ 35	≤ 70	≤ 35
Mounting methods	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet
Adapter socket type	PYF08A	PTF14A-E	PTF08A

## 2. Dimension (mm)

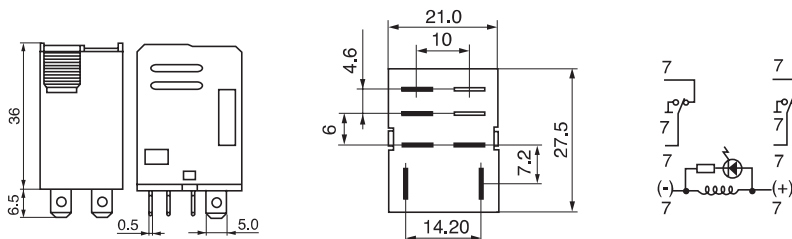
56.02



56.04



58.02





# General Relay

## 1. Main Technical Parameter



60.12



60.13

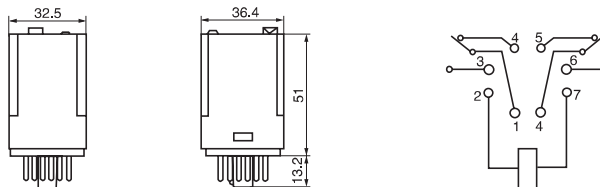


60.12-I

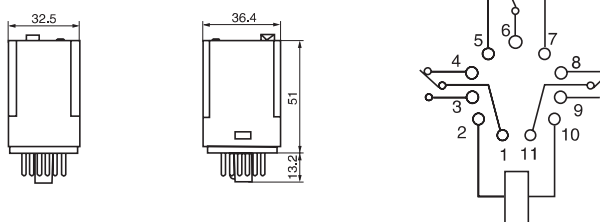
Model		60.12	60.13	60.12-I
Specifications				
Terminal layout		2Z	3Z	2Z
Contact capacity	AC	10A 220V	10A 220V	10A 250V
	DC	10A 28V	10A 28V	10A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 500MΩ	≥ 500MΩ	≥ 500MΩ
Dielectric strength	BOC	2000VAC	2000VAC	1500VAC
	BCC	2000VAC	2000VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 380V
	DC	6 to 125V	6 to 125V	6 to 220V
Coil nominal power	AC	≤ 3.5VA	≤ 3.5VA	2.0VA to 2.8VA
	DC	≤ 2W	≤ 2W	≤ 1.5W
Electrical life(OPS)		20 <sup>5</sup>	20 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		20 <sup>7</sup> /50 <sup>7</sup>	20 <sup>7</sup> /50 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+70	-40~+70	-40~+60
Weight(g)		≤ 125	≤ 125	≤ 80
Mounting method		Outlet	Outlet	Outlet
Adapter socket type		90.22	90.23	90.22

## 2. Dimension (mm)

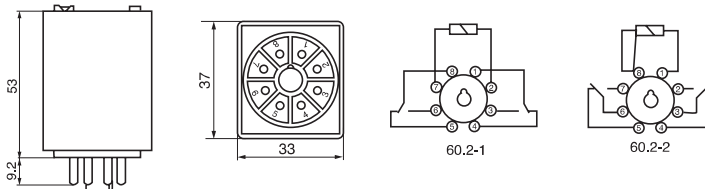
60.12



60.13



60.12-I



# General Relay

## 1. Main Technical Parameter

Model		60.13-I	70.2	70.3
Specifications				
Terminal layout		3Z	2Z	3Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 30V	10A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 500MΩ	≥ 500MΩ	≥ 500MΩ
Dielectric strength	BOC	1500VAC	1500VAC	1500VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 380V	6 to 380V	6 to 380V
	DC	6 to 220V	6 to 220V	6 to 220V
Coil nominal power	AC	2.0VA to 2.8VA	2.0VA to 2.8VA	2.0VA to 2.8VA
	DC	≤ 1.5W	≤ 1.5W	≤ 0.5W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-40~+60	-40~+60
Weight(g)		≤ 80	≤ 85	≤ 85
Mounting methods		Outlet	Outlet	Outlet
Adapter socket type		90.23	90.22	90.23



60.13-I

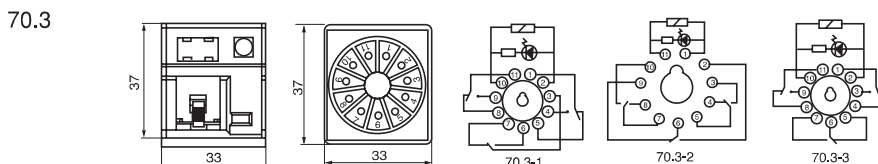
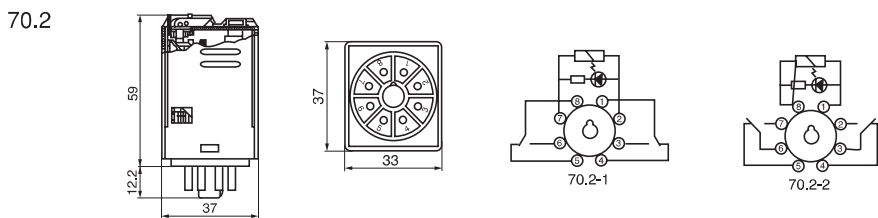
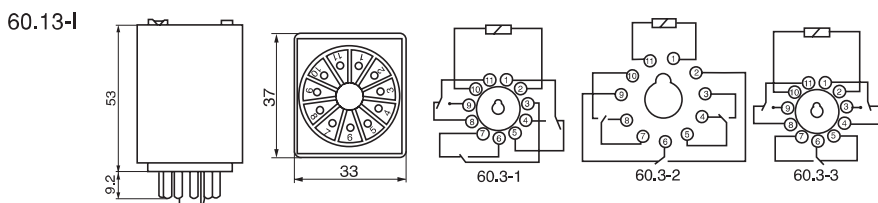


70.2



70.3

## 2. Dimension (mm)



# General Relay

## 1. Main Technical Parameter

Model		MY2	MY3	MY4
Specifications				
Terminal layout		2Z	3Z	4Z
Contact capacity	AC	5A 250V	5A 250V	3A 250V
	DC	5A 30V	5A 30V	3A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 100MΩ	≥ 100MΩ	≥ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 240V
	DC	6 to 220V	6 to 220V	6 to 220V
Coil nominal power	AC	0.9VA to 1.2VA	0.9VA to 1.2VA	0.9VA to 1.2VA
	DC	≤ 0.9W	≤ 0.9W	≤ 0.9W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-40~+60	-40~+60
Weight(g)		≤ 35	≤ 35	≤ 35
Mounting methods		Printed-circuit board, Outlet	Printed-circuit board, Outlet	Printed-circuit board, Outlet
Adapter socket type		PYF08A	PYF11A	PYF14A



MY2



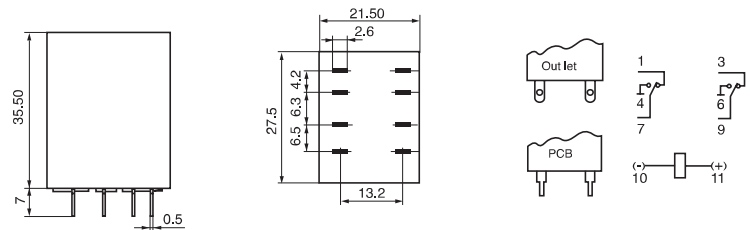
MY3



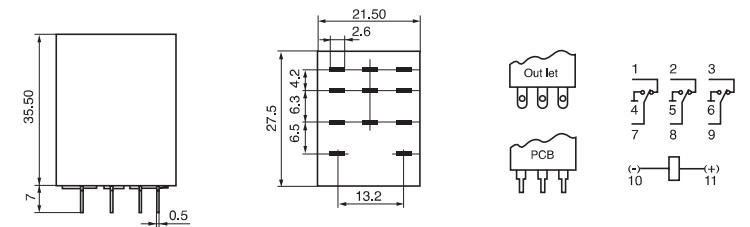
MY4

## 2. Dimension (mm)

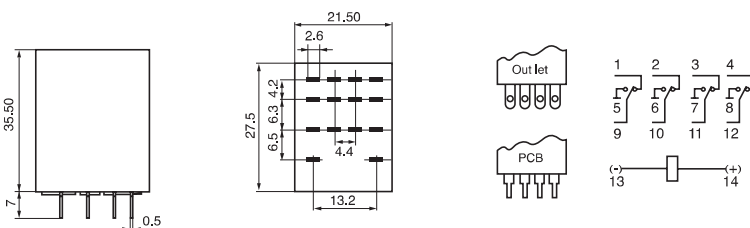
MY2



MY3



MY4



# General Relay

## 1. Main Technical Parameter

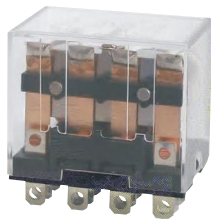
Model		LY2	LY3	LY4
Specifications				
Terminal layout		2Z	4Z	2Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 28V	10A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 100MΩ	≥ 100MΩ	≥ 500MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1500VAC
	BCC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 240V	6 to 240V	6 to 380V
	DC	6 to 220V	6 to 110V	6 to 220V
Coil nominal power	AC	0.9VA to 1.2VA	≤ 2.5VA	≤ 2.8VA
	DC	≤ 0.9W	≤ 1.6W	≤ 1.6W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-40~+70	-40~+60
Weight(g)		≤ 35	≤ 70	≤ 80
Mounting methods		Printed-circuit board, Flange, Outlet	Printed-circuit board, Flange, Outlet	Outlet
Adapter socket type		PTF08A	PTF11A	PTF14A



LY2

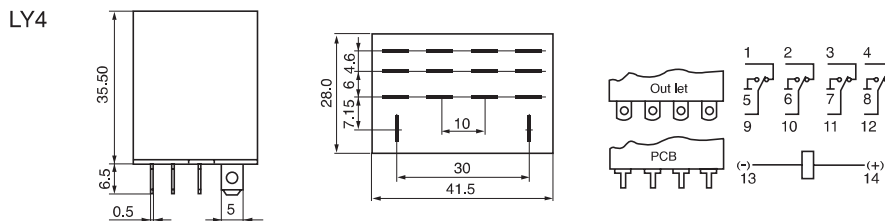
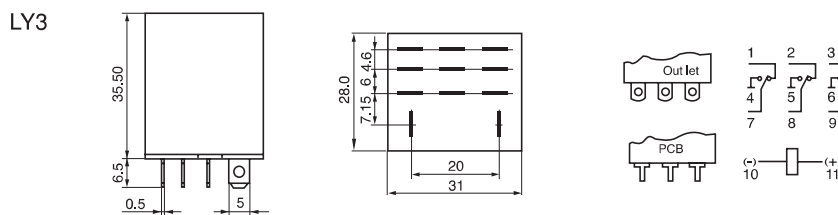
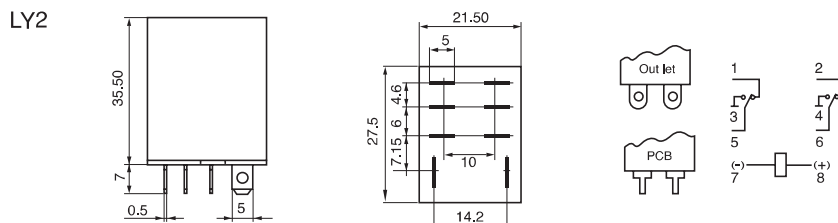


LY3



LY4

## 2. Dimension (mm)



# General Relay

## 1. Main Technical Parameter



MK2P-I



MK3P-I



MK2PN-I

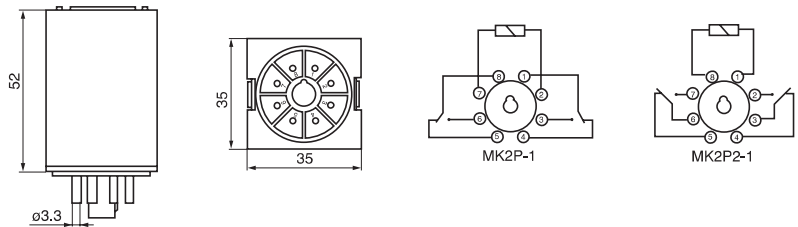


MK3PN-I

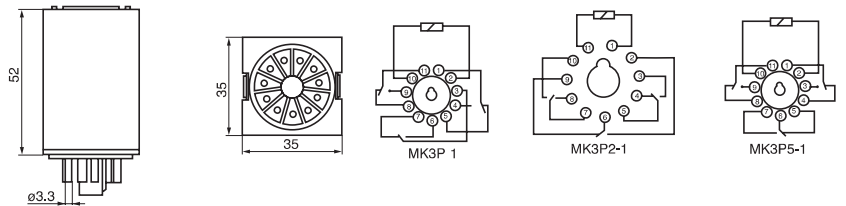
Specifications	Model	MK2P-I	MK3P-I	MK2PN-I	MK3PN-I
Terminal layout		3Z	3Z	2Z	3Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 30V	10A 30V	10A 30V
Contact resistance(mΩ)		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance(MΩ)		≥ 500MΩ	≥ 500MΩ	≥ 500MΩ	≥ 500MΩ
Dielectric strength	BOC	1500VAC	1500VAC	1500VAC	1500VAC
	BCC	1500VAC	1500VAC	1500VAC	1500VAC
Coil nominal voltage	AC	6 to 380V	6 to 380V	6 to 380V	6 to 380V
	DC	6 to 220V	6 to 220V	6 to 220V	6 to 220V
Coil nominal power	AC	≤ 2.8VA	≤ 2.8VA	≤ 2.8VA	≤ 2.8VA
	DC	≤ 1.6W	≤ 1.6W	≤ 1.6W	≤ 1.6W
Electrical life(OPS)		10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Mechanical life(OPS)		10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
Operating temperature(°C)		-40~+60	-40~+60	-40~+60	-40~+60
Weight(g)		≤ 80	≤ 80	≤ 80	≤ 80
Mounting methods		Outlet	Outlet	Outlet	Outlet
Adapter socket type		PF083A	PF113A	PF083A	PF113A

## 2. Dimension (mm)

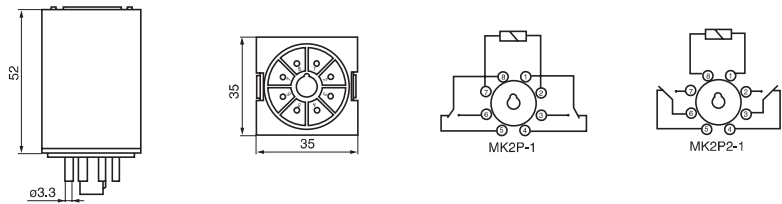
MK2P-I



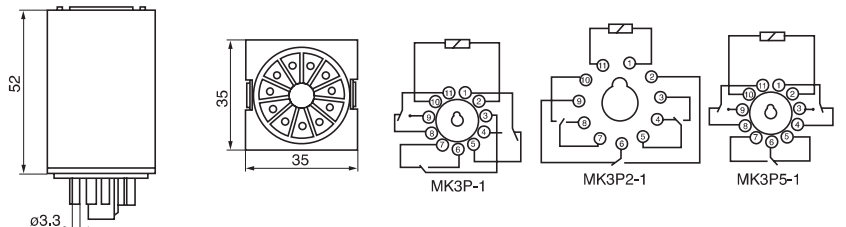
MK3P-I



MK2PN-I



MK3PN-I





## Multi Range Timer

### 1. Main Technical Parameter



AH3-3



AH3-B



AH3-NB

Classification		Timer	Multi range timer	Multi range timer					
Model		AH3-3	AH3-B	AH3-NB					
Specification									
Dimension (mm)		50H x 40W x 57.5D	50H x 40W x 57.5D	50H x 40W x 57.5D					
Mounting & socket	Surface(-N)	PF083A(E)	PF083A(E)	PF083A(E)					
	Flush(-Y)	US-08 P3G-08	US-08 P3G-08	US-08 P3G-08					
Full timing range		SEC: 1,3,6,10,12,30,60 MIN: 3,6,10,12,30,60 HR: 3,6,10,12,30	A: 1S,10S,1M,10M B: 3S,30S,3M,30M C: 6S,60S,6M,60M D: 1M,10M,1H,10H E: 3M,30M,3H,30H	A: 1S,10S,1M,10M B: 3S,30S,3M,30M C: 6S,60S,6M,60M D: 1M,10M,1H,10H E: 3M,30M,3H,30H					
Rated voltage (V)		AC: 12,24,110,220,240,380 50/60Hz DC: 12,24	AC: 12,24,110,220,240,380 50/60Hz DC: 12,24	AC: 12,24,110,220,240,380 50/60Hz DC: 12,24					
Indicator operating		ON-UP operating		Time operating flicker					
O/P Contact	Model	AH3-1	AH3-2	AH3-3	AH3-1	AH3-2	AH3-3	Mode A/B	
	Time limit 1C	5A		5A	□	□	5A		5A
	Time limit 2C		5A		5A			5A	
	Instantaneous 1C			5A		5A	5A		5A
Life	Mechanical	5 x 10 <sup>6</sup> Times			5 x 10 <sup>6</sup> Times			5 x 10 <sup>6</sup> Times	
	Electrical	10 <sup>5</sup> Times			10 <sup>5</sup> Times			10 <sup>5</sup> Times	
Accuracy	Repeat error	±1% max			±1% max			±1% max	
	Setting error	±10% max			±10% max			±10% max	
	Voltage error	±1% max			±1% max			±1% max	
	Temp error	±2% max			±2% max			±2% max	
Reset time		0.1 sec max			0.1 sec max			0.1 sec max	
Consumed power		3VA			3VA			3VA	
Ambient temperature		-10°C~+55°C			-10°C~+55°C			-10°C~+55°C	
Ambient humidity		48~85% RH			48~85% RH			48~85% RH	
Weight		160g			160g			160g	
Adapter socket type		PF083A			PF083A			PF083A	

## Multi Range Timer

### 1. Main Technical Parameter



ST2P



ST3PA



H3BA-8/H3BA-11

Classification		Timer	Multi range timer	Multi range timer			
Specification		Model	ST2P	ST3PA	H3BA-8/H3BA-11		
Dimension (mm)		50H x 40W x 57.5D	55H x 40.5W x 57.5D	48H x 48W x 93.5D			
Mounting & socket	Surface(-N)	PF083A(E)	PF-083A(E)	PF113A(E)	PF083A PS-08		
	Flush(-Y)	US-08 P3G-08	US-08 P3G-08	US-11	US-08 P3G-08		
Full timing range		SEC: 1,3,6,10,12,30,60 MIN: 3,6,10,12,30,60 HR: 3,6,10,12,30	A: 0.05-0.5s/5s/30s/3min B: 0.1-10s/60s/6min C: 0.5-5s/50s/5min/30min D: 1-10s/100s/100min/60min E: 5-60s/10s/60min/6h F: 0.25-2min/20min/2h/12h G: 0.5-4min/40min/4h/24h	0.1SEC~100HRS			
Rated voltage (V)		AC: 12,24,110,220(50/60Hz) DC: 12~24	AC: 24,48,110,220(50/60Hz) DC: 24,48	24 to 240 DC/AC AC: 24,48,110,220 DC: 12,24,48			
Indicator operating		ON-UP operating	ON-UP operating	Time operating flicker			
O/P Contact	Model	ST2P-E	ST3PA	ST3PC	H3BA	H3BA-8	H3BA-8H
	Time limit 1C	5A		5A			5A
	Time limit 2C	5A	5A		5A	5A	
	Instantaneous 1C	5A		5A			5A
Life	Mechanical	5 x 10 <sup>7</sup> Times	5 x 10 <sup>7</sup> Times		10 <sup>7</sup> Times		
	Electrical	10 <sup>5</sup> Times	10 <sup>5</sup> Times		10 <sup>5</sup> Times		
Accuracy	Repeat error	±2% max	±2% max		±2% max		
	Setting error	±5% max	±5% max		±5% max		
	Voltage error	±5% max	±5% max		±5% max		
	Temp error	±2% max	±2% max		±2% max		
Reset time		0.5 sec max	0.5 sec max		0.5 sec max		
Consumed power		3VA	3VA		100~240VAC:10VA 12VDC,24~240VDC:1.5W		
Ambient temperature		-10°C~+55°C	-10°C~+55°C		-10°C~+55°C		
Ambient humidity		35~85% RH	35~85% RH		35~85% RH		
Weight		100g	100g		100g		
Adapter socket type		PF083A	PF083A		PF083A		

## Multi Range Timer

### 1. Main Technical Parameter



H3CR-A8



H3CA-A



H3CA-8

Classification		Multi range timer	Multi range timer	Multi range timer
Specification	Model	H3CR-A8	H3CA-A	H3CA-8
	Dimension (mm)	48H x 48W x 81.6D	48H x 48W x 81.6D	48H x 48W x 81.6D
Mounting & socket	Surface(-N)	PS-08 PF083A	PF113A(E)	PS-08 PF083A
	Flush(-Y)	US-08 P3G-08	US-11	US-08 P3G-08
Full timing range		0.5SEC~300HRS	0.1SEC~9990HRS	0.1SEC~9990HRS
Rated voltage (V)		AC: 24,110~240(50/60Hz) DC: 12,24~240(50/60Hz)	AC: 24~240(50/60Hz) DC: 24~240(50/60Hz)	AC: 24,110, 220 (50/60Hz) DC: 24,48(50/60Hz)
Indicator operating		Time operating flicker	LCD	LCD
O/P Contact	Model	H3CR-A8	H3CA-A	H3CA-8
	Time limit 1C		5A	
	Time limit 2C	5A(AC250)		5A
	Instantaneous 1C			
Life	Mechanical	10 <sup>7</sup> Times	10 <sup>7</sup> Times	10 <sup>7</sup> Times
	Electrical	10 <sup>5</sup> Times	10 <sup>5</sup> Times	10 <sup>5</sup> Times
Accuracy	Repeat error	±2% max	±2% max	±2% max
	Setting error	±5% max	±5% max	±5% max
	Voltage error	±5% max	±5% max	±5% max
	Temp error	±2% max	±2% max	±2% max
Reset time		0.5 sec max	0.5 sec max	0.5 sec max
Consumed power		100~240VAC:10VA 12VDC,24~240VDC:1.5W	100~240VAC:10VA 12VDC,24~240VDC:1.5W	100~240VAC:10VA 12VDC,24~240VDC:1.5W
Ambient temperature		-10°C~+55°C	-10°C~+55°C	-10°C~+55°C
Ambient humidity		35~85% RH	35~85% RH	35~85% RH
Weight		100g	100g	100g
Adapter socket type		/	/	/

# Timer

## 1. Main Technical Parameter



ASTP-N



ASTP-Y



AH2-N



AH2-Y

Classification		Timer	Timer	Timer	Timer		
Specification Model		ASTP-N	ASTP-Y	AH2-N	AH2-Y		
Dimension (mm)		61H x 49W x 70D	88H x 58W x 68D	61H x 49W x 70D	88H x 58W x 68D		
Mounting & socket	Surface(-N)	PF083A PS-08	PF083A	PF083A PS-08	PF083A		
	Flush(-Y)	P2CF-08	US-08 P3G-08	P2CF-08	US-08 P3G-08		
Full timing range		SEC: 1,3,6,10,12,30,60 MIN: 3,6,10,12,30,60 HR: 3,6,10,12,24		SEC: 1,3,6,12,30,60 MIN: 3,6,12,30,60 HR: 3,6,12,24			
Rated voltage (V)		AC: 12,24,110,220,240 50/60Hz DC: 12,24		AC: 12,24,110,220,240 50/60Hz DC: 12,24			
Indicator operating		Time operating			ON-UP two indicator lamp		
O/P Contact	Model	ASTP-N1/ ASTP-Y1	ASTP-N2/ ASTP-Y2	ASTP-N/ ASTP-Y	AH2-N1/ AH2-Y1	AH2-N2/ AH2-Y2	AH2-N/ AH2-Y
	Time limit 1C	5A		5A	5A		5A
	Time limit 2C		5A			5A	
	Instantaneous 1C			5A			5A
Life	Mechanical	5 x 10 <sup>6</sup> Times			5 x 10 <sup>6</sup> Times		
	Electrical	10 <sup>5</sup> Times			10 <sup>5</sup> Times		
Accuracy	Repeat error	±1% max			±1% max		
	Setting error	±10% max			±10% max		
	Voltage error	±1% max			±1% max		
	Temp error	±2% max			±2% max		
Reset time		0.1 sec max			0.1 sec max		
Consumed power		3VA			3VA		
Ambient temperature		-10°C~+55°C			-10°C~+55°C		
Ambient humidity		48~85% RH			48~85% RH		
Weight		220g			220g		
Adapter socket type		PF083A			PF083A		

## Digital Timer

### 1. Main Technical Parameter



ASY-2D



ASY-3D



H3Y-□(ST6P)

Classification		Digital timer	Digital timer	Timer
Model		ASY-2D	ASY-3D	H3Y-□(ST6P)
Specification				
Dimension (mm)		88H x 58W x 68D	88H x 58W x 68D	28H x 21W x 52.6D
Mounting & socket	Surface(-N)	PF083A	PF083A	PYF08A(E) PYF14A(E)
	Flush(-Y)	US-08 P3G-08	US-08 P3G-08	With Y-20 adapter
Full timing range		SEC: 9.9,99 MIN: 9.9,99 HR: 9.9,99	SEC: 9.99,99.9,999 MIN: 99.9,999 HR: 99.9,999	SEC: 1,3,5,10,30,60,120 MIN: 3,5,10,30,60 HR: 3
Rated voltage (V)		AC: 12,24,110,220,240 50/60Hz DC: 12,24	AC: 12,24,110,220,240 50/60Hz DC: 12,24	AC: 12,24,110,220,240 50/60Hz DC: 12,24
Indicator operating		After contact transfer	After contact transfer	Power, up operating
O/P contact	Model	ASY-2D	ASY-3D	
	Time limit 1C			
	Time limit 2C	5A	5A	
	Instantaneous 1C			
Life	Mechanical	5 x 10 <sup>6</sup> Times	5 x 10 <sup>6</sup> Times	5 x 10 <sup>6</sup> Times
	Electrical	10 <sup>5</sup> Times	10 <sup>5</sup> Times	10 <sup>5</sup> Times
Accuracy	Repeat error	±0.05% max	±0.05% max	±3% max
	Setting error	0	0	-
	Voltage error	±0.05 Sec	±0.05 Sec	±2% max
	Temp error	±0.05 Sec	±0.05 Sec	±5% max
Reset time		0.3 sec max	0.3 sec max	0.2 sec max
Consumed power		5VA	5VA	3VA
Ambient temperature		-10°C~+55°C	-10°C~+55°C	-10°C~+55°C
Ambient humidity		48~85% RH	48~85% RH	48~85% RH
Weight		230g	230g	45g
Adapter socket type		PF083A	PF083A	PYF14A PYF08A



## Twin Timer

### 1. Main Technical Parameter



AH2-N/Y



ATDV-N



ATDV-Y

Classification		Multi range timer	Twin timer	Twin timer
Model		AH2-N/Y	ATDV-N	ATDV-Y
Specification				
Dimension (mm)		61H x 49W x 70D 88H x 58W x 68D	61H x 49W x 70D	88H x 58W x 68D
Mounting & socket	Surface(-N)	PF083A PS-08	P2CF-08 PS-08	PF083A
	Flush(-Y)	US-08 P3G-08	PF083A	US-08 P3G-08
Full timing range		A: 1S,10S,1M,10M B: 3S,30S,3M,30M C: 6S,60S,6M,60M D: 1M,10M,1H,10H E: 3M,30M,3H,30H	6S x 6S,6S x 60S, 60S x 6S,60S x 60S, 6M x 6M,6M x 60M, 60M x 6M,60M x 60M, Longest time 12Hours upon clients' request	6S x 6S,6S x 60S, 30S x 30S, 30S x 60S, 60S x 6S,60S x 60S, 6M x 6M,6M x 60M, 60M x 6M,60M x 60M, Longest time 12Hours upon clients' request
Rated voltage (V)		AC: 12,24,110,220, 240 50/60Hz DC: 12,24	AC: 12,24,110,220,240 50/60Hz DC: 12,24	AC: 12,24,110,220,240 50/60Hz DC: 12,24
Indicator operating		ON-UP Two Indicator Lamp	ON,OFF Operating	ON,OFF Operating
O/P contact	Model	AH2-N-□ / AH2-Y-□	ATDV-N	ATDV-Y
	Time limit 1C	5A	5A	5A
	Time limit 2C			
	Instantaneous 1C	5A		
Life	Mechanical	5 x 10 <sup>6</sup> Times	5 x 10 <sup>6</sup> Times	5 x 10 <sup>6</sup> Times
	Electrical	10 <sup>5</sup> Times	10 <sup>5</sup> Times	10 <sup>5</sup> Times
Accuracy	Repeat error	±1% max	±1% max	±2% max
	Setting error	±10% max	±10% max	±20% max
	Voltage error	±1% max	±1% max	±1% max
	Temp error	±2% max	±2% max	±2% max
Reset time		0.1 sec max	0.2 sec max	0.2 sec max
Consumed power		3VA	3VA	3VA
Ambient temperature		-10°C~+55°C	-10°C~+55°C	-10°C~+55°C
Ambient humidity		48~85% RH	48~85% RH	48~85% RH
Weight		220g	160g	210g
Adapter socket type		PF083A	PF083A	PF083A

# Timer Relay

## 1. Main Technical Parameter



ST3PF



ST3PK



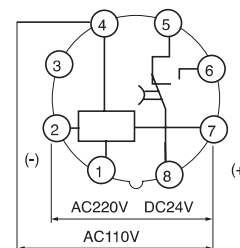
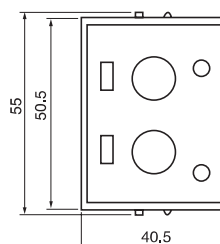
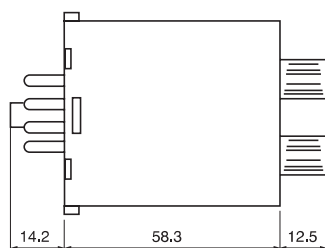
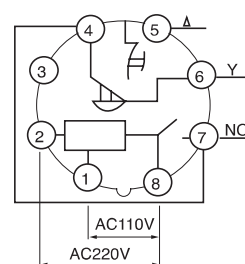
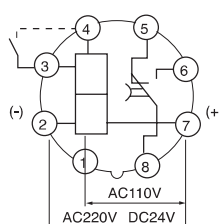
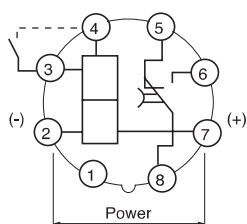
ST3PY



ST3PR

Classification	Timer relay			
Model	ST3PF	ST3PK	ST3PY	ST3PR
Specification				
Dimension (mm)	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D
Function	Off delay	Breaking delay	Delaying of star-delta starter	On-off delaying repetitive
Delaying accuracy	1%	1%	0.5%±10ms	1%
Contact amount	Timed 1 Spdt	Timed 1 Spdt	Timed star-delta transfer Inst.1 normally open	Timed 1 Spdt
Contact capacity	AC220V 3A	AC220V 3A	AC220V 3A	AC220V 2A
Delaying range	0.1~1s 0.2~2s 0.5~5s 1~10s 2.5~30s 5~60s	0.1~1s 0.25~2s 0.5~5s 1~10s 2.5~30s 5~60s 15~180s	1~10s 2.5~30s 5~60s	0.5~6s/60s 1~10s/10min 2.5~30s/30min
Rated voltage	AC110, 220V DC24, 48, 110V	AC110, 220V DC24V	AC110, 220V	AC110, 220V DC24V
Adapter socket type	PF083A	PF083A	PF083A	PF083A

## 2. Dimension (mm)



# Timer Relay

## 1. Main Technical Parameter



TB-388



TB-35



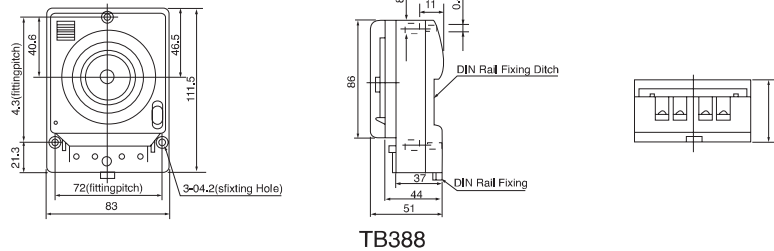
SUL181H



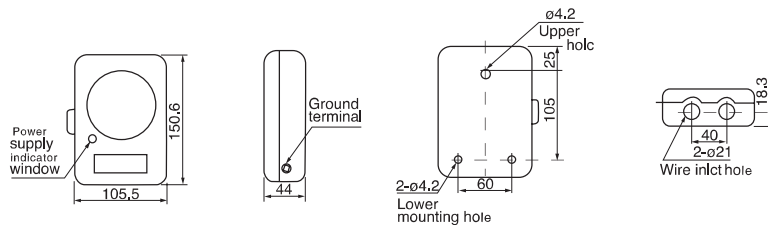
E8

Classification		Timer	Timer	Timer	Timer
Model		TB-388	TB-35	SUL181h	E8
Specification					
Contact capacity		AC220V 10A	AC220V 10A	AC220V 16A	AC220V 10A
Full timing range		24h	24h	24h	7m
Contact resistance		≤ 50mΩ	≤ 50mΩ	≤ 50mΩ	≤ 50mΩ
Insulation resistance		≥ 100MΩ	≥ 100MΩ	≥ 100MΩ	≥ 100MΩ
Coil voltage		100~240V AC	100~240V AC	110,230V AC	110,230V AC
Life	Electrical	10 <sup>5</sup> Times	10 <sup>5</sup> Times	10 <sup>5</sup> Times	10 <sup>5</sup> Times
	Mechanical	10 <sup>7</sup> Times	10 <sup>7</sup> Times	10 <sup>7</sup> Times	10 <sup>7</sup> Times
Operating temperature		-40°C~+55°C	-40°C~+55°C	-40°C~+55°C	-40°C~+55°C
Storage battery (Working reserve)		Time 150h	Without battery	Time 150h	-
Minimum setting unit		15Minutes	15Minutes	30Minutes	0.5Minutes
Set up times		15 m/per times 96 times	15 m/per times 96 times	30 m/per times 48 times	1M, 1.5M, 2M, 2.5M, 3M, 3.5M, 4.5M, 5M, 5.5M, 6M, 6.5M, 7M

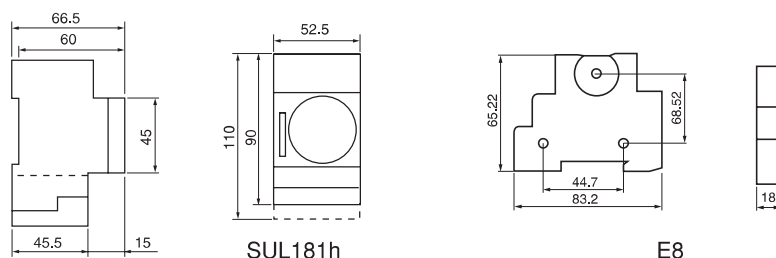
## 2. Dimension(mm)



TB388



TB35



SUL181h

E8

## Floatless Level Switch Relay

### 1. Main Technical Parameter



AFR-1



AFS-GR



PM61F-GR



61F-GP-N



61F-G

Classification		Floatless level switch relay				
Specification	Model	AFR-1	AFS-GR	PM61F-GR	61F-GP-N	61F-G
	Dimension (mm)		61H x 49W x 70D	50H x 40W x 58D	50H x 40W x 58D	50H x 40W x 70D
Sensing mode	General	AFR-1	-	-	-	61F-G
	High sensing	AFR-1H	-	-	-	-
	Long distance	AFR-1L	-	-	-	-
	Low density	AFR-1D	-	-	-	-
	Two lines	AFR-1R	AFS-GR	PM61F-GR	61F-GP-N	-
Rated voltage		AC: 110V, 220V, 240 50/60Hz				
Indicator operating		Two LED's use for two status				
Operate voltage		85~110% of rated voltage				
Second voltage		8VAC (except high sensing 24VAC)				
Operate resistance		4K Ωmin.(GENERAL)				
Release resistance		15K Ωmin.(GENERAL)				
Response time		Operate: 80msec max, Release: 160 msec max.				
Contact rating		5A, 250VAC(RESISTIVE LOAD)				
Length of cable		1Km max.(GENERAL)				
Life	Mechanical	5 x 10 <sup>6</sup> times min				
	Electrical	10 <sup>5</sup> times min				
Insulation resistance		100MΩ (DC 500V)min				
Dielectric strength		1500VAC, 50/60Hz, for 1 minute				
Consumed power		3.2VA				
Ambient temperature		-10°C~+55°C				
Ambient humidity		45~85%RH				
Weight		200g	150g	150g	150g	380g
Adapter socket type		PS-08 PF-083A(E)	PF083A(E)	PF083A(E)	PF113A(E)	-

# Single-function Timer Relay

## 1. General

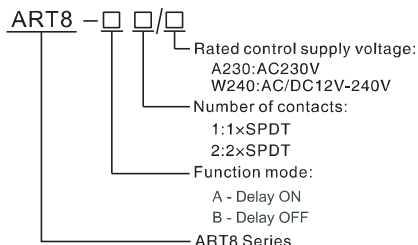
### ■ Applications

- Suitable for applications where function and time requirements are know.
- Time switch , possible to be used for pump decay time after switching heating off , switching of fans.

### ■ Function Features

- Single-function relay with possibility of time setting by a potentiometer.
- Choice of 2 functions:  
A:Delay ON  
B:Delay OFF
- Time scale 0.1 s - 10 days divided into 10 ranges..
- Relay status is indicated by LED.
- 1-MODULE,DIN rail mounting.

### ■ Model and connotation



ART8-A1



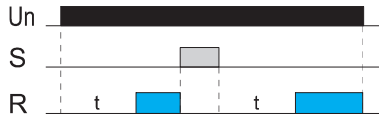
ART8-B1

## 2. Technical Parameters

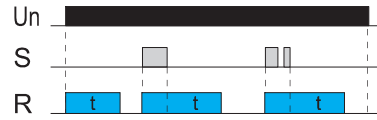
Technical Parameters	ART8-A1/B1	ART8-A2/B2
Function	Delay ON	Delay OFF
Supply terminals	A1-A2	
Voltage range	AC/DC 12-240V(50-60Hz)	
Burden	AC 0.7-3VA/DC 0.5-1.7W	
Voltage range	AC 230V(50-60Hz)	
Power input	AC max.12VA/1.3W	AC max.12VA/1.9W
Supply voltage tolerance	-15%;+10%	
Supply indication	Green LED	
Time ranges	0.1s-10days,ON,OFF	
Time setting	Potentionmeter	
Time deviation	5%-mechanical setting	
Repeat accuracy	0.2%-set value stability	
Temperature coecient	0.05%/°C,at=20°C(0.05%°F , at=68°F)	
Output	1xSPDT	2xSPDT
Current rating	16A/AC1	
Switching voltage	250VAC/24VDC	
Min.breaking capacity DC	500mW	
Output indication	Red LED	
Mechanical life	1×10 <sup>6</sup>	
Electrical life(AC1)	1×10 <sup>7</sup>	
Reset time	Max.200ms	
Operating temperature	-20°C ~ +55°C(-4°F to 131°F)	
Storage temperature	-35°C ~ +75°C(-22°F to 158°F)	
Mounting/DIN rail	Din rail EN/IEC 60715	
Protection degree	IP40 for front panel/IP20 terminals	
Operating position	Any	
Overvoltage cathegory	III.	
Pollution degree	2	
Max.cable size(mm <sup>2</sup> )	solid wire max.1×2.5or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	90×18×64mm	
Weight	1xSPDT:W240-60g,A230-59g	
	2xSPDT:W240-81g,A230-79g	
Standards	IEC/EN 61812-1,IEC/EN61010-1	

## Functions Diagram

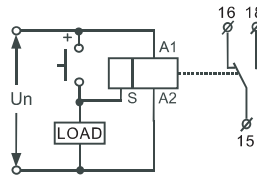
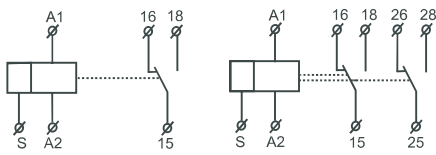
A - Delay ON



B - Delay OFF

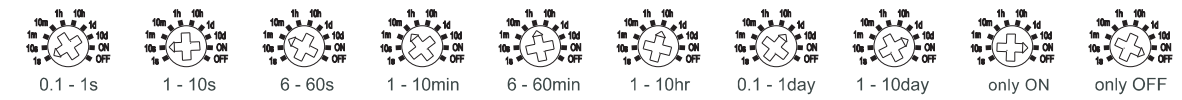


## Wiring Diagram

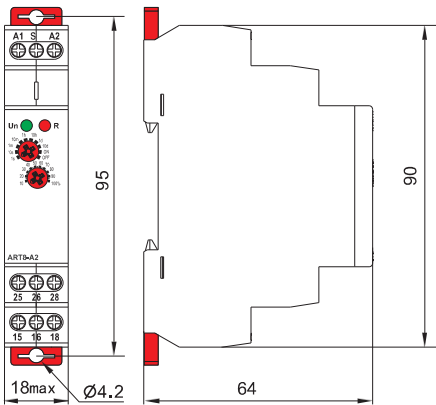


It is possible to connect load between S-A2 (e.g. contactor, control of light or any other device, without disturbing a correct connection of relay (load is energized while the switch is ON.))

## Time Range



## Dimensions (mm)





## Monitoring Voltage Relay

### 1. General

#### ■ Applications

- Protect electrical equipment and motors from over-voltage and under-voltage.
- Normal/emergency power supply switching.

#### ■ Function Features

- Controls its own supply voltage(True RMS measurement)
- User may select operation mode through knob.
- Voltage measurement accuracy<1%.
- Relay status is indicated by LED.
- 1-MODULE,DIN rail mounting.

#### ■ Model and connotation

ARV8 - □/□

Rated control supply voltage:

Rated supply voltage code	Rated supply voltage	Supply voltage limits	Range of adjustment
D12	DC 12V	DC 7...20V	DC 9...15V
AD48	AC/DC 24...48V	AC/DC 15...100V	AC/DC 20...80V
AD240	AC/DC 110...240V	AC/DC 50...270V	AC/DC 65...260V
A220	AC 220V	AC 160...270V	AC 180...260V

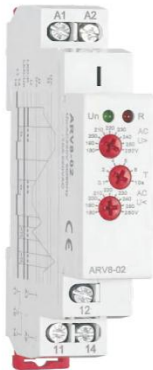
Function mode:

- 01 - Over/under voltage in windows mode
- 02 - Overvoltage Undervoltage

ARV8 Series



ARV8-01

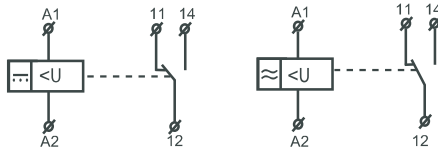


ARV8-02

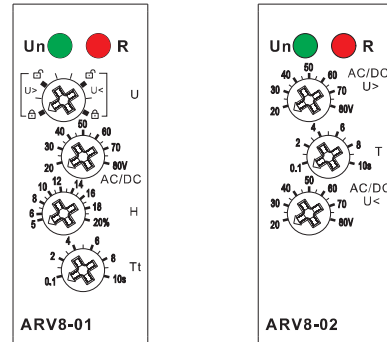
### 2. Technical Parameters

Technical Parameters	ARV8-01	ARV8-02
Function	Monitoring voltage	
Supply terminals	A1-A2	
Rated supply voltage	DC12V,AC/DC24V-48V,AC/DC110V-240V,AC220V	
Rated supply frequency	45Hz-65Hz,0	
Hysteresis	5%-20%	3%fixed
Supply indication	Green LED	
Time delay	Adjustable 0.1s-10s, 10%	
Measurement error	≤ 1%	
Run up delay at power up	0.5s time delay	
Konb setting accuracy	1% of scale value	
Reset time	1000ms	
Temperature coecient	0.05%/°C,at=20°C(0.05%/°F , at=68°F)	
Output	1×SPDT	
Current rating	10A/AC1	
Switching voltage	250VAC/24VDC	
Min.breaking capacity DC	500mW	
Output indication	Red LED	
Mechanical life	1×10 <sup>7</sup>	
Electrical life(AC1)	1×10 <sup>6</sup>	
Operating temperature	-20°C ~ +55°C(-4°F to 131°F)	
Storage temperature	-35°C ~ +75°C(-22°F to 158°F)	
Mounting/DIN rail	Din rail EN/IEC 60715	
Protection degree	IP40 for front panel/IP20 terminals	
Operating position	Any	
Overvoltage cathegory	III.	
Pollution degree	2	
Max.cable size(mm <sup>2</sup> )	solid wire max.1×2.5or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	90×18×64mm	
Weight	59g	
Standards	IEC/EN 60255-1,IEC/EN61010-1	

Wiring Diagram

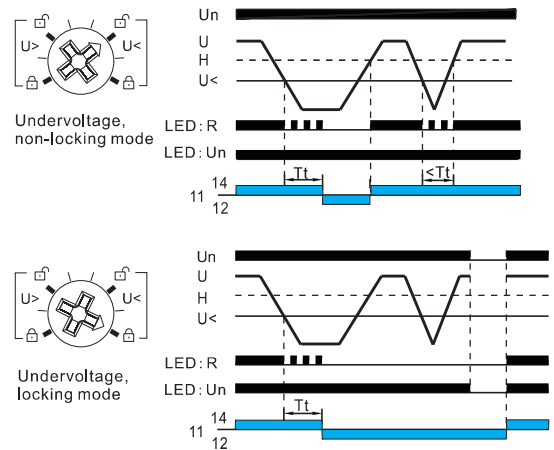
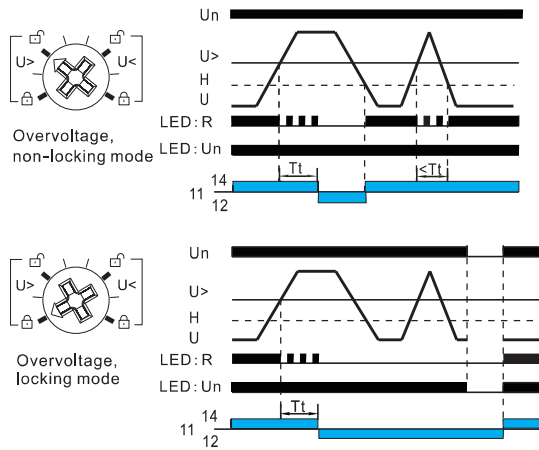


Panel Diagram

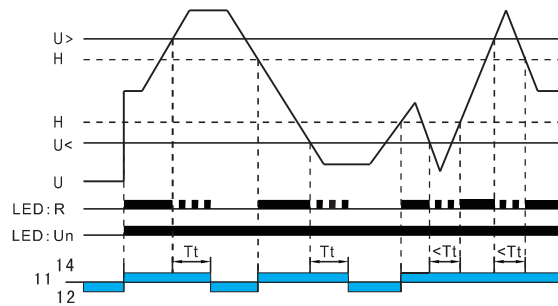


Functions Diagram

ARV8-01

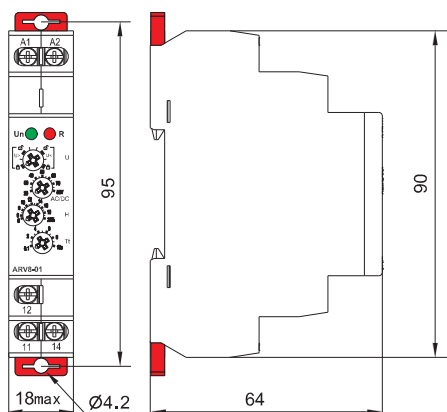


ARV8-02



U> : Overvoltage threshold  
 U< : Undervoltage threshold  
 H : Hysteresis  
 U : Controlled signal  
 Tt : Delay on threshold crossing

Dimensions(mm)



## Timer



THC8A-1A



THC8A-2A



DH48S



DH48S-S



APR-3



JVM-1



THC8



THC15A



XJ11

## Hour Meter

### 1. Main Technical Parameter



HM-1

HM-1	
Supply voltage	AC110V, 220V/50Hz
Dimension	48 x 48 x 40(mm)
Timing range	0~99, 999.99 Hours
Net weight	50g



HC3L-A

### HC3L, HC3L-A

Dimension	24 x 48 x 50(mm)
Timing range	999999.9H, 99H59M59S, 9999H59M, 9999Day23H, 9999H59M59S, 999999H59M
Voltage	No need out put
Battery life	6 Years
Panel size	22.5 x 45(mm)

# Relay Socket



PTF08A



PTF08A-E



PTF11A



PTF14A-E



PYF08A



PYF08A-E



PYF14A



PYF14A-E



PF-083BE



RT704



RT624



PSF-14AE/L



TYPE 90.22



TYPE 90.23



PF085A



PF113A



PF113A-E



PF083A



PF083A-E

# Single Phase Solid State Relay



SSR-10DA



SSR-10DA-H



SSR-10AA



SSR-10AA-H

SSR-□DA (Basis Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	<p>62L×45W×26H</p>
Load Voltage	24-380VAC	
Control Voltage	3-32VDC	
Control Current	DC5-15mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	

SSR-□DA-H (High-Voltage Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	<p>62L×45W×26H</p>
Load Voltage	90-480VDC	
Control Voltage	3-32VDC	
Control Current	DC5-15mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	

SSR-□AA (Basis Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	<p>62L×45W×26H</p>
Load Voltage	24-380VAC	
Control Voltage	80-250VAC	
Control Current	AC ≤ 15mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 4mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	

SSR-□AA-H (High-Voltage Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	<p>62L×45W×26H</p>
Load Voltage	90-480VAC	
Control Voltage	80-250VAC	
Control Current	AC ≤ 15mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	

Instruction: 1. load current 10A, should install radiator, upwards 40A should add fan for force cooling or water cooling.  
 2. when using Inductive load, please add a varistor at the outside, the value is 1.6-1.9 multiple of load voltage.



## Single Phase Solid State Relay



SSR-25VA

SSR-□VA (Basis Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	
Load Voltage	24-380VAC	
Control Voltage	VR:250KΩ/220VAC / 500KΩ/380VAC	
Control Current	/	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	/	
Dielectric Strength	2500VAC input, output-cooling plate	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	/	
Weight	132g	



SSR-25VA-H

SSR-□VA-H (High-Voltage Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	
Load Voltage	24-380VAC	
Control Voltage	VR:500KΩ/380VAC / 1MΩ/480VAC	
Control Current	/	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	/	
Dielectric Strength	2500VAC input, output-cooling plate	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	/	
Weight	132g	



SSR-25LA

SSR-□LA (Basis Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	
Load Voltage	24-380VAC	
Control Current	DC4-20mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	≤ 10mS	
Dielectric Strength	2000VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	



SSR-25LA-H

SSR-□LA-H (High-Voltage Type)		Wiring drawing(mm)
Load Current	10A,25A,40A,50A,60A,75A,90A,100A	
Load Voltage	90-480VAC	
Control Current	DC4-20mA	
On Voltage	≤ 1.5V	
Off Leakage Current	≤ 2mA	
On-off Time	≤ 10mS	
Dielectric Strength	2000VAC	
Insulation Resistance	500MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	132g	

Instruction 1. load current 10A, should install radiator, upwards 40A should add fan for force cooling or water cooling.  
 2. when using Inductive load, please add a varistor at the outside, the value is 1.6-1.9 multiple of load voltage.



## Three Phase Solid State Relay



MJGX-3 D4810A



MJGX-3 D4860A



MJGX-3 A4810A



MJGX-3 A48100A

MJGX-3 D48 □		Wiring drawing(mm)
Load Current	10A,15A,20A,25A,30A,40A,50A,60A,80A,100A	
Load Voltage	480VAC	
Control Voltage	3-32VDC	
Control Current	18-42mA	
On Voltage	≤ 1.8V	
Off Leakage Current	≤ 10mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	340(460)g	

MJGX-3 D48 □Z (Bnganced Type)		Wiring drawing(mm)
Load Current	100A,120A	
Load Voltage	480VAC	
Control Voltage	3-32VDC	
Control Current	18-42mA	
On Voltage	≤ 2V	
Off Leakage Current	≤ 10mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	480g	

MJGX-3 A48 □		Wiring drawing(mm)
Load Current	10A,15A,20A,25A,30A,40A,50A,60A,80A,100A	
Load Voltage	480VAC	
Control Voltage	80-250VAC	
Control Current	AC ≤ 15mA	
On Voltage	≤ 1.8V	
Off Leakage Current	≤ 10mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	340 (460) g	

MJGX-3 A48 □		Wiring drawing(mm)
Load Current	100A,120A	
Load Voltage	480VAC	
Control Voltage	80-250VAC	
Control Current	AC ≤ 15mA	
On Voltage	≤ 1.8V	
Off Leakage Current	≤ 10mA	
On-off Time	≤ 10mS	
Dielectric Strength	2500VAC	
Insulation Resistance	1000MΩ/500VDC	
Ambient Temperature	-30°C ~+75°C	
Mounting Methods	Fixed by screw bolt	
The work instructions	LED	
Weight	480g	

Instruction: 1. load current 10A, should install radiator, upwards 40A should add fan for force cooling or water cooling.  
 2. when using inductive load, please add a varistor at the outside, the value is 1.6-1.9 multiple of load voltage.

## CJX1 Series AC Contactors

### 1. Application

CJX1 series AC contactors are suitable for frequency 50/60Hz, rated insulation voltage up to 1000V, rated operation current 9~475A under AC-3 duty. It is mainly used for making/breaking electric circuit at a long distance & for frequent starting/stopping & with thermal relay to compose a magnetic motor starter. The product conforms to IEC60947-4-1 standard.



CJX1-9,12



CJX1-16,22



CJX1-32



CJX1-45~85

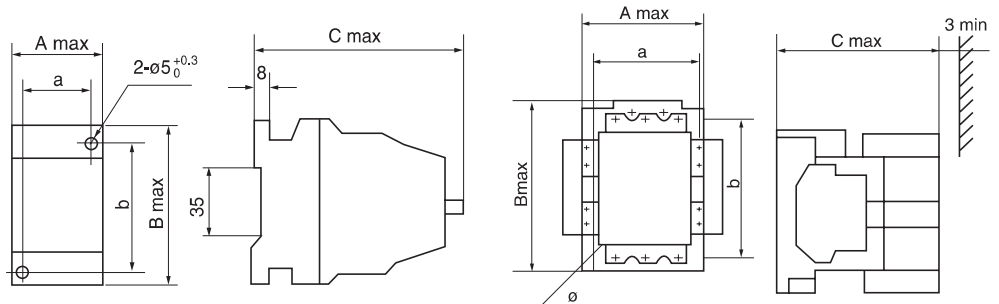
### 2. Specification

Type	CJX1-9 CJX1-12	CJX1-16 CJX1-22	CJX1-32	CJX1-45 CJX1-63	CJX1-75 CJX1-85	CJX1-110 CJX1-140	CJX1-170 CJX1-205	CJX1-250 CJX1-300	CJX1-400 CJX1-475	
Mechanical endurance(x10 <sup>6</sup> )	10	10	10	8	8	8	8	8	8	
Conventional thermal current(A)	20	30	45	80	100	160	210	300	400/550	
Rated insulation voltage(V)	660	660	660	1000	1000	1000	1000	1000	1000	
Rated(380V) operating current(A)	AC-3	9/12	16/22	32	45/63	75/85	110/140	170/205	250/300	400/475
	AC-4	3.3/4.3	7.7/8.5	15.6	24/28	34/42	54/68	75/96	110/125	150
Power of controllable motor(kW) AC-3	380V	4/5.5	7.5/11	15	22/30	37/45	55/75	90/110	132/160	200/250
	660V	5.5/7.5	11	23	39/55	67	100	156	235	375
Power of controllable motor(kW) AC-4	380V	1.4/1.9	3.5/4	7.5	12/14	17/21	27/35	38/50	58/66	81
	660V	2.4/3.3	6/6.6	13	20.8/24	29.5/36	46.9/60	66/86	100/114	140
Frequency of operation (l/h)	AC3	1000	750	750	1200/1000	1000/850	1000/750	700/500	700/500	500/420
	AC4	250	250	250	400/300	300/250	300/200	200/130	200/130	150
Electrical endurance (x10 <sup>6</sup> )	AC3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
	AC4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Operating voltage range of coil	(0.8~1.1)U <sub>e</sub>									
Power consumption of coil	Attracting (VA)	10	10	12.1	17	32	39	58	84	115
	Starting (VA)	68	69	101	183	330	550	910	1430	2450
Rated insulation voltage of auxiliary contacts(V)	690	690	690	690	690	690	690	690	690	
Conventional thermal current of auxiliary contacts(A)	10	10	10	10	10	10	10	10	10	
Rated operating current of auxiliary contacts(A)	AC15 380/220	6/10	6/10	4/6	4/6	4/6	4/6	4/6	4/6	4/6
	DC13 220V	0.45	0.45	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Rated voltage of the control coil(V)	50Hz	24,36,48,110,127,220,380,etc								
	60Hz	24,110,220,440,etc.								

**3. Outline and Mounting Dimension (mm)**



CJX1-110,140



CJX1-0.9~32 (Table 1)

CJX1-45~475 (Table 2)



CJX1-170~475

Table 1

Type	A max	B max	C max	a	b
CJX1-9,12	45	78.5	104(90)	35+0.31	60+0.37
CJX1-16,22	46	85	114	35+0.31	75+0.37
CJX1-32	74	88	108	50+0.31	75+0.37

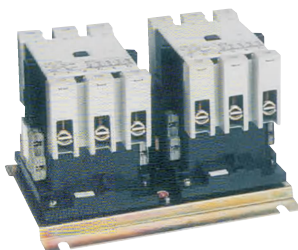
Table 2

Type	A max	B max	C max	a	b	
CJX1-45,63	91(114)	120	124	70+0.6	100+0.2	4.8
CJX1-75,85	102(125)	135	142	80+0.6	100+0.2	5.5
CJX1-110,140	122(145)	156	154	100+0.2	130+0.8	6.5
CJX1-170,205	140(163)	185	190	100+0.2	160+0.8	7
CJX1-250,300	150(173)	205	200	120+0.2	180+0.8	9
CJX1-400,475	165(188)	205	225	130+0.8	180+0.8	9



CJX1-09~32N

**CJX1-N Mechanical Interlocking Contactor**



CJX1-45~400N

Type	Rated thermal current (A)	Rated operation current (A)		Controllable power of motor (kW)			
				AC 3		AC 4	
		380V	660V	380V	660V	380V	660V
CJX1-09N	20	9	3.3	4	5.5	1.4	2.4
CJX1-12N	20	12	4.3	5.5	7.5	1.9	3.3
CJX1-16N	30	16	7.7	7.5	11	3.5	6
CJX1-22N	30	22	8.5	11	11	4	6.6
CJX1-32N	45	32	15.6	15	23	7.5	13
CJX1-45N	45	38	18.5	18.5	23	9	15.5
CJX1-63N	70	45	24	22	39	12	20.8
CJX1-75N	70	63	28	30	55	14	24.3
CJX1-85N	90	75	34	37	67	17	29.5
CJX1-110N	90	85	42	45	67	21	36
CJX1-140N	150	110	54	55	100	27	46.9
CJX1-170N	150	140	68	75	100	35	60
CJX1-205N	180	170	75	90	156	38	66
CJX1-250N	220	205	96	110	156	50	86
CJX1-300N	300	250	110	132	235	58	100
CJX1-400N	300	300	125	160	235	66	114

## CJX2 Series AC Contactor

### 1. Application

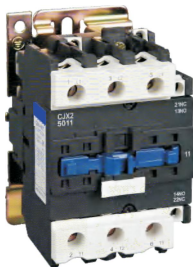
CJX2 series AC Contactor is suitable for using in the circuits up to the rated voltage 660V AC 50/60Hz, rated current up to 620A, for making, breaking, frequently starting & controlling the AC motor. Combined with the auxiliary contact block, timer delay & machine-interlocking device etc, it becomes the delay contactor, mechanical interlocking contactor, star-delta starter. With the thermal relay, it is combined into the electromagnetic starter. The product conforms to IEC60947-4-1 standard.



CJX2-0910



CJX2-3210



CJX2-5011



CJX2-9511

### 2. Specification

Type		CJX2-10	CJX2-12	CJX2-18	CJX2-25	CJX2-32	CJX2-40	CJX2-50	CJX2-65	CJX2-80	CJX2-95
Rated working current (A)	AC3	9	12	18	25	32	40	50	65	80	95
	AC4	3.5	5	7.7	8.5	12	18.5	24	28	37	44
Standard power ratings of 3-phase motors 50/60Hz in category AC-3 (kW)	220/230V	2.2	3	4	5.5	7.5	11	15	18.5	22	25
	380/400V	4	5.5	7.5	11	15	18.5	22	30	37	45
	415V	4	5.5	9	11	15	22	25	37	45	45
	500V	5.5	7.5	10	15	18.5	22	30	37	55	55
	660/690V	5.5	7.5	10	15	18.5	30	33	37	45	55
Rated heat current (A)		20	20	32	40	50	60	80	80	125	125
Electrical life	AC3 (x10 <sup>4</sup> )	100	100	100	100	80	80	60	60	60	60
	AC4 (x10 <sup>4</sup> )	20	20	20	20	20	15	15	15	10	10
Mechanical life (x10 <sup>4</sup> )		1000	1000	1000	1000	800	800	800	800	600	600
Number of the contacts		3P+NO					3P+NC+NO				
		3P+NC									

Type		CJX2-115	CJX2-150	CJX2-170	CJX2-205	CJX2-245	CJX2-300	CJX2-410	CJX2-475	CJX2-620
Rated working current (A)	AC3	115	150	170	205	245	300	410	475	620
	AC4	52	60	75	85	105	117	138	147	180
Standard power ratings of 3-phase motors 50/60Hz in category AC-3(kW)	220/230V	30	40	55	63	75	100	110	147	200
	380/400V	55	75	90	110	132	160	220	265	335
	415V	59	80	100	110	132	180	220	280	375
	500V	75	90	110	129	160	200	250	355	400
	660/690V	80	100	110	129	160	220	280	355	450
Rated heat current (A)		200	250	250	275	315	400	500	700	1000
Electrical life	AC3 (x10 <sup>4</sup> )	200	60	60	50	50	50	30	30	20
	AC4 (x10 <sup>4</sup> )	15	15	15	15	15	15	8	8	5
Mechanical life (x10 <sup>4</sup> )		300	300	300	300	300	300	100	100	100

### 3. Standard Control Circuit Voltage

Volts	24	42	48	110	220	230	240	380	400	415	440	500	660
50Hz	B5	D5	E5	F5	M5	P5	U5	Q5	V5	N5	R5	S5	Y5
60Hz	B6	D6	E6	F6	M6	-	U6	Q6	-	-	R6	-	-
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7	-	-

**4. Outline and Mounting Dimension (mm)**



CJX2-D115



CJX2-D170



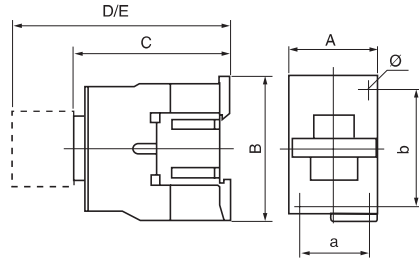
CJX2-D410



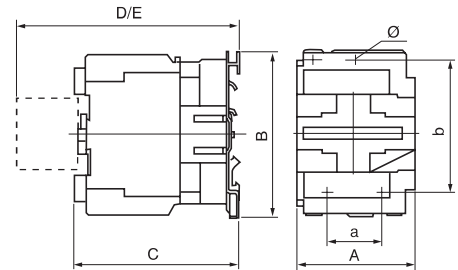
CJX2-D475



CJX2-D620

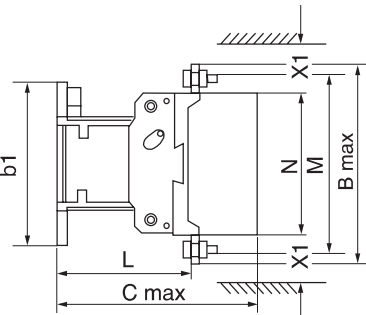
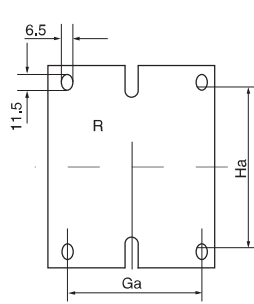
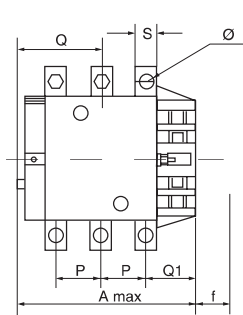


CJX2-D09~32



CJX2-D40~95

Type	A	B	C	D	E	a	b	Φ
CJX2-D09~12	47	76	82	113	133	34/35	50/60	4.5
CJX2-D18	47	76	87	118	138	34/35	50/60	4.5
CJX2-D25	57	86	95	126	146	40	48	4.5
CJX2-D32	57	86	100	131	151	40	48	4.5
CJX2-D40~65	77	129	116	145	165	40	100/110	6.5
CJX2-D80~95	87	129	127	175	195	40	100/110	6.5



CJX2-D115~620

Type	A	B	C	b1	P	Q	S	Q1	M	N	L	Φ	Ga	Ha
CJX2-D115	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
CJX2-D150	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
CJX2-D170	158	120	132	158	35	60	17	25	134	96.2	75	M6	-	-
CJX2-D205	168.5	174	181	137	40	69	20	59.4	154	127	113.5	M8	80	120-106
CJX2-D245	168.5	197	181	137	48	69	25	51.5	172	127	113.5	M10	80	120-106
CJX2-D300	213	206	219	145	48	91	25	74	181	158	145	M10	80	120-106
CJX2-D410	213	206	219	209	48	91	25	74	181	158	145	M10	80	120-106
CJX2-D475	233	238	232	209	55	108	30	77	208	172	146	M10	80	180
CJX2-D620	309	304	255	280	80	140	40	89	264	202	155	M12	80	180





F4-11



F4-31



F8-20



LA2-DT2



LA3-DR2

**5. Auxiliary Contact Block**

Appellation	Type	
Auxiliary instantaneous contactor block, contactor I	F4-10	
	F4-01	

Appellation	Type	
Auxiliary instantaneous contactor block, contactor II	F4-11	
	F4-20	
	F4-02	

Appellation	Type	
Auxiliary instantaneous contactor block, contactor IV	F4-40	
	F4-31	
	F4-22	
	F4-13	
	F4-04	

Appellation	Type	
Auxiliary instantaneous contactor block, contactor IV	F4-40	
	F4-31	
	F4-22	
	F4-13	
	F4-04	
















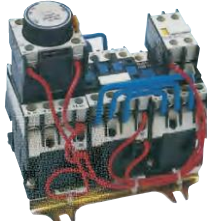
Appellation	Type	
Side-mounted auxiliary module	F8-11	
	F8-20	

**6. Time Delay Auxiliary Contact Block**

Appellation	Type	
On delay	0.1...3S LA2-DT0	Rated insulating voltage:660V Rated voltage:380V Rated thermal current:10A Rated current:0.95A(AC-15) 0.15A(DC-13) Rated insulating resistance:10MΩ Reset time: ≤0.5S
	0.1...30S LA2-DT2	
	10...180S LA2-DT4	
Off delay	0.1...3S LA3-DR0	
	0.1...30S LA3-DR2	
	10...180S LA3-DR4	



**7. Characteristic**

Contactor	Auxiliary Blocks	Relative products
	<p data-bbox="555 600 576 629">+</p> 	<p data-bbox="954 611 1034 633">→</p> 
	<p data-bbox="563 936 584 965">+</p> 	<p data-bbox="970 943 1050 965">→</p> 
	<p data-bbox="552 1290 572 1319">+</p> 	<p data-bbox="962 1294 1042 1317">→</p> 
	<p data-bbox="576 1637 596 1666">+</p> 	<p data-bbox="970 1641 1050 1664">→</p> 
	<p data-bbox="592 1944 612 1973">+</p>  <p data-bbox="842 1944 863 1973">+</p> 	<p data-bbox="1066 1951 1145 1973">→</p> 

## CJX2N Series AC Contactor

### 1. Application

CJX2N series AC contactor is suitable for frequency 50/60Hz, rated insulation voltage up to 1000V, rated operation current 9~95 A under AC-3 duty. It is mainly used for making/breaking electric circuits at a long distance & for frequent starting/stopping & controlling AC Motors. It is used in combination with thermal relay to compose a magnetic motor starter. The products comply with IEC60947-4-1 standard.



CJX2N-09



CJX2N-25



CJX2N-50

### 2. Specification

Type	CJX2N-09	CJX2N-12	CJX2N-18	CJX2N-25	CJX2N-32		
Rated working current Ie (A) AC-3 Ue ≤ 440V	9	12	18	25	32		
Rated heat current Ith (A)	25	25	32	40	50		
Rated insulation voltage Ui (V)	690	690	690	690	690		
Rated operating voltage Ue (V) Max	690	690	690	690	690		
Rated operational power in AC-3 Pe (kW)	220/230V	2.2	3	4	5.5	7.5	
	380/400V	4	5.5	7.5	11	15	
	415/440V	4	5.5	9	11	15	
	500V	5.5	7.5	10	15	18.5	
	660/690V	5.5	7.5	10	15	18.5	
Rated operational power in AC-4 Pe (kW)	220/230V	1.5	1.5	2.2	3	4	
	380/400V	2.2	3.7	4	5.5	7.5	
	415/440V	2.2	3	3.7	5.5	7.5	
	500V	3	4	5.5	7.5	9	
	660/690V	4	5.5	7.5	10	11	
Frequency of operation (I/h)	1200	1200	1200	1200	1000		
Electrical endurance (x10 <sup>4</sup> )	AC-3	100	100	100	100	80	
	AC-4	20	20	20	20	20	
Mechanical endurance (x10 <sup>6</sup> )	15	15	15	15	15		
Operating voltage range of coil	Close voltage:(0.85~1.1)Us				Open voltage:(20%~75%)Us		
Power consumption of coil (VA)	Attracting	7	7	7	7	7	20
	Starting	70	70	70	70	70	200
Rated insulation voltage of auxiliary contacts (V)	690	690	690	690	690	690	690
Conventional thermal current of auxiliary contacts (A)	10	10	10	10	10	10	10
Auxiliary contacts specification	AC-15:360VA				DC-13:33W		



CJX2N-80

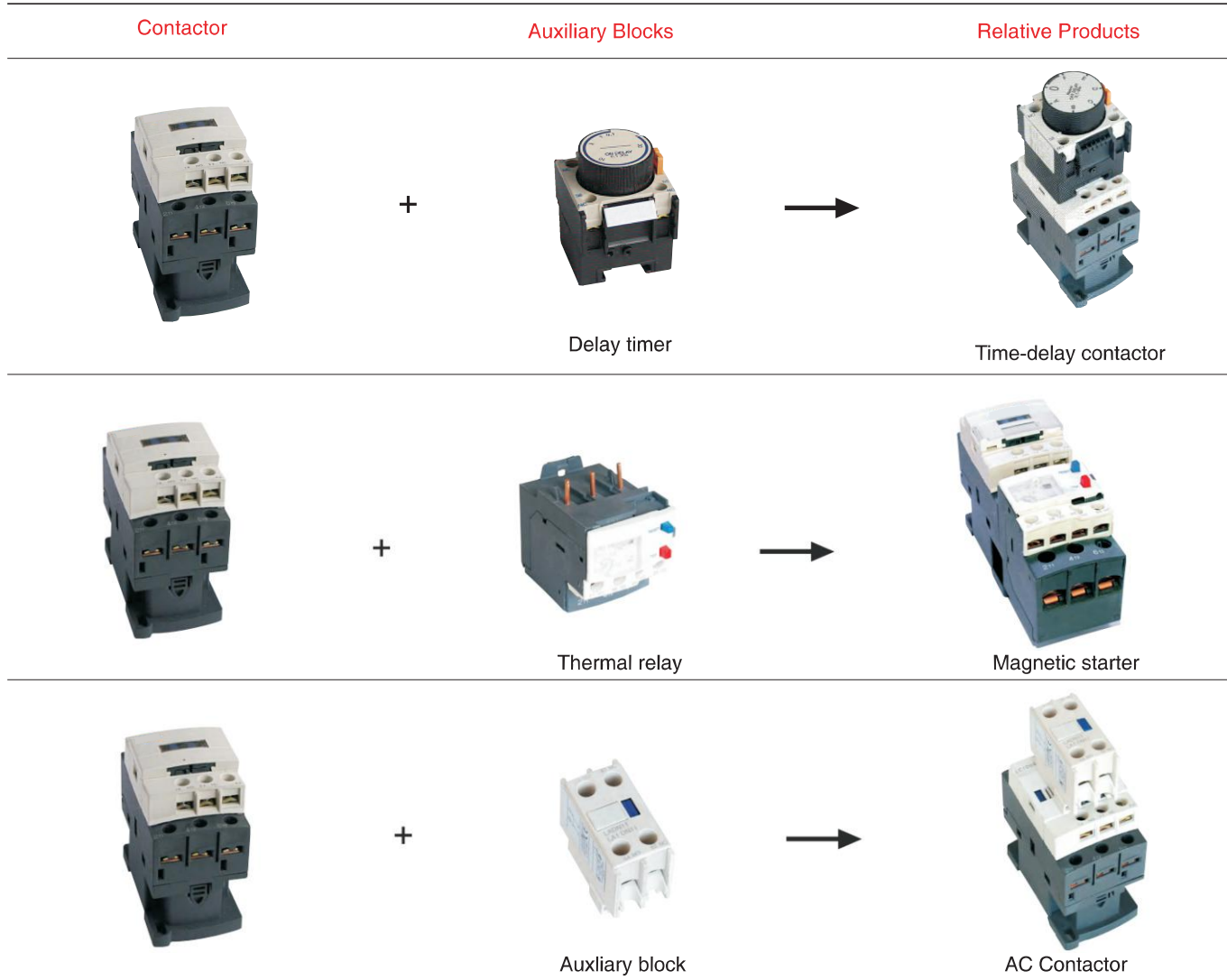
Type	CJX2N-40	CJX2N-50	CJX2N-65	CJX2N-80	CJX2N-95	
Rated working current Ie (A) AC-3 Ue ≤ 440V	40	50	65	80	95	
Rated heat current Ith (A)	60	80	80	125	125	
Rated insulation voltage Ui (V)	1000	1000	1000	1000	1000	
Rated operating voltage Ue (V) Max	1000	1000	1000	1000	1000	
Rated operational power in AC-3 Pe (kW)	220/230V	11	15	18.5	22	25
	380/400V	18.5	22	30	37	45
	415/440V	22	25/30	37	45	45
	500V	22	30	37	55	55
	660/690V	30	33	37	45	45
Rated operational power in AC-4 Pe (kW)	220/230V	4	5.5	7.5	7.5	9
	380/400V	9	11	11	15	15
	415/440V	9/11	11	11/15	15	15
	500V	11	15	18.5	22	22
	660/690V	15	18.5	22	25	25
Frequency of operation (I/h)	1000	1000	1000	750	750	
Electrical endurance (x10 <sup>4</sup> )	AC-3	80	60	60	60	60
	AC-4	15	15	15	10	10
Mechanical endurance (x10 <sup>6</sup> )	6	6	6	4	4	
Operating voltage range of coil	Close voltage:(0.85~1.1)Us			Open voltage:(20%~75%)Us		
Power consumption of coil (VA)	Attracting	20	20	20	22	22
	Starting	200	200	200	300	300
Rated insulation voltage of auxiliary contacts (V)	690	690	690	690	690	690
Conventional thermal current of auxiliary contacts (A)	10	10	10	10	10	10
Auxiliary contacts specification	AC-15:360VA			DC-13:33W		

**3. Standard Control Circuit Voltage**

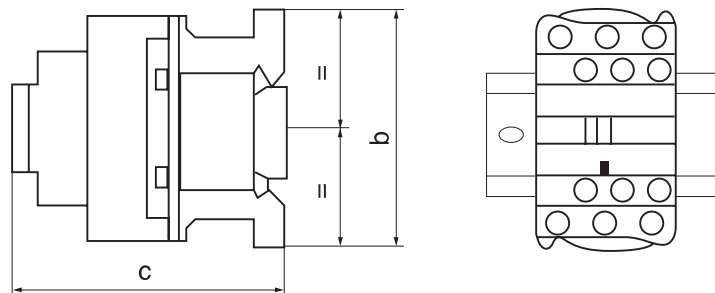
Volts	24	42	48	110	220	230	240	380	400	415	440	500	660
50Hz	B5	D5	E5	F5	M5	P5	U5	Q5	V5	N5	R5	S5	Y5
60Hz	B6	D6	E6	F6	M6	-	U6	Q6	-	-	R6		
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7		

## 4. Characteristic

Contactor and other auxiliary blocks.



## 5. Outline and Mounting Dimension (mm)



	09	12	18	25	32	38	40	50	65	80	95	115	150
b	76.6	76.6	76.6	76.6	76.6	76.6	127	127	127	127	127	158	158
c	87	87	87	94	94	94	116	116	116	123.8	123.8	132	132

## CJX2-F AC Contactor



CJX2-F115



CJX2-F225



CJX2-F265



CJX2-F400

### 1. Application

CJX2-F AC contactor is suitable for using in the circuits with rated voltage 380V AC50/60Hz, current 800A, for long distance breaking circuit and frequently starting or controlling the motor. It also can be used for the control of distribution circuits of rated current from 115A to 800A. It conforms to IEC60947-4-1 standard.

### 2. Specification

Type	Rated operational current in AC-3(A)	Max power ratings of 3-phase motors in category AC-3(kW)							Operating frequency (time/hour) AC-3	Electrical life AC-3 x10 <sup>4</sup>	Mechanical life x10 <sup>4</sup>
		220V 230V	380V 400V	415V	440V	500V	660V 690V	1000V			
CJX2-F115	115	30	55	59	59	75	80	65	1200	120	1000
CJX2-F1154	115	30	55	59	59	75	80	65	1200	120	1000
CJX2-F150	150	40	75	80	80	90	100	65	1200	120	1000
CJX2-F1504	150	40	75	80	80	90	100	65	1200	120	1000
CJX2-F185	185	55	90	100	100	110	110	100	600	100	600
CJX2-F1854	185	55	90	100	100	110	110	100	600	100	600
CJX2-F225	225	63	110	110	110	130	129	100	600	100	600
CJX2-F2254	225	63	110	110	110	130	129	100	600	100	600
CJX2-F265	265	75	132	140	140	160	160	147	600	80	600
CJX2-F2654	265	75	132	140	140	160	160	147	600	80	600
CJX2-F330	330	100	160	180	200	200	220	160	600	80	600
CJX2-F3304	330	100	160	180	200	200	220	160	600	80	600
CJX2-F400	400	110	200	220	250	257	280	185	600	80	600
CJX2-F4004	400	110	200	220	250	257	280	185	600	80	600
CJX2-F500	500	147	250	280	295	355	335	335	600	80	600
CJX2-F5004	500	147	250	280	295	355	335	335	600	80	600
CJX2-F630	630	200	335	375	400	400	450	450	600	80	600
CJX2-F6304	630	200	335	375	400	400	450	450	600	80	600
CJX2-F780	780	220	400	425	425	450	475	40	600	80	600
CJX2-F7804	780	220	400	425	425	450	475	450	600	80	600
CJX2-F800	800	250	450	450	450	450	470	450	600	80	600

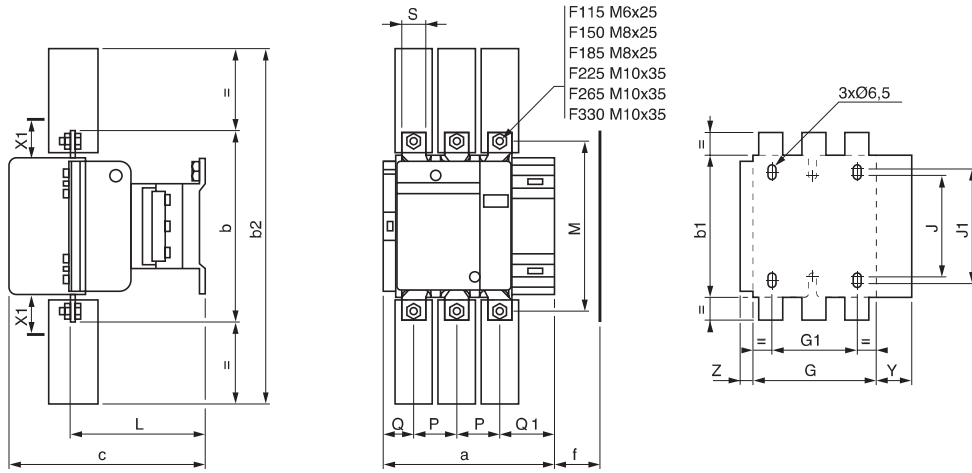


CJX2-F1154



CJX2-F5004

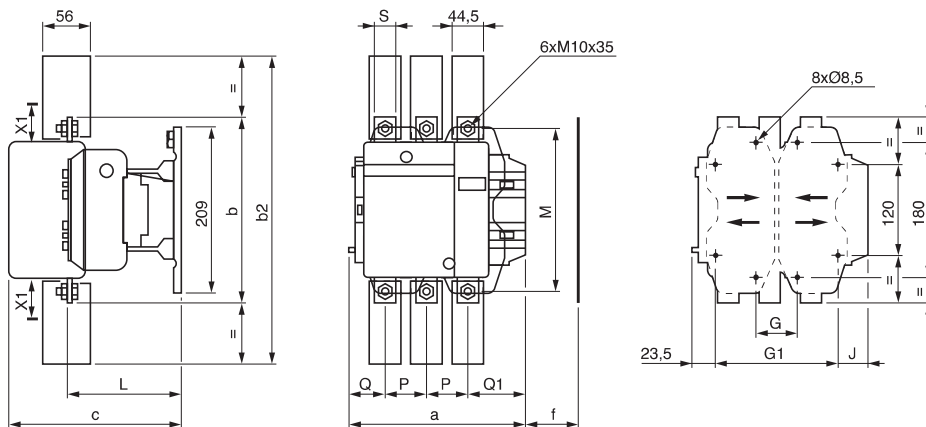
3. Outline and Mounting Dimension (mm)



CJX2-F115 to F330

CJX2-		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	X1	Y	Z
F115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	44	13.5
F150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4P	200.5	170	137	301	171	131	143	80	106	120	107	150	40	26	55.5	20	34	44	13.5
F185	3P	168.5	174	137	305	181	130	111	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
	4P	208.5	174	137	305	181	130	151	80	106	120	113.5	154	40	29	59.5	20	34	44	13.5
F225	3P	168.5	197	137	364	181	130	111	80	106	120	113.5	172	48	21	51.5	25	44.5	44	13.5
	4P	208.5	197	137	364	181	130	151	80	106	120	113.5	172	48	17	47.5	25	44.5	44	13.5
F265	3P	201.5	203	145	375	213	147	142	96	106	120	141	178	48	39	66.5	25	44.5	38	21.5
	4P	244.5	203	145	375	213	147	190	96	106	120	141	178	48	34	66.5	25	44.5	38	21.5
F330	3P	213	206	145	375	219	147	154.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5
	4P	261	206	145	375	219	147	202.5	96	106	120	145	181	48	43	74	25	44.5	38	20.5

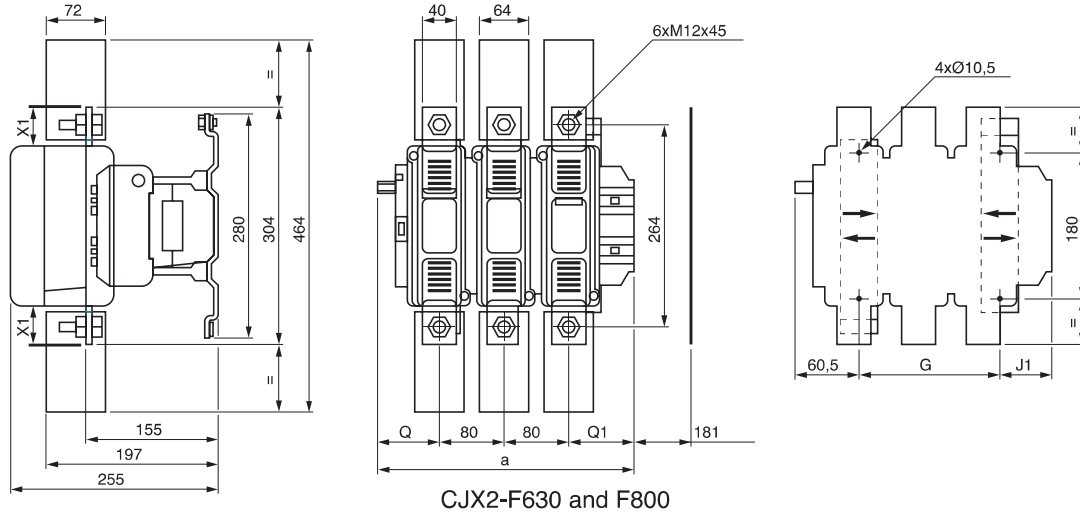
f = minimum distance required for coil removal



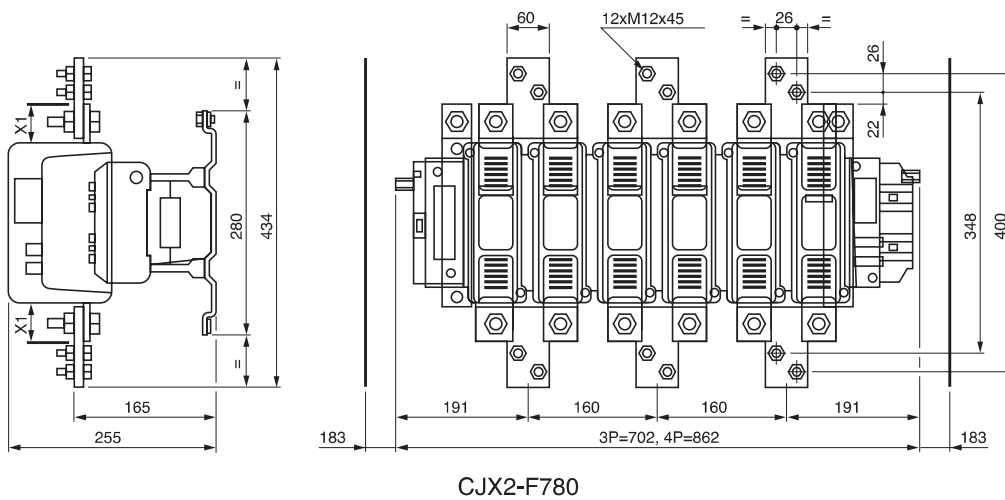
CJX2-F400 and F500

CJX2-		a	b	b2	c	f	G *	G min.	G max.	G1 *	G1 min.	G1 max.	J	L	M	P	Q	Q1	S
F400	2P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	69	96	25
	3P	213	206	375	219	119	80	66	102	170	156	192	19.5	145	181	48	43	74	25
	4P	261	206	375	219	119	80	66	150	170	156	240	67.5	145	181	48	43	74	25
F500	2P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	76	102	30
	3P	233	238	400	232	141	80	66	120	170	156	210	39.5	146	208	55	46	77	30
	4P	288	238	400	232	141	140	66	175	230	156	265	34.5	146	208	55	46	77	30





CJX2-		a	G	G min.	G max.	J1	Q	Q1
F630	2P	309	180	100	195	68.5	102	127
F630, F800	3P	309	180	100	195	68.5	60	89
F630	4P	389	240	150	275	68.5	60	89



**4. Bobbin of AC Contactor CJX2-F**

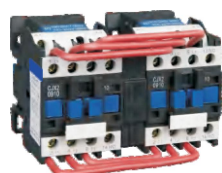
Type	Used for contactor
LX1-FF	CJX2-F115~F150
LX1-FG	CJX2-F185~F225
LX1-FH	CJX2-F265~F330
LX1-FJ	CJX2-F400
LX1-FK	CJX2-F500
LX1-FL	CJX2-F630/CJX2-F800
LX1-FX	CJX2-F780

## CJX2-N Mechanical Interlocking Contactor

### 1. Application

CJX2-N mechanical interlocking contactor is suitable for using in the circuits up to the rated voltage 660V AC 50/60Hz, current 620A, for convertible controlling the motor. This mechanical interlocking device ensures contact changeover of the two convertible contactors. It conforms to IEC60947-4-1 standard.

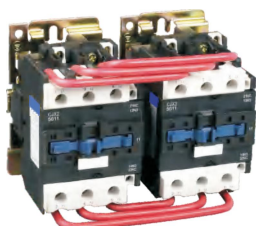
### 2. Specification



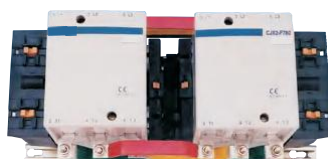
CJX2-09~12N



CJX2-25~32N



CJX2-40~95N

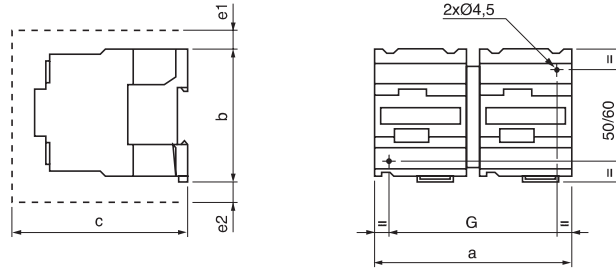


CJX2-115~800N

Type	Rated current AC-3(A)	Controlled power (kW)				
		220V	380V	415V	440V	660V
CJX2-09N	9	2.2	4	4	4	5.5
CJX2-12N	12	5.5	5.5	5.5	5.5	7.5
CJX2-18N	18	7.5	7.5	9	9	10
CJX2-25N	25	5.5	11	11	11	15
CJX2-32N	32	7.5	15	15	15	18.5
CJX2-40N	40	18.5	18.5	22	22	30
CJX2-50N	50	15	22	25	30	33
CJX2-65N	63	18.5	30	37	37	37
CJX2-80N	80	22	37	45	45	45
CJX2-95N	95	22	45	45	45	41
CJX2-115N	115	30	55	59	59	80
CJX2-150N	150	40	75	80	80	100
CJX2-170N	170	55	90	100	100	110
CJX2-205N	205	63	110	110	110	129
CJX2-245N	245	75	132	132	132	160
CJX2-300N	300	100	160	200	200	220
CJX2-410N	410	110	220	250	250	280
CJX2-475N	475	147	265	280	280	355
CJX2-620N	620	200	335	400	400	450

Type	Number of poles	Rated current AC-3(A)	Rated current In/A	Controlled power(kW)	
				220V	380V
CJX2-F115N	3P	115	250	200	55
CJX2-F1154N	4P	115	250	200	55
CJX2-F150N	3P	150	355	250	75
CJX2-F1504N	4P	150	355	250	75
CJX2-F185N	3P	185	425	275	90
CJX2-F1854N	4P	185	425	275	90
CJX2-F225N	3P	225	500	315	110
CJX2-F2254N	4P	225	500	315	110
CJX2-F265N	3P	265	630	350	132
CJX2-F2654N	4P	265	630	350	132
CJX2-F330N	3P	330	800	400	160
CJX2-F3304N	4P	330	800	400	160
CJX2-F400N	3P	400	800	500	200
CJX2-F4004N	4P	400	800	500	200
CJX2-F500N	3P	500	1000	700	250
CJX2-F5004N	4P	500	1000	700	250
CJX2-F630N	3P	630	1250	1000	335
CJX2-F6304N	4P	630	1250	1000	335
CJX2-F800N	3P	800	1250	1000	400

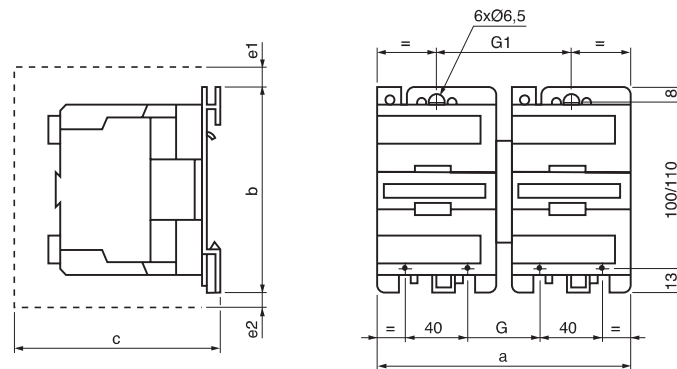
**3. Outline and Mounting Dimension (mm)**



CJX2-09N~38N

CJX2-N	a	b	c	e1(3P)	e2(4P)	G
09N, 12N	105	74	84	7	6	95
18N	106	74	92	8	-	95
25N	127	84	99	8	7	111
32N, 38N	127	84	117	10	-	111

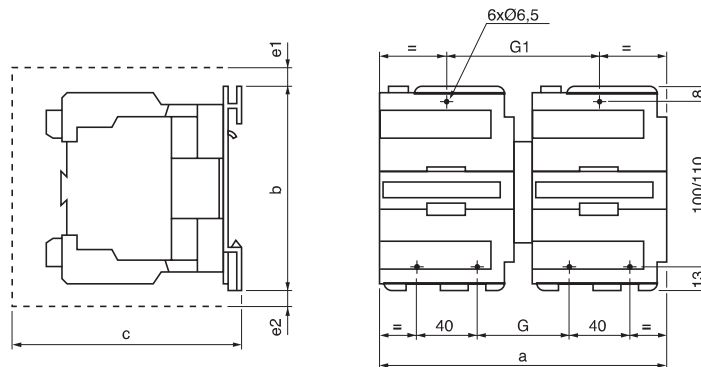
c, e1 and e2 including cabling



CJX2-40N~65N

CJX2-N(3-pole)	a	b	c	e1	GG	1
40N, 50N, 55N	165	127	142	5	50	90
CJX2-N(4-pole)	a	b	c	e2	GG	1
40N, 65N	182	127	133	11	57	97

c, e1 and e2 including cabling

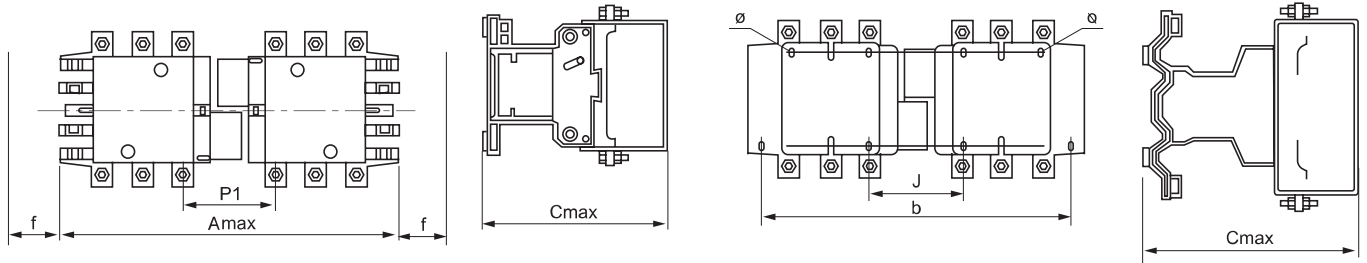


CJX2-80N~95N

CJX2-N(3-pole)	a	b	c	e1	GG	1
80N, 95N	182	127	158	13	57	90
CJX2-N(4-pole)	a	b	c	e2	GG	1
80N	207	127	158	20	71	11

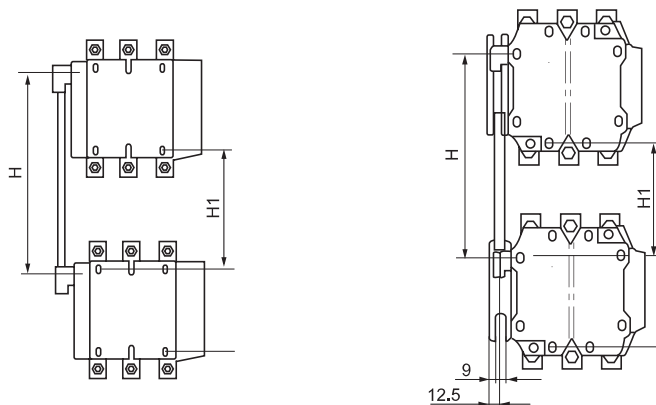
c, e1 and e2 including cabling

**Horizontal mounting**



Type	Amax	J	P1	f	b	φ	Cmax
CJX2-F115N	350	71	77	131	330	6.5	182
CJX2-F1154N	425	105	77	131	370	6.5	182
CJX2-F150N	350	71	71	131	330	6.5	182
CJX2-F1504N	425	105	71	131	370	6.5	182
CJX2-F185N	350	78	71	130	330	6.5	193
CJX2-F1854N	430	114	71	130	370	6.5	193
CJX2-F225N	350	78	55	130	330	6.5	193
CJX2-F2254N	430	118	54	130	370	6.5	193
CJX2-F265N	450	109	96	147	428	6.5	225
CJX2-F2654N	546	157	100	147	485	6.5	225
CJX2-F330N	450	124	112	147	428	6.5	232.5
CJX2-F3304N	546	166	107	147	485	6.5	232.5
CJX2-F400N	485	157	110	146	460	8.5	232.5
CJX2-F4004N	485	157	107	146	485	8.5	232.5
CJX2-F500N	485	156	115	150	460	8.5	245.5
CJX2-F630N	650	139	140	181	625	10.5	268.5
CJX2-F6304N	810	139	137	181	785	10.5	268.5

**Vertical mounting**



CJX2-F115N~CJX2-F225N

CJX2-F265N~CJX2-F630N

Type	H	H	H1	H1
	Min	Max	Min	Max
CJX2-F115N, CJX2-F150N	200	310	80	190
CJX2-F185N, CJX2-F225N	220	310	100	190
CJX2-F265N	250	380	130	260
CJX2-F330N	260	380	60	200
CJX2-F400N	280	380	100	200
CJX2-F500N	300	380	120	200
CJX2-F630N	380	380	200	200

## CJX2-K Series AC Contactor



CJX2-K06, 09, 12

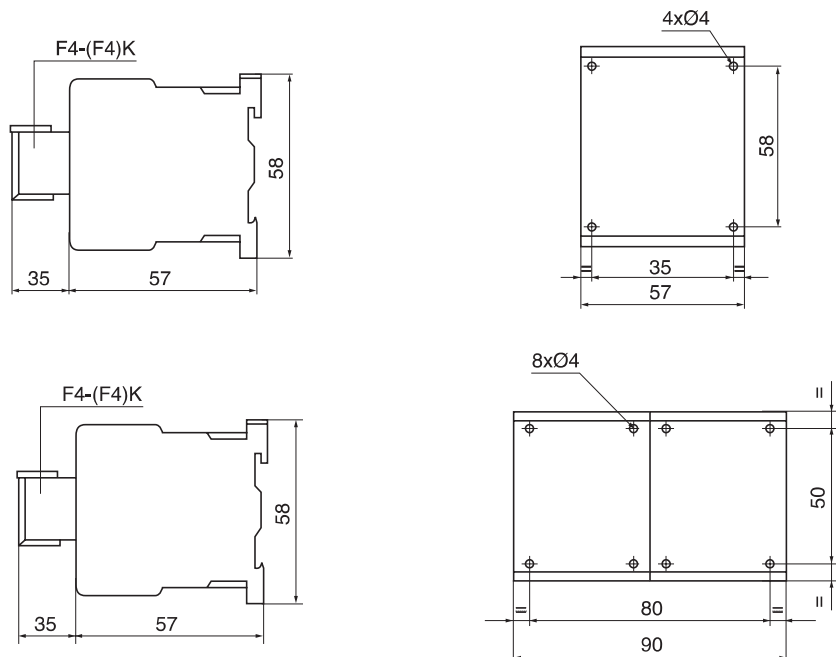
### 1. Application

CJX2-K series AC contactor is suitable for use in the circuit up to the rate and frequent starting, controlling the AC motor. The addition of auxiliary contact group to the contactor, combined with the proper thermal relay, can act from protect the circuit from overload. It conforms from IEC60947-4-1 standard.

### 2. Specification

Type		CJX2-K06	CJX2-K09	CJX2-K12	
Rated working voltage(V)		660(690)			
Rated working current(A)	380V	AC-3	6	9	12
		AC-4	2.6	3.5	5
Rated heat current(A)		16	20	20	
The max current when turn on(A)	380V	60	90	120	
	660V	72	108	144	
The max current for turn off(A)	380V	48	72	96	
	660V	60	90	120	
Three phases cage motors power which can be pulled AC3(kW)	220V	1.5	2.2	3	
	380V	2.2	4	5.5	
	660V	3	4	4	
Operation frequency (time/hour)	Electrical life( $\times 10^4$ )	AC-3	1200		
		AC-4	300		
Electrical life	AC-3	5 $\times 10^6$			
	AC-4	1 $\times 10^5$			
Mechanical life		3 $\times 10^6$			

### 3. Outline and Mounting Dimension (mm)



## CJX2-Z Series DC Contactor

### 1. Application

CJX2-Z series DC operated contactor is suitable for use in the circuits up to rated voltage 660V DC 50Hz/60Hz, and in rated current 9-95A in DC-3/380V load circuits. For remote controlling circuit making, breaking and frequent starting DC motors. It can also combine with the auxiliary contact group, air delayer, thermal relay devices etc.

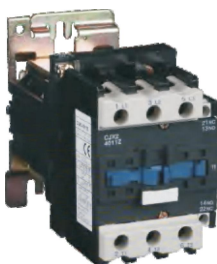
### 2. Specification



CJX2-09~18Z



CJX2-25~32Z



CJX2-40~65Z



CJX2-80~95Z

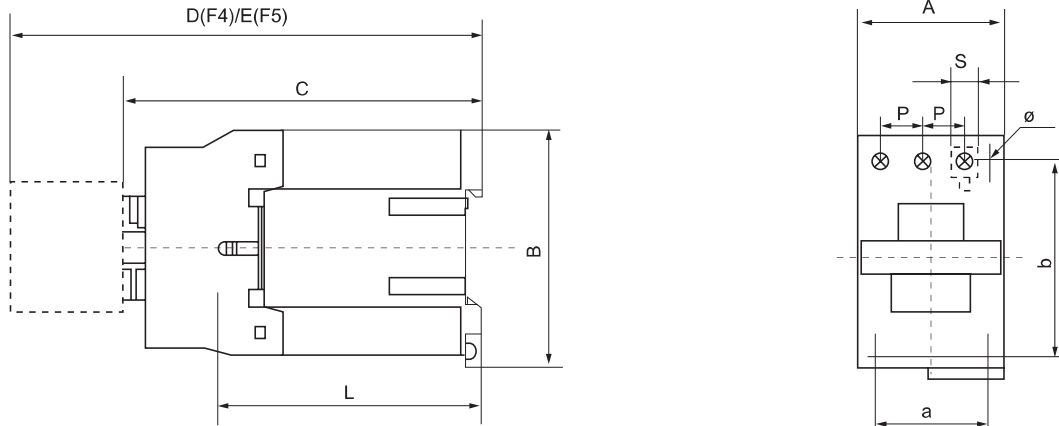
Type		CJX2-09Z	CJX2-12Z	CJX2-18Z	CJX2-25Z	CJX2-32Z		
Rated working current(A)	380V	AC3	9	12	18	25	32	
		AC4	3.5	5	7.7	8.5	12	
	660V	AC3	6.6	8.9	12	18	21	
		AC4	1.5	2	3.8	4.4	7.5	
Rated heat current(A)		25	25	32	40	50		
Controllable power(kW)	220/240V		2.2	3	4	5.5	7.5	
	380/400V		4	5.5	7.5	11	15	
	415V		4	5.5	9	11	15	
	500V		5.5	7.5	10	15	18.5	
	600/690V		5.5	7.5	10	15	18.5	
Weight(Kg)	DC contactor		0.64	0.34	0.65	0.65	0.95	
Measure(mm <sup>3</sup> )	DC contactor		76x115x47	76x115x47	76x120x47	88x130x59	86x135x59	
Pole			3, 4	3, 4	3	3, 4	3	
Rated working voltage(V)			380, 660	380, 660	380, 660	380, 660	380, 660	
Rated insulation voltage(V)			660					
Mechanical life x10 <sup>4</sup>			1000				800	
Electrical life	AC3x10 <sup>4</sup>						100	80
	AC4 x10 <sup>4</sup>						20	
Operating frequency	Electrical life	AC3 x10 <sup>4</sup>					1200	600
		AC4 x10 <sup>4</sup>					300	
	Mechanical life x10 <sup>4</sup>						3600	
Rated controlled voltage(V)							24-660	
Working voltage	Close	DC %					0.85~1.1Us	
	Open	DC %					0.10~0.75Us	

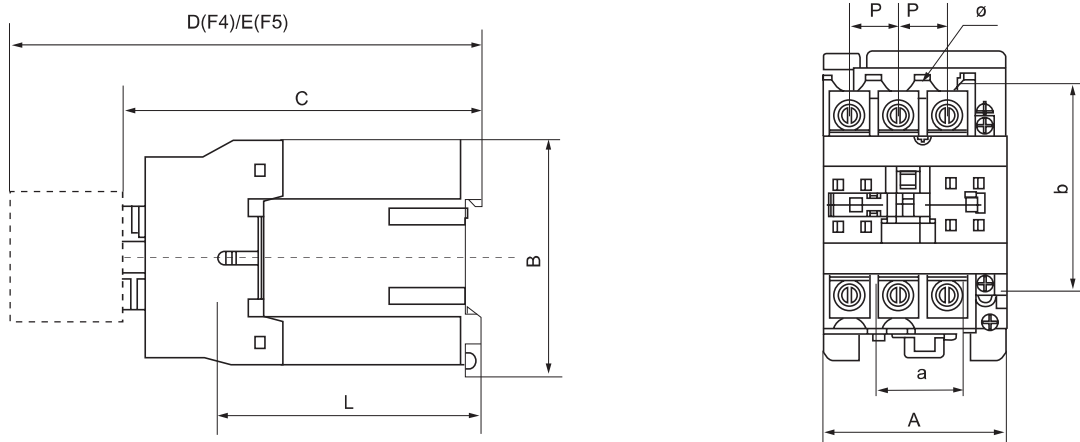
Type		CJX2-40Z	CJX2-50Z	CJX2-65Z	CJX2-80Z	CJX2-95Z	
Rated working current(A)	380V	AC3	40	50	65	80	95
		AC4	18.5	24	28	37	44
	660V	AC3	34	39	42	49	55
		AC4	9	12	14	17.3	21.3
Rated heat current(A)		60	80	80	125	125	
Controllable power(kW)	220/240V		11	15	18.5	22	25
	380/400V		18.5	22	30	37	45
	415V		22	30	37	45	45
	500V		22	30	37	55	55
	600/690V		30	33	37	45	55
Weight(Kg)	DC contactor		2.185	2.185	2.185	2.525	2.525
Measure(Mm <sup>3</sup> )	DC contactor		128x175x81	128x175x87	128x175x87	128x183x87	128x183x88
Pole			3, 4	3, 4	3, 4	3, 4	3, 4
Rated working voltage(V)			380, 660	380, 660	380, 660	380, 660	380, 660
Rated insulation voltage(V)			660				
Mechanical life x10 <sup>4</sup>			800	800	800	600	600
Electrical life	AC x10 <sup>4</sup>		80	80	80	60	60
	AC4 x10 <sup>4</sup>		15	15	15	10	10
Operating frequency	Electrical life	AC3 x10 <sup>4</sup>	600	600	600	600	600
		AC4 x10 <sup>4</sup>	300	300	300	300	300
	Mechanical life x10 <sup>4</sup>		3600	3600	3600	3600	3600
Rated controlled voltage(V)		24-660					
Working voltage	Close	DC %	0.85~1.1Us	0.85~1.1Us	0.85~1.1Us	0.85~1.1Us	0.85~1.1Us
	Open	DC %	0.10~0.75Us	0.10~0.75Us	0.10~0.75Us	0.10~0.75Us	0.10~0.75Us



**3. Outline and Mounting Dimension (mm)**



CJX2-09~32Z



CJX2-40~95Z

Type	Amax	Bmax	Cmax	Dmax	Emax	a	b	Φ	L	P	S
CJX2-09Z~12Z	47	76	82(116)	120.5(154.5)	140.5(174.5)	34/35	50/60	4.5	60(95)	105	8.6
CJX2-18Z	47	76	87(122)	125.5(160.5)	145.5(180.5)	34/35	50/60	4.5	61(96)	11.3	10.4
CJX2-25Z	57	86	95(131)	133.5(169.5)	153.5(189.5)	40	48	4.5	70(107)	13.2	11.7
CJX2-32Z	57	86	100(138)	138.5(176.5)	158.5(196.5)	40	48	4.5	71.6(120)	14.5	13
CJX2-4011Z~6511Z	77	129	116(173)	154.5(211.5)	174.5(231.5)	40	100/110	6.5	78(135)	20	8.6
CJX2-4004/4088Z ~6504/6508Z	84	129	116(173)	154.5(211.5)	174.5(231.5)	40	100/110	6.5	78(135)	20	8.6
CJX2-8011Z~9511Z	87	129	127(188)	165.5(226.5)	185.5(246.5)	40	100/110	6.5	83(140)	23.5	12
CJX2-8004/8008Z ~9504/9508Z	96	129	127(183)	160.5(221.5)	180.5(241.5)	40	100/110	6.5	83(140)	23.5	12

## CJ19 Series Changeover Capacitor Contactor

### 1. Application

CJ19 series changeover capacitor contactor is mainly applicable to a power line of AC 50/60Hz, rated working voltage up to 380V. It is used to put a low voltage parallel connected capacitor in operation or switch it off in a low voltage reactive power compensation device. The contactor is equipped with a surge suppressor, which can effectively reduce the surge current passing through the capacitor at weitching on and suppress the over-voltage at switching off. The product is in conformity with the standards IEC947-4-1.



CJ19-25~32



CJ19-43

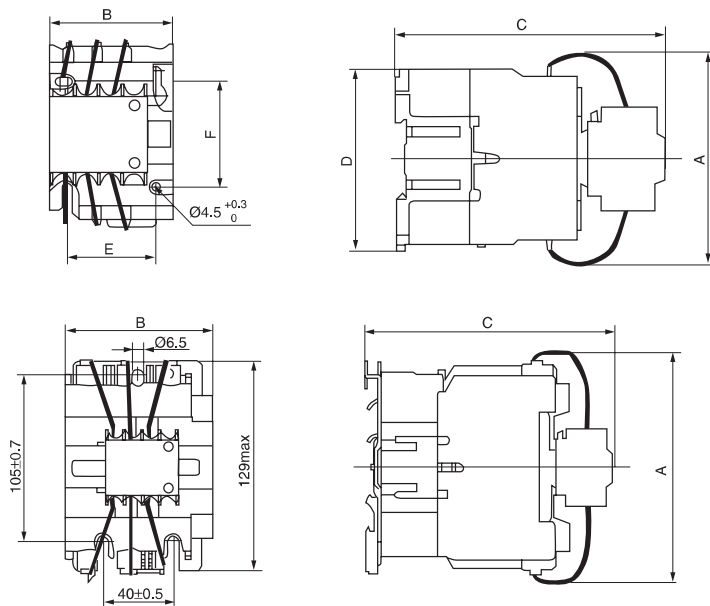


CJ19-63~95

### 2. Specification

Model	CJ19-25	CJ19-32	CJ19-43	CJ19-63	CJ19-95
Electrical life	100	100	100	100	100
Rating current Ie (380V)A	17	23	29	43	63
Power of controlled capacitor	220/230V	6	9	15	22
	380/400V	12	18	30	40
Rated insulation voltage Ui(V)	500				
Rated operational voltage Ue(V)	380				
Restrained surge capacity	20Ie				
Operation range	70Pick-up:(85%~110%); Drop-out:(20%~75%) Us				
Coil power(VA)	Start-up	110	110	200	200
	Holding	8	11	11	20
Control capacity of auxiliary contact	AC-15 360VA; DC-13 33W				
Weight(Kg)	0.44	0.63	0.64	1.4	1.5

### 3. Outline and Mounting Dimension (mm)



Type	Amax	Bmax	Cmax	Dmax	E	F	Note
CJ19-25	80	47	124	76	34/35	50/60	Screw mount/ 35mm rail mount
CJ19-32	90	58	134	86	40	48	
CJ19-43	90	58	136	86	40	48	
CJ19-63	132	79	150				
CJ19-95	135	87	158				

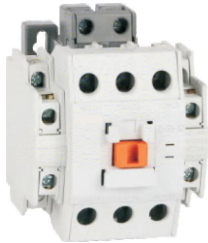
# CJX5 Series AC Contactor

## 1. Application

CJX5 series AC Contactor is suitable for using in the circuits up to the rated voltage 660V AC 50/60Hz, rated current up to 85A, for making, breaking, frequently starting & controlling the AC motor. Combined with the auxiliary contact block, timer delay & machine-interlocking device etc, it becomes the delay contactor, mechanical interlocking contactor, star-delta starter. With the thermal relay, it is combined into the electromagnetic starter. It conforms to IEC60947-1 standard.



CJX5-9~22



CJX5-32



CJX5-40~65



CJX5-75~85

## 2. Specification

Type		CJX5-9	CJX5-12	CJX5-18	CJX5-22	CJX5-32	
AC1 duty		20A	20A	25A	32A	50A	
AC3 duty	200~240V	2.5kW11A	3.5kW13A	4.5kW18A	5.5kW22A	7.5kW32A	
	380~440V	4kW9A	5.5kW12A	7.5kW18A	11kW22A	15kW32A	
	500~550V	4kW7A	7.5kW12A	7.5kW13A	15kW22A	18.5kW28A	
	690V	4kW5A	7.5kW9A	7.5kW9A	15kW18A	18.5kW21A	
Continuous current(Ith)		20A	25A	30A	32A	45A	
AC motor	Single phase	115V	0.5HP	0.5HP	1HP	2HP	2HP
		230V	1HP	2HP	3HP	3HP	5HP
	Three phase	200V	2HP	3HP	5HP	7HP	7.5HP
		230V	3HP	3HP	5HP	7.5HP	10HP
		460V	2HP	7.5HP	10HP	10HP	20HP
		575V	5HP	10HP	15HP	15HP	20HP

Type		CJX5-40	CJX5-50	CJX5-65	CJX5-75	CJX5-85	
AC1 duty		60A	80A	100A	110A	135A	
AC3 duty	200~240V	11kW40A	15kW55A	18.5kW65A	22kW75A	25kW85A	
	380~440V	18.5kW40A	22kW50A	30kW65A	37kW75A	45kW85A	
	500~550V	22kW32A	30kW43A	37kW60A	45kW64A	45kW75A	
	690V	22kW25A	30kW33A	37kW47A	45kW47A	45kW52A	
Continuous current(Ith)		50A	70A	80A	90A	100A	
AC motor	Single phase	115V	3HP	3HP	5HP	5HP	7.5HP
		230V	5HP	7.5HP	10HP	15HP	15HP
	Three phase	200V	10HP	10HP	15HP	20HP	25HP
		230V	10HP	15HP	20HP	25HP	30HP
		460V	25HP	30HP	40HP	50HP	50HP
		575V	25HP	30HP	40HP	50HP	50HP

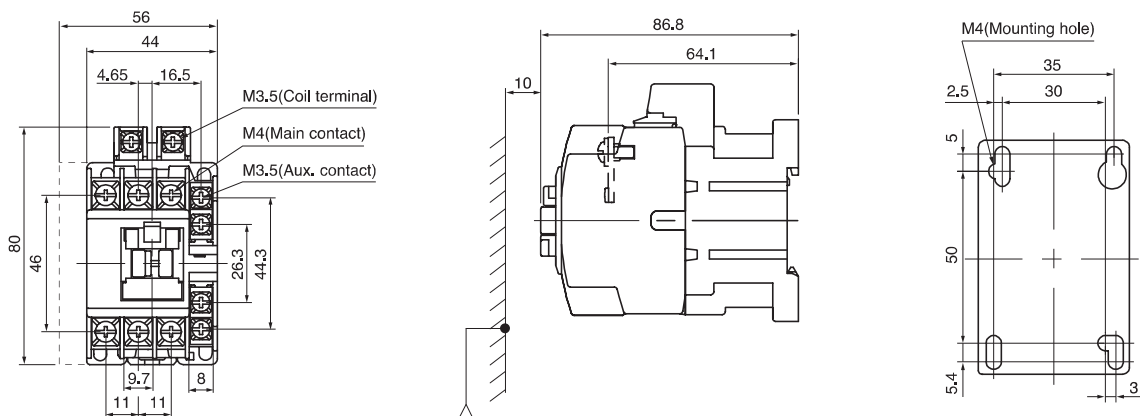
## 3. Auxiliary for AC Contactor CJX5

Type	Contact No.		PIC
	NO	NC	
AU-2-20	2	0	
AU-2-11	1	1	
AU-2-02	0	2	
AU-4-40	4	0	
AU-4-31	3	1	
AU-4-22	2	2	
AU-4-13	1	3	
AU-4-04	0	4	

Type		CJX5-100	CJX5-125	CJX5-150	CJX5-180	
AC1 duty		150	150	200	230	
AC3 duty	200~240V	30kW105A	37kW125A	37kW125A	55kW180A	
	380~440V	55kW105A	60kW120A	60kW120A	90kW180A	
	500~550V	55kW85A	60kW90A	60kW90A	110kW180A	
	690V	55kW85A	60kW70A	60kW70A	100kW120A	
Continuous current(Ith)		160	160	160	230	
AC motor	Single phase	115V	7.5HP	10HP	10HP	15HP
		230V	15HP	20HP	20HP	30HP
	Three phase	200V	30HP	40HP	40HP	60HP
		230V	30HP	40HP	40HP	60HP
		460V	60HP	75HP	75HP	125HP
		575V	60HP	75HP	75HP	125HP

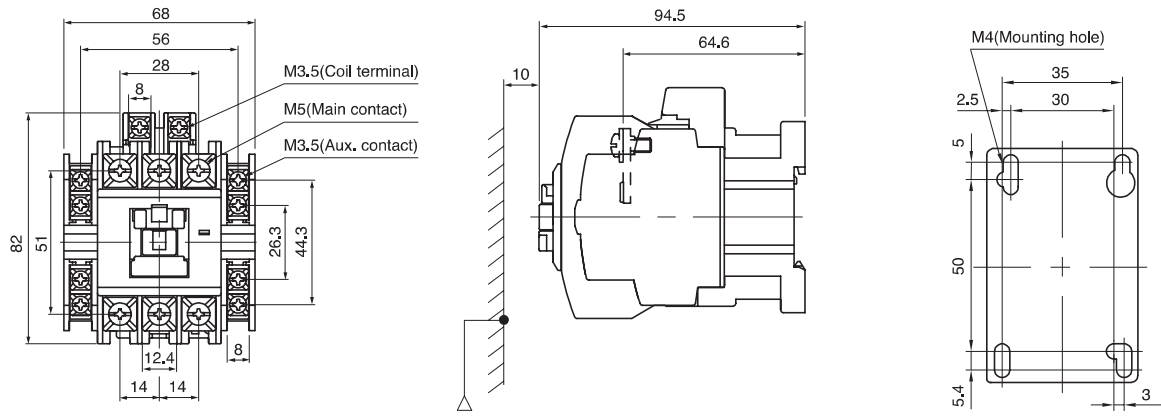
Type		CJX5-220	CJX5-300	CJX5-400	CJX5-600	CJX5-800	
AC1 duty		260	350	420	660	900	
AC3 duty	200~240V	75kW250A	90kW105A	125kW400A	190kW630A	220kW800A	
	380~440V	132kW250A	160kW105A	220kW400A	330kW630A	440kW800A	
	500~550V	132kW200A	160kW85A	225kW350A	330kW500A	550kW720A	
	690V	132kW150A	200kW85A	250kW300A	330kW420A	500kW120A	
Continuous current(Ith)		257	250	450	800	900	
AC motor	Single phase	115V	15HP				
		230V	40HP				
	Three phase	200V	60HP	100HP	25HP	150HP	200HP
		230V	75HP	100HP	150HP	200HP	250HP
		460V	150HP	200HP	300HP	400HP	500HP
		575V	150HP	200HP	300HP	400HP	500HP

**4. Outline and Mounting Dimension (mm)**

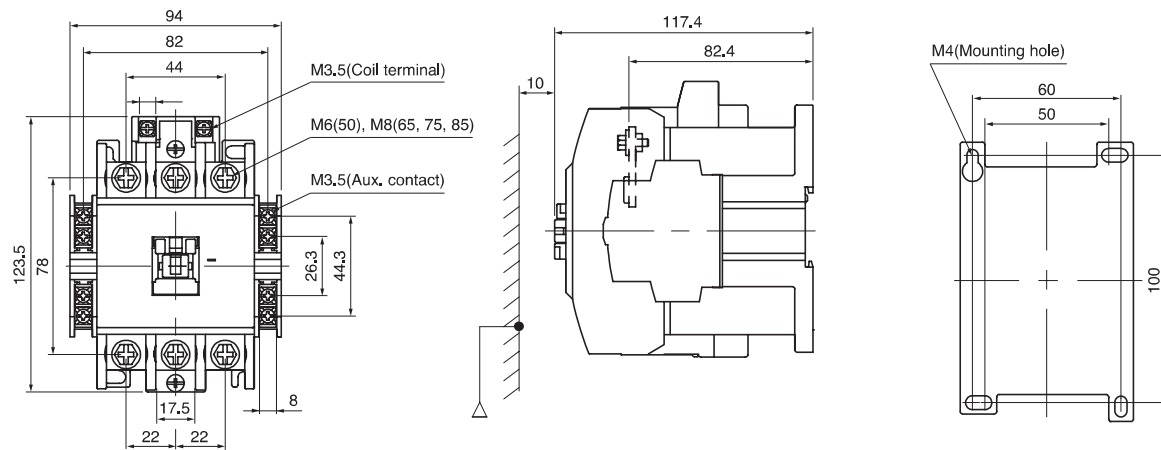


CJX5-9~22

**4. Outline and Mounting Dimension (mm)**



CJX5-32~40



CJX5-50~85

## Home Contactor

### 1. Application

LNC1 home contactor is mainly designed for AC 50/60Hz circuits with rated operating voltage up to 400V. In AC-1, AC-7a and AC-7b usage, rated operating current up to 63A, it functions as long distance breaking and circuit controlling. This product is mainly applied to household appliances or low inductance loading and home electromotor loading control used for the similar purpose.



LNC1-25 2P



LNC1-25 4P



LNC1-63 2P

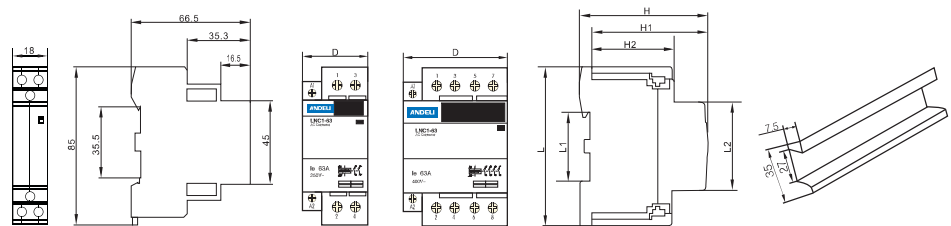


LNC1-63 4P

### 2. Specification

Type	Pole	Using category	Insulating voltage (V)	Rated voltage (V)	Rated heat current (A)	Rated current (A)	Control voltage (V)	Control power (kW)		
LNC1-16	2	AC-1 AC-7a AC-7b	500	230	16	16/6	24 220/230 240	3/1		
LNC1-20					20	20/7		4/1.2		
LNC1-25					25	25/8.5		5.4/1.5		
LNC1-32					32	32/12	220/230 240	6.6/1.9		
LNC1-40					40	40/15		8.4/2.4		
LNC1-63					63	63/20		12/3.8		
LNC1-16	4			AC-1 AC-7a AC-7b	500	400	16	16/6	24 220/230 240	7.5/2.1
LNC1-20							20	20/7		10/2.3
LNC1-25							25	25/8.5		16/3
LNC1-32							32	32/12	220/230 240	20/3.8
LNC1-40							40	40/15		26/4.8
LNC1-63							63	63/20		40/6.5

### 3. Outline and Mounting Dimension (mm)



Type	D(2 pole)(4 pole)	L	L1	L2	H	H1	H2
LNC1-16~25	18 36	85	35.5	45	68	60	44
LNC1-32~63	36 54	85	35.5	45	68	60	44



## QCX2 Series Magnetic Starter

### 1. Application

QCX2 series magnetic starter is mainly applied to circuit of AC50/60Hz, voltage up to 690V. It can be used for making and breaking circuit of far distance, also can be used for frequently starting and controlling motor. It has the features of small volume, light weight, low power consumption, high efficiency, safe and reliable performance. It complies to IEC60947 standard.



QCX2-09,12,18



QCX2-25,32

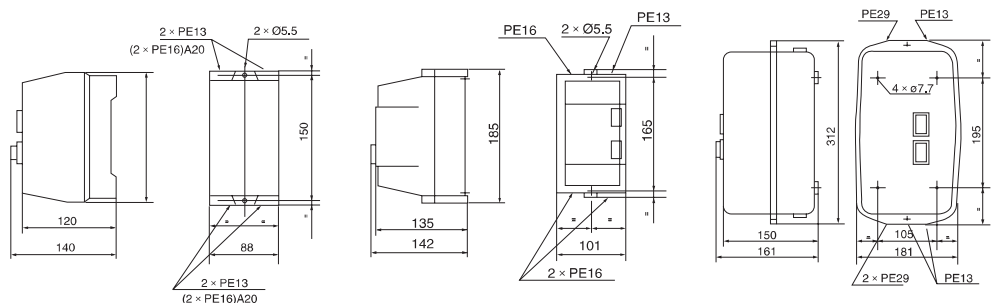


QCX2-40-95

### 2. Specification

Type	Rated current (A)	Maximum power AC3 duty (kW)						Suitable thermal relay (A)
		220/230V	380/400V	415V	440V	500V	660/690V	
QCX2-9	9	2.2	4	4	4	5.5	5.5	JR28 D1312 JR28 D1314
QCX2-12	12	3	5.5	5.5	5.5	7.5	7.5	JR28 D1316
QCX2-18	18	4	7.5	9	9	10	10	JR28 D1321
QCX2-25	25	5.5	11	11	11	15	15	JR28 D1322 JR28 D2353
QCX2-32	32	7.5	15	15	15	18.5	18.5	JR28 D2355
QCX2-40	40	11	18.5	22	22	22	30	JR28 D3353 JR28 D3355
QCX2-50	50	15	22	25	30	30	33	JR28 D3357 JR28 D3359
QCX2-65	65	18.5	30	37	37	37	37	JR28 D3359
QCX2-80	80	22	37	45	45	55	45	JR28 D3363 JR28 D3365
QCX2-95	95	25	45	45	45	55	45	JR28 D3365

### 3. Outline and Mounting Dimension (mm)



QCX2-09  
QCX2-12  
QCX2-18

QCX2-25  
QCX2-32

QCX2-40  
QCX2-95

# QCX3 Star-delta Reduced Voltage Starter

## 1. Application

QCX3 series star delta reduced voltage starter is suitable for starting motor in the circuit of AC 50/60Hz, voltage up to 660V and current up to 95A. It is provided with a timer for automatic changeover of start-delta to reduce the voltage and current of motor starter. It complies with IEC947-4-1 standard.



QCX3-09,12,18,25,32



QCX3-40, 50, 65

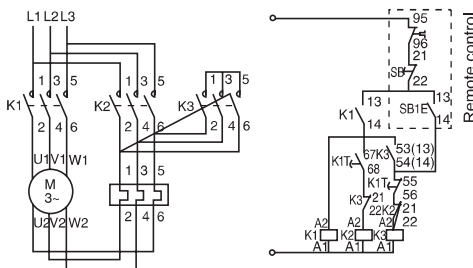


QCX3-80, 95

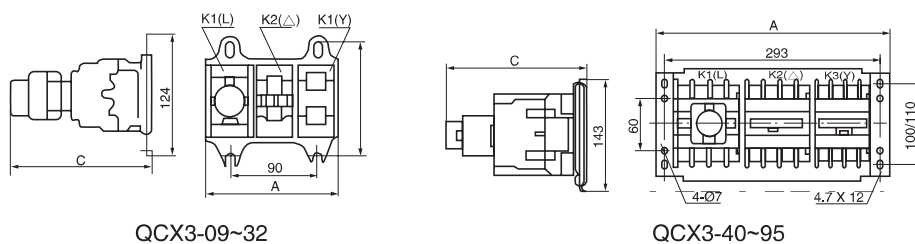
## 2. Specification

Type	Rated operating current (A)		3-phase motor capacity (kW)			
	AC3		220V	380V	415V	440V
QCX3-09	9		4	7.5	7.5	7.5
QCX3-12	12		5.5	11	11	11
QCX3-18	18		11	18.5	22	22
QCX3-25	25		11	22	22	22
QCX3-32	32		15	25	25	25
QCX3-40	40		18.5	37	37	37
QCX3-50	50		25	55	59	59
QCX3-65	65		32	55	59	59
QCX3-80	80		37	75	75	75
QCX3-95	95		45	80	80	80

## 3. Wiring Diagram



## 4. Outline and Mounting Dimension (mm)



Type	QCX3-09	QCX3-12	QCX3-18	QCX3-25	QCX3-32	QCX3-40	QCX3-50	QCX3-65	QCX3-80	QCX3-95
A	140	140	140	174	174	310	310	310	310	310
C	149	149	154	164	169	185	185	185	196	196

## AMW Series Magnetic Starter



AMW-22B



AMW-40B



AMW-65B

### 1. Application

AMW series magnetic starter is mainly applied to circuit of AC50/60Hz, voltage up to 690V. It can be used for making and breaking circuit of far distance, also can be used for frequently starting and controlling motor. It has the features of small volume, light weight, low power consumption, high efficiency, safe and reliable performance. It complies to IEC947-4-1 standard.

### 2. Specification

Type	Rated power(kw)					Rated current(A)			AC1 DUTY
	1P	AC3 DUTY				AC3 DUTY			
	110	220	220-230	380-440	500-550	220-230	380-440	500-550	A
AMW-9B	0.4	0.8	2.5	4	4	11	9	7	20
AMW-12B	0.5	1	3.5	5.5	7.5	13	12	12	20
AMW-18B	0.75	1.5	4.5	7.5	7.5	18	18	13	25
AMW-22B	0.9	1.8	5.5	11	15	22	22	22	32
AMW-32B	1.2	-	7.5	15	18.5	32	32	28	50
AMW-40B	1.7	-	11	18.5	22	40	40	32	60
AMW-50B	-	-	15	22	30	55	50	43	80
AMW-65B	-	-	18.5	30	37	65	65	60	100
AMW-75B	-	-	22	37	37	75	75	64	110
AMW-85B	-	-	25	45	45	85	85	75	135

## QS5 Series Cam Starter

### 1. Application

QS5 cam starter is mainly used to start forward or backward and stop directly three-phase asynchronous electric motor with AC50/60Hz, voltage up to 500V and capacity up to 7.5KW. It can also be used for changeover from one ind of circuit to the other.

### 2. Specification

Model	Mark	Rated current (A)	Motor control capacity (HP)	Mechanical life (times)	Frequency of operation (per hr)	Applications	Position of lever		
QS5-15A	I-O	15	5.5	250000	200	ON-OFF switching	0-60		
QS5-30A		30	10						
QS5-15N	I-O-I	15	5.5			200000	180	Forward & reverse	60-0-60
QS5-30N		30	10						
QS5-15P/3	I-O-II	15	5.5			200000	180	for 3 pole two circuit	60-0-60
QS5-30P/3		30	10						
QS5-63A	I-O	63	22	200000	180	ON-OFF switching	0-60		
QS5-100A		100	30						
QS5-63N	I-O-I	63	22			200000	180	Forward & reverse	60-0-60
QS5-100N		100	30						
QS5-63P/4	I-O-II	63	22			200000	180	for 3 pole two circuit	60-0-60
QS5-100P/4		100	30						



QS5-15N



QS5-63A

## ADL100G Series Frequency Inverter

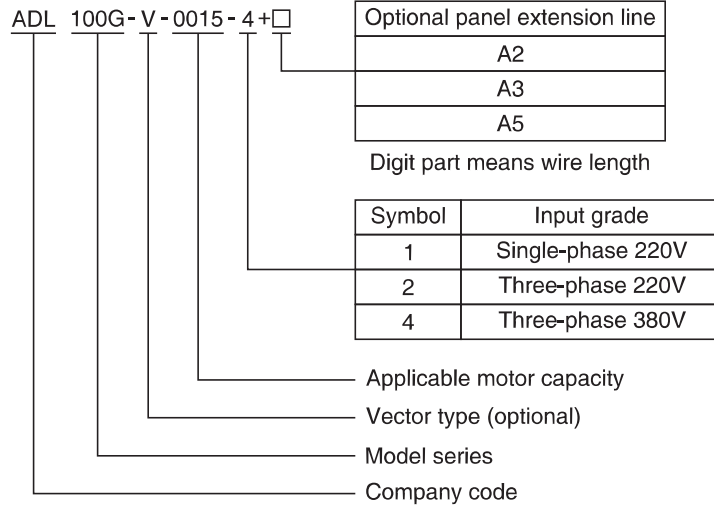


ADL100G

### 1. Application

ADL100G frequency inverter is a multi-functional universal frequency converter developed by ANDELI Group for various small-scale machinery supporting market, which is widely applied in different environments such as processing machinery, water pump, conveyor and fan, etc. With complete functions, the product owns multiple common functions and features such as Modbus, 8-section speed, revolving speed tracking, built-in PID, integrated braking unit and high-frequency output, etc. The product adopts vectorization V/F control technology to optimize the performance of motor control. Besides, the compact structural design saves more installation space for users. By adopting PIM module, the product can provide overload capacity of 150% rated current overload for 60s.

### 2. Type and Meaning



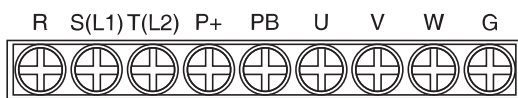
Voltage grade	Frequency inverter model	Rated capacity (kVA)	Rated output current (A)	Adaptable motor (kW)
220V single phase	ADL100G-0004-1	1.0	2.4	0.4
	ADL100G-0007-1	1.4	4.5	0.75
	ADL100G-0015-1	2.6	7.0	1.5
	ADL100G-0022-1	3.8	10.0	2.2
	ADL100G-0040-1	6.3	17.0	4.0
	ADL100G-0055-1	11	25.0	5.5
	ADL100G-0075-1	14	33.0	7.5
380V three phase	ADL100G-0004-4	1.2	1.2	0.4
	ADL100G-0007-4	1.5	2.5	0.75
	ADL100G-0015-4	3.7	3.7	1.5
	ADL100G-0022-4	4.7	5.0	2.2
	ADL100G-0040-4	6.1	8.5	4.0
	ADL100G-0055-4	11	13.0	5.5
	ADL100G-0075-4	14	17.0	7.5

**3. Specification**

Functional description	Specification
Rated input voltage(V)	Single-phase 220 (-15%)~240 (+10%)
	Three-phase 220 (-15%)~240 (+10%)
	Three-phase 380 (-15%)~440 (+10%)
Rated input frequency(Hz)	50Hz or 60Hz, allowed range 47~63Hz
Rated output voltage(V)	Be equal to input voltage and error is below 5%
Rated output frequency(Hz)	50Hz/60Hz, fluctuation range: ±5%
Control mode	V/F control/flux vector control /open-loop vector control (optional)
Maximal output frequency	1000Hz
Speed ratio	1:100
Overload capacity	150% rated current for 1min, 180% rated current for 10s, 200% rated current for 1s
Resolution of analog input	<20mV
Resolution of terminal on-off input	<2ms
Analog input/output	Input 2-line, 1-line 0~10V, 1-line 0~10V/0~20mA, output 1-line 0~10V/0~20mA
Digital input/output	5-line common input, 1-line Y terminal output (share with common digital value), 1-line programmable relay output
Communication	485 communication (support Modbus)
Installation way	Wall-mounted installation
Operating ambient environment	-10~50°C, derating use for above 40°C
Cooling mode	Single-phase, forced cooling, natural cooling at 0.4-0.75kW;
	Three-phase, natural cooling at 0.4-0.75KW; Three-phase 380V, natural cooling at 1.5-2.2kW
Fault protection function	Offer multiple fault protection functions such as overcurrent, overvoltage, undervoltage, over-temperature and overload
Braking unit	Built-in

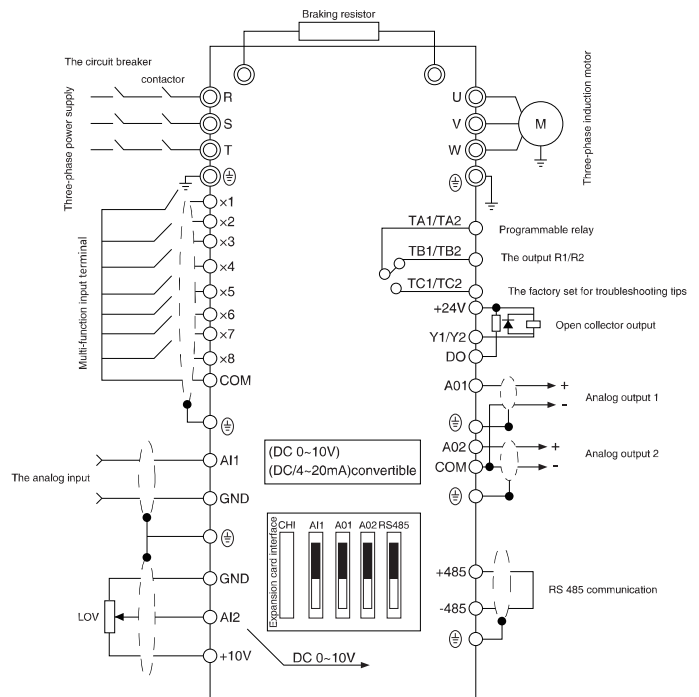
**4. Wiring Diagram**

Main loop terminal



Terminal name	Function description
R S(L1) T(L2)	AC power input terminal, R, S and T connect with three-phase 380V AC power, L1 and L2 connect with single phase 220V AC power
G	Grounding terminal, connecting with ground
U,V,W	Frequency inverter output terminal connects with three-phase AC motor
P+,BR	External braking resistance connection terminal

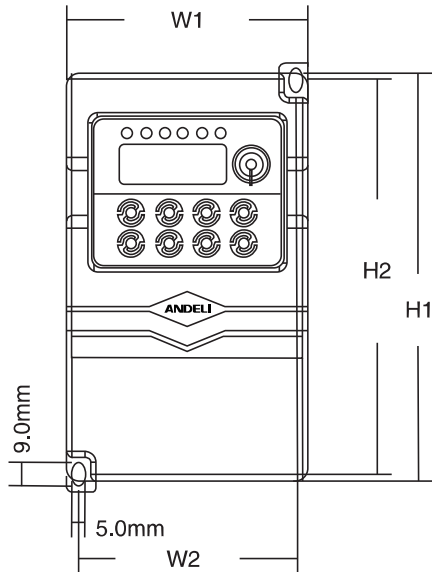
\*The models at 2.2KW and below do not offer X6 or X7 terminal



**5. Outline & Installation Dimension (mm)**

Specification&Model		Appearance dimension			Installation dimension			Packaging dimension			Weight(KG)
		W1	H1	D	W2	H2	Ø	Length	Width	Height	
Single phase 220V	ADL100G-0004-1	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0007-1	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0015-1	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0022-1	90	152	132.5	81	147	M5	210	110	165	1.3
Three phase 380V	ADL100G-0004-4	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0007-4	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0015-4	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0022-4	90	152	132.5	81	147	M5	210	110	165	1.3
	ADL100G-0040-4	140	240	178	130	230	M5	260	160	210	3.5
	ADL100G-0055-4	140	240	178	130	230	M5	260	160	210	3.5
	ADL100G-0075-4	140	240	178	130	230	M5	260	160	210	3.5

ANDELI Group reserves the right to modify dimensions without further notice



Dimension Of External Keyboard

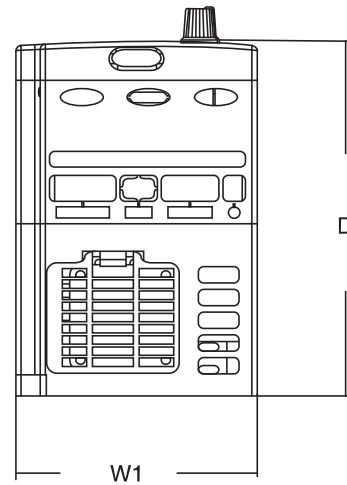


Figure Of Installation Opening

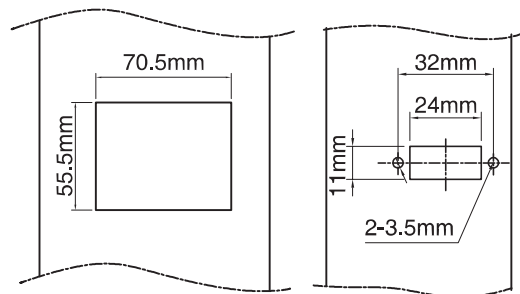
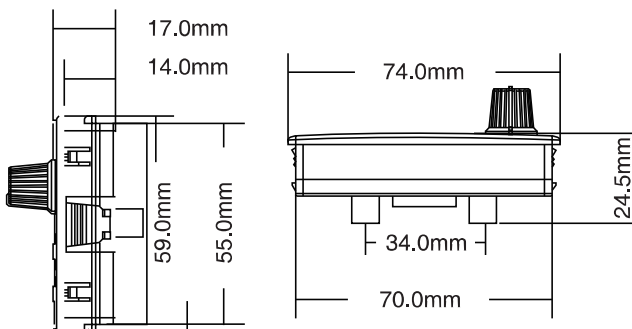


Figure of keyboard installation support opening

Figure of keyboard screw installation opening



## ADL200G Series Frequency Inverter



ADL200G

### 1. Application

General functions and descriptions of ADL200G series frequency inverter:

1. Abundant voltage classes: support three voltage classes, namely single-phase 220V, three-phase 220V and three-phase 380V.
2. Abundant control mode: apart from vector control of velocity sensor, sensorless vector control and V/F control, support V/F separation control.
3. Abundant field bus: support Modbus-RTU and CANlink field bus.
4. Abundant encoder types: support difference encoder, open collector encoder and rotary transformer, etc.
5. Brand-new sensorless vector control algorithm Brand-new SVC creates better low-velocity stability, stronger low-frequency load capacity, and supports torque control of SVC.
6. Powerful background software: uploading, downloading parameters, real-time oscilloscope can be realized on background software.

Functions	Descriptions
Overheat protection of motor	After choosing ADL200GPC1 expansion card, AI3 can receive temperature sensor input of motor (PT100, PT1000) to realize overheat protection
Fast current limiting	Avoid over-current fault of frequency converter
Dual motor switch	Two sets of motor parameters can realize dual motor switch
Restore user parameters	Users can save or restore own parameter settings
Accurate AIAO	After factory calibration (or spot calibration), AIAO accuracy can be <math>20\text{mv}</math>
Show customized parameters	Users can customize function parameters to be displayed
Show altered parameters	User can view function parameters after modification
Optional fault handing ways	Users can select action modes of converter after confirming certain faults: free halting, deceleration halting, continual operation. The users can also select frequency for continual operation.
PID parameter switch	Two sets of PID parameters can switch by terminal or based on deviation
PID feedback loss detection	PID feedback loss detection value realizes protection during PID operation
DIDO positive/negative logic	Users can set positive/negative logic of DIDO
DIDO response delay	Users can set response delay time of DIDO
Run under instantaneous stop	Frequency converter continues running within short time if instantaneous power outage or voltage decrease
Timing operation	Support timing operation for 6,500 minutes at most

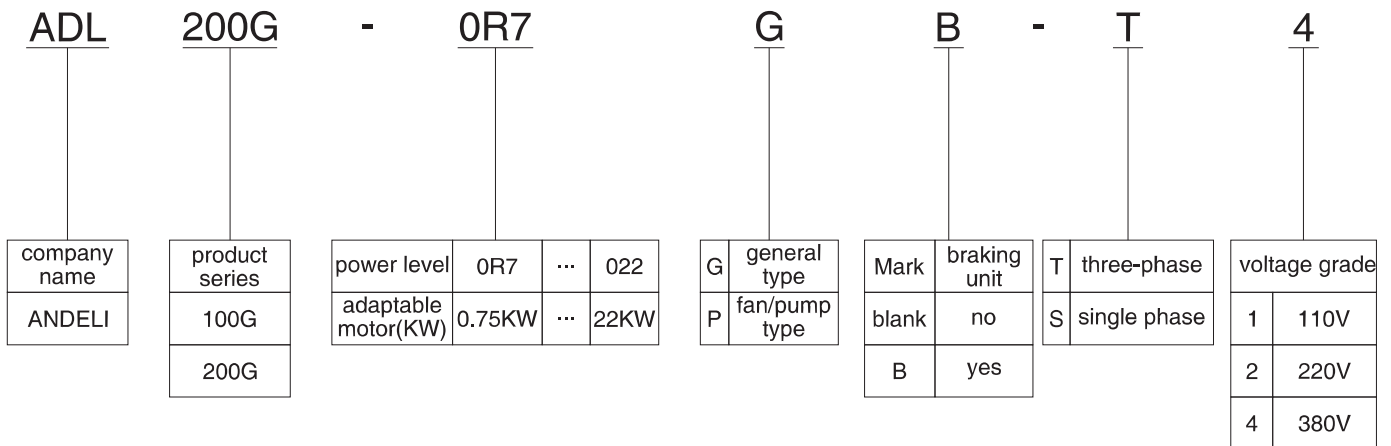
## 2. Specification

Items		Specifications		
Basic functions	Highest frequency	Vector control: 0~300Hz		
		V/F control: 0~3200Hz		
	Carrier frequency	0.5kHz~16kHz		
		Adjust carrier frequency automatically based on load characteristic		
	Input frequency resolution	Number setting: 0.01Hz		
		Simulation setting: highest frequency×0.025%		
	Control mode	SVC		
		FVC		
		V/F control		
	Starting torque	G-style machine: 0.5Hz/150% (SVC); 0Hz/180% (FVC)		
		P-style machine: 0.5Hz/100%		
	Speed regulation range	1: 100 (SVC)	1: 1000 (FVC)	
	Speed stabilizing precision	±0.5% (SVC)	±0.02% (FVC)	
	Torque control precision	±5% (FVC)		
	Overload capacity	G-style machine: 150% rated current at 60s; 180% rated current at 3s		
		P-style machine: 120% rated current at 60s; 150% rated current at 3s		
	Torque promotion	Automatic torque promotion; manual torque promotes by 0.1%~30.0%		
	V/F curve	Three ways: linear type; multipoint type; N power type V/F curve		
		(1.2 power, 1.4 power, 1.6 power, 1.8 power, 2 power)		
	V/F separation	2 ways: full separation, semi-separation		
	Acceleration/deceleration curves	Linear or S-curve acceleration/deceleration way. Four kinds of acceleration/deceleration time		
		Acceleration/deceleration time range: 0.0~6500.0s		
DC braking	DC braking frequency: 0.00Hz~maximum frequency; Braking time: 0.0s~36.0s braking action; Current value:0.0%~100.0%			
Inching control	Inching frequency range: 0.00Hz~50.00Hz;			
	Inching acceleration/deceleration time 0.0s~6500.0s			
Simple PLC, multi-stage velocity operation	Realize 16-stage velocity operation at most through built-in PLC or control terminal			
Built-in PID	Easy to realize process control, closed-loop control system			
Automatic voltage regulation	Keep constant output voltage automatically if any change of network voltage			
Overvoltage, overcurrent, stalling control	Limit current/voltage automatically during operation, prevent frequent tripping caused by over-current and over-voltage			
Fast current-limiting function	Reduce over-current fault, protect normal operation of convertor			
Torque limit and control	"Nawy" character limit torque during operation, prevent frequent overcurrent tripping, closed-loop vector mode can realize torque control			

Items		Specifications
Individualized functions	Excellent performance	Realize motor control with high-performance current vector control
	Operate under instantaneous stop	Offset reduced voltage through load feedback energy if instantaneous outage, keep continual operation of frequency convertor within short time
	Fast current limiting	Avoid frequent over-current fault of frequency convertor
	Timing control	Timing control function: set time range 0.0Min~6500.0Min
	Multi-motor switch	2 sets of motor parameters realize switch control of 2 motors
	Multi-threading bus	Support two kinds of spot field bus: RS-485 , CAN link
	Overheating protection	Optional multi-function card, analog input A13 can receive motor temperature sensor input(PT100, PT1000)
	Multi encoder	Support various encoders such as differentiation, open collector and rotary transformer
	Programmable by users	Optional user programmable card realizes secondary development
	Powerful background software	Support parameter operation and virtual oscilloscope function. Realize graphic monitoring of internal status of frequency convertor through virtual oscilloscope
Operation	Command source	Given operation panel, given control terminal, given serial communication port. Switch through multiple ways
	Frequency source	10 frequency sources: given digit, given analog voltage, given
		Analog current, given pulse, given serial port. Switch through
		Multiple ways
	Auxiliary frequency source	10 auxiliary frequency sources. Realize auxiliary frequency trimming and frequency synthesis flexibly
	Input terminals	Standard:
		5 digital input terminals, in which 1 terminal supports high-speed
		Impulse input at100Hz
		2 analog input terminals, in which 1 supports voltage input at 0~10V, 1 supports voltage support at 0~10V or current input at 4~20mA
		Expansion capability:
		5 digital input terminals
	Output terminals	1 analog input terminal supports voltage support at 0~10V
		Standard:
		1 high-speed pulse output terminal (open collector is optional), support square signal output at 0~100kHz
		1 digital output terminal
		1 relay output terminal
1 analog output terminal supports current input at 0~20mA or voltage support at 0~10V		
Expansion capability:		
1 digital output terminal		
1 relay output terminal		
1 analog output terminal supports current input at 0~20mA or voltage support at 0~10V		

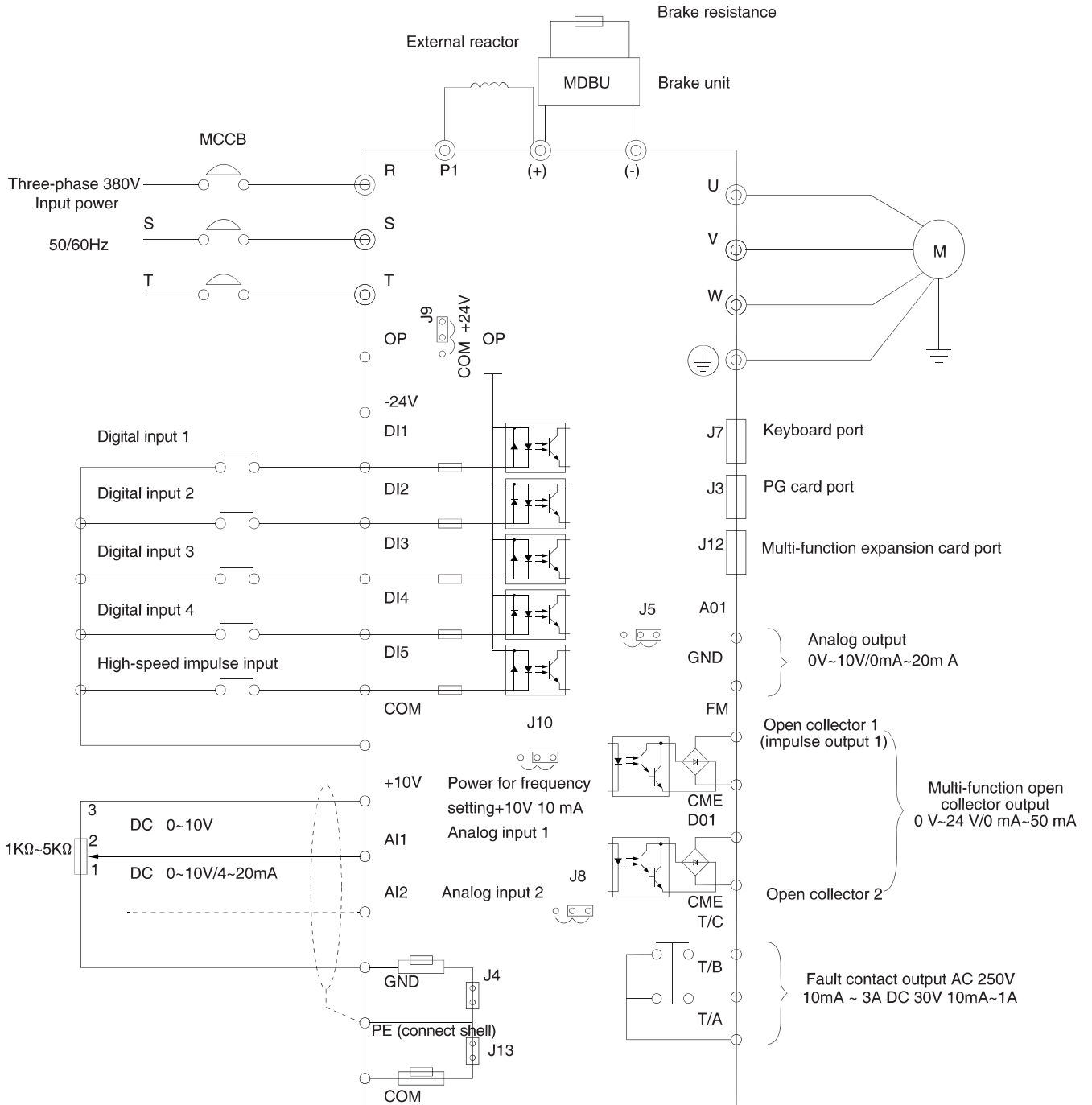
Items		Specifications
Display and keyboard operation	LED display	Display parameters
	Key locking and function selection	Partial or all locking of keys, define function range of some keys to prevent misoperation
	Protection function	Short-circuit detection of motor when electrifying, input/output default phase protection, over-current protection, overvoltage protection, undervoltage protection, overheating protection, overload protection
	Optional accessories	LCD operation panel, braking unit, multi-function expansion card, IO expansion card, RS485 communication card, CAN link communication card, differential input PG card, rotary transformer PG card, OC input PG card
Operating environment	Using place	Indoor without direct sunlight, dust, corrosive gas, combustible gas, oil mist, water vapor, dropping water or salinity
	Altitude	<1,000m
	Environment temperature	-10°C~+40°C(environment temperature at 40°C~50°C , please derate to use
	Humidity	<95%RH, no condensing drops
	Virbration	<5.9m/s <sup>2</sup> (0.6g)
	Storage temperature	-20°C~+60°C

**3. Type and Meaning**



Model of frequency inverter	Power capacity kVA	Input current A	Output current A	Adaptive motor kW HP	
Single-phase power: 220V, 50/60Hz					
ADL200G-0R4GB-S2	1	5.4	2.3	0.4	0.5
ADL200G-0R7GB-S2	1.5	8.2	4	0.75	1
ADL200G-1R5GB-S2	3	14	7	1.5	2
ADL200G-2R2GB-S2	4	23	9.6	2.2	3
Three-phase power: 220V, 50/60Hz					
ADL200G-0R4GB-T2	1.5	3.4	2.1	0.4	0.5
ADL200G-0R7GB-T2	3	5	3.8	0.75	1
ADL200G-1R5GB-T2	4	5.8	5.1	1.1	1.5
ADL200G-2R2GB-T2	5.9	10.5	9	2.2	3
ADL200G-3R7GB-T2	8.9	14.6	13	3.7	5
ADL200G-5R5GB-T2	17	26	25	5.5	7.5
ADL200G-7R5GB-T2	21	35	32	7.5	10
ADL200G-11G-T2	30	46.5	45	11	15
ADL200G-15G-T2	40	62	60	15	20
ADL200G-18R5G-T2	57	76	75	18.5	25
ADL200G-22G-T2	69	92	91	22	30
ADL200G-30G-T2	85	113	112	30	40
ADL200G-37G-T2	114	157	150	37	50
ADL200G-45G-T2	134	180	176	45	60
ADL200G-55G-T2	160	214	210	55	70
ADL200G-75G-T2	231	307	304	75	100
Three-phase power: 380V, 50/60Hz					
ADL200G-0R7GB-T4	1.5	3.4	2.1	0.75	1
ADL200G-1R5GB-T4	3	5	3.8	1.5	2
ADL200G-2R2GB-T4	4	5.8	5.1	2.2	3
ADL200G-3R7GB-T4/ADL200G-3R7PB-T4	5.9	10.5	9	3.7	5
ADL200G-5R5GB-T4/ADL200G-5R5PB-T4	8.9	14.6	13	5.5	7.5
ADL200G-7R5GB-T4/ADL200G-7R5PB-T4	11	20.5	17	7.5	10
ADL200G-11GB-T4/ADL200G-11PB-T4	17	26	25	11	15
ADL200G-15GB-T4/ADL200G-15PB-T4	21	35	32	15	20
ADL200G-18R5G-T4/ADL200G-18R5P-T4	24	38.5	37	18.5	25
ADL200G-22G-T4/ADL200G-22P-T4	30	46.5	45	22	30
ADL200G-30G-T4/ADL200G-30P-T4	40	62	60	30	40
ADL200G-37G-T4/ADL200G-37P-T4	57	76	75	37	50
ADL200G-45G-T4/ADL200G-45P-T4	69	92	91	45	60
ADL200G-55G-T4/ADL200G-55P-T4	85	113	112	55	70
ADL200G-75G-T4/ADL200G-75P-T4	114	157	150	75	100
ADL200G-90G-T4/ADL200G-90P-T4	134	180	176	90	125
ADL200G-110G-T4/ADL200G-110P-T4	160	214	210	110	150
ADL200G-132G-T4/ADL200G-132P-T4	192	256	253	132	175
ADL200G-160G-T4/ADL200G-160P-T4	231	307	304	160	210
ADL200G-185G-T4/ADL200G-185P-T4	240	345	340	185	248
ADL200G-200G-T4/ADL200G-200P-T4	250	385	377	200	260
ADL200G-220G-T4/ADL200G-220P-T4	280	430	426	220	300
ADL200G-250G-T4/ADL200G-250P-T4	355	468	465	250	350
ADL200G-280G-T4/ADL200G-280P-T4	396	525	520	280	370
ADL200G-315G-T4/ADL200G-315P-T4	445	590	585	315	500
ADL200G-355G-T4/ADL200G-355P-T4	500	665	650	355	420
ADL200G-400G-T4/ADL200G-400P-T4	565	785	725	400	530

**4. Wiring Diagram**





## 5. Terminal And Wiring Of Main Circuit

### 1. Description of terminal of main circuit for single-phase frequency inverter

Terminal marking	Name	Description
L1,L2	Input terminal of single-phase power	Contact poin of single-phase 220V AC power
(+),(-)	Positive/negative terminals of DC bus	Input point of DC bus
(+),PB	Connection terminal of brake resistance	Connect brake resistance
U,V,W	Output terminal of convertor	Connect three-phase motor
PE⊕	Earthing terminal	Earthing terminal

### 2. Description of terminal of main circuit for single-phase frequency convertor

Terminal marking	Name	Description
R,S,T	Input terminal of three-phase power	Connection point of AC input three-phase power
(+),(-)	Positive/negative terminals of DC bus	Input point of DC bus and brake unit
(+),PB	Connection terminal of brake resistance	Connect brake resistance
P1,(+)	Connection terminal of external DC reactor	Connection point of external DC reactor
U,V,W	Output terminal of convertor	Connect three-phase motor
PE⊕	Earthing terminal	Earthing terminal

#### Wiring precautions:

a. Input power L1, L2 or R, S, T:

b. Wiring on input side of convertor has no requirement on phase sequence. Wiring precautions:

1. (+) (-) terminals of DC bus: there's residual voltage for DC bus (+) (-) immediately after outage. Contact after CHARGE light extinguishes and confirm it's <36V, otherwise there is risk of electric shock.

2. When selecting external braking component, avoid inverse connection of (+) (-) polarity, otherwise it will lead to damage of frequency convertor and even fire.

3. Wiring length of brake unit should not exceed 10m. Twisted pair or tight double-line should be used for parallel wiring. Do not connect brake resistance directly to DC bus, otherwise it will lead to damage of frequency convertor and even fire.

c. Connection terminal (+), PB of brake resistance: Confirm the model of built-in brake unit, and connection terminal of brake resistance is valid. Model selection of brake resistance refers to recommended value and wiring distance should be <5m, otherwise frequency convertor may be damaged.

d. Connection terminal P1, (+) of external DC reactor

For the frequency convertor at above 220V37KW and 380V75kW, connection strap between P1 and (+) terminals needs to be removed when installing DC reactor externally, and connect DC reactor between two terminals.

e. U, V, W on output side of frequency convertor: output side of frequency convertor shall not connect capacitor or surge absorber, otherwise it will lead to frequent protection and even damage of convertor. Due to influence of distributed capacitance, if motor cable is too long, electric resonance wil produce easily, which will damage motor insulation or produce large leak current and frequent protection of convertor. If motor cable is >100m, AC input reactor should be installed.

f. Earthing terminal PE, ⊕

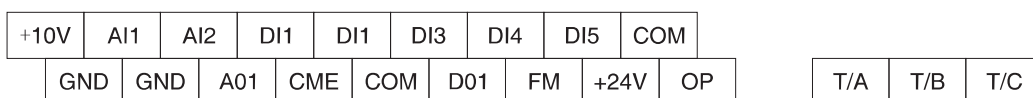
For different models, the marking of earthing terminal may be different, but the meaning is same. In above descriptions, PE, ⊕ means that earthing marking is PE or ⊕.

Keep reliable earthing of earthing terminal and resistance value of ground wire should be <0.1Ω, otherwise it will lead to abnormal operation and even damage of device. Do not use earthing terminal PE or ⊕ and N terminal on null line of power in common.

#### Control terminal and wiring

1. Layout diagram of terminals on control circuit is as below:

(Note: there's no short-circuit strap between CME and COM, OP and +24V of ADL200G frequency convertor. Users select wiring way of CME and OP respectively through J10, J9)

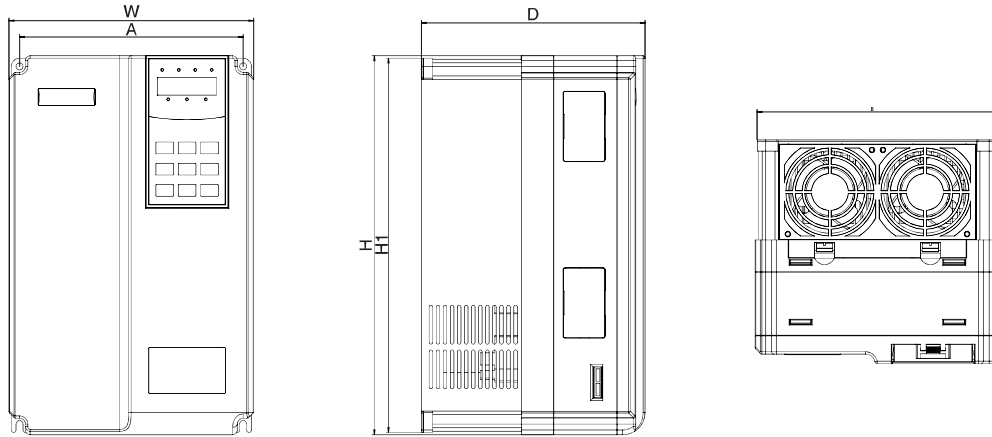


Layout diagram of terminals on control circuit

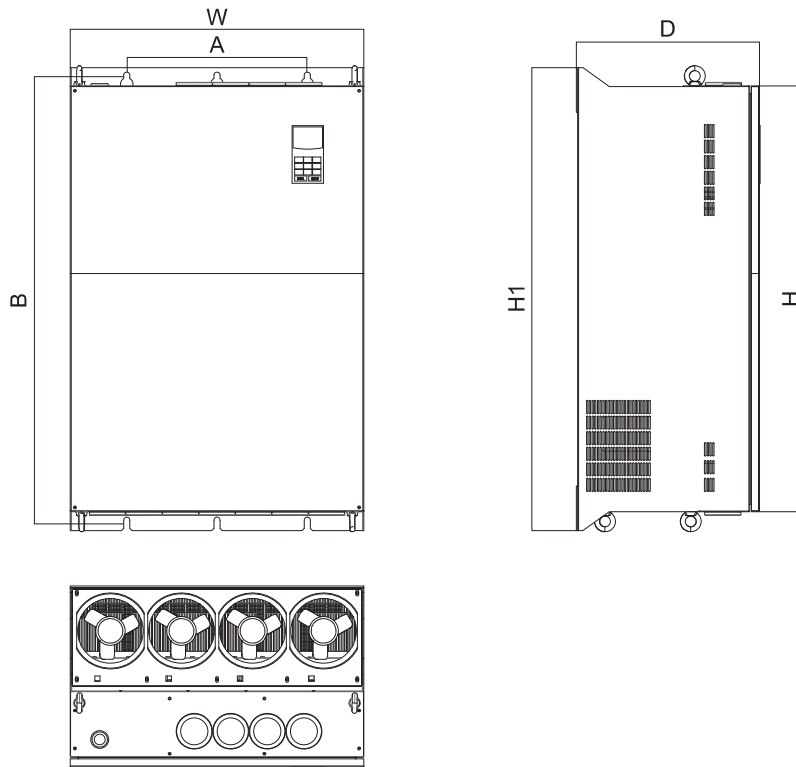
2. Functional descriptions of control terminals

Type	Terminal symbol	Terminal name	Functional description
Power	+10V-GND	Connect 10V power externally	Offer +10V power externally, max. output current: 10mA Be commonly used as working power of external potentiometer, resistance value range of potentiometer: 1kΩ~5kΩ
	+24V-COM	Connect 24V power externally	Offer +24V power externally, be used as working power of digital input/output terminal and power of external sensor Max. output current: 200mA
	OP	Input terminal of external power	Connect +24V or COM through J9 jumper on control panel If using external signal to drive DI1~DI5, OP needs to connect with external power, and pull out J9 jumper
Analog input	AI1-GND	Analog input terminal 1	1. Range of input voltage: DC 0V~10V 2. Input impedance: 22kΩ
	AI2-GND	Analog input terminal 2	1. Input range: DC 0V~10V/4mA~20mA, depend on J8 jumper on control panel 2. Input impedance: 22kΩ for voltage input, 500Ω for current input
Digital input	DI1-OP	Digital input 1	1. Optical coupling isolation, be compatible with bipolar input 2. Input impedance: 2.4kΩ 3. Voltage range for level input: 9V~30V
	DI2-OP	Digital input 2	
	DI3-OP	Digital input 3	
	DI4-OP	Digital input 4	
	DI5-OP	High-speed impulse input terminal	Apart from features of DI1~DI4, it can be high-speed impulse input channel. Max. input frequency: 100kHz
Analog output	AO1-GND	Analog output 1	J5 jumper on control panel decides voltage or current output Output voltage range: 0V~10V Output current range: 0mA~20mA
Digital output	DO1-CME	Digital output 1	Optical coupling isolation, bipolar open collector output Output voltage range: 0V~24V; output current range: 0mA~50mA Caution: digital output CME and digital input COM are internally isolated, but short circuit of CME and COM is realized through J10 jumper on control panel (DO1 is +24V drive by default). If DO1 needs to be driven by external power, pull out J10 jumper
	FM- CME	High-speed impulse output	Be restricted by function code F5-00 "output way selection of FM terminal" As high-speed impulse output, max. frequency is 100kHz As open-collector output, it's the same with DO1 specification
Relay output	T/A-T/B	Normally closed terminal	Drive capability of contact: AC250V,3A, COSØ=0.4 DC 30V,1A
	T/A-T/C	Normally open terminal	

**6. Outline & Installation Dimension (mm)**



Schematic diagram of external dimension and mounting dimension of ADL200G plastic structure



Schematic diagram of external dimension and mounting dimension of ADL200G metal plate structure

Shell structures of ADL200G series models are as follow:

Model	Shell type
	Single-phase 220V
0.4kW~2.2kW	Plastic structure
	Three-phase 220V
0.4kW~7.5kW	Plastic structure
11kW~75kW	Metal plate structure
	Three-phase 380V
0.75kW~15kW	Plastic structure
18.5kW~400kW	Metal plate structure

Outside drawing and mounting hole dimension (mm) of ADL200G frequency inverter

Model of frequency inverter	Mounting hole(mm)		External dimension(mm)				Hole diameter	Weight(kg)
	A	B	H	H1	W	D		
Single-phase 220V								
ADL200G-0R4GB-S2	113	172	186	/	125	164	5	1.1
ADL200G-0R7GB-S2								
ADL200G-1R5GB-S2								
ADL200G-2R2GB-S2								
Three-phase 220V								
ADL200G-0R4GB-T2	113	172	186	/	125	164	5	1.1
ADL200G-0R7GB-T2								
ADL200G-1R5GB-T2								
ADL200G-2R2GB-T2								
ADL200G-3R7GB-T2	148	236	248	/	160	183	5	2.5
ADL200G-5R5GB-T2								
ADL200G-7R5GB-T2	190	305	322	/	208	192	6	6.5
ADL200G-11G-T2								
ADL200G-15G-T2	235	447	432	463	285	228	8	20
ADL200G-18R5-T2								
ADL200G-22G-T2								
ADL200G-30G-T2								
ADL200G-37G-T2	260	580	549	600	385	265	10	32
ADL200G-45G-T2								
ADL200G-55G-T2	343	678	660	700	473	307	10	47
ADL200G-75G-T2								
ADL200G-90G-T2	449	905	880	930	579	375	10	90
ADL200G-110P-T2								
Three-phase 380V								
ADL200G-0R7GB-T4	113	172	186	/	125	164	Ø5.0	1.1
ADL200G-1R5GB-T4								
ADL200G-2R2GB-T4								
ADL200G-3R7GB-T4								
ADL200G-5R5PB-T4	148	236	248	/	160	183	Ø5.0	2.5
ADL200G-7R5PB-T4								
ADL200G-11PB-T4	190	305	322	/	208	192	Ø6	6.5
ADL200G-15GB-T4								
ADL200G-15PB-T4								
ADL200G-18R5PB-T4								
ADL200G-18R5G-T4	235	447	432	463	285	228	8	20
ADL200G-22P-T4								
ADL200G-22G-T4	260	580	549	600	385	265	10	32
ADL200G-30P-T4								
ADL200G-30G-T4								
ADL200G-37P-T4								
ADL200G-37G-T4	343	678	660	700	473	307	10	47
ADL200G-45P-T4								
ADL200G-45G-T4	320	1166	1090	1192	440	310	10	90
ADL200G-55P-T4								
ADL200G-55G-T4								
ADL200G-75P-T4								
ADL200G-75G-T4	420	1030	983	1060	650	377	12	130
ADL200G-90P-T4								
ADL200G-90G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-110P-T4								
ADL200G-110G-T4								
ADL200G-132P-T4								
ADL200G-132G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-160P-T4								
ADL200G-160G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-185P-T4								
ADL200G-185G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-200P-T4								
ADL200G-200G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-220P-T4								
ADL200G-220G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-250P-T4								
ADL200G-250G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-280P-T4								
ADL200G-280G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-315P-T4								
ADL200G-315G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-355P-T4								
ADL200G-355G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-400P-T4								
ADL200G-400G-T4	520	1300	1203	1358	800	400	14	200
ADL200G-450P-T4								

Due to continuous improvements outline dimension(Size)parameter may have changed. Please confirm with us before ordering.

## ADL8802 Series Intelligent Inverter for Water Pumps



### 1. Application

ADL8802 Series intelligent inverter for water pumps developed by our company, as high quality, multifunctional type, to perform the control of constant pressure for water pump. The inverter provides built-in PID controller, shift function of detection on the setting and feeding signal wire broken, protection of load being lost, and etc, total 22 functions of fault protection, monitoring, also assembled with several I/O terminals for user. LED display the operating data and fault code, background software can commission and control the operation through built-in RS485 port, master machine can control 11 slave machines at maximum, the freq inversion of main and slave machines can be adjusted according to pressure change, to perform constant pressure of pump.

### 2. Features

- Compact structure, light weight
- Auto detect water leakage/normal supply
- Fast wakeup for water supply
- Detection of sensor line being broken
- Prevent running at high speed in case of line broken.
- Built-in RS-485 port, standard MODBUS protocol
- Easy adjustment of pressure: push the +/- key on the panel to adjust the pressure.
- Direct display: busbar voltage, freq, output current, setting pressure, and feedback pressure will be displayed in turns.
- 22 protections
- Easy installation, commissioning not needed.

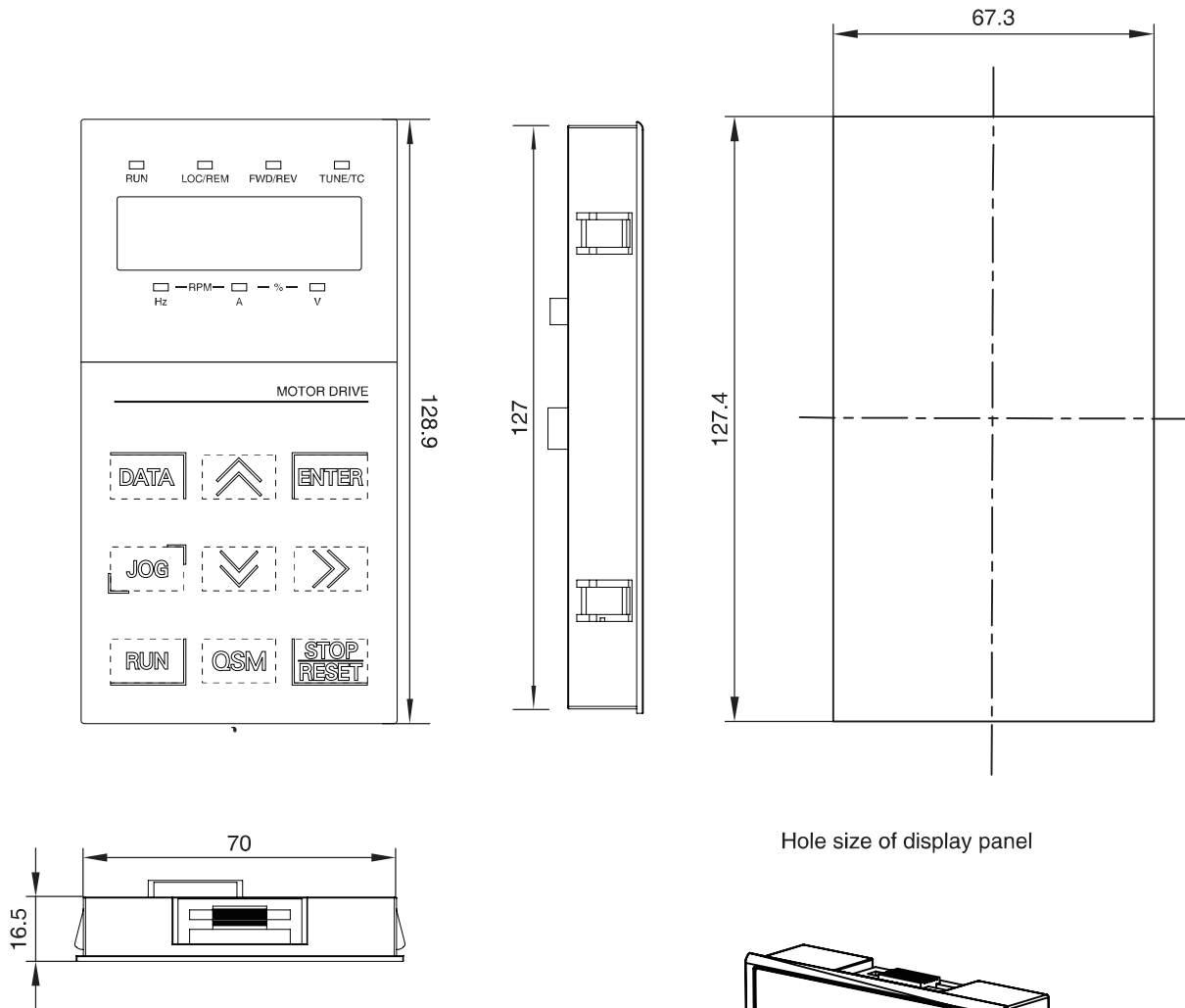


### 3. Specification

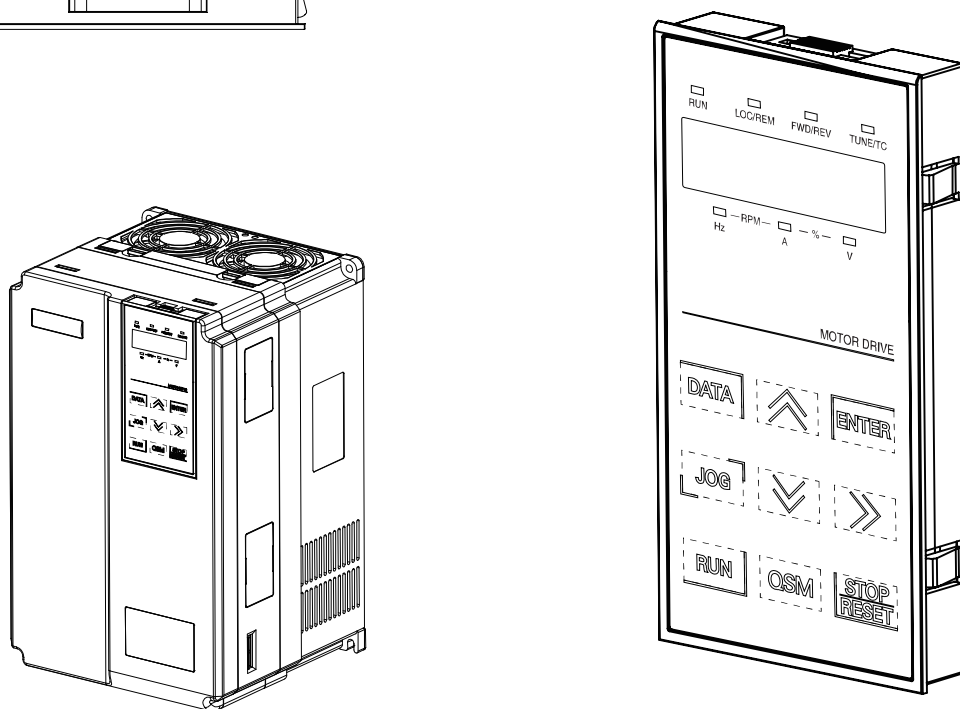
Item	Specifications
Control mode	SPWM
Input voltage	220:220V±15%;380:380V±15%
Output voltage	0~output voltage
4-digit LED display and status indicator	Display: freq, current, setting pressure, feedback pressure, forward/reverse rotation, fault and etc.
Control of communication	RS-485
Operating temperature	-10~40°C
Humidity	0-95% relative humidity
Vibration	<0.5g
Protection grade	IP54
Cooling mode	Wind cooling
Range	0.1-2000.0Hz
Setting freq	Digital mode: 0.1Hz, analog mode: 1% x max.frequency
Output freq	0.1Hz
Keyboard setting mode	Through ▼/▲key
Analog setting mode	Outer analog signal 0-10V, 4-20mA
Other function	Minimum frequency, startup frequency, stopping frequency, three jumping frequency can be set separately
Overload	Constant torque (150%): 1min, wind fan (120%): 1min
Under-voltage	220V: DC voltage < 200V 380V: DC < 400V
Over-voltage	220V: DC voltage < 400V 380V: DC < 800V
Restart after immediate stop	After immediate stop, it can restart at mode of tracking frequency
Prevention of speed lost	Prevent speed losing during speed up/down
Short connection on output terminals	Protection of integrated circuit
Other functions	Temperature protection, limit of reverse rotation, direct start after power on, reset fault, parameter locked PID, one drive N and etc.



External dimension of display panel



Hole size of display panel





## AJR3-1000 Series Soft Starter



AJR3-1000

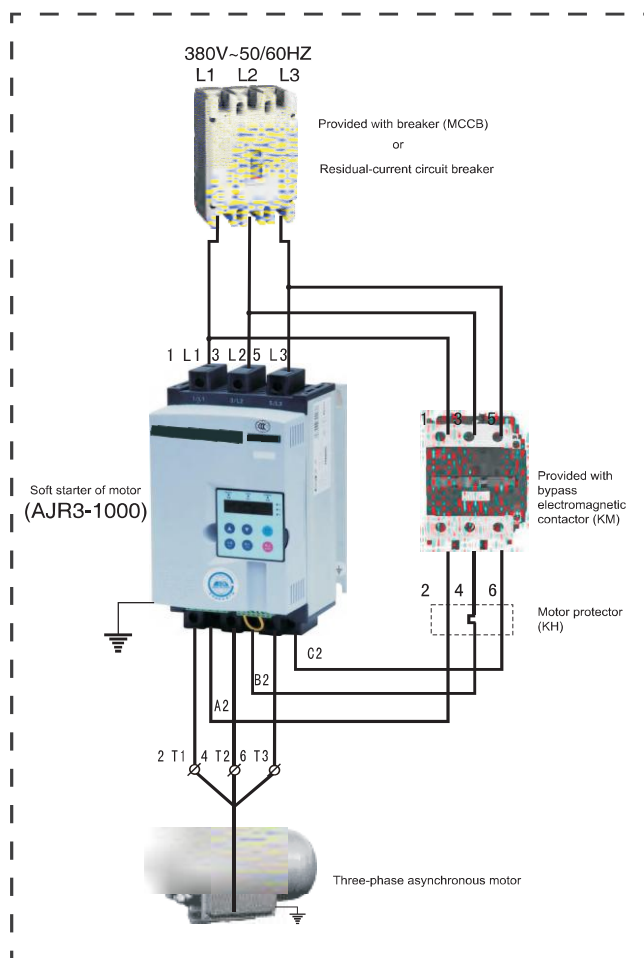
### 1. Application

AJR3-1000 is a kind of pressure regulating and current limiting intelligent motor soft starter developed based on the latest digital processor, its particularly intelligent electronic circuit can provide perfect control and protection functions for the motor. Intelligent motor soft starter of AJR3-1000 series, being ideal substitutes for traditional starting modes such as star-delta starter or self-coupling reduced voltage reduction starter, perfectly solve secondary shock caused by circuit absorption process, provide comprehensive fault protection and prolong lifespan of equipment.

The product is widely applied in various industries, including spinning, metallurgy, oil, chemical, water treatment, shipping, medical and mining machinery, etc.

The features of intelligent motor soft starter of AJR3-1000 series are as follows:

1. Five advanced starting modes: ramp voltage mode, current limiting mode, kick and current limiting mode, kick and voltage mode, ramp current mode, dual closed-loop mode.
2. Programmable delay starting mode, programmable interconnected control, programmable fault contact output.
3. Integrated protection functions: over-current, overload, input-output open phase, over-heating.
4. Shutdown mode: ramp voltage soft shutdown, free shutdown.
5. Starting time and stalling time can be amended through programming.
6. Major loop adopts three incoming lines and six outgoing lines to realize full-automatic monitoring.
7. Three relay output and one analogue output.
8. Own automatic identification and protection functions for phase sequence.
9. Special compact design.
10. High product reliability.



Typical application

## ADL8802 Series Intelligent Inverter for Water Pumps



### 4. Rated Current And Mounting Dimensions(unit:mm) (Input voltage 220V)

Model and specification	Output power (KW)	Output current A	W	H	D	Mounting Hole
ADL8802-2S007	0.75	4.5	178.5	105	130	Ø4.5
ADL8802-2S015	1.5	7.0	178.5	105	130	Ø4.5
ADL8802-2S022	2.2	10	178.5	105	130	Ø4.5

(Input voltage 380V)



Model and specification	Output power (KW)	Output current A	W	H	D	Mounting Hole
ADL8802-4T007	0.75	2.5	111	157	165	Ø4.5
ADL8802-4T015	1.5	3.7	111	157	165	Ø4.5
ADL8802-4T022	2.2	5	111	157	165	Ø4.5
ADL8802-4T037	3.7	9	137	208	180	Ø5
ADL8802-4T055	5.5	13	137	208	180	Ø5
ADL8802-4T075	7.5	17	205	286	237	Ø6.5
ADL8802-4T110	11	25	205	286	237	Ø6.5
ADL8802-4T150	15	32	205	286	237	Ø6.5
ADL8802-4T185	18.5	37	180	420	250	Ø6.5
ADL8802-4T220	22	45	180	420	250	Ø6.5



5. Single inverter intelligently controls water supply
- IP54 protection grade, dustproof and waterproof, extra control panel or pump control room is not needed.
  - After power off, it will stop(s) machine automatically and provide(s) protection against low water level, to prevent motor running without load.
  - Protections: motor overloading, motor short circuit, pressure sensor damaged, water shortage, lower water level, high water pressure.
  - Energy saving, high efficiency: up to 10%-50%.
  - High accuracy of constant pressure: 0.3% rated pressure.
  - Fast wakeup for water supply: it can run the pump within 3s, built-in PID, plus pressure sensor to perform closed loop control, water supply under constant pressure.

### 3.Basic Function Parameters

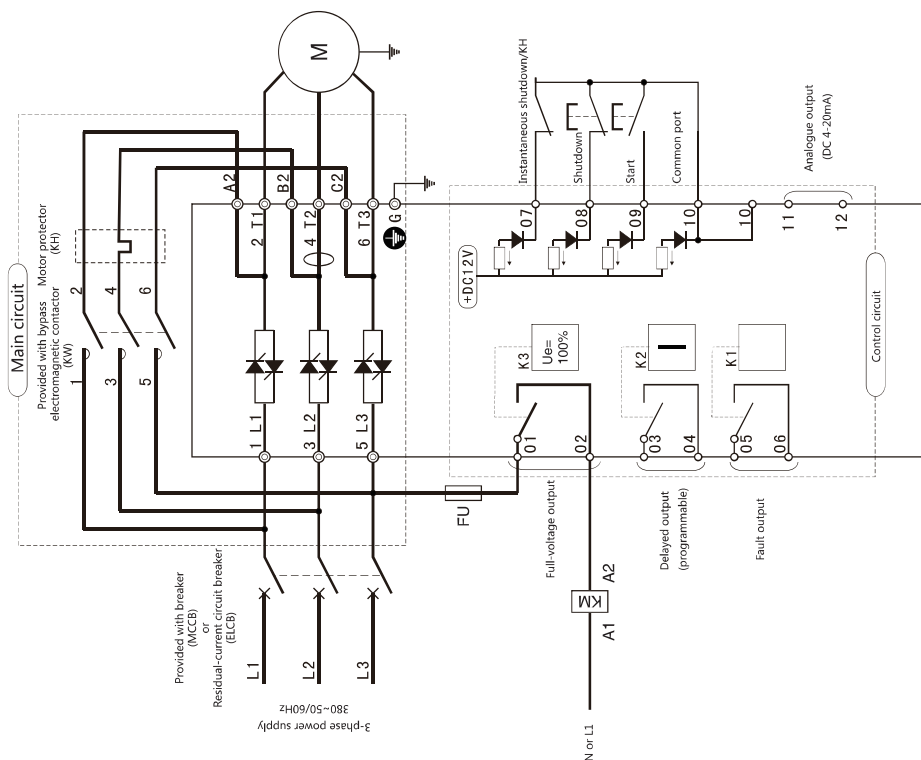
Function name	Setting range	Explanations
Starting voltage	30-70%	Ramp voltage mode is valid; modification is valid if code PB is set as 1; starting voltage is 40% when setting PB as 0
Soft starting time	2-60S	Ramp voltage mode is valid; modification is valid if code PB is set as 1
Soft shutdown time	0-60S	0: free shutdown, it must be set as 0 for multi-split situation
Start delay	0-999S	Press start key (set time) to delay starting with countdown way, start immediately when setting as 0
Programming delay	0-999S	Set running relay output (03/04 terminal), close immediately when setting as 0
Interval delay	0-999S	When overheating reduces, delay also occurs and status indicator light flickers for prompt during delay period
Start limiting current	50-500%	Current-limiting mode is valid; modification is valid if code PB is set as 0; maximal current-limiting value is 400% if PB is set as 1
Max. operating current	50-200%	Input mode of P6/P7 parameters is determined by P8
Keyboard display mode	00-03	Multiple control modes, see details in specification
Under-voltage protection	40-99%	Protect when it's lower than set value
Over-voltage protection	100-130%	Protect when it's higher than set value
Starting mode	00-06	00: current limit; 01 voltage; 02 kick + current limit; 03 kick + voltage; 04 ramp current; 05 dual closed-loop; 06 forbidden
Permission of output protection	00-04	00 primary; 01 light load; 02 standard; 03 heavy load; 04 high level
Operating control way	00-07	0: keyboard operation, see details in specification
Restart permission	00-09	0: prohibit; 01-09: time of auto restarting
Permission of parameter	00-01	00: not allowed to amend parameters; 01: allowed to amend parameters;
Programming output	00-07	Set running relay output (03/04 terminal), see details in specification
Current limit for soft shutdown	20-100	See details in specification
Bypass Delay	00-11	Allows modification bypass delay

**2. Specification**

Standard	The AJR3 introduces the electronic soft start-stop device meeting the performance test and national standard: (GB14048.6-2008)			
Voltage of 3-phase			380-15%...415+10%	
Frequency		Hz	50	
Nominal current		A	10 ...1000. 20 rated values in total	
Power of motor			380...415	
Current adjustment			The nominal current $I_n$ of motor can be adjusted within 0.5~1.3 times the rated starter current, the maximal starting current can be adjusted within 2~7 times the $I_n$ , the current limit is 5 times the set value.	
Start mode			Limited start current: $5I_n$ . Factory setting: $3I_n$ under standard load when the torque integral is 16s. $3.5I_n$ under heavy load when the torque integral is 15s.	
Shutdown mode	Free shutdown		/	
	Soft shutdown		Programmable adjustment within 0.5~60s	
	Shutdown by braking		Programmable adjustment within 0.5~60s (order protocol)	
Display and keyboard			Motor running current (or current percentage) can be shown during normal running, the relative information can be shown when fault occurs; parameter, contact function and lock-stop can be set through keyboard.	
Output relay (2)	Type of contact		K1	
	Max. operating power~220V		1 "Normally On"	
		Output port of fault relay		1 "Normally On"
	Min. switching	VA		100mA-24V
	Nominal operating	A		0.5. class AC-14,AC-15 (240VAV) and DC-13 (48VDC)
	Nominal thermocurre	A		5
	Max. operating	V		400V~
	Service life			500 million times
Protection	Protection of main power supply			Integrated protection of motor and starter
				Open phase protection and phase unbalance protection, indicated by output relay
Starter selection				The AJR3 device can be selected according to the nominal power and load of the motor
				The power of starter is available for standard or heavy load

**4.Terminal Function Table**

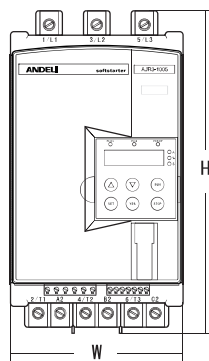
Type	Terminal label	Terminal name	Explanations
Contact output	01,02	Bypass output	01/02 close after soft starter starts, control bypass electromagnetic contactor
	03,04	Operation output (delay)	03/04 are programmable relay output, delay time is set by code F4. Output function time is set by code contact output (delay) FJ. As normally open contact, it closes when the output is valid (contact capacity AC250V/3A)
	05,06	Fault output	05/06 are programmable fault relay output. If soft starter has fault or closes during outage, disconnect it when plugging in (contact capacity AC250V/3A)
Contact input	7	Instantaneous shutdown output	Soft starter shuts down immediately if 07/10 disconnect (or tandem connection with normally closed contacts of other protectors such as thermal relay)
	8	Soft shutdown output	Motor reduces speed for soft shutdown if 08/10 disconnect (or free shutdown)
	9	Starting output	Motor starts to operate if 09/10 close
	10	Common port	Common port for contact input signal
Analogue output	11,12	Analogue output	11/12 are 4~20mA DC analogue output used to monitor running current of motor. If full scale is 20mA, analogue output 11/12 is 4 times of nominal rated current of motor, and it can be connected to 4~20mA DC ammeter to monitor signal. The maximal value of output load resistance is 300Ω



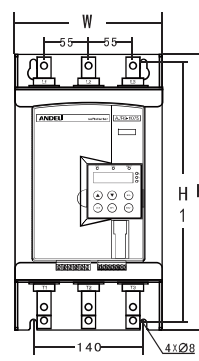
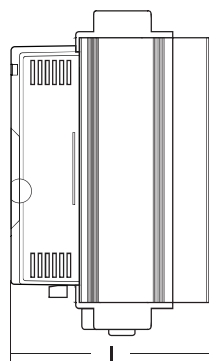
## 5. Rated Power Table

Starter 230V/400V/-50/60HZ		Rated power of motor	External dimension	Installation dimension	Installing hole	Gross weight
Starting model	10-grade max. current	380V KW	HXWXI	H1XW1	Ø	KG
AJR3-1007	17	7.5	270×145×165	205×128	7	5
AJR3-1011	22	11	270×145×165	205×128	7	5
AJR3-1015	32	15	270×145×165	205×128	7	5
AJR3-1017	38	18.5	270×145×165	205×128	7	5
AJR3-1022	44	22	270×145×165	205×128	7	5
AJR3-1030	60	30	270×145×165	205×128	7	5
AJR3-1037	74	37	270×145×165	205×128	7	5
AJR3-1045	100	45	270×145×165	205×128	7	5
AJR3-1055	110	55	270×145×165	205×128	7	5
AJR3-1075	150	75	345×185×240	325×140	8	10
AJR3-1090	160	90	385×260×240	360×200	9	22
AJR3-1115	200	110	385×260×240	360×200	9	22
AJR3-1132	250	132	385×260×240	360×200	9	22
AJR3-1160	300	160	385×260×240	360×200	9	22
AJR3-1200	360	200	385×260×240	360×200	9	22
AJR3-1250	480	250	445×290×265	425×235	8	31
AJR3-1315	590	315	445×290×265	425×235	8	33
AJR3-1400	790	400	445×290×265	425×235	8	33

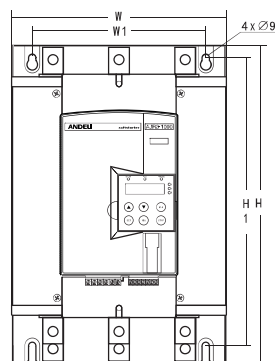
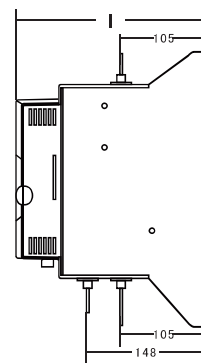
\*Note 1: Rated power in table is reference value of standard load. In the case of heavy load or special requirements, please select the soft starter with larger grade of rated power.  
 \*Note 2: The definition of 10-grade maximal current refers to the explanations of trip curve protection in operating manual.



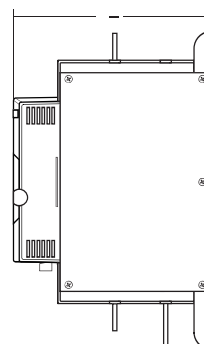
AJR3-1005~AJR3-1055



AJR3-1075



AJR3-1090~AJR3-1400





## AJR3-N Series Soft Starter(Inbuilt Bypass)



AJR3-N

### 1. Application

**Using Press-fit type SCR(thyristor)**

Compared with solder type, press-fit is more stronger and reliable and robust and long service life

**Internal Bypass Contactor**

Free of bypass contactor, save time and labor and space

**Alloy high intensity body**

Metal processing technology and oxidation technics Aluminum high strength body, anti-corrosion

**Control unit & Internal power supply design**

No need power supply for control unit, no three phase

**Free of setting, fast arranging**

No need to set for motor or internal intelligent process

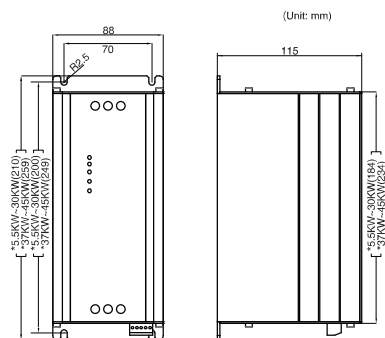
**"Pocket Size" Body**

Integrated with bypass contactor, reduced 40% of the volume(Compared with AJR3-1000)

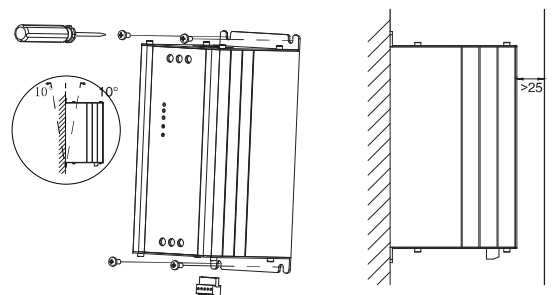
### 2. Electrical Parameters

Standard	GB 14048.6-2008/IEC 60947-4-2 : 2002	
Rated operational voltage	200~415V(-15%+10%)	
Max.length between soft starter and cable	300m	
Permissible ambient environment	Operation	-25°C~+60°C(consider reducing capacity if>40°C)
	Storage	-40°C~+70°C
Protection grade	IP20	
Rated power	50/60Hz	
Permissible installation height	5000m (start to reduce capacity for above 1000m)	
Starting frequency	≤ 15 times/hour (Class10 standard load)	

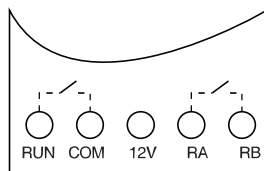
### 3. Product Dimensions



### 4. Installation Sketch



## 5. Terminal Description



Terminal marking of major loop	Terminal name	Function description
L1,L2,L3	Mains input of major loop	Connect three-phase source
T1,T2,T3	Output connection of soft start	Connect three-phase motor

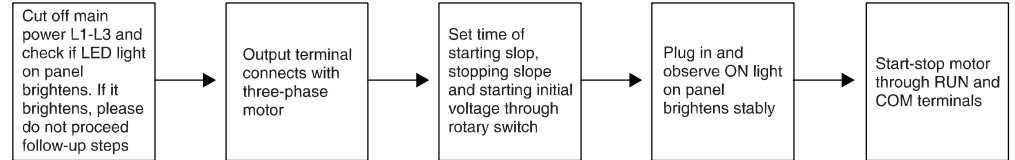
Terminal marking of control loop	Terminal name	Function description
RUN	Enable input	When closing run and com, start to operate When breaking run and com, motor slows down and halts
COM	Common port	Run and common port at 12V
12V	Power terminal	Interior power output terminal at 12V, 300mA at maximum, prohibit overload
RA,RB	Indication of working status	Working status: relay output, normally open contact, close during operation, break if stall or fault, relay capacity 250V/AC 0.3A

## 6. Power Diagram

Model	230V/KW	400V/KW	Rated current A
AJR3-N5R5	3	5.5	13
AJR3-N7R5	4	7.5	17
AJR3-N11	5.5	11	25
AJR3-N15	7.5	15	32
AJR3-N18	7.5	18.5	37
AJR3-N22	11	22	45
AJR3-N30	15	30	60
AJR3-N37	18.5	37	75
AJR3-N45	22	45	90

## 7. Parameter Setting

### Wiring steps

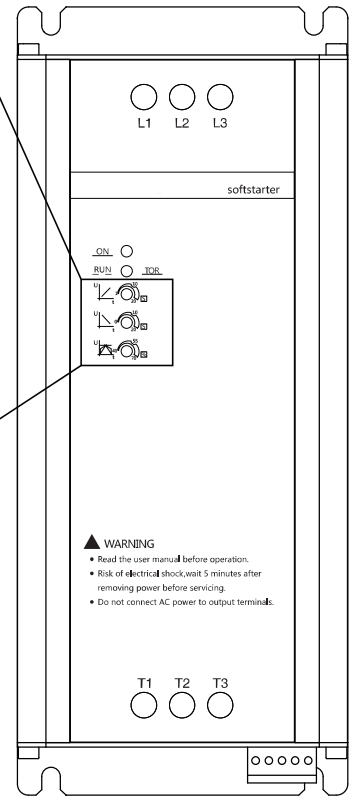
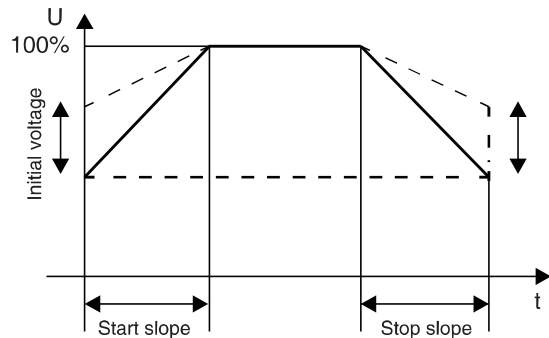


### Panel parameters

Knob of soft starting time: adjust soft starting time of soft starter and range is 1-20S. The longer the time setting, the more gentle the soft starting process, which is helpful to reduce the impact on power grid.

Knob of soft stopping time: adjust soft stopping time of soft starter and range is 0-20S. In some application occasions of water pump, soft stopping function can effectively avoid 'water hammer effect' generated by the halt of water pump. When the knob is adjusted to be 0S, it indicates that the stalling way of motor is free stalling, which will stop output immediately after soft starting.

Knob of initial voltage: adjust initial voltage of soft starter and range is 40%~70%. When the motor starts, it needs to overcome the friction under stationary state. Properly increasing the initial voltage can obtain larger starting torque. The users should refer to actual load condition to coordinate starting and stopping time, thus obtaining the best effect of smooth starting.



### Operation sequence diagram

