ANDELI

CATALOGUE

ELECTRICAL PRODUCT

ANDELI GROUP CO.,LTD.

About Andeli

Andeli Group Co., Ltd. was founded in 1993. It is located in the largest manufacturing hub of low-voltage electric equipment at Yueqing in China, which is called "the Electrical city of China".

Andeli is a leading Group in the electrical industry with production, scientific research, transport, import-export, trade & investment.

Andeli is one of the largest group in China. It has 12 share holding companies in ZHEJIANG,UAE, RUSSIA, Uganda and Brazil. It has over 300 cooperation companies & over 3000 employees with total assets of US$150,000,000 in area of 235,000 square meters.

Andeli regards quality of products as life. We have achieved ISO9001:2008 Quality Management System certificates, ISO14001:2004 Environmental Management System certificates, OHSAS18001:2007 Occupational health and safety Management System certificates along with Measure Detection System, Standardization System Certification and “CCC” for all products in the market. We have also passed ROHS, CE, CB, SEMKO, KEMA, INMETRO and many other international certifications.

Our R&D engineers are planning and Research to innovate a concrete advantage for the users, for actual product development and advance manufacturing process. We widely produce and sell over 300 series, more than 10000 type in Low- & High-voltage electrical devices, complete equipments, power transformers, cables, instruments, meters and welding equipments which are praised by all users in home & overseas. A number of new independent intellectual property right, intelligent appliances is moving into the market from us.

We are keeping our business principles for “Approaching the first-class management, producing the first-class products, providing the first-class service”. Andeli staffs are hard-working, constantly innovated and honest to all users & business partners to enjoy a better tomorrow together with us.

President of ANDELI Mr. Cheng Anlin

ANDELI

Quality System& Product Certificates

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00124Q39536R7M/3302

We hereby certify that

ANDELI GROUP CO.,LTD.

Business Registration Number: 91330382145546231P

No.208, Weiqi Road, Yueqing Economic Development Zone, Yueqing City, Wenzhou City, Zhejiang Province, China

by reason of its

Quality Management System

has been awarded this certificate for compliance with the standard

ISO 9001:2015

The Quality Management System Applies in the following area:

Design, Production and After-sale Service of 40.5kV and Below High-voltage Switchgear, High-voltage Electrical Components,2500kVA and Below Power Transformer, 10kV and Below Pole-Mounted Transformer Set, Fault Indicator, Current Transformer, Electric Energy Meter,Communication Power Supply Equipment and Integrated Cabinet,Intelligent Fusion Terminal,Low-voltage Switchgear, Low-voltage Electrical Components and Welding Machines

Certified since: January 8, 2004 Valid from: November 4, 2024 Valid until: November 25, 2027

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC. Please access www.cqc.com.cn for checking validity of the certificate. This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).

Signed by: Xie ZhaoXu

中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

Section 9, No. 188, Nansihuan Xilu, Beijing 100070 P. R. China http://www.cqc.com.cn

2024年版

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00124S33605R4M/3302

We hereby certify that

ANDELI GROUP CO.,LTD.

Business Registration Number: 91330382145546231P

No.208, Weiqi Road, Yueqing Economic Development Zone, Yueqing City, Wenzhou City, Zhejiang Province, China

by reason of its

Occupational Health and Safety Management

has been awarded this certificate for compliance with the standard

ISO 45001:2018

The Occupational Health and Safety Management Applies in the following area:

Design, Production of 40.5kV and Below High-voltage Switchgear, High-voltage Electrical Components, 2500kVA and Below Power Transformer, 10kV and Below Column Mounted Transformer Set, Fault Indicator, Mutual Inductor, Electric Energy Meter, Low-voltage Switchgear, Low-voltage Electrical Components and Welding Machines Within the Scope of Qualification and Related Management Activity

Certified since: January 15, 2013 Valid from: November 7, 2024 Valid until: January 14, 2028

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC. Please access www.cqc.com.cn for checking validity of the certificate. This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).

Signed by: Xie ZhaoXu

中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

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2024年版

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00124E34529R4M/3302

We hereby certify that

ANDELI GROUP CO.,LTD.

Business Registration Number: 91330382145546231P

No.208, Weiqi Road, Yueqing Economic Development Zone, Yueqing City, Wenzhou City, Zhejiang Province, China

by reason of its

Environmental Management System

has been awarded this certificate for compliance with the standard

ISO 14001:2015

The Environmental Management System Applies in the following area:

Design, Production of 40.5kV and Below High-voltage Switchgear, High-voltage Electrical Components, 2500kVA and Below Power Transformer, 10kV and Below Column Mounted Transformer Set, Fault Indicator, Mutual Inductor, Electric Energy Meter, Low-voltage Switchgear, Low-voltage Electrical Components and Welding Machines Within the Scope of Qualification and Related Management Activity

Certified since: January 15, 2013 Valid from: November 4, 2024 Valid until: January 14, 2028

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC. Please access www.cqc.com.cn for checking validity of the certificate. This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).

Signed by: Xie ZhaoXu

中国质量认证中心

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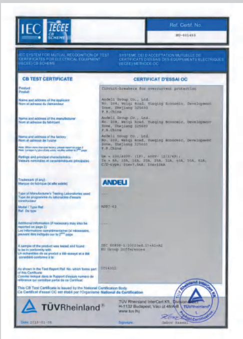
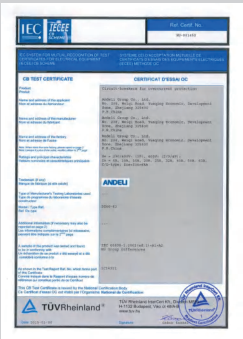
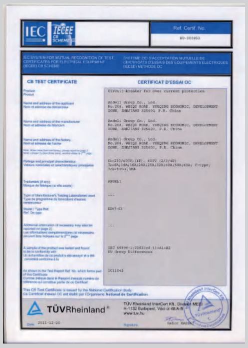
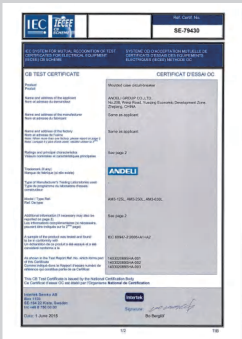
2024年版

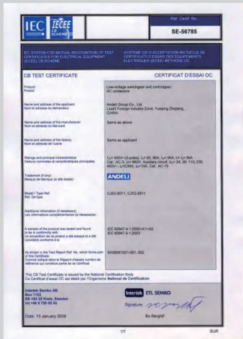
ISO9001 | OHSAS18001 | ISO14001

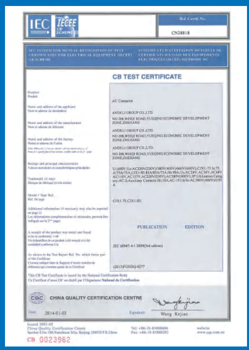
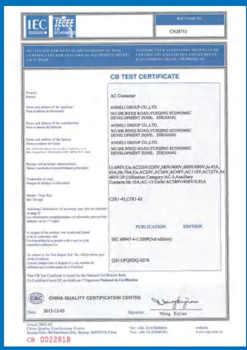
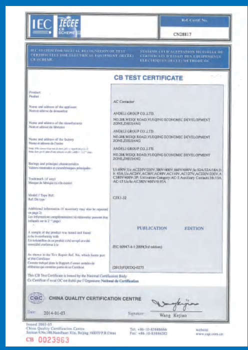
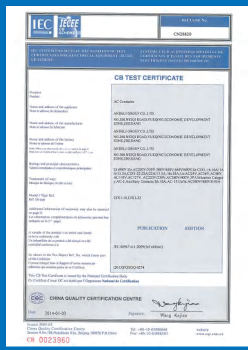
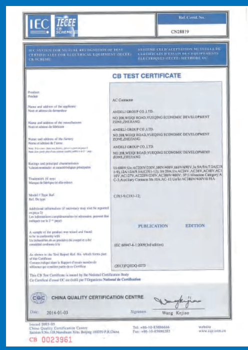










CB TEST CERTIFICATE
DEKRA

CB TEST CERTIFICATE
DEKRA

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TÜVRheinland
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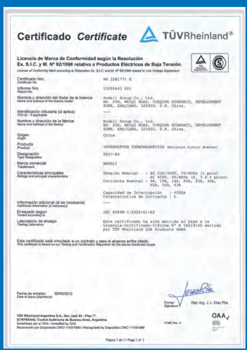
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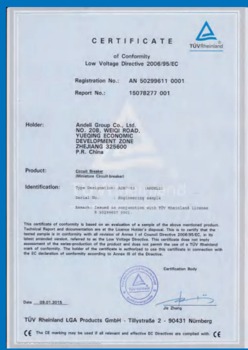
Certificate of Approval

Intertek
Certificate
for European Product Safety
Moulded Case Circuit-breakers

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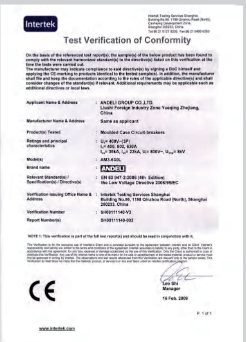
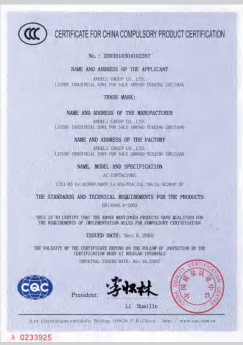

Intertek
Test Verification of Conformity

EC DECLARATION OF CONFORMITY

ATC
CERTIFICATE

SGS

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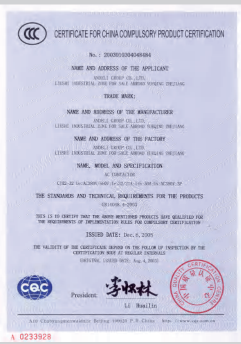
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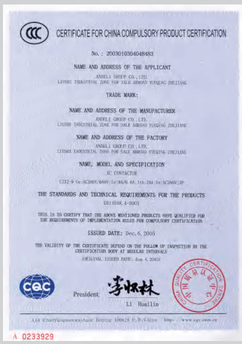
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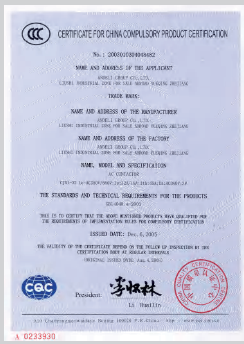
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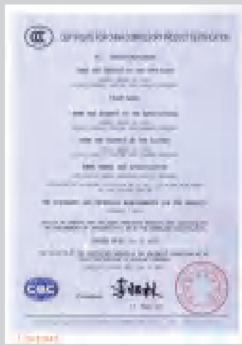

Relay & Contactor & Starter & Frequency Inverter

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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 (Following the No.1 test)	
3	1.5	<4min				
4	7.2	10A	2s<Tp⩽10s	⩽63A	Cold state	
		10A	4s<Tp⩽10s	>63A		

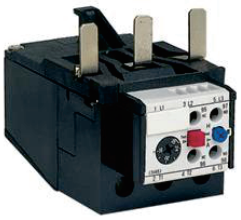
3. Phase-losing Motion Characteristic

No	Times of the setting current		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

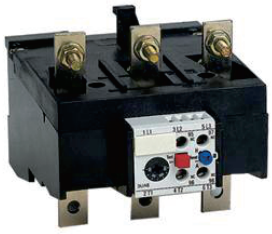
Type	Number	Setting range (A)	For contactor
JRS2-12.5/Z	0A	0.1~0.16	CJX1-09 CJX1-12
	0C	0.16~0.25	
	0E	0.25~0.4	
	0G	0.4~0.63	
	0J	0.63~1	
	0K	0.8~1.25	
	1A	1~1.6	
	1B	1.25~2	
	1C	1.6~2.5	
	1D	2~3.2	
	1E	2.5~4	
	1F	3.2~5	
	1G	4~6.3	
	1H	5~8	
	1J	6.3~10	
	1K	8~12.5	
	2S	10~14.5	

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



JRS2-80/Z

JRS2-135



JRS2-150

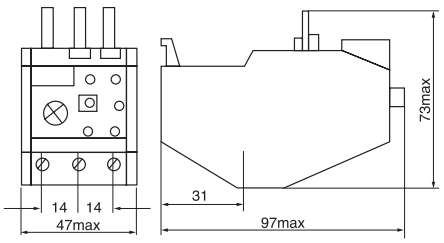
JRS2-180/F

JRS2-400/F
JRS2-630/F

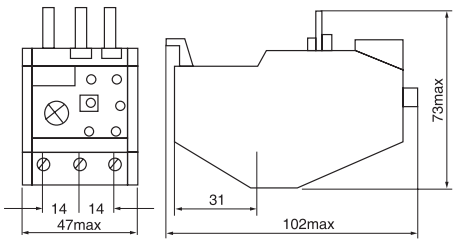
Type	Number	Setting range (A)	For contactor
JRS2-32/Z	1G	4~6.3	CJX1-32
	1J	6.3~10	
	2A	10~16	
	2B	12.5~20	
	2C	16~25	
	2D	20~32	
	2Q	25~36	
JRS2-45/Z	0A	0.1~0.16	CJX1-32
	0C	0.16~0.25	
	0E	0.25~0.4	
	0G	0.4~0.63	
	0J	0.63~1	
	0K	0.8~1.25	
	1A	1~1.6	
	1B	1.25~2	
	1C	1.6~2.5	
	1D	2~3.2	
	1E	2.5~4	
	1F	3.2~5	
	1G	4~6.3	
	1H	5~8	
	1J	6.3~10	
	1K	8~12.5	
	2A	10~16	
	2B	12.5~20	
	2C	16~25	
	2D	20~32	
	2Q	25~36	
	2R	32~40	
	8M	36~45	
JRS2-80/Z	1G	4~6.3	CJX1-45 CJX1-63 CJX1-75 CJX1-85
	8A	11~17	
	2B	12.5~20	
	2C	16~25	
	2D	20~32	
	2E	25~40	
	2F	32~50	
	2T	40~57	
	2P	50~63	
	2V	57~70	
	2U	63~80	
	8W	70~88	
JRS2-63/F	0A	0.1~0.16	CJX1-09~63
	0C	0.16~0.25	
	0E	0.25~0.4	
	0G	0.4~0.63	
	0J	0.63~1	

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

5. Outline and Mounting Dimension (mm)



JRS2-12.5



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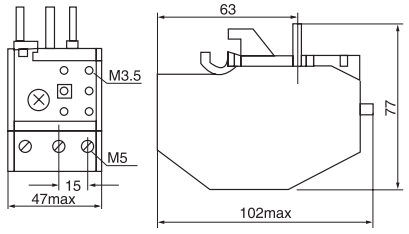

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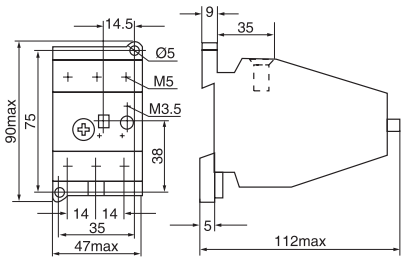

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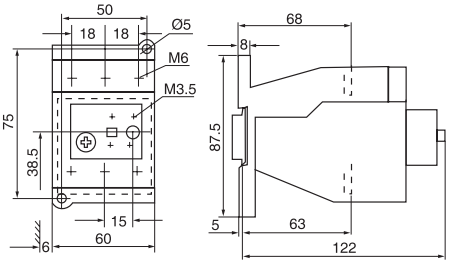

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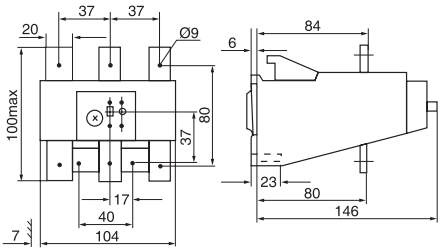
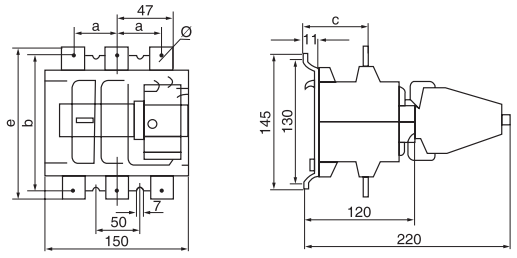


JRS2-180



JRS2-400~630

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

JR28-25

JR28-36

JR28-93

JR28-150

JR28-200

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)	

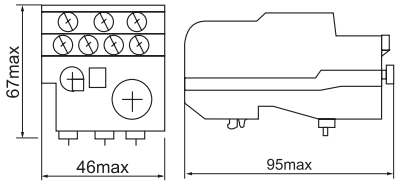
4. Specification

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

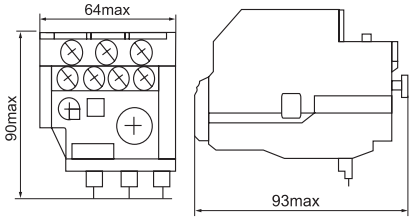
JR28-630

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

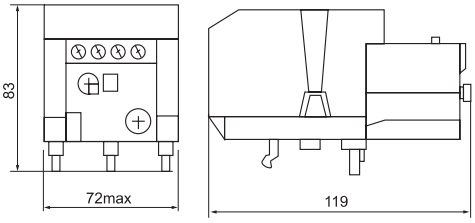
5. Outline and Mounting Dimension (mm)



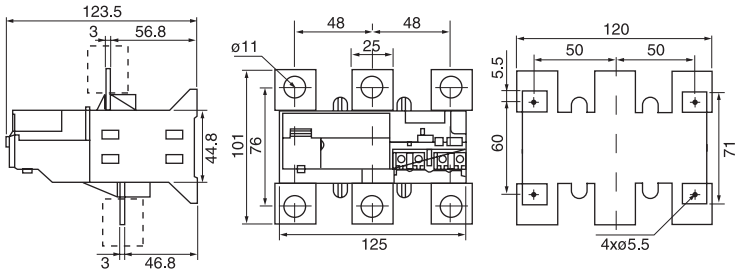
JR28-25



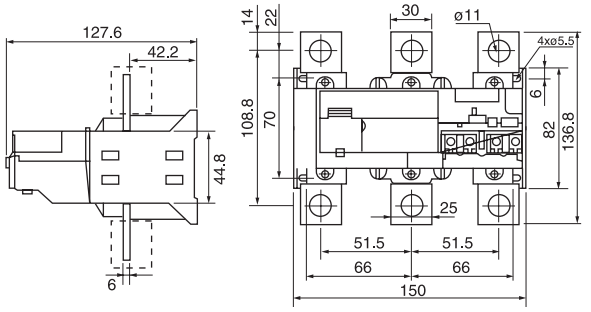
JR28-36



JR28-93

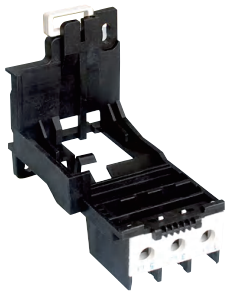
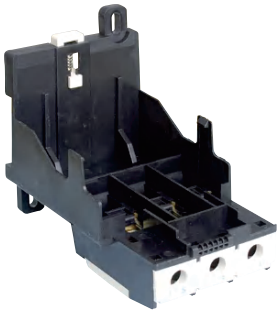


JR28-200



JR28-630

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-25

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.

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		

JR28N-36

3. Phase-losing Motion Characteristic

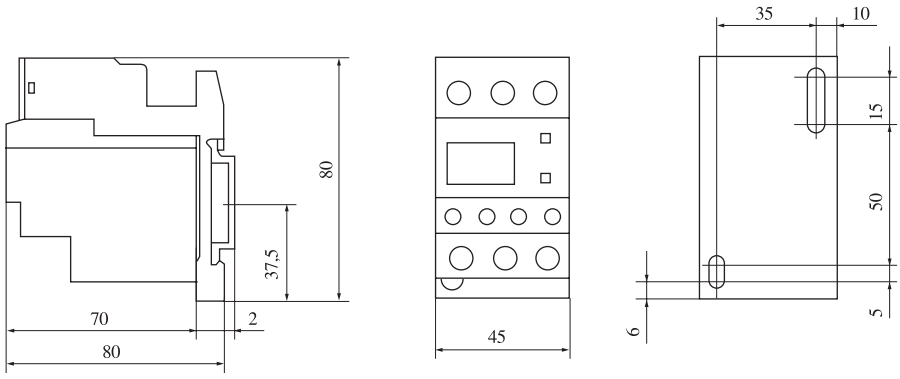
No	Times of the setting current(A)		Motion time	Start condition	Ambient temperature
	Any two phases	Another phase			
1	1.0	0.9	>2h	Cold state	20±5℃
2	1.15	0	<2h	Heat state (Following the No.1 test)	

JR28N-93

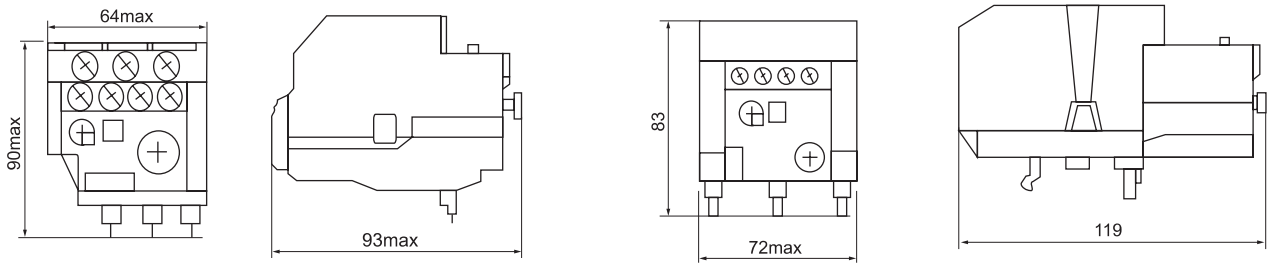
4. Specification

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
	D53	30~38	CJX2N-40
JR28N-36	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)



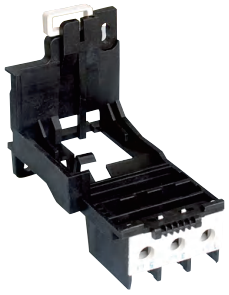
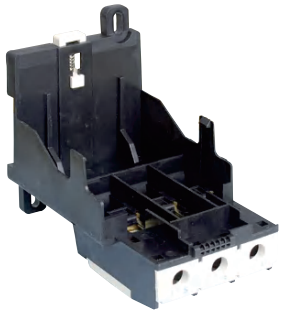
JR28N-25



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

JR30-40

1. Application

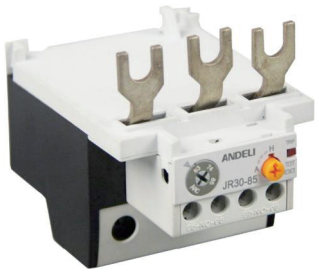
JR30 series thermal relay is used in the circuit of 50/60Hz, rated insulation voltage 660V, rated current 0.1-85A for protecting the phase break when the electric motor is overloaded. The relay has different mechanism and temperature compensation. It can be plugged in CJX5 series AC contactor. The product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

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)	

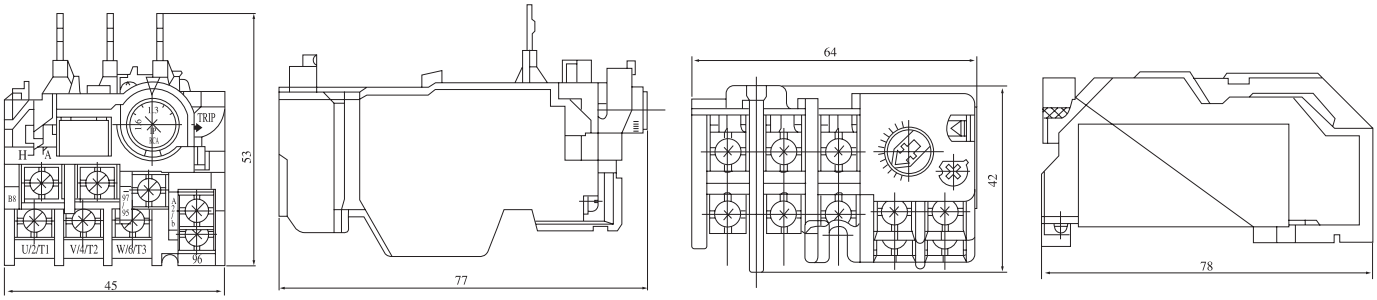


JR30-85

4. Specification

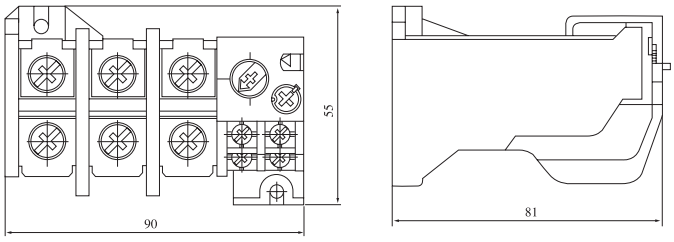
Ratings	Type	JR30-22			JR30-40			JR30-85		
	Nominal current	Ranges			Ranges			Ranges		
		Min.	Mid.	Max.	Min.	Mid.	Max.	Min.	Mid.	Max.
Rated current(A)	0.14	0.1	0.14	0.16						
	0.21	0.16	0.21	0.25						
	0.33	0.25	0.33	0.4						
	0.52	0.4	0.52	0.63						
	0.82	0.63	0.82	1						
	1.3	1	1.3	1.6						
	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)



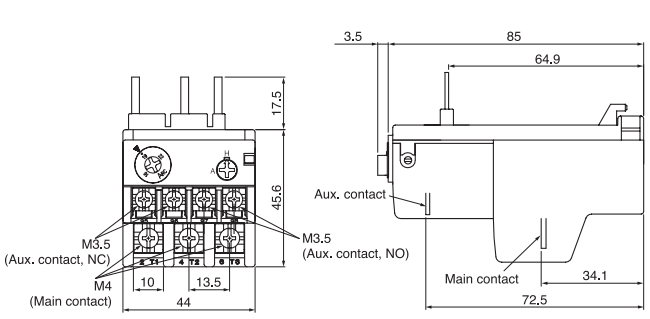
JRS5-12/Z

JRS5-20/P

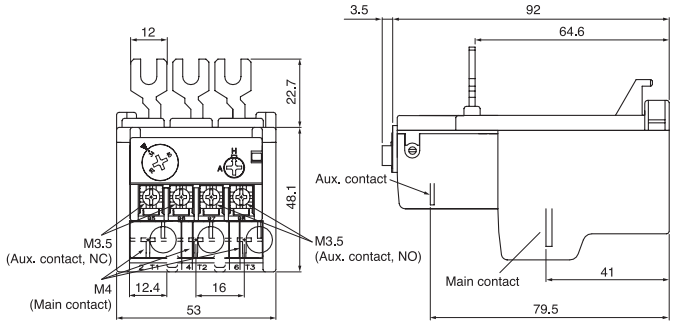


JRS5-60/F

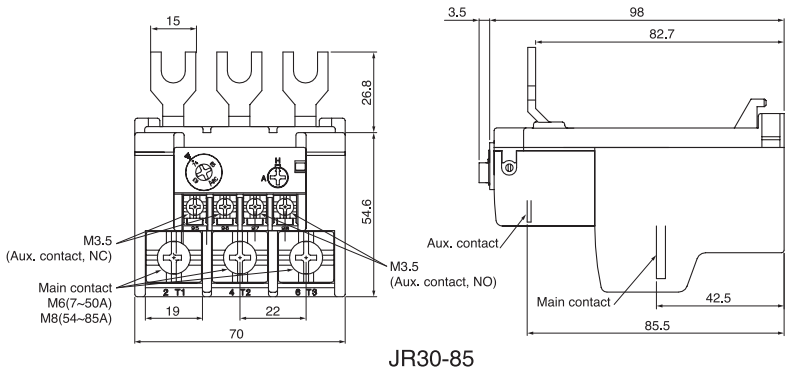
6. JR30 Outline and Mounting Dimension (mm)



JR30-22



JR30-40



JR30-85

General Relay

1. Main Technical Parameter

Specifications \ Model		55.02	55.04	55.32
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)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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

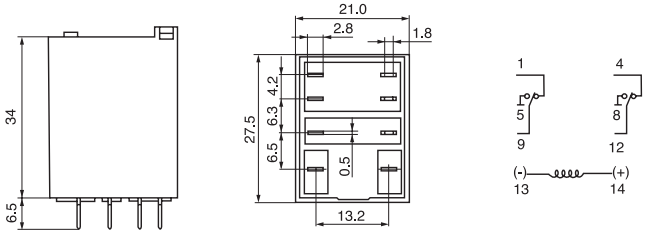
55.02

55.04

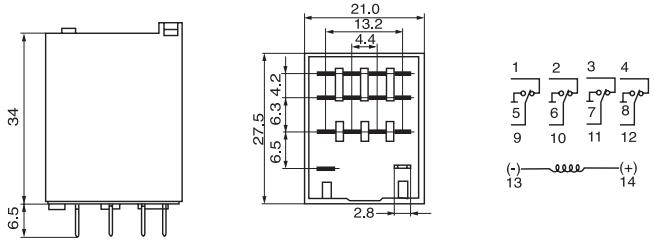
55.32

2. Dimension (mm)

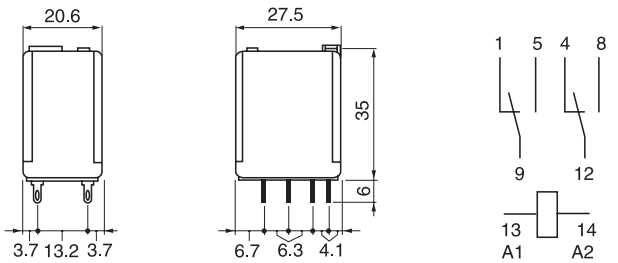
55.02



55.04



55.32



General Relay

1. Main Technical Parameter

Specifications \ Model		55.34	57.02	57.04
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)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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

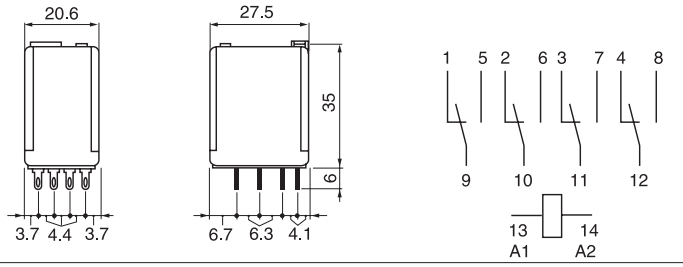
55.34

57.02

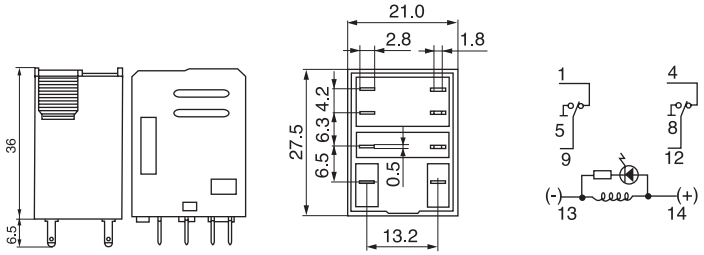
57.04

2. Dimension (mm)

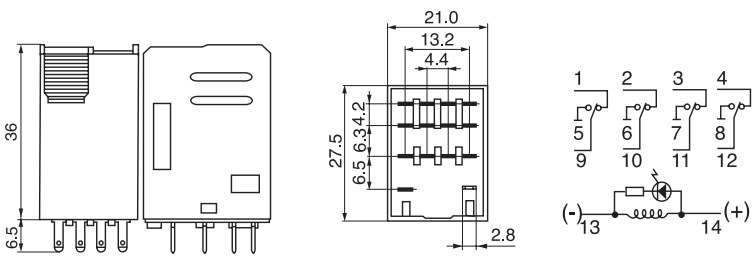
55.34



57.02



57.04



General Relay

56.02

56.04

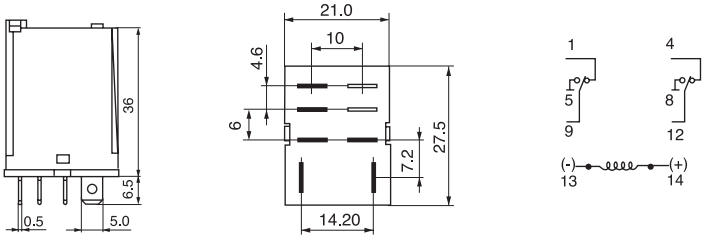
58.02

1. Main Technical Parameter

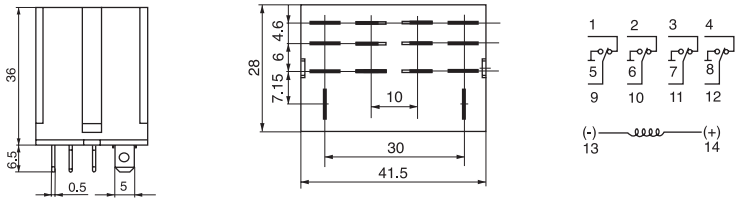
Specifications \ Model		56.02	56.04	58.02
Terminal layout		2Z	4Z	2Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V
	DC	10A 28V	10A 28V	10A 28V
Contact resistance(mΩ)		⩽ 50mΩ	⩽ 50mΩ	⩽ 50mΩ
Insulation resistance(MΩ)		⩾ 100MΩ	⩾ 100MΩ	⩾ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	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	⩽ 2.5VA	0.9VA to 1.2VA
	DC	⩽ 0.9W	⩽ 1.6W	⩽ 0.9W
Electrical life(OPS)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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)

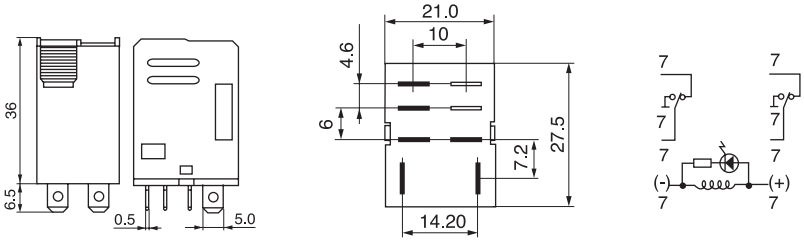
56.02



56.04



58.02



General Relay

60.12

60.13

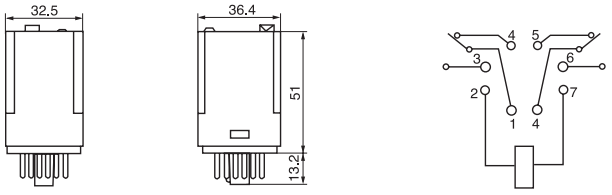
60.12-I

1. Main Technical Parameter

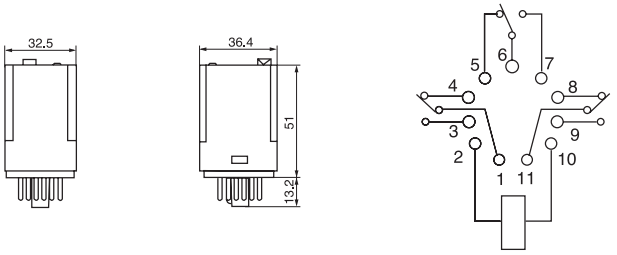
Specifications \ Model		60.12	60.13	60.12-I
Terminal layout		2Z	3Z	2Z
Contact capacity	AC	10A 220V	10A 220V	10A 250V
	DC	10A 28V	10A 28V	10A 30V
Contact resistance(mΩ)		⩽ 50mΩ	⩽ 50mΩ	⩽ 50mΩ
Insulation resistance(MΩ)		⩾ 500MΩ	⩾ 500MΩ	⩾ 500MΩ
Dielectric strength	BOC	2000VAC	2000VAC	1500VAC
	BCC	2000VAC	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)		20^5	20^5	10^5
Mechanical life(OPS)		$20^7/50^7$	$20^7/50^7$	10^7
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)

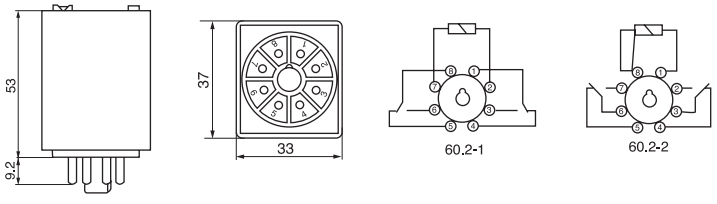
60.12



60.13



60.12-I



ANDELI

60.13-I

General Relay

60.13-I

70.2

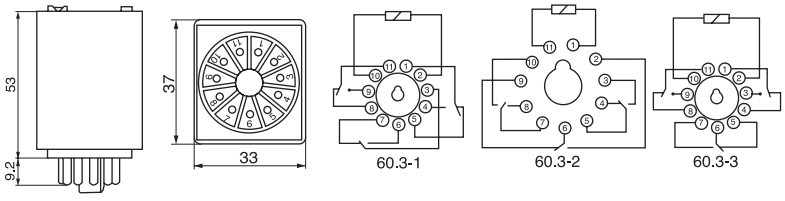
70.3

1. Main Technical Parameter

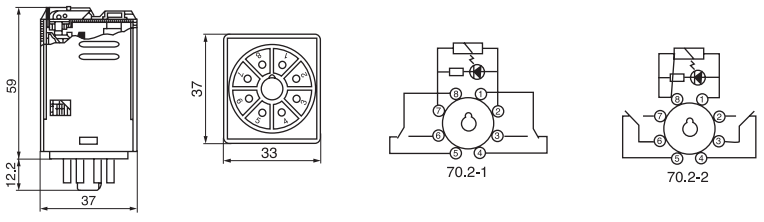
Specifications \ Model		60.13-I	70.2	70.3
Terminal layout		3Z	2Z	3Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 30V	10A 30V
Contact resistance(mΩ)		⩽ 50mΩ	⩽ 50mΩ	⩽ 50mΩ
Insulation resistance(MΩ)		⩾ 500MΩ	⩾ 500MΩ	⩾ 500MΩ
Dielectric strength	BOC	1500VAC	1500VAC	1500VAC
	BCC	1500VAC	1500VAC	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)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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

2. Dimension (mm)

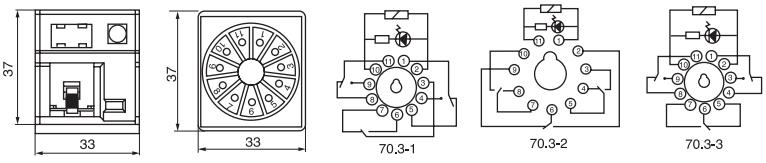
60.13-I



70.2



70.3



General Relay

MY2

MY3

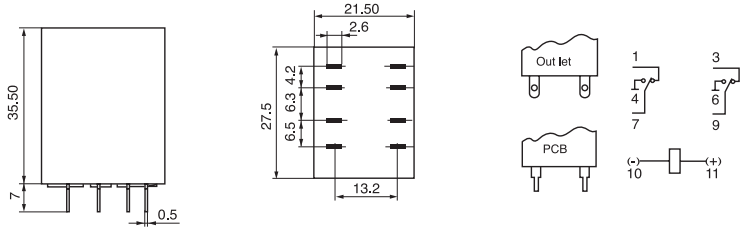
MY4

1. Main Technical Parameter

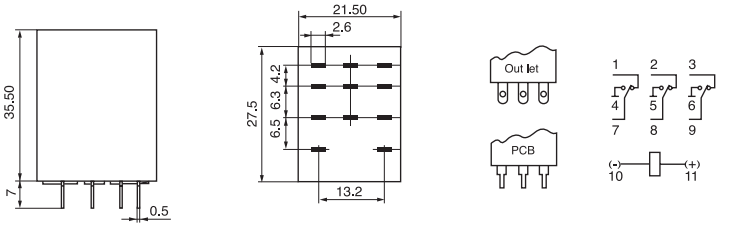
Specifications \ Model		MY2	MY3	MY4
Terminal layout		2Z	3Z	4Z
Contact capacity	AC	5A 250V	5A 250V	3A 250V
	DC	5A 30V	5A 30V	3A 30V
Contact resistance(mΩ)		⩽ 50mΩ	⩽ 50mΩ	⩽ 50mΩ
Insulation resistance(MΩ)		⩾ 100MΩ	⩾ 100MΩ	⩾ 100MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1000VAC
	BCC	1500VAC	1500VAC	1500VAC
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)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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

2. Dimension (mm)

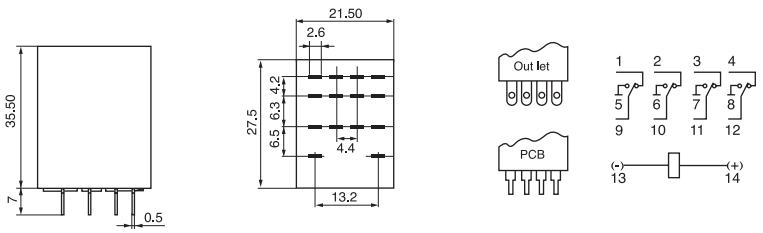
MY2



MY3



MY4



General Relay

LY2

LY3

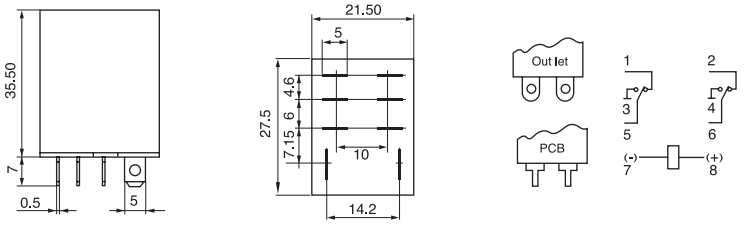
LY4

1. Main Technical Parameter

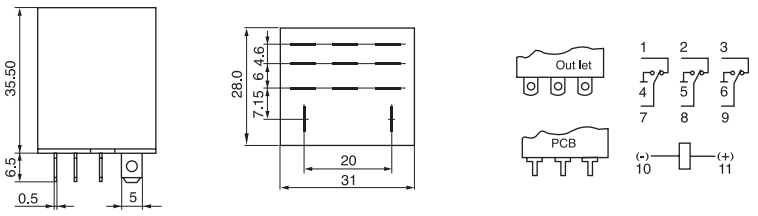
Specifications \ Model		LY2	LY3	LY4
Terminal layout		2Z	4Z	2Z
Contact capacity	AC	10A 250V	10A 250V	10A 250V
	DC	10A 30V	10A 28V	10A 30V
Contact resistance(mΩ)		⩽ 50mΩ	⩽ 50mΩ	⩽ 50mΩ
Insulation resistance(MΩ)		⩾ 100MΩ	⩾ 100MΩ	⩾ 500MΩ
Dielectric strength	BOC	1000VAC	1000VAC	1500VAC
	BCC	1500VAC	1500VAC	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)		10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7
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

2. Dimension (mm)

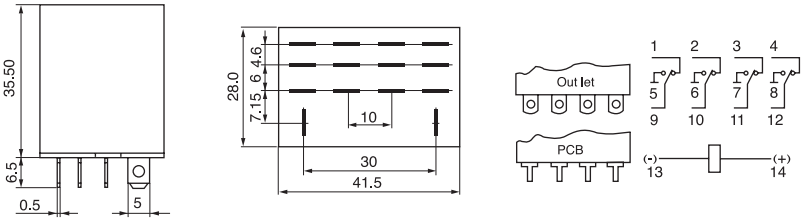
LY2



LY3



LY4



General Relay

1. Main Technical Parameter

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)		10^5	10^5	10^5	10^5
Mechanical life(OPS)		10^7	10^7	10^7	10^7
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

MK2P-I

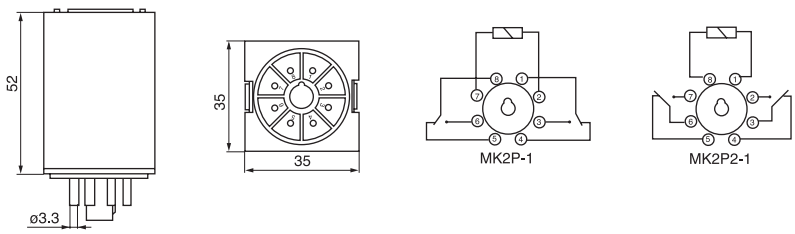
MK3P-I

MK2PN-I

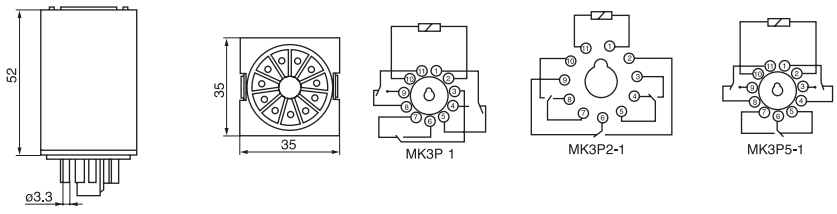
MK3PN-I

2. Dimension (mm)

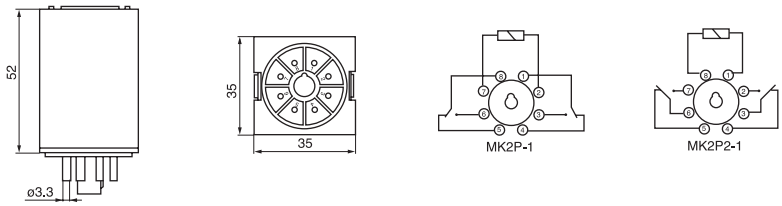
MK2P-I



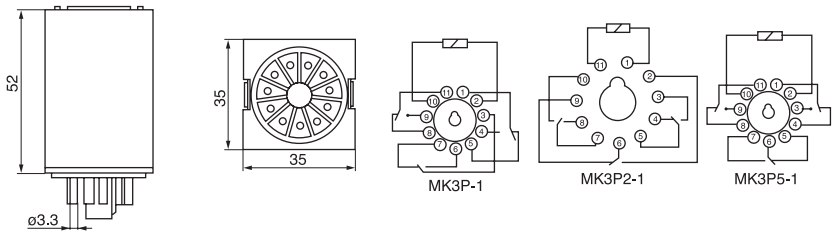
MK3P-I



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	
Specification \ Model		AH3-3			AH3-B			AH3-NB	
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			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	5×10^6 Times			5×10^6 Times			5×10^6 Times	
	Electrical	10^5 Times			10^5 Times			10^5 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 x93.5D		
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 10^7 Times	5 x 10^7 Times		10^7 Times		
	Electrical	10^5 Times	10^5 Times		10^5 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	10^7 Times	10^7 Times	10^7 Times
	Electrical	10^5 Times	10^5 Times	10^5 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	5×10^6 Times			5×10^6 Times		
	Electrical	10^5 Times			10^5 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		

Twin Timer

1. Main Technical Parameter

AH2-N/Y

ATDV-N

ATDV-Y

Classification		Multi range timer	Twin timer	Twin timer
Specification \ Model		AH2-N/Y	ATDV-N	ATDV-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	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 10^6 Times	5 x 10^6 Times	5 x 10^6 Times
	Electrical	10^5 Times	10^5 Times	10^5 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

Digital Timer

1. Main Technical Parameter

ASY-2D

ASY-3D

H3Y- □(ST6P)

Classification		Digital timer	Digital timer	Timer	
Specification \ Model		ASY-2D	ASY-3D	H3Y- □(ST6P)	
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 10^6 Times	5 x 10^6 Times	5 x 10^6 Times	
	Electrical	10^5 Times	10^5 Times	10^5 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	

Timer Relay

1. Main Technical Parameter

ST3PF

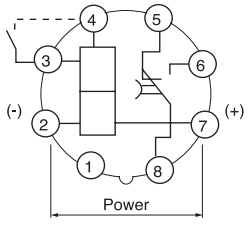
ST3PK

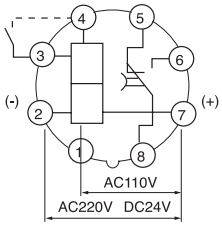
ST3PY

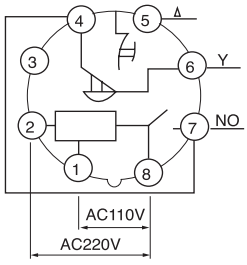
ST3PR

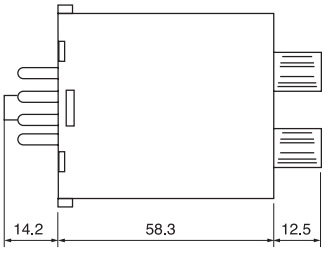
Classification	Timer relay			
Model / Specification	ST3PF	ST3PK	ST3PY	ST3PR
Dimension (mm)	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D	55H x 40.5W x 57.5D
Function	Off delay	Breaking delay	Delaying of star-delta starter	On-off delaying repetitive
Delaying accuracy	1%	1%	0.5%±10ms	1%
Contact 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

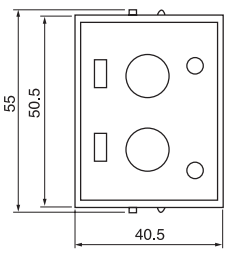
2. Dimension (mm)

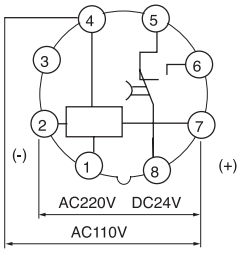












ANDELI

TB-388

Timer Relay

1. Main Technical Parameter

TB-388

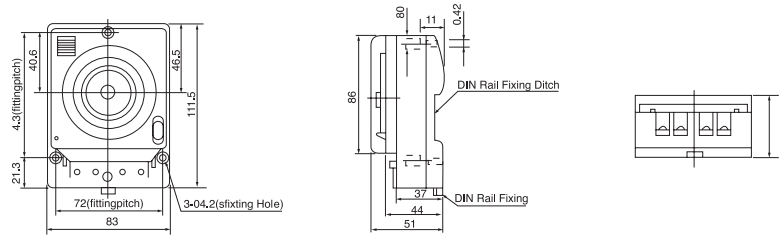
TB-35

SUL181H

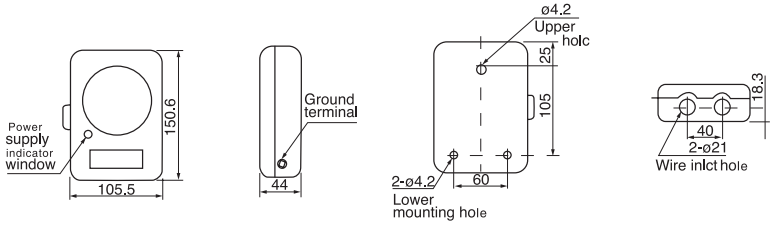
E8

Classification		Timer	Timer	Timer	Timer
Specification \ Model		TB-388	TB-35	SUL181h	E8
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	10^5 Times	10^5 Times	10^5 Times	10^5 Times
	Mechanical	10^7 Times	10^7 Times	10^7 Times	10^7 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

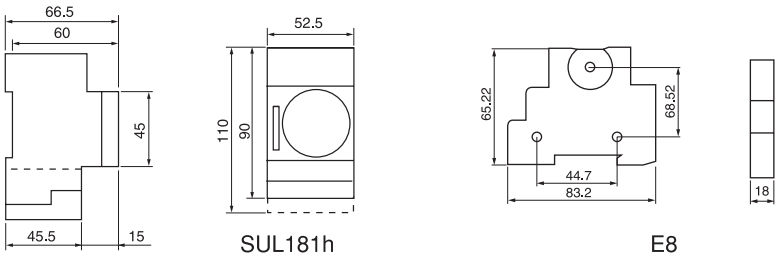
2. Dimension(mm)



TB388



TB35



SUL181h E8

Floatless Level Switch Relay

1. Main Technical Parameter

AFR-1

AFS-GR

PM61F-GR

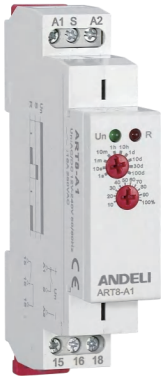
61F-GP-N

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	79.5H x 84W x 127D
Sens-ing 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	5×10^6 times min				
	Electrical	10^5 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



ART8-A1

■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 –□ □/□

- □: Rated control supply voltage: A230:AC230V, W240:AC/DC12V-240V
- □: Number of contacts: 1:1×SPDT, 2:2×SPDT
- □: Function mode: A - Delay ON, B - Delay OFF
- ART8: ART8 Series

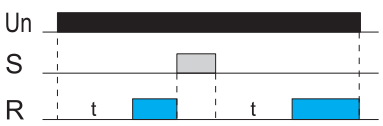
ART8-B1

2.Technical Parameters

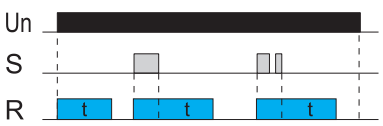
Technical Parameters	ART8-A1/B1	ART8-A2/B2
Function	Delay ON	Delay OFF
Supply terminals	A1-A2	
Voltage range	AC/DC 12-240V(50-60Hz)	
Burden	AC 0.7-3VA/DC 0.5-1.7W	
Voltage range	AC 230V(50-60Hz)	
Power input	AC max.12VA/1.3W	AC max.12VA/1.9W
Supply voltage tolerance	-15%;+10%	
Supply indication	Green 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	1×SPDT	2×SPDT
Current rating	16A/AC1	
Switching voltage	250VAC/24VDC	
Min.breaking capacity DC	500mW	
Output indication	Red LED	
Mechanical life	1×10^6	
Electrical life(AC1)	1×10^7	
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^2)	solid wire max.1×2.5or 2×1.5/with sleeve max.1×2.5(AWG 12)	
Dimensions	90×18×64mm	
Weight	1×SPDT:W240-60g,A230-59g	
	2×SPDT:W240-81g,A230-79g	
Standards	IEC/EN 61812-1,IEC/EN61010-1	

Functions Diagram

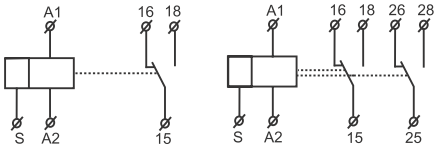
A - Delay ON

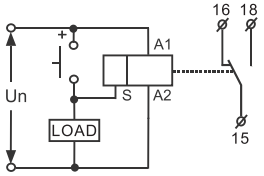


B - Delay OFF



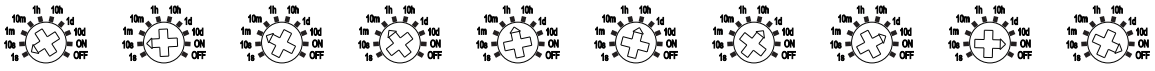
Wiring Diagram





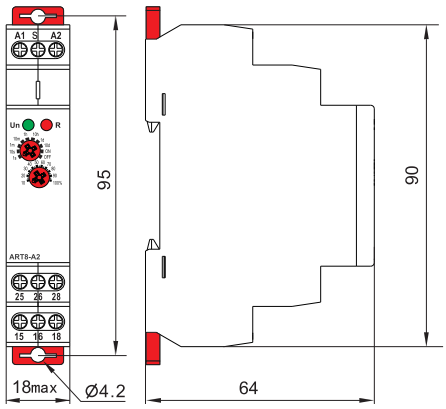
It is possible to connect load between S-A2(e.g contactor , control of light or any other device, without disturbing a correctgunction of relay(load is energized while the switch isON.)

Time Range



0.1 - 1s | 1 - 10s | 6 - 60s | 1 - 10min | 6 - 60min | 1 - 10hr | 0.1 - 1day | 1 - 10day | only ON | only OFF

Dimensions(mm)



Monitoring Voltage Relay

1.General

ARV8-01

■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:

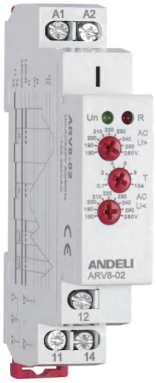
Rated supply voltage code	Rated supply voltage	Supply voltage limits	Range of adjustment
D12	DC 12V	DC 7...20V	DC 9...15V
AD48	AC/DC 24...48V	AC/DC 15...100V	AC/DC 20...80V
AD240	AC/DC 110...240V	AC/DC 50...270V	AC/DC 65...260V
A220	AC 220V	AC 160...270V	AC 180...260V

Function mode:

01 - Over/under voltage in windows mode

02 - Overvoltage Undervoltage

ARV8 Series

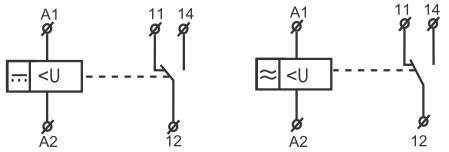


ARV8-02

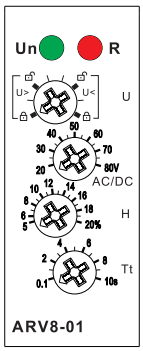
2.Technical Parameters

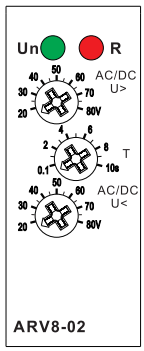
Technical Parameters	ARV8-01	ARV8-02
Function	Monitoring voltage	
Supply terminals	A1-A2	
Rated supply voltage	DC12V,AC/DC24V-48V,AC/DC110V-240V,AC220V	
Rated supply frequency	45Hz-65Hz,0	
Hysteresis	5%-20%	3%fixed
Supply indication	Green LED	
Time delay	Adjustable 0.1s-10s,10%	
Measurement error	≤1%	
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	1×10^7	
Electrical life(AC1)	1×10^6	
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^2)	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



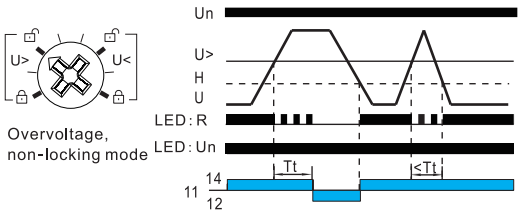
Panel Diagram



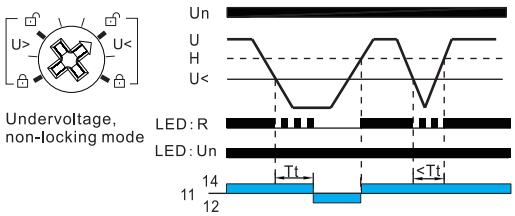


Functions Diagram

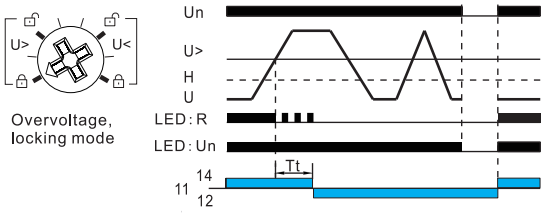
ARV8-01



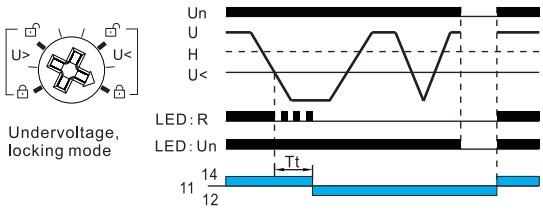
Overvoltage, non-locking mode



Undervoltage, non-locking mode

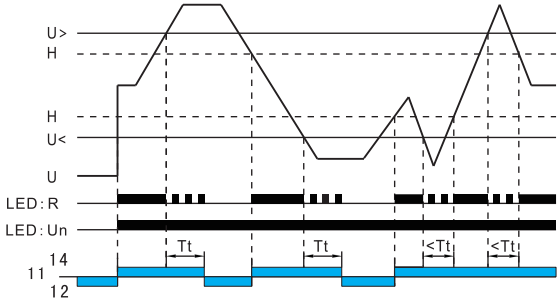


Overvoltage, locking mode



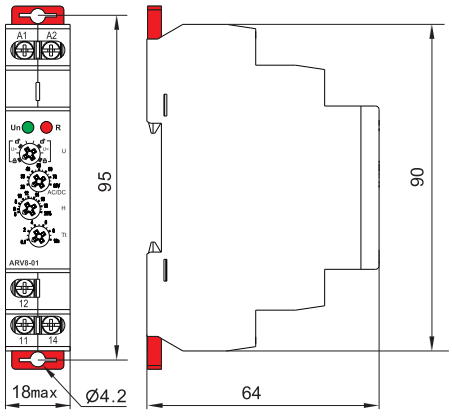
Undervoltage, locking mode

ARV8-02



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

Dimensions(mm)



Timer

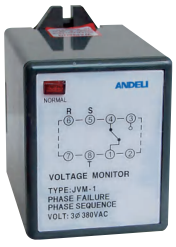
THC8A-1A

THC8A-2A

DH48S

DH48S-S

APR-3



JVM-1

THC8

THC15A

XJ11

Hour Meter

HM-1

HC3L-A

1. Main Technical Parameter

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, 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

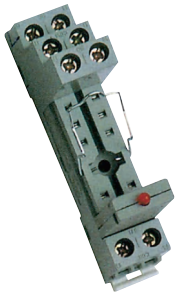
PYF14A

PYF14A-E

PF-083BE

RT704

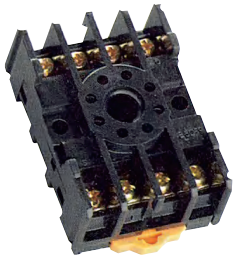
RT624



PSF-14AE/L

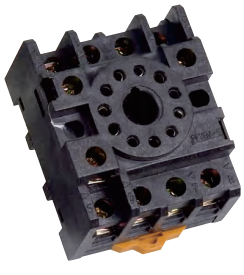
TYPE 90.22

TYPE 90.23



PF085A

PF113A



PF113A-E

PF083A

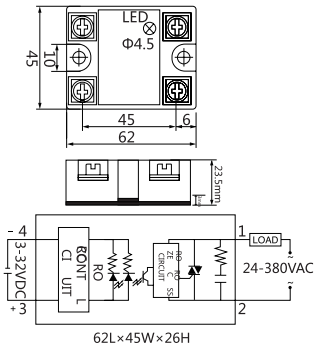
PF083A-E

Single Phase Solid State Relay

SSR-10DA

SSR-□DA（Basis Type）	
Load Current	10A,25A,40A,50A,60A,75A,90A,100A
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

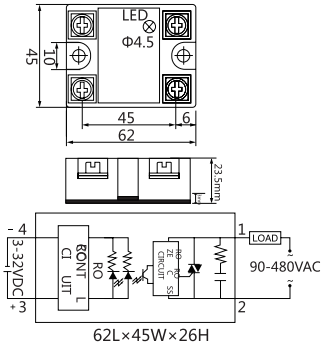
Wiring drawing(mm)



SSR-10DA-H

SSR-□DA-H（High-Voltage Type）	
Load Current	10A,25A,40A,50A,60A,75A,90A,100A
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

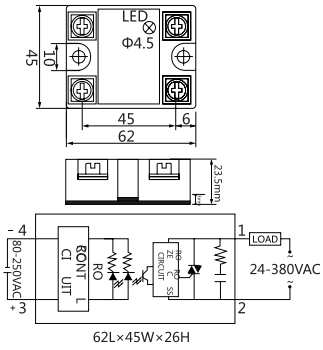
Wiring drawing(mm)



SSR-10AA

SSR-□AA（Basis Type）	
Load Current	10A,25A,40A,50A,60A,75A,90A,100A
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

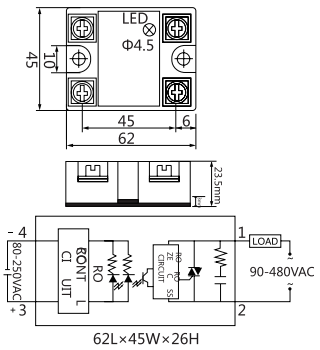
Wiring drawing(mm)



SSR-10AA-H

SSR-□AA-H（High-Voltage Type）	
Load Current	10A,25A,40A,50A,60A,75A,90A,100A
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

Wiring drawing(mm)



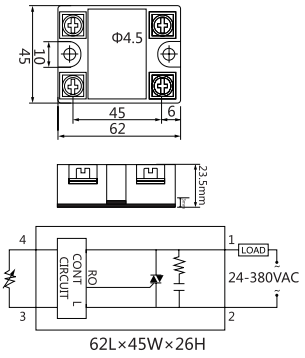
Instruction：1.load current 10A,should install radiator,upwards 40A should sdd fan for force cooling or water cooling.
2.when using Inductive load, please add a varistor at the outputside, the value is 1.6-1.9 mutiple of load voltage.

Single Phase Solid State Relay

SSR-25VA

SSR-□VA（Basis Type）	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	/
Weight	132g

Wiring drawing(mm)

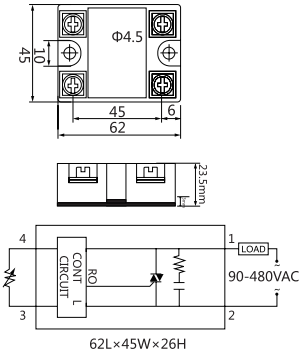


62L×45W×26H

SSR-25VA-H

SSR-□VA-H（High-Voltage Type）	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	/
Weight	132g

Wiring drawing(mm)

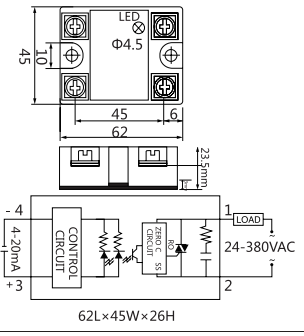


62L×45W×26H

SSR-25LA

SSR-□LA（Basis Type）	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

Wiring drawing(mm)

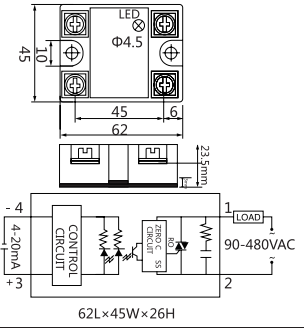


62L×45W×26H

SSR-25LA-H

SSR-□LA-H（High-Voltage Type）	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	132g

Wiring drawing(mm)



62L×45W×26H

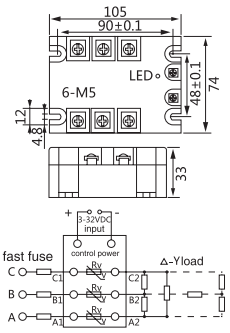
Instruction：1.load current 10A,should install radiator,upwards 40A should sdd fan for force cooling or water cooling.
2.when using Inductive load, please add a varistor at the outputside, the value is 1.6-1.9 mutiple of load voltage.

Three Phase Solid State Relay

MJGX-3 D4810A

MJGX-3 D48□	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	340(460)g

Wiring drawing(mm)

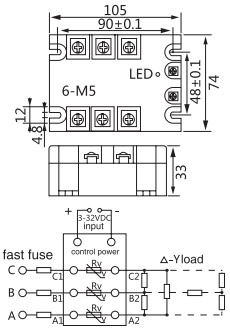


105.0L×74.0W×33.0H

MJGX-3 D4860A

MJGX-3 D48□Z（Bnganced Type）	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	480g

Wiring drawing(mm)

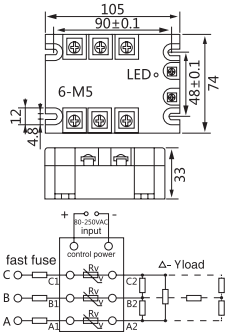


105.0L×74.0W×33.0H

MJGX-3 A4810A

MJGX-3 A48□	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	340（460）g

Wiring drawing(mm)

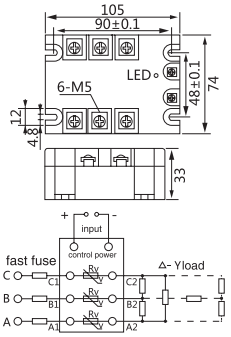


105.0L×74.0W×33.0H

MJGX-3 A48100A

MJGX-3 A48□	
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℃ ~+75℃
Mounting Methods	Fixed by screw bolt
The work instructions	LED
Weight	480g

Wiring drawing(mm)



105.0L×74.0W×33.0H

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

ADC3 Series AC Contactor

ADC3-1811

1.Application

ADC3 series AC contactors (hereinafter referred to as contactors) are mainly used in circuits with a rated operating voltage of up to 690V at 50Hz/60Hz and a rated operating current of up to 95A at a rated operating voltage of 380V (or 400V) under the AC-3 use category, for remote switching and breaking of circuits, and can be combined with suitable thermal overload relays to form electromagnetic starters to protect The contactors are suitable for the frequent starting and control of AC motors.

ADC3 series contactors comply with IEC60947.4 and GB/T 14048.4 standards.

2.Types and meaning

AD	C	3	-	□	-	11
1	2	3		4		5

1.Company code
2.AC Contactor
3.Design serial number
4.Basic specification code in 380V (or 400V), AC-3 in rated operating current values
5.Auxiliary contact:1NO+1NC

ADC3-2511

3.Normal operating conditions and installation conditions

3.1 Ambient air temperature: -5℃ to +40℃, with an average value not exceeding +35°C over a 24-hour period.

3.2 Altitude: not more than 2000m.

3.3 Atmospheric conditions: Atmospheric relative humidity not exceeding 50% at +40°C, higher relative humidity at lower temperatures, monthly average minimum temperature not exceeding +25°C in the wettest month, monthly average maximum relative humidity not exceeding 90% in that month, and taking into account condensation on the product surface due to temperature changes.

3.4 Pollution class: Class 3.

3.5 Installation category: Class III.

3.6 Installation conditions: the inclination of the installation surface to the vertical surface is not greater than ±5°; 3.7 Shock and vibration: The product should be installed and used in a place free from significant shaking, shock and vibration.

ADC3-9511

4.Main parameters and technical performance

Table 1

Type			ADC3-06	ADC3-09	ADC3-12	ADC3-18	ADC3-25	ADC3-32
Rated working current A	380V (400V)	AC-3	6	9	12	18	25	32
		AC-4	2.6	3.5	5	7.7	8.5	12
	660V (690V)	AC-3	3.8	6.6	8.9	12	18	22
		AC-4	1	1.5	2	3.8	4.4	7.5
Rated thermal current A			16	20	20	25	32	40
Max connection current A		380/400V	72	108	144	216	300	384
		660/690V	60	90	120	180	250	320
Max disconnection current A		380/400V	60	90	120	180	250	320
		660/690V	48	72	96	144	200	256
Controlled three-phase squirrel-cage motor power kW		220/230V	1.4	2.2	3	4	5.5	7.5
		380/400V	2.2	4	5.5	7.5	11	15
		660/690V	3	5.5	7.5	10	15	18.5
Operating frequency times/hour	Electrical life	AC-3	1200					600
		AC-4	300					
	Mechanical life		3600 or 7200					
Electrical life (10^4times)		AC-3	120					100
		AC-4	25					
Mechanical life (10^4 times)			1600				1000	
Type of fuse to be used			NT00-16	NT00-20	NT00-20	NT00-25	NT00-32	NT00-40
Rate impulse withstand voltage kV			6					
Rated insulation voltage V			690					

Table 1 continued

Type			ADC3-38	ADC3-40	ADC3-50	ADC3-65	ADC3-80	ADC3-95
Rated working current A	380V (400V)	AC-3	38	40	50	65	80	95
		AC-4	14	18.5	24	28	37	44
	660V (690V)	AC-3	22	34	39	42	49	49
		AC-4	8.9	9	12	14	17.3	21.3
Rated thermal current A			50	50	60	80	110	110
Max connection current A		380/400V	456	480	600	780	960	1140
		660/690V	380	400	500	650	800	950
Max disconnection current A		380/400V	380	400	500	650	800	950
		660/690V	304	320	400	520	640	760
Controlled three-phase squirrel-cage motor power kW		220/230V	8.8	11	15	18.5	22	25
		380/	18.5	18.5	22	30	37	45
		400V660/	18.5	30	33	37	45	45
Operating frequency times/hour	Electrical life	690V	600					
		AC-3	300					
	Mechanical life		3600or7200					
Electrical life (10^4times)		AC-3	100				80	
		AC-4	25	20			13	
Mechanical life (10^4 times)			1000	900			650	
Type of fuse to be used			NT00-50	NT00-50	NT00-63	NT00-80	NT00-100	NT00-125
Rate impulse withstand voltage kV			6				8	
Rated insulation voltage V			690					

4.1 The protection type of the contactor is a "2" coordinated fit, the contactor should not be hazardous to people and equipment under short circuit conditions. The contacts should be welded but should be able to continue to be used.

4.2 Basic parameters for auxiliary contacts (see Table 2)

4.3 Contactor rated limit short circuit current (see table 3), "q" current is equal to "r" current.

4.4 Contactor coil working voltage Us is AC 24V, 36V, 48V, 110V, 127V, 220(230V), 380V(400V).

4.5 Operation characteristics: The suction voltage is 85%~110%Us; the release voltage is 20%~75%Us.

Table 2

Using category	Rated voltage v	Rated insulation voltage V	Rated thermal voltage A	Rated current A	Control capacity		Rated impulse withstand voltage kV	Fuse to be used
					Turn on	Off		
AC-15	380/	690	10	0.95	3600VA	360VA	4	RT14-10
DC-13	400220/ 230			0.15	33W	33W		

Table 3

AC-3 380/400V rated current Ie (A)	Expected current r (kA)	Power factor COSf
Ie≤16	1	0.95
16<Ie≤63	3	0.90
63<Ie≤125	5	0.70

5.Structural features

5.1 Complete function, the whole series of products can have one normally open and one normally closed auxiliary function at the same time.

5.2 The contactors are characterised by small size, low power consumption, high life expectancy, safety and reliability.

5.3 Auxiliary contact sets, air delay heads, thermal relays and other accessories can be added in a modular installation to form a wide range of derivative products.

5.4 In addition to screw mounting, the contactors can also be mounted on 35mm and 75mm standard rails.

Outline and installation dimensions

Outline and installation dimensions see figure 1,figure,2 and table 4)

Figure 1 ADC3-06~38 series outline and installation dimensions

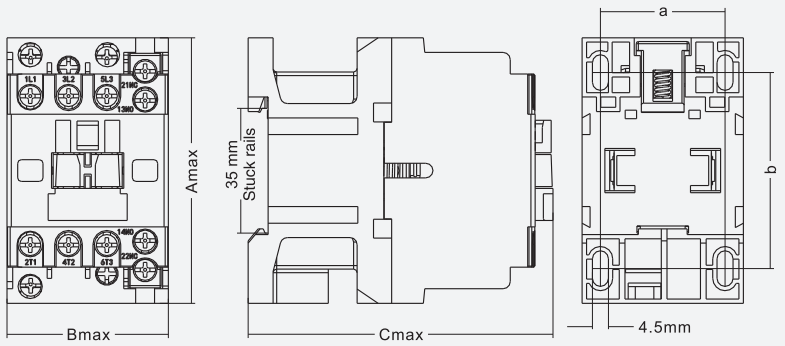


Figure 2 ADC3-40~95 series outline and installation dimensions

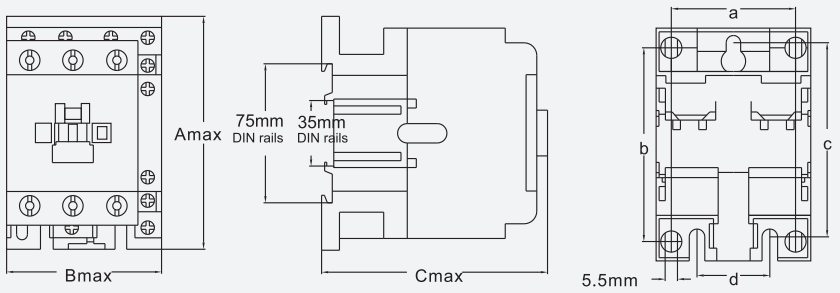


Table 4

Type	Amax	Bmax	Cmax	a	b	c	c
ADC3-06~18	74.5	45.5	86	35	50/60	-	-
ADC3-25~38	83	56.5	97	38/42	50/70	-	-
ADC3-40~65	127.5	74.5	117	59	100/110	105	40
ADC3-80~95	127.5	85.5	125.5	67	100/110	105	40

6.Installation,use and maintenance

6.1 Before installation, please recognize the company's trademark mark.
6.2 and shall check that the rated voltage, current, frequency and auxiliary contacts of the coil are in accordance with the design requirements.
6.3 When installing, it should be installed according to the specified installation conditions, the A1 symbol of the contactor coil terminals should face upwards, in line with human visual habits; the cross-sectional area of the wire connectingthe main circuit should be in line with the size of the rated working current.
6.4 The wiring screws should be tightened, and after checking that the wiring is correct, the main contactor should be put into use only after the main contactor is not charged and the attractor coil is first energised and divided several times to test reliable operation.
6.5 If any abnormal noise is found during use, it may be due to dirt on the pole surface of the iron core, please wipe the pole surface.
6.6 In use, the parts of the product should be checked regularly, the movable part should not be stuck, the fasteners should not be loose, and the parts should be replaced in time if they are damaged.

7.Ordering Instructions

When ordering, it must be indicated that:
7.1 The complete type of the contactor.
7.2 The rated operating voltage and frequency of the coil.
7.3 Quantity to be ordered.
7.4 If standard rails are to be ordered, this should be indicated separately; example: ADC3 - 0611
Coil voltage 24V, 50Hz, 16 units.

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

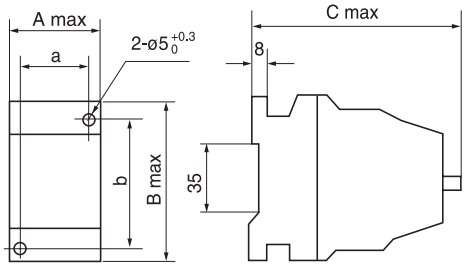
CJX1-45~85

2. Specification

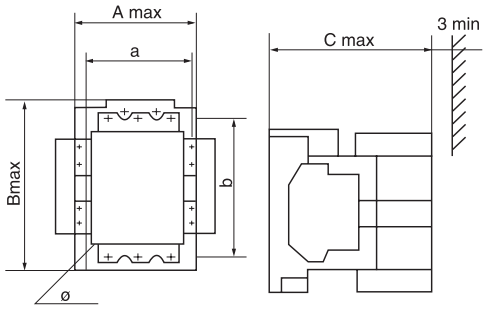
Type		CJX1-9 CJX1-12	CJX1-16 CJX1-22	CJX1-32	CJX1-45 CJX1-63	CJX1-75 CJX1-85	CJX1-110 CJX1-140	CJX1-170 CJX1-205	CJX1-250 CJX1-300	CJX1-400 CJX1-475
Mechanical endurance(x10^6)		10	10	10	8	8	8	8	8	8
Conventional thermal current(A)		20	30	45	80	100	160	210	300	400/550
Rated insulation voltage(V)		660	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 (I/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 (x10^6)	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)Ue								
Power consumption of coil	Atracting (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)

Table 1

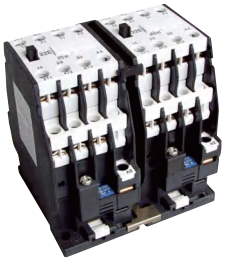
Type	A max	B max	C max	a	b
CJX1-9,12	45	78.5	104(90)	35+0.31	60+0.37
CJX1-16,22	46	85	114	35+0.31	75+0.37
CJX1-32	74	88	108	50+0.31	75+0.37

CJX1-170~475

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-N Mechanical Interlocking Contactor



CJX1-09~32N

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

CJX2-0910

CJX2-3210

CJX2-5011

CJX2-9511

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.

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 ($x10^4$)	100	100	100	100	80	80	60	60	60	60
	AC4 ($x10^4$)	20	20	20	20	20	15	15	15	10	10
Mechanical life ($x10^4$)		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 ($x10^4$)	200	60	60	50	50	50	30	30	20
	AC4 ($x10^4$)	15	15	15	15	15	15	8	8	5
Mechanical life ($x10^4$)		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)

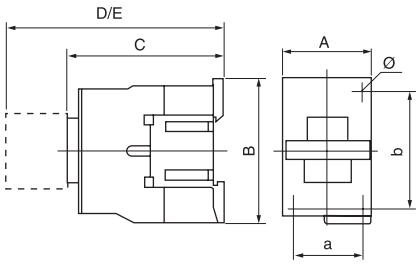
CJX2-D115

CJX2-D170

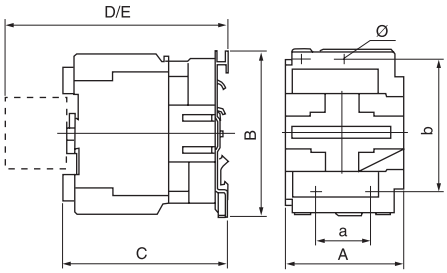
CJX2-D410

CJX2-D475

CJX2-D620

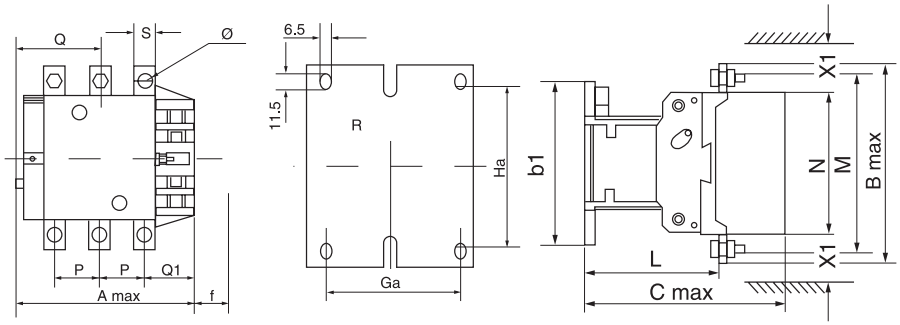


CJX2-D09~32



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	1 - - 1
	F4-01	

Appellation		
Auxiliary instantaneous contactor block,contactor II	F4-11	1 1 2 0 0 2
	F4-20	
	F4-02	

Appellation		
Auxiliary instantaneous contactor block,contactor IV	F4-40	4 0 3 1 2 2 1 3 0 4
	F4-31	
	F4-22	
	F4-13	
	F4-04	

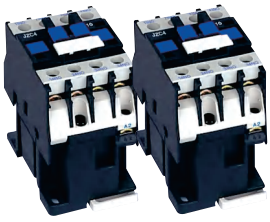
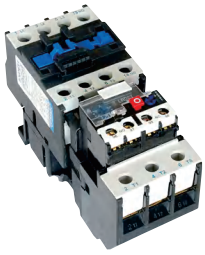
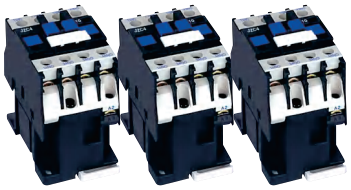
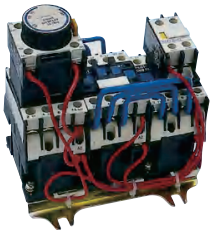
Appellation		
Auxiliary instantaneous contactor block,contactor IV	F4-40	4 0 3 1 2 2 1 3 0 4
	F4-31	
	F4-22	
	F4-13	
	F4-04	

Appellation	Type	
Side-mounted auxiliary module	F8-11	1 - - 1
	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
 +	 Delay timer →	 Time-delay contactor
 +	 Mechanical interlock →	 Reversing contactor
 +	 Thermal relay →	 Magnetic starter
 +	 Current-limited auxiliary block →	 Changeover capacitor contactor
 +	 +  Delay timer Auxiliary block →	 Star-delta starter

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 ($x10^4$)	AC-3	100	100	100	100	80
	AC-4	20	20	20	20	20
Mechanical endurance ($x10^6$)		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)	Atracting	7	7	7	7	7	7	20
	Starting	70	70	70	70	70	70	200
Rated insulation voltage of auxiliary contacts (V)	690	690	690	690	690	690	690	690
Conventional thermal current of auxiliary contacts (A)	10	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 (x10^4)	AC-3	80	60	60	60	60
	AC-4	15	15	15	10	10
Mechanical endurance (x10^6)		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)	Atracting	20	20	20	20	22	22
	Starting	200	200	200	200	300	300
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						

3. Standard Control Circuit Voltage

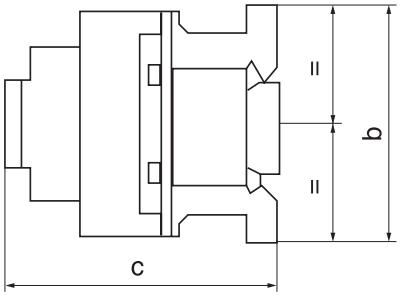
Volts	24	42	48	110	220	230	240	380	400	415	440	500	660
50Hz	B5	D5	E5	F5	M5	P5	U5	Q5	V5	N5	R5	S5	Y5
60Hz	B6	D6	E6	F6	M6	-	U6	Q6	-	-	R6		
50/60Hz	B7	D7	E7	F7	M7	P7	U7	Q7	V7	N7	R7		

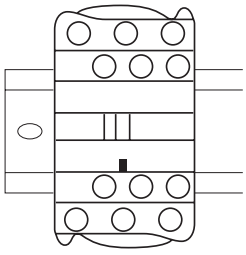
4. Characteristic

Contactor and other auxiliary blocks.

Contactor	Auxiliary Blocks	Relative Products
 +	 Delay timer →	 Time-delay contactor
 +	 Thermal relay →	 Magnetic starter
 +	 Auxliary block →	 AC Contactor

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

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 conntrol of distrib ution 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 x10^4	Me-chanical life x10^4
		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-F225

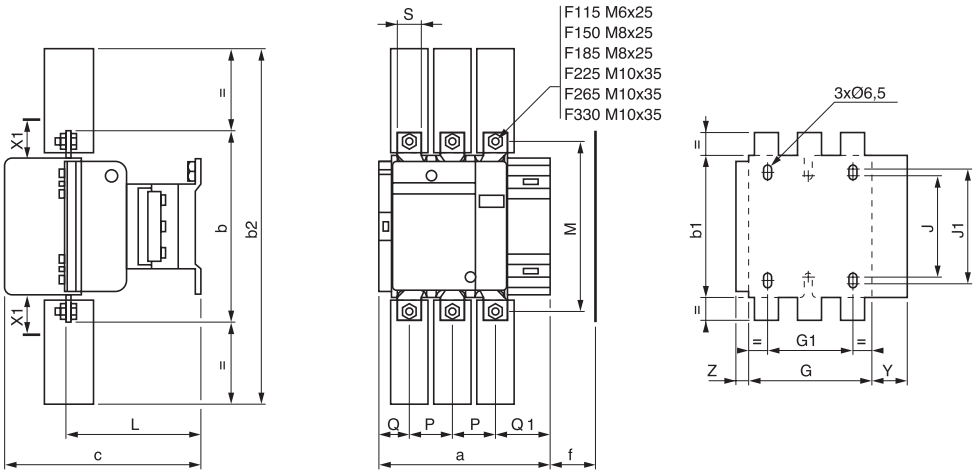
CJX2-F265

CJX2-F400

CJX2-F1154

CJX2-F5004

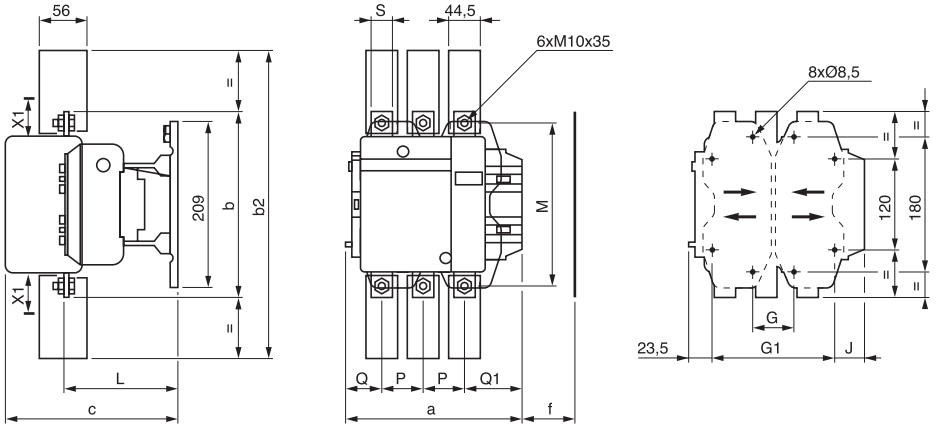
3. Outline and Mounting Dimension (mm)



CJX2-F115 to F330

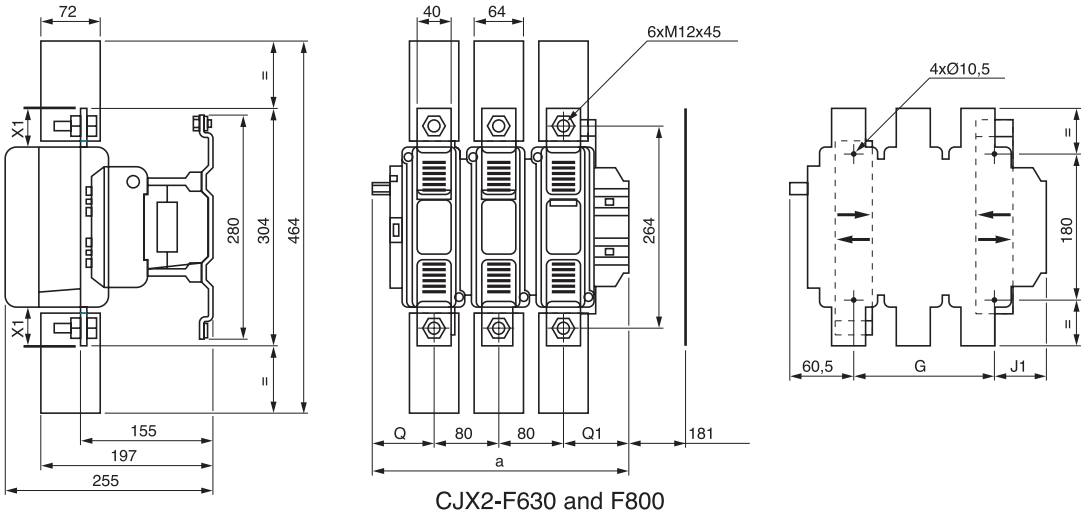
CJX2-		a	b	b1	b2	c	f	G	G1	J	J1	L	M	P	Q	Q1	S	X1	Y	Z
F115	3P	163.5	162	137	265	171	131	106	80	106	120	107	147	37	29.5	60	20	26	44	13.5
	4P	200.5	162	137	265	171	131	143	80	106	120	107	147	37	29.5	60	20	26	44	13.5
F150	3P	163.5	170	137	301	171	131	106	80	106	120	107	150	40	26	57.5	20	34	44	13.5
	4P	200.5	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



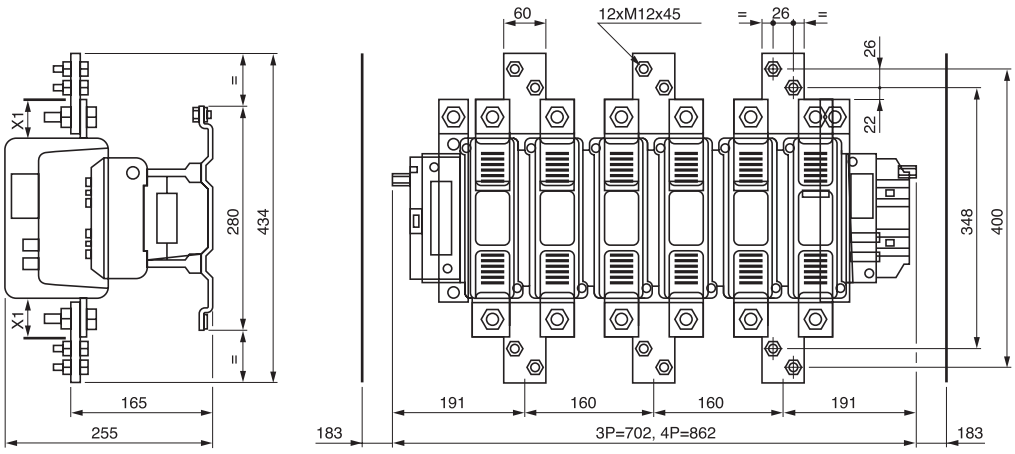
CJX2-F400 and F500

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-F630 and F800

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



CJX2-F780

4. Bobbin of AC Contactor CJX2-F

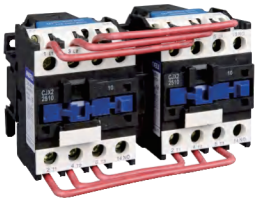
Type	Used for contactor
LX1-FF	CJX2-F115~F150
LX1-FG	CJX2-F185~F225
LX1-FH	CJX2-F265~F330
LX1-FJ	CJX2-F400
LX1-FK	CJX2-F500
LX1-FL	CJX2-F630/CJX2-F800
LX1-FX	CJX2-F780

CJX2-N Mechanical Interlocking Contactor

1. Application

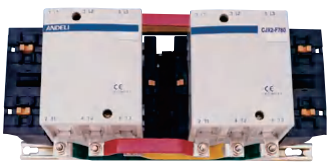
CJX2-N mechanical interlocking contactor is suitable for using in the circuits up to the rated voltage 660V AC 50/60Hz, current 620A, for convertible controlling the motor. This mechanical interlocking device ensures contact changeover of the two convertible contactors. It conforms to IEC60947-4-1 standard.

CJX2-09~12N



CJX2-25~32N

CJX2-40~95N



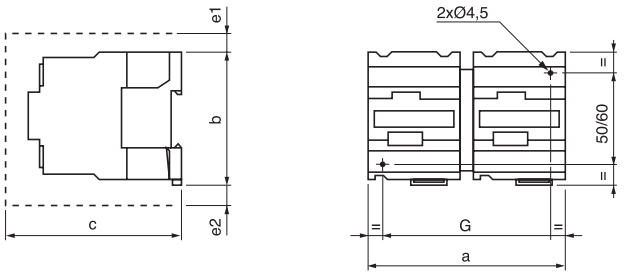
CJX2-115~800N

2. Specification

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

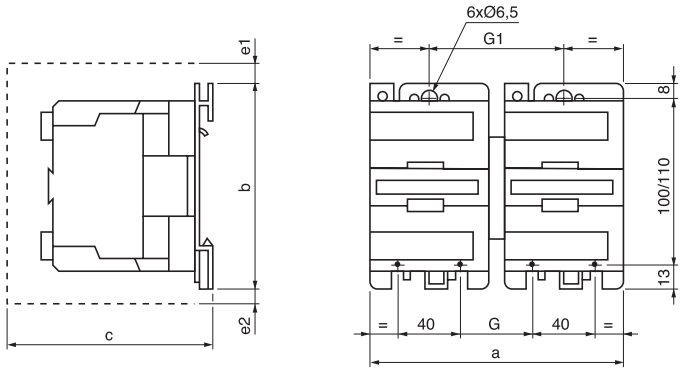
3. Outline and Mounting Dimension (mm)



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

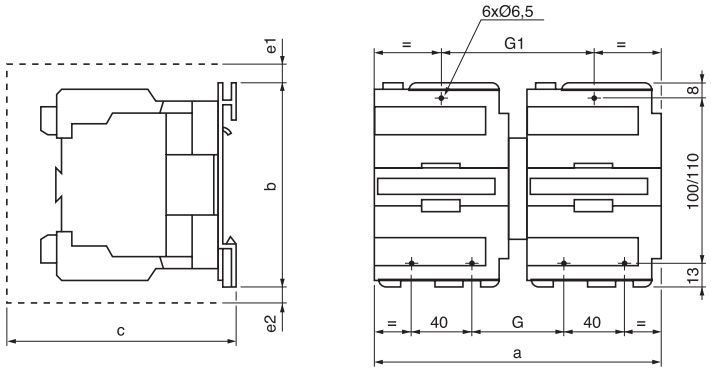
c, e1 and e2 including cabing



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 cabing

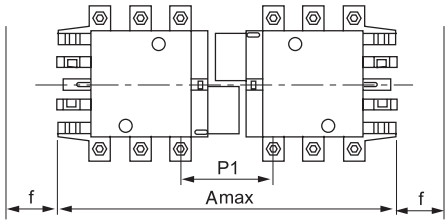


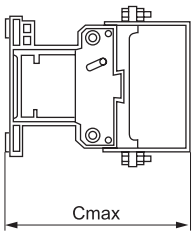
CJX2-80N~95N

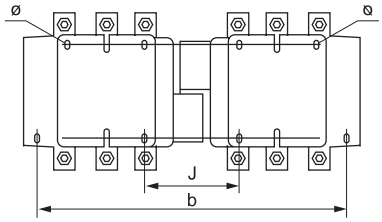
CJX2-N(3-pole)	a	b	c	e1	GG	1
80N, 95N	182	127	158	13	57	90
CJX2-N(4-pole)	a	b	c	e2	GG	1
80N	207	127	158	20	71	11

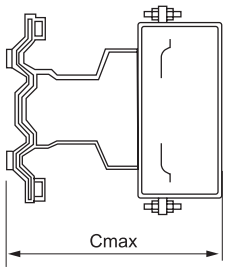
c, e1 and e2 including cabing

Horizontal mounting



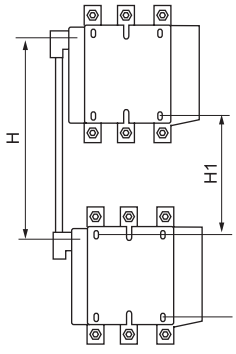




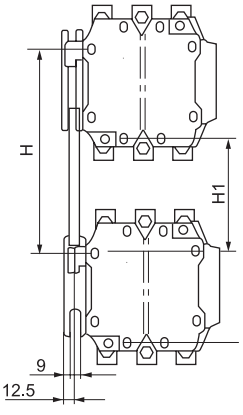


Type	Amax	J	P1	f	b	ϕ	Cmax
CJX2-F115N	350	71	77	131	330	6.5	182
CJX2-F1154N	425	105	77	131	370	6.5	182
CJX2-F150N	350	71	71	131	330	6.5	182
CJX2-F1504N	425	105	71	131	370	6.5	182
CJX2-F185N	350	78	71	130	330	6.5	193
CJX2-F1854N	430	114	71	130	370	6.5	193
CJX2-F225N	350	78	55	130	330	6.5	193
CJX2-F2254N	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

1. Application

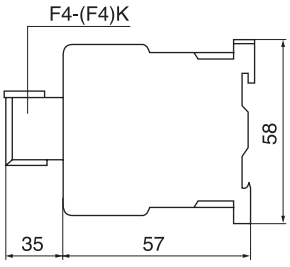
CJX2-K06, 09, 12

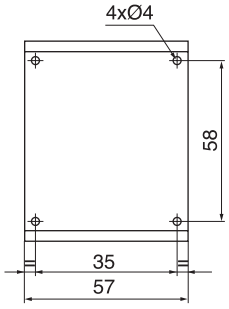
CJX2-K series AC contactor is suitable for use in the circuit up to the rate and frequent starting, controlling the AC motor. The addition of auxiliary contact group to the contactor, combined with the proper thermal relay, can act from protect the circuit from overload. It conforms from IEC60947-4-1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

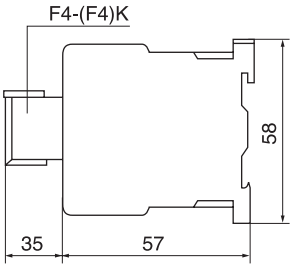
2. Specification

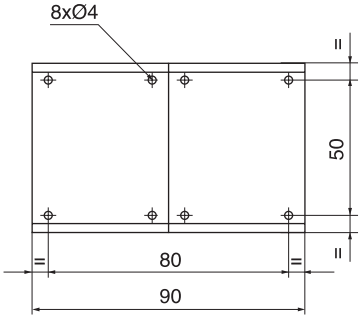
Type			CJX2-K06	CJX2-K09	CJX2-K12
Rated working voltage(V)			660(690)		
Rated working current(A)	380V	AC-3	6	9	12
		AC-4	2.6	3.5	5
Rated heat current(A)			16	20	20
The max current when turn on(A)		380V	60	90	120
		660V	72	108	144
The max current for turn off(A)		380V	48	72	96
		660V	60	90	120
Three phases 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($\times10^4$)	AC-3	1200		
		AC-4	300		
Electrical lfie	AC-3		$5x10^6$		
	AC-4		$1x10^5$		
Mechanical life			$3x10^6$		

3. Outline and Mounting Dimension (mm)





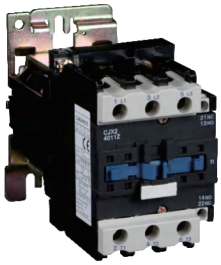




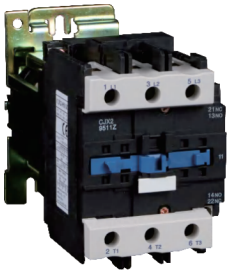
CJX2-Z Series DC Contactor

CJX2-09~18Z

CJX2-25~32Z



CJX2-40~65Z



CJX2-80~95Z

1. Application

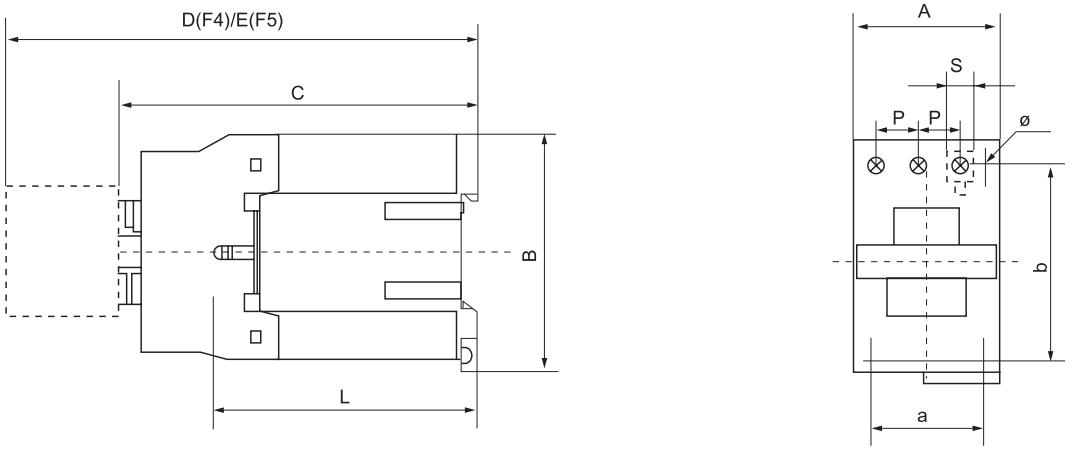
CJX2-Z series DC operated contactor is suitable for use in the circuits up to rated voltage 660V DC 50Hz/60Hz, and in rated current 9-95A in DC-3/380V load circuits. For remote controlling circuit making, breaking and frequent starting DC motors. It can also combine with the auxiliary contact group,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

2. Specification

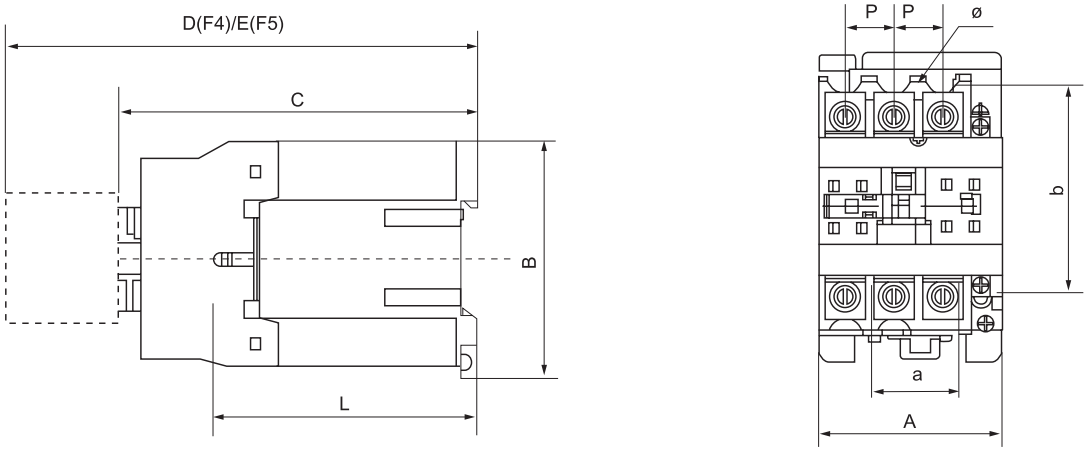
Type			CJX2-09Z	CJX2-12Z	CJX2-18Z	CJX2-25Z	CJX2-32Z
Rated working current(A)	380V	AC3	9	12	18	25	32
		AC4	3.5	5	7.7	8.5	12
	660V	AC3	6.6	8.9	12	18	21
		AC4	1.5	2	3.8	4.4	7.5
Rated heat current(A)			25	25	32	40	50
Controllable power(kW)	220/240V		2.2	3	4	5.5	7.5
	380/400V		4	5.5	7.5	11	15
	415V		4	5.5	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^3)	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 $x10^4$			1000				800
Electrical life	AC3$x10^4$		100				80
	AC4 $x10^4$		20				
Operating frequency	Electri-cal life	AC3 $x10^4$	1200				600
		AC4 $x10^4$	300				
	Mechanical life $x10^4$		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^3)	DC contactor		128x175x81	128x175x87	128x175x87	128x183x87	128x183x8
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	660	660	660	660
Mechanical life $x10^4$			800	800	800	600	600
Electrical life	AC $x10^4$		80	80	80	60	60
	AC4 $x10^4$		15	15	15	10	10
Operating frequency	Electri-cal life	AC3 $x10^4$	600	600	600	600	600
		AC4 $x10^4$	300	300	300	300	300
	Mechanical life $x10^4$		3600	3600	3600	3600	3600
Rated controlled voltage(V)			24-660	24-660	24-660	24-660	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

CJ19-25~32

CJ19-43

CJ19-63~95

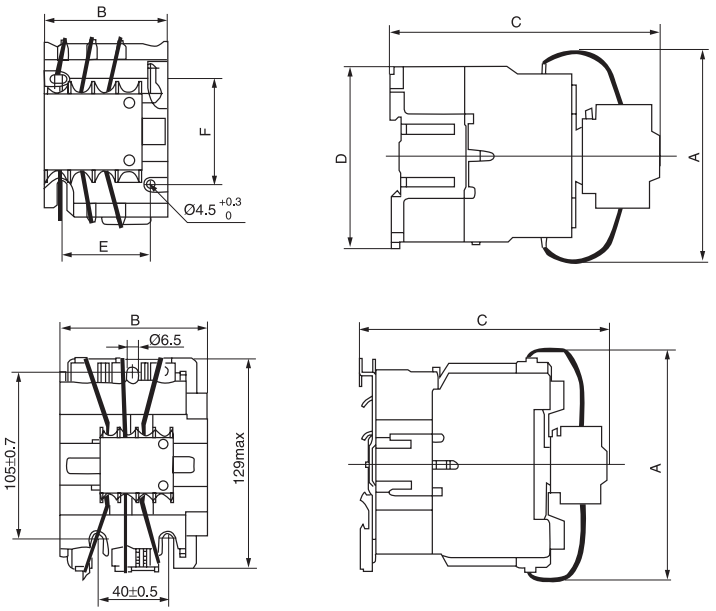
1. Application

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.

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	10	15	22
	380/400V	12	18	20	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	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

CJX5-9~22

CJX5-32

CJX5-40~65

CJX5-75~85

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.

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

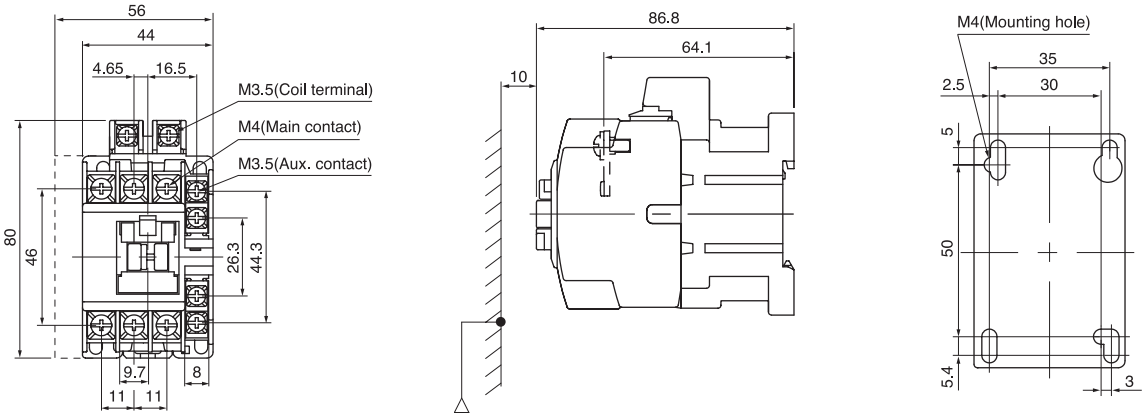
3. Auxiliary for AC Contactor CJX5

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

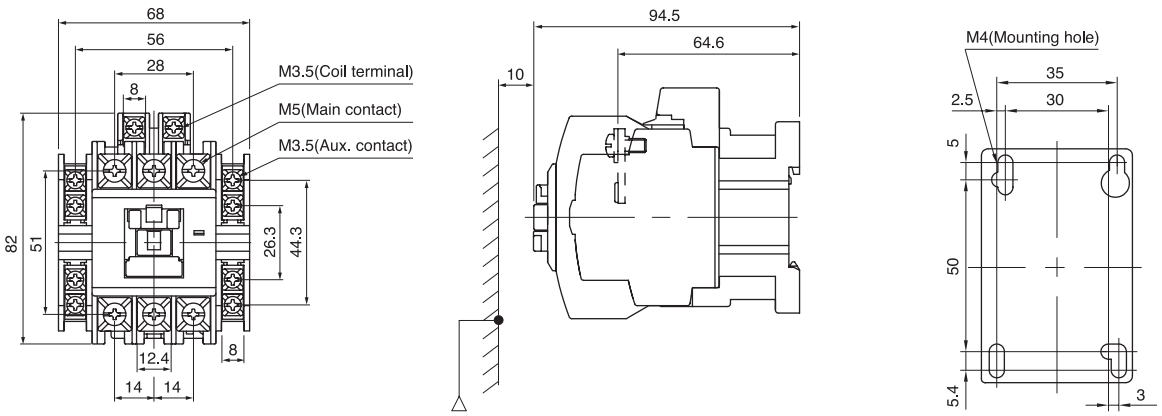
Type			CJX5-220	CJX5-300	CJX5-400	CJX5-600	CJX5-800
AC1 duty			260	350	420	660	900
AC3 duty		200~240V	75kW250A	90kW105A	125kW400A	190kW630A	220kW800A
		380~440V	132kW250A	160kW105A	220kW400A	330kW630A	440kW800A
		500~550V	132kW200A	160kW85A	225kW350A	330kW500A	550kW720A
		690V	132kW150A	200kW85A	250kW300A	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)

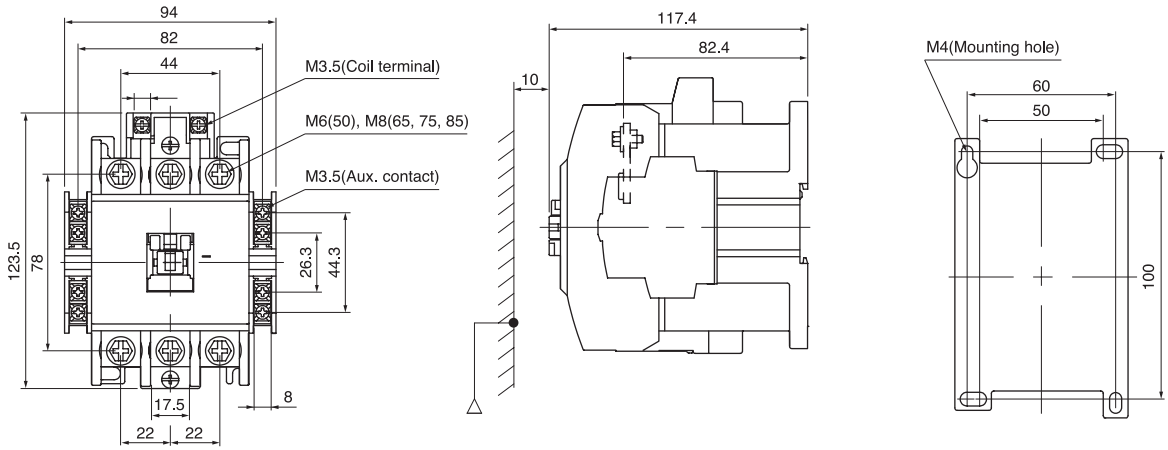


CJX5-9~22

4. Outline and Mounting Dimension (mm)



CJX5-32~40



CJX5-50~85

Home Contactor

LNC1-25 2P

LNC1-25 4P

LNC1-63 2P

LNC1-63 4P

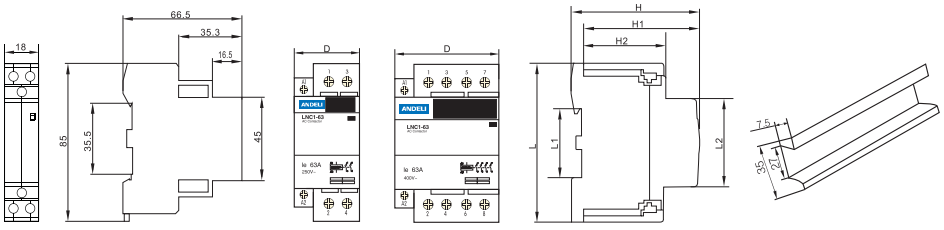
1. Application

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 t0 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.

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			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

ADS1 Series Star Delta Starter

ADS1-110

1. Application

ADS1 series star delta starter (hereinafter referred to as the starter) is suitable for three-phase squirrel cage induction motors with AC 50Hz, rated voltage of 380V/400V, and rated working current of up to 265A (phase current when the starter is delta connected). It controls the starting, running, and stopping of the stator winding from star to delta to reduce the impact of starting current and motor starting on the transmission network.The starter adopts a modular design and integrated structure, integrating contactors, intelligent controllers, and auxiliary contacts. The intelligent controller can automatically control the starter to run according to the predetermined program, thereby completing the star delta starting of the motor.

2. Model Designation

AD S 1 - □ / □ □ □ □ □

1 2 3 4 5 6 7 8 9

1.Enterprise code

2.Intelligent starter

3.Design code

4.Shell level current (Annotation 1)

5.Rat ed current (Annotation 2)

6.Functional mode (Annotation 3)

7.Control power supply voltage(Annotation 4)

8.Auxiliary contacts： F11、Z11、F22(F11+Z11)

9.Outs ide cabinet operations(Annotation5)

ADS1-110S

Annotation：

(1)Shell level current(A)：

265/110、50

(2)Rated current (A)：

265、225、185、160、120、110、100、95、85、75、65、50、40、32、25、18。

(3)Functional mode：

无（Star Triangle Start）；

S（Mechanical emergency）；

Z（Intelligent control type）。

(4)Control power supply voltage（V）：

220(Not labeled)

(5)Outside cabinet operations：

G22： Regular type (Handle length122MM);

G52： Regular type (Handle length152MM) ;

GS： Lock type (Handle length140MM)。

ADS1-110Z

3. Normal working and installation conditions

3.1 Surrounding Air Temperature:

The upper limit value shall not exceed+40 ℃, the lower limit value shall not be lower than -5 ℃, and the average value within 24 hours shall not exceed+35 ℃.Note: When the ambient tempe rature exceeds the range, users should consult with our factory.

3.2 Altitude:

The installation location shall have an altitude not exceeding 2000 meters.

3.3 Pollution level: 3 Level

3.4 Installation Environment:

No abnormal vibration or impact.3

.5 In stallation conditions:

The vertically installed starter has an upward power terminal and a downward load terminal; The inclination angle between the installation surface and the vertical surface of all starters shall not exceed ± 5 °, which does not affect their performance.3.6 Fixation method:

Screw installation.

1. Main technical parameters and functions

4.1 Parameters of the starter

Parameter		Unit	ADS1 Series														
Rated working current Ie(AC-3)		A	18	25	32	40	50	65	75	85	95	100	110	120	160	185	225	265
Rated working voltage Ue		V	380V/400V														
Rated insulation voltage Ui		V	690					800						1000			
poles		P	3														
Electrical lifespan		million time	60														
Mechanical lifespan		million time	600														
Manual type (operating mecha nism) mechanical life		time	10000														
Controllable three-phase motor operating power (AC-3)		KW	11	18.5	22	30	37	45		55		75	90	110	132	160	185	235
Supporting fuses		A	20	32		63	80	100				125		160	200	250	300	355
Ability of wiring terminals to connect wires		mm²	16					35	50			75			150			
Coil parameters	Rated control voltage (Us)	V	200V/230V														
	pull-in voltage	%US	80%~110%														
	Release voltage	%US	20%~75%														
	Coil suction	VA	230														
	Maintain power	VA	19					32						92			

4.2 The function of the starter

Function	Automatic	SMechanical emergency	ZMultifunctional
Star Triangle Conversion	●	●	●
Dual speed	□	O	O
Reversible	□	O	O
Protagonist's movement	□	O	O
Mechanical emergency (manual forced start)	O	●	O
Short circuit linkage protection	O	O	●
overload protection	O	O	●
Locked rotor protection	O	O	●
Phase loss protection	O	O	●
Three-phase imbalance protection	O	O	●
Overvoltage and undervoltage protection	O	O	●
Trouble display	O	O	●
Fault alarm	O	O	●
Fault records	O	O	●
Adjustable parameters	O	O	●
Status display	O	O	●
Fire protection function	O	O	□
Communication function	O	O	□
Residual current protection	O	O	□
Life cycle management	O	O	●

*O represents not available, □ represents optional, and ● represents standard.

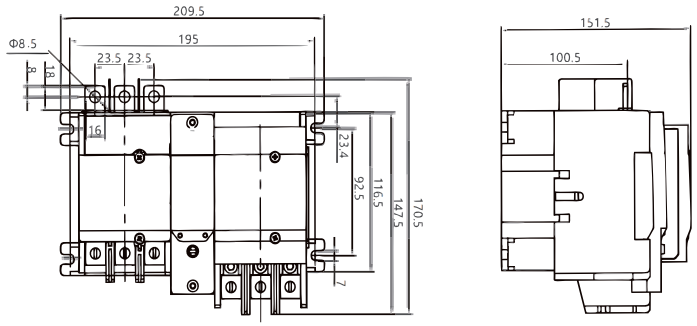
5. Application

Star delta starter: When the control coil is energized with a 220V control voltage, the main contactor of the product closes, forming a star circuit with the star contactor. The motor starts running by reducing voltage. When the operating time reaches the set s witching time and the motor speed approaches normal speed, the main contactor automatically disconnects and then simultaneously closes with the angle contactor, forming a triangular circuit, and the motor runs at full voltage.

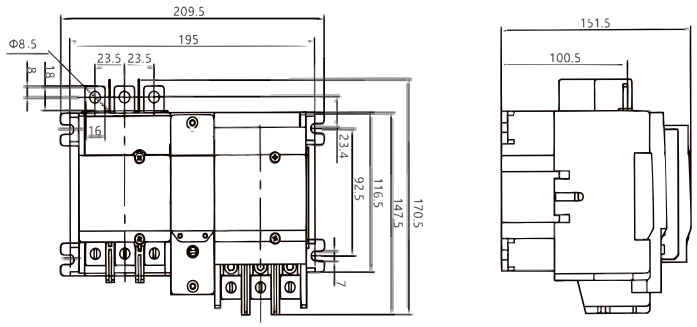
Mechanical emergency: When the signal line or the control line of the fire pump control box malfunctions, making it impossible to automatically or manually start the fire pump, the mechanical emergency start device on the fire pump control box door can be used to manually close the main and corner contactors of the fire pump to start the fire water pump.

6. Appearance and installation dimensions

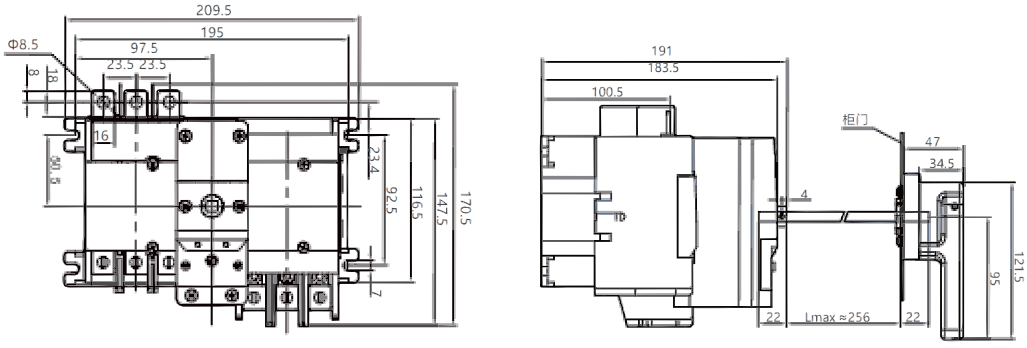
ADS1-110 65A、75A、85A、95A Automatic Type



ADS1-110 100A、110A Automatic Type



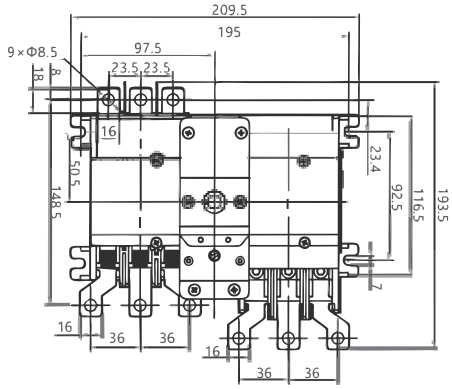
ADS1-110S 65A、75A、85A、95A Automatic mechanical emergency Type

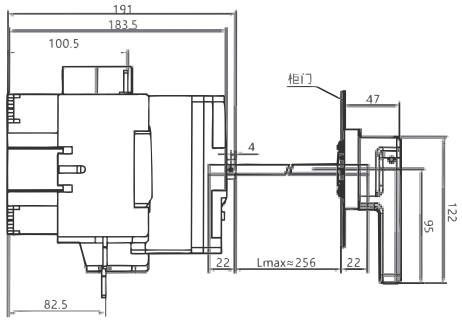


(Handle A with padlock function)

	External dimensions	Handle length
1	With padlock functionA	L=122mm
2	With padlock functionB	L=152mm
3	Equipped with lock function C	L=140mm

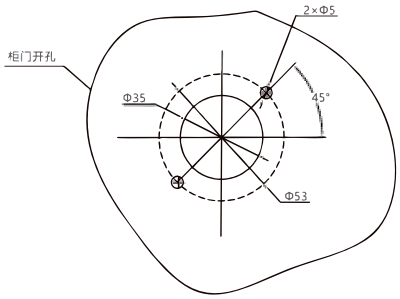
ADS1-110S 110A Mechanical emergency type

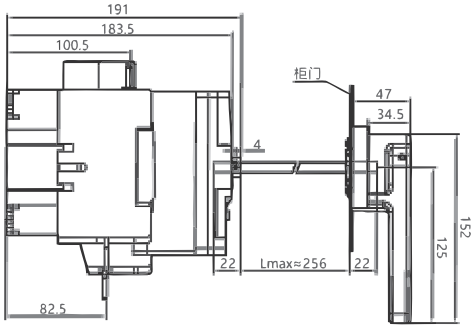




(Handle A with padlock function)

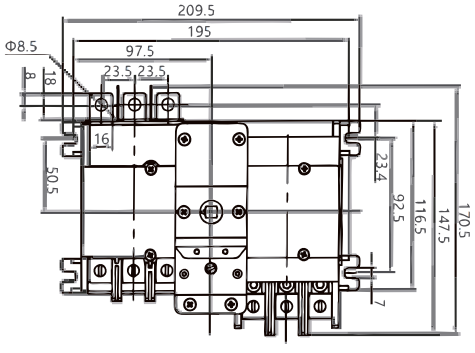
Handle A with padlock function B hole diagram

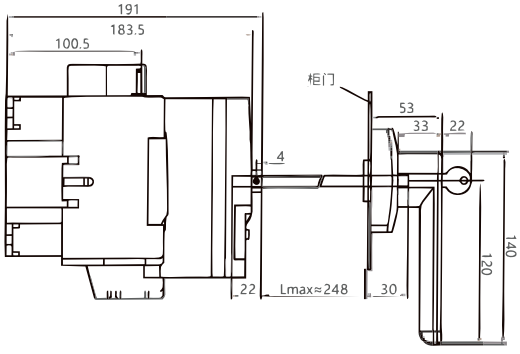




(Handle B with padlock function)

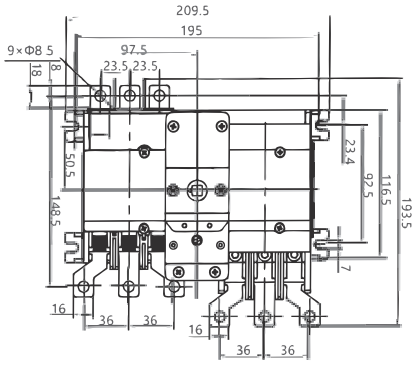
ADS1-110S 65A、75A、85A、95A Mechanical emergency type

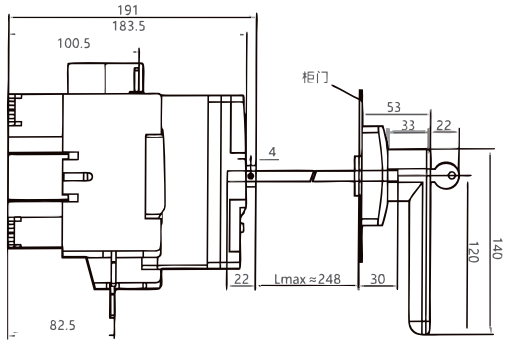




(Equipped with lock function handle C)

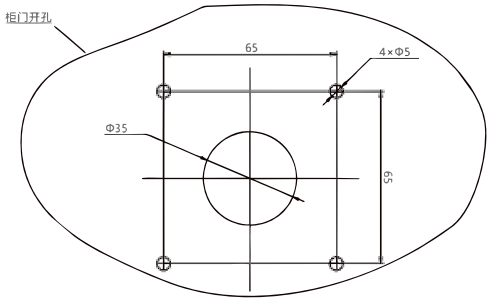
ADS1-110S 110AMechanical emergency type



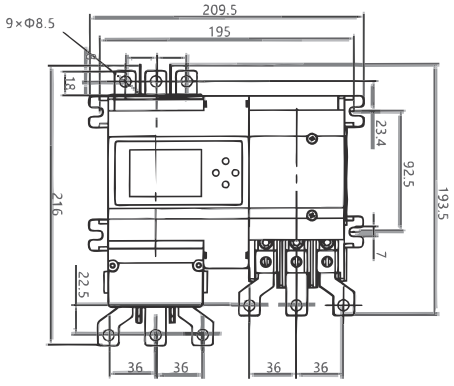


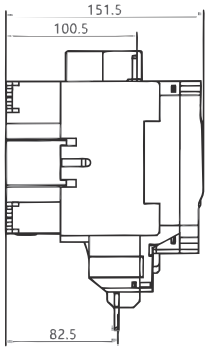
(Equipped with lock function handle C□

Opening diagram of handle C with built-in lock function

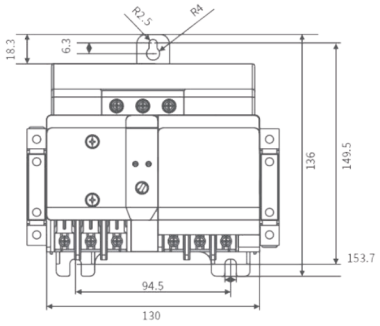


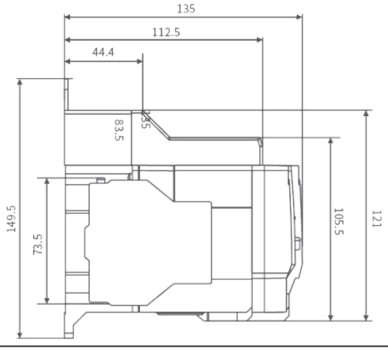
ADS1-110Z Multifunctional



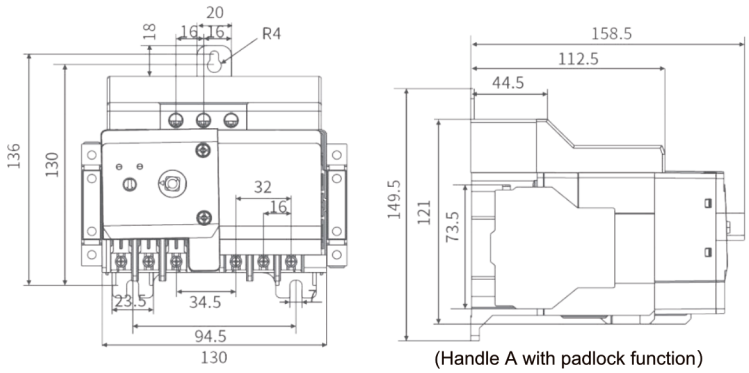


ADS1-50 50A、40A、32A、25A、18A Electric type

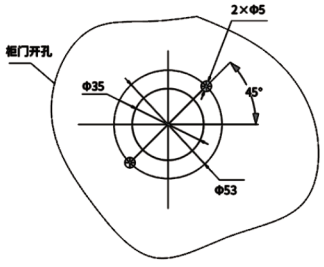




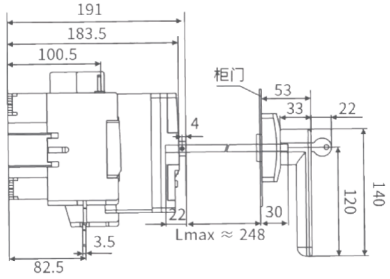
ADS1-50S 50A、40A、32A、25A、18A Mechanical emergency type



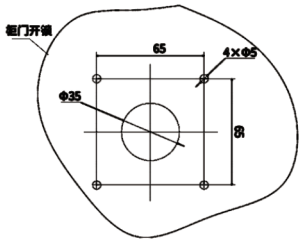
(Handle A with padlock function)



Opening diagram of handle with padlock function

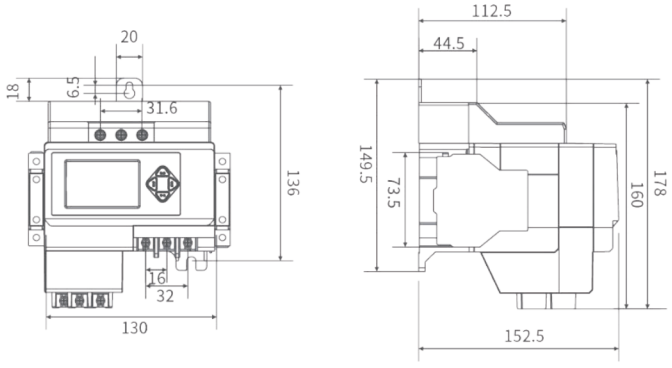


(Equipped with lock function handle C□



Opening diagram of the outer handle of the lockable cabinet

ADS1-50Z 50A、40A、32A、25A、18A Multifunctional



7. Product selection and ordering instructions

Starter	Shell curret	functional m odule	Rated current	rated control voltage	Auxiliary contacts (NO、NC)	Cabinet door handle
Electric/mechanical emergency type: ADS1/ADS1-S Multifunctional: ADS1-Z	50A 110A 265A	No annotation: automatic type S: Mechanical emergency type Z:Multifunctional	18A¡ ¢25A¡ ¢32A 40A¡ ¢50A¡ ¢65A 75A¡ ¢85A¡ ¢95A 100A¡ ¢110A 120A¡ ¢160A 185A¡ ¢225A 265A	220V/230	F11:Left mounted Z11:Right mounted F22:Left and right installation	A:Padlock function (L=122mm) B:Padlock function (L=152mm) C:Equipped with lock (L=140mm)

When placing an order, the user must indicate:

7.1 The complete name, model, specifications, and quantity of the starter, including the requirements for the handle and auxiliary contacts.

7.2 Rated control power supply voltage and frequency .

7.3 If there are special installation conditions or special places for use, corresponding technical information should be provided or negotiated with our company.

7.4 Ordering Example:

(1) If an electric 110A current is selected and the control voltage is 220V for 100 units, it is marked as ADS1-110 110A for 100 units.

(2) If mechanical emergency type 95A current is selected, control voltage 220V, equipped with 1 open and 1 close auxiliary contact left mounted, and the handle outside the cabinet has a lock function (length 140) 300Set, marked as ADS1-110S 95A 220V F11 C 300 sets.

QCX2 Series Magnetic Starter

1. Application

QCX2-09,12,18

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.

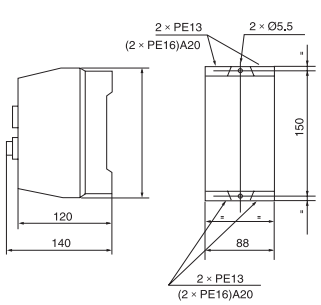
2. Specification

QCX2-25,32

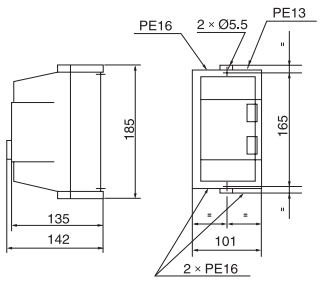
Type	Rated current (A)	Maximum power AC3 duty (kW)						Suitable thermal relay (A)
		220/230V	380/400V	415V	440V	500V	660/690V	
QCX2-9	9	2.2	4	4	4	5.5	5.5	JR28 D1312 JR28 D1314
QCX2-12	12	3	5.5	5.5	5.5	7.5	7.5	JR28 D1316
QCX2-18	18	4	7.5	9	9	10	10	JR28 D1321
QCX2-25	25	5.5	11	11	11	15	15	JR28 D1322 JR28 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

QCX2-40~95

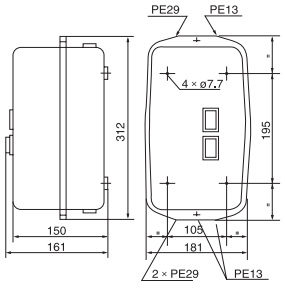
3. Outline and Mounting Dimension (mm)



QCX2-09
QCX2-12
QCX2-18



QCX2-25
QCX2-32

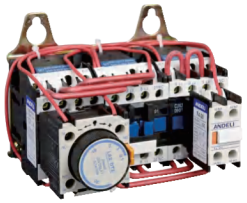


QCX2-40
QCX2-95

QCX3 Star-delta Reduced Voltage Starter

1. Application

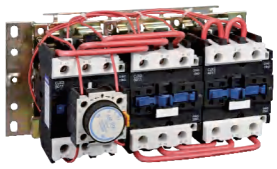
QCX3 series star delta reduced voltage starter is suitable for starting motor in the circuit of AC 50/60Hz, voltage up to 660V and current up to 95A. It is provided with a timer for automatic changeover of start-delta to reduce the voltage and current of motor starter. It complies with IEC947-4-1 standard.



QCX3-09,12,18,25,32

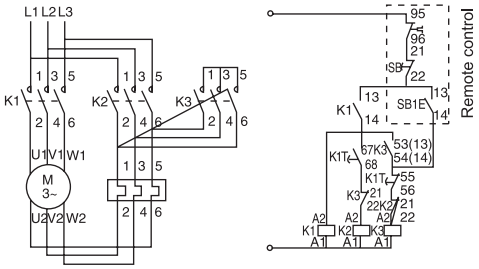
2. Specification

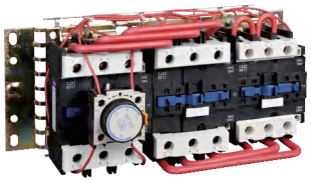
Type	Rated operating current (A)	3-phase motor capacity (kW)			
	AC3	220V	380V	415V	440V
QCX3-09	9	4	7.5	7.5	7.5
QCX3-12	12	5.5	11	11	11
QCX3-18	18	11	18.5	22	22
QCX3-25	25	11	22	22	22
QCX3-32	32	15	25	25	25
QCX3-40	40	18.5	37	37	37
QCX3-50	50	25	55	59	59
QCX3-65	65	32	55	59	59
QCX3-80	80	37	75	75	75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



QCX3-40, 50, 65

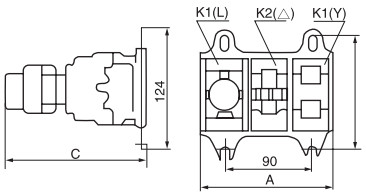
3. Wiring Diagram



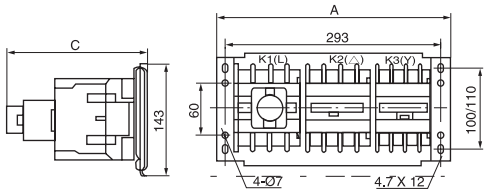


QCX3-80, 95

4. Outline and Mounting Dimension (mm)



QCX3-09~32



QCX3-40~95

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-22B

AMW-40B

AMW-65B

AMW Series Magnetic Starter

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 torward 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			Forward & reverse	60-0-60
QS5-30N		30	10				
QS5-15P/3	I-O-II	15	5.5			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			Forward & reverse	60-0-60
QS5-100N		100	30				
QS5-63/P4	I-O-II	63	22			for 3 pole rwo circuit	60-0-60
QS5-100/P4		100					

QS5-15N

QS5-63A

ADL200G Series Frequency Inverter

ADL200G-0.75kW

1.Product Information

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.Sensorless vector control algorithm SVC creates better low-velocity stability, stronger low-frequency load capacity, and supports rotque control of SVC.

ADL200G-3.7kW

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<20mv
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 convertor 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 convertor continues running within short time if instantaneous power outage or voltage decrease
Timing operation	Support timing operation for 6,500 minutes at most

ADL200G-22kW

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
		1 analog input terminal supports voltage support at 0~10V
	Output terminals	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℃~+40℃(environment temperature at 40℃~50℃ , please derate to use
	Humidity	<95%RH, no condensing drops
	Virbration	<5.9m/s2 (0.6g)
	Storage temperature	-20℃~+60℃

3. Type and Meaning

ADL 200G - 0R7 G B - T 4

company name
ANDELI

product series
100G
200G

power level	0R7	···	022
adaptable motor(KW)	0.75KW	···	22KW

G	general type
P	fan/pump type

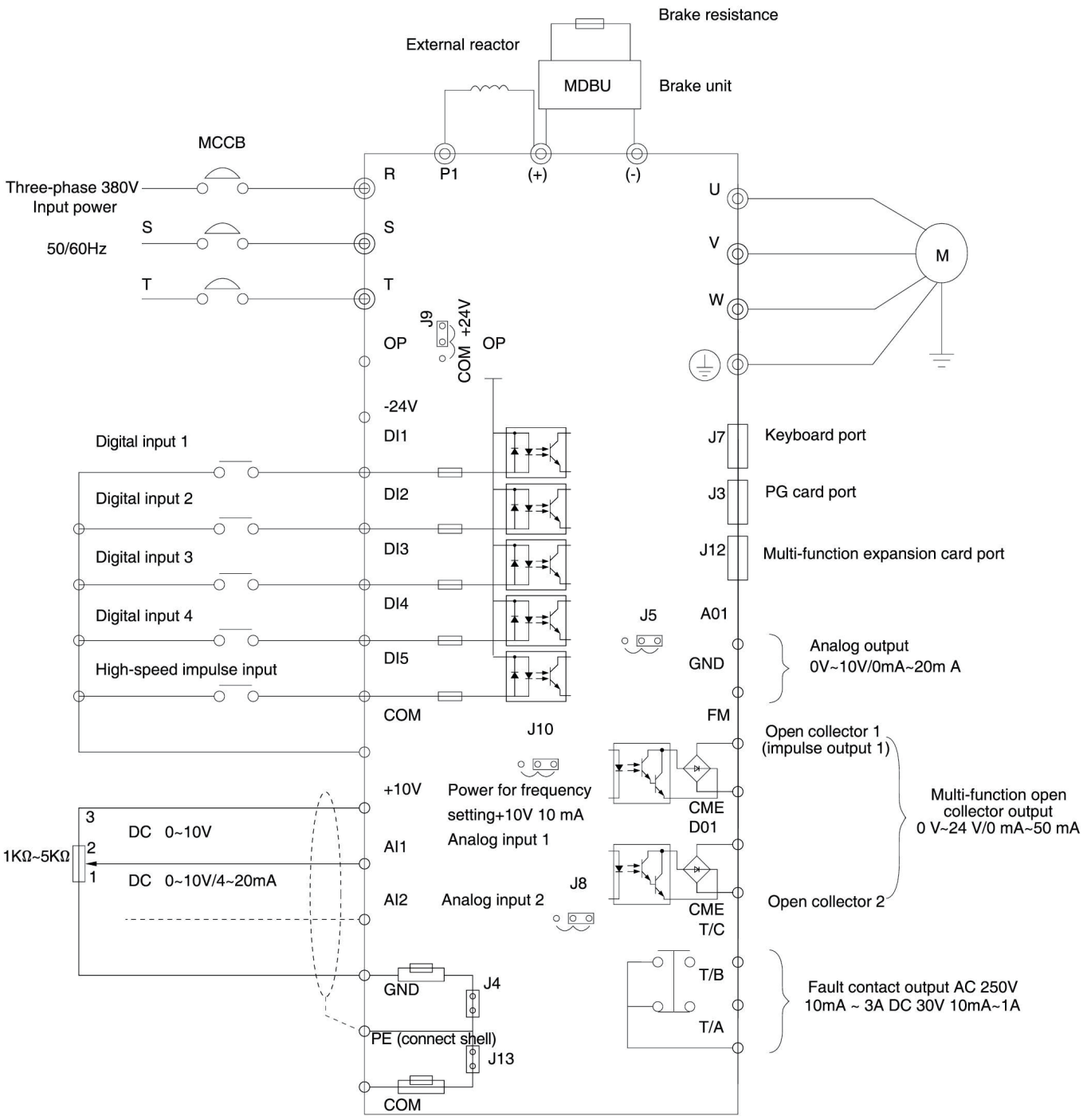
Mark	braking unit
blank	no
B	yes

T	three-phase
S	single phase

voltage grade	
1	110V
2	220V
4	380V
5	480V
6	660V

Model of frequency inverter	Power capacity kVA	Input current A	Output current A	Adaptive motor kW	Adaptive motor 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	5.9	10.5	9	3.7	5
ADL200G-5R5GB-T4	8.9	14.6	13	5.5	7.5
ADL200G-7R5GB-T4	11	20.5	17	7.5	10
ADL200G-11GB-T4	17	26	25	11	15
ADL200G-15GB-T4	21	35	32	15	20
ADL200G-18R5G-T4	24	38.5	37	18.5	25
ADL200G-22G-T4	30	46.5	45	22	30
ADL200G-30G-T4	40	62	60	30	40
ADL200G-37G-T4	57	76	75	37	50
ADL200G-45G-T4	69	92	91	45	60
ADL200G-55G-T4	85	113	112	55	70
ADL200G-75G-T4	114	157	150	75	100
ADL200G-90G-T4	134	180	176	90	125
ADL200G-110G-T4	160	214	210	110	150
ADL200G-132G-T4	192	256	253	132	175
ADL200G-160G-T4	231	307	304	160	210
ADL200G-200G-T4	250	385	377	200	260
ADL200G-220G-T4	280	430	426	220	300
ADL200G-250G-T4	355	468	465	250	350
ADL200G-280G-T4	396	525	520	280	370
ADL200G-315G-T4	445	590	585	315	500
ADL200G-355G-T4	500	665	650	355	420
ADL200G-400G-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)

+10V	AI1	AI2	DI1	DI1	DI3	DI4	DI5	COM

GND	GND	A01	CME	COM	D01	FM	+24V	OP

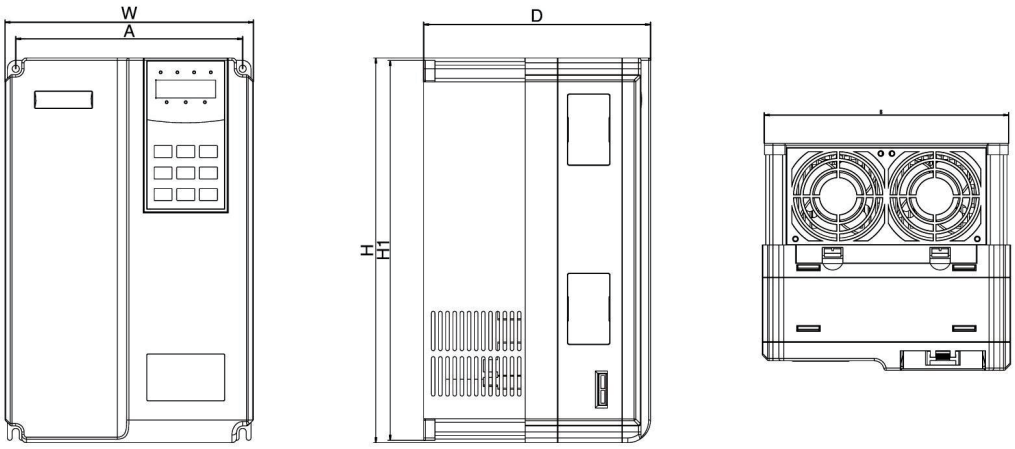
T/A	T/B	T/C

Layout diagram of terminals on control circuit

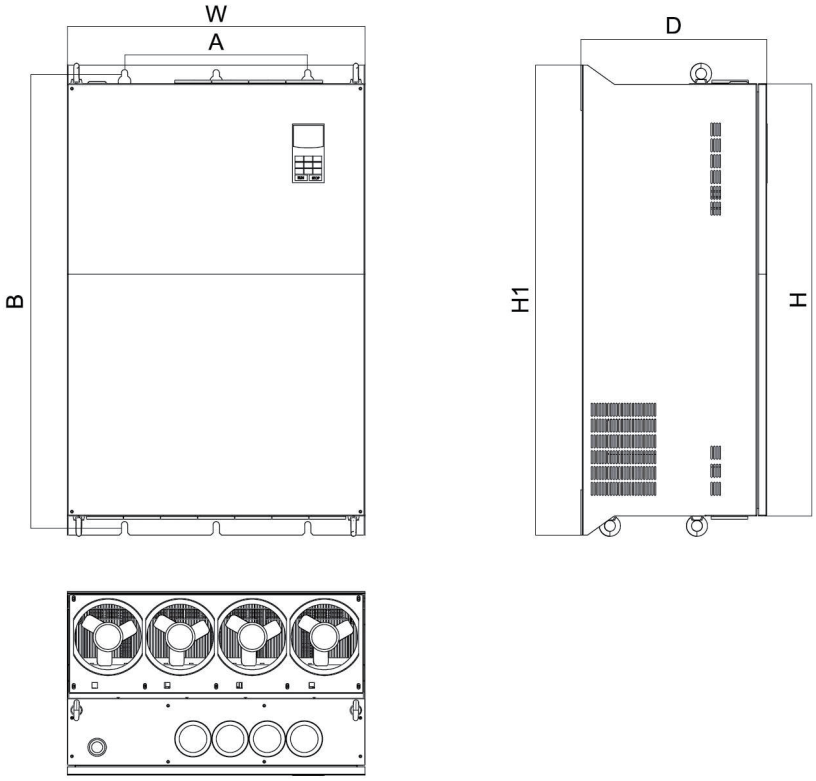
2. Functional descriptions of control terminals

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, 500□ 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 drived 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

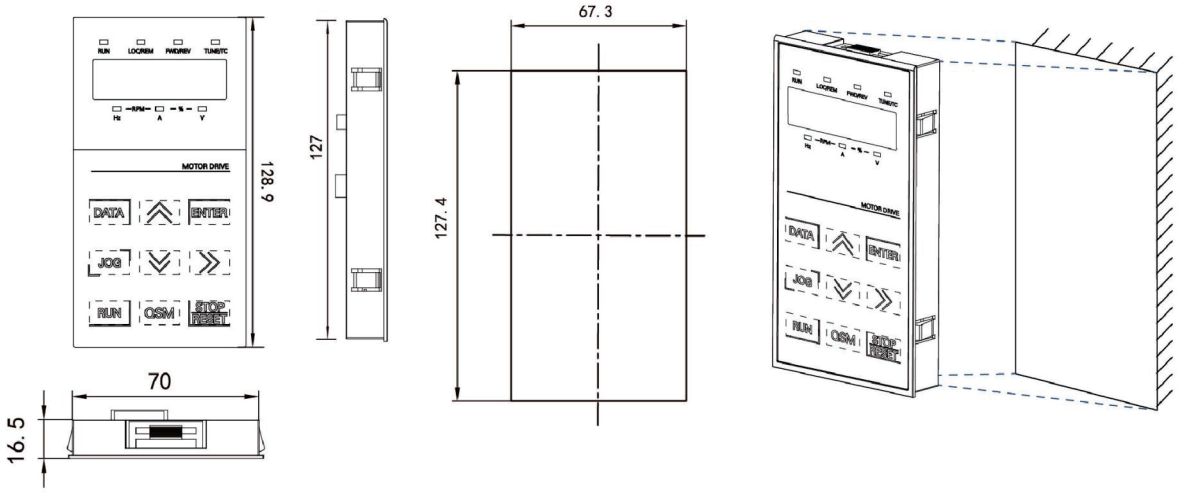
Shell structures of ADL200G series models are as follow:

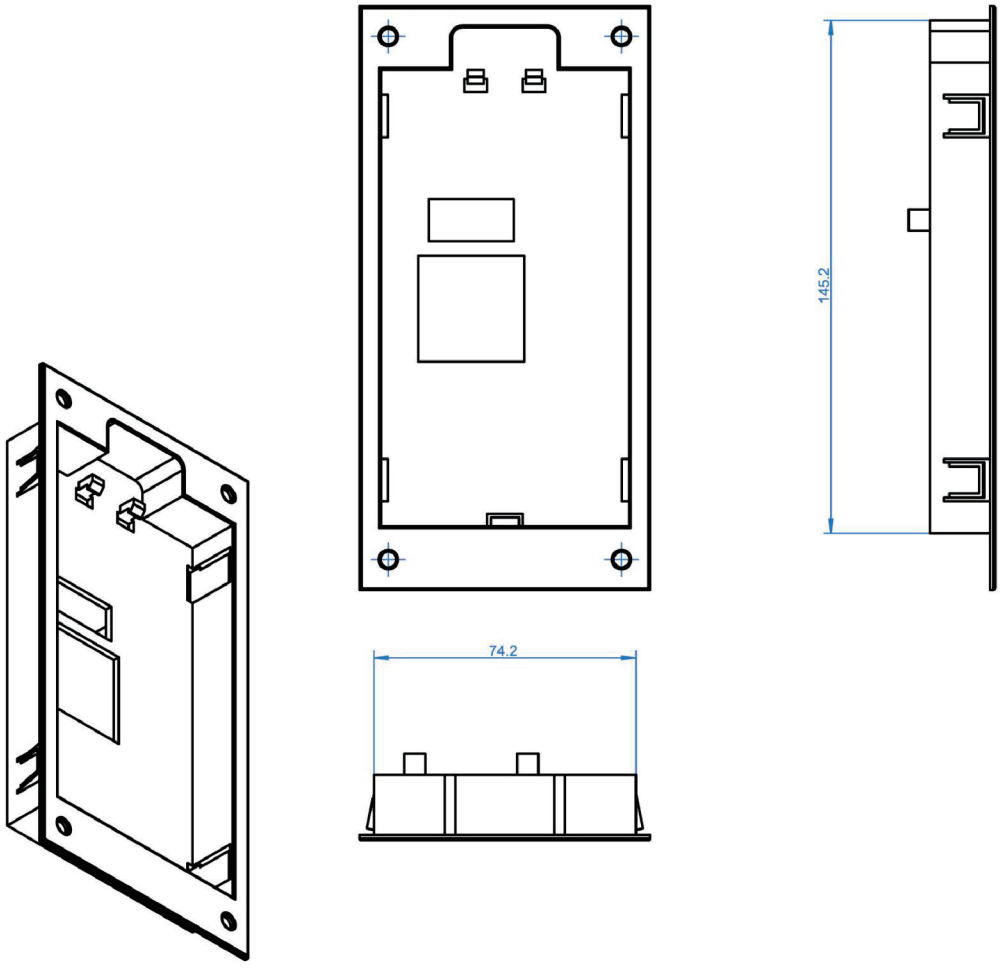
Model	Shell type
Single-phase 220V	
0.4kW~2.2kW	Plastic structure
Three-phase 220V	
0.4kW~7.5kW	Plastic structure
11kW~75kW	Metal plate structure
Three-phase 380V	
0.75kW~18.5kW	Plastic structure
22kW ~ 400kW	Metal plate structure

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	H	W	D		
Single-phase 220V								
ADL200G-0R4GB-S2 ADL200G-0R7GB-S2 ADL200G-1R5GB-S2 ADL200G-2R2GB-S2	114	172	186	/	125	159	5	1.7
Three-phase 220V								
ADL200G-0R4GB- T2ADL200G-0R7GB- T2ADL200G-1R5GB- T2ADL200G-2R2GB- T2ADL200G-3R7GB-	114	172	186	/	125	159	5	1.7
T2ADL200G-5R5GB- T2ADL200G-7R5GB-T2	149	237	248	/	160	174	5	3.2
ADL200G-11G-T2	190	304	322	/	208	190	6	6.2
ADL200G-15G-T2								6.4
ADL200G-18R5-T2								6.6
ADL200G-22G-T2	220	453	435	475	270	222	9	17.1
ADL200G-30G-T2								17.4
ADL200G-37G-T2								17.7
ADL200G-45G-T2	250	576	550	600	355	290	9	30
ADL200G-55G-T2								31
ADL200G-75G-T2								32
Three-phase 380V								
ADL200G-0R7GB-T4 ADL200G-1R5GB-T4 ADL200G-2R2GB-T4	114	172	186	/	125	159	5.0	1.7
ADL200G-3R7GB-T4/ADL200G-5R5PB-T4 ADL200G-5R5GB-T4/ADL200G-7R5PB-T4 ADL200G-7R5GB-T4/ADL200G-11PB-T4	149	237	248	/	160	174	5.0	3.2
ADL200G-11GB-T4/ADL200G-15PB-T4	190	304	322	/	208	190	6	6.2
ADL200G-15GB-T4/ADL200G-18R5PB-T4								6.4
ADL200G-18R5G-T4/ADL200G-22P-T4								6.6
ADL200G-22G-T4/ADL200G-30P-T4	220	453	435	475	270	222	9	17.1
ADL200G-30G-T4/ADL200G-37P-T4								17.4
ADL200G-37G-T4/ADL200G-45P-T4								17.7
ADL200G-45G-T4/ADL200G-55P-T4	250	576	550	600	355	290	9	30
ADL200G-55G-T4/ADL200G-75P-T4								31
ADL200G-75G-T4/ADL200G-90P-T4								32
ADL200G-90G-T4/ADL200G-110P-T4	260	745	700	784	385	323	11.5	58.4
ADL200G-110G-T4/ADL200G-132P-T4								61.6
ADL200G-132G-T4/ADL200G-160P-T4								60
ADL200G-160G-T4/ADL200G-200P-T4	300	865	820	904	440	353	13	87.6
ADL200G-200G-T4/ADL200G-220P-T4	400	1000	957	1040	650	406	13	190.1
ADL200G-220G-T4/ADL200G-250P-T4								192.1
ADL200G-250G-T4/ADL200G-280P-T4								194.1
ADL200G-280G-T4/ADL200G-315P-T4								215.1
ADL200G-315G-T4/ADL200G-355P-T4								236.2
ADL200G-355G-T4/ADL200G-400P-T4	600	1260	1153	1300	815	424	13	316.4
ADL200G-400G-T4/ADL200G-450P-T4								350.6
ADL200G-450G-T4/ADL200G-500P-T4								370

External dimension of display panel





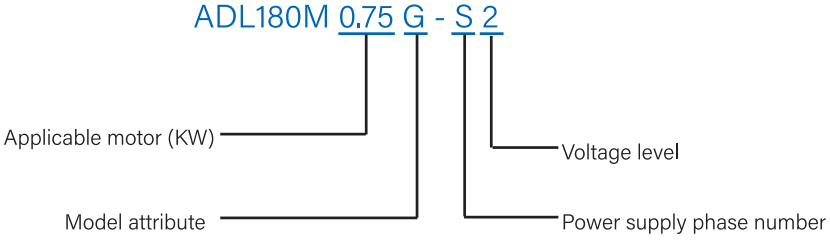
Variable-Frequency Drive ADL180M Series

1. 0.75kW-37kW

- This self-developed, new-generation and all-purpose frequency converter can be used to control asynchronous AC induction motor.
- The adoption of space voltage vector control technology and DSP control system enhances theproduct reliability and stability.
- It supports two control modes: V/F control and sensorless vector control (SVC).
- It has the performances of automatic torque boost and slip compensation.
- It has the performances of speed-up and slow-down.
- It can start 0.5 Hz and provide 150% of torque.
- It can run smoothly in a full speed range, with the stabilized speed precision less than 0.5%.
- It can adapt to the network voltage range of 200 V to 480 V.
- Its anti-electromagnetic interference capacity conforms to IEC 61800-3: C3 Standard.
- With three coatings of anti-varnish applied to its circuit board, it can adapt to high temperature,
- high humidity and dust environments and others.
- It has built-in RS485 communication.
- It supports external keyboards.

2. Variable-Frequency Drive

Product Model Coding Rule for the Frequency Converter



Model attribute	G: G-model (heavy-load): 150% rated current for 60 s and 180% rated current for 6 s
	P: P-model (all-purpose): 120% rated current for 60 s and 150% rated current for 6 s
Power supply phase number	S: represents single-phase
	T: represents three-phase
Voltage level	2: represents 220 V
	4: represents 380 V
Remarks: Some models support switch between G/P models, with 15 KW as an example: Users can change G-model of 15 KW to P-model of 18.5 KW by settings.	

3. Product Model and Specification

Product rated value					
VFD model	Rated capacity (KVA)	Rated input current (A)	Rated output current (A)	Applicable motor (KW)	Applicable motor (HP)
Single -phase power supply 220V 50/60Hz					
ADL180M 0R7GB-S2-J ADL180M-0R7GB-S2	1.5	8.2	4	0.75	1
ADL180M-1R5GB-S2-J ADL180M-1R5GB-S2	3	14	7	1.5	2
ADL180M-2R2GB-S2-J ADL180M-2R2GB-S2	4	23	9.6	2.2	3
Three-phase power supply 380V 50/60Hz					
ADL180M-0R7GB-T4	1.5	3.4	2.1	0.75	1
ADL180M-1R5GB-T4	3	5	3.8	1.5	2
ADL180M-2R2GB-T4	4	5.8	5.1	2.2	3
ADL180M-3R7GB-T4	6	10.5	9	3.7	5
ADL180M-5R5GB-T4	11	13.9	13	5.5	7.5
ADL180M-7R5GB-T4	15	18.9	17	7.5	10
ADL180M-11GB-T4	30	27.8	25	11	15
ADL180M-15GB-T4	37	37.9	32	15	20
ADL180M-18R5GB-T4	44	46.7	37	18.5	25
ADL180M-22GB-T4	60	55.6	45	22	30
ADL180M-30GB-T4	52	57	60	30	40
ADL180M-37GB-T4	63	69	75	37	50

*-J model is a starter edition and does not contain brake unit, 485 communication, external crystal head and relay output.

4. Variable-Frequency Drive

Variable-Frequency Drive

Model	0.75 KW-2.2 KW	3.7 KW-37 KW
Power input		
Input voltage	AC, 1 PH, 220 V (-15%)-240 V (+10%) AC, 3 PH, 380 V (-15%)-440 V (+10%)	AC, 3 PH, 380 V (-15%)-480 V(+10%)
Rated frequency	50/60Hz	
Frequency range	±5% (47.5-63Hz)	
Power output		
Output voltage	0-input voltage	
Output frequency	0.1-500HZ	

Output power	Please refer to "rated value"
Output current	Please refer to "rated value"
Basic functions	
Maximum frequency	Vector control: 0-500 Hz
	V/F control: 0-500 Hz
Carrier frequency	0.8KHz-8KHz (the maximum carrier frequency of 16 KHz is supported)
	The carrier frequency can be adjusted automatically according to the load characteristic.
Resolution of input frequency	Digital setting: 0.01Hz
	Analog setting: Maximum frequency×0.025%
Control mode	Open-loop SVC control V/F open-loop speed control
Starting torque	0.5Hz/150% (SVC)
Range of speed regulation	1:100(SVC)
Stabilized speed precision	±0.5% (SVC)
Overload capability	150% rated current for 60s; 170% rated current for 12s; 190% rated current for 1.5s
Torque boost	Automatic torque boost; automatic torque boost by 0.1%-30.0%
V/F curve	Three ways: linear type; multi-point type; N-th power V/F curve
	(The power of 1.2, 1.4, 1.6, 1.8, 2)
V/F separation	2 ways: full separation and semi-separation
Acceleration/deceleration curve	Linear or S-curve acceleration/decelerate on mode. Two kinds of acceleration/deceleration time, with the range of 0.0-6500.0 s
DC braking	DC braking frequency: 0.00 Hz-maximum frequency
	Braking time: 0.0 s-36.0 s
	Brake action current: 0.0%-100.0%
Jog control	Jog frequency range: 0.00 Hz-maximum frequency (5 Hz is the default). Inching acceleration/deceleration time: 0.0s-6500.0s
Built-in PID	It can realize process control of closed-loop control system conveniently
Automatic voltage regulation (AVR)	Constant output voltage can be automatically maintained when the grid voltage changes
Over-voltage/overcurrentstall contro	The current and voltage during operation can be automatically limited to prevent frequent overcurrent and overvoltage tripping
Fast current limiting function	The overcurrent fault can be minimized to protect the normal operation of the VFD
Torque limit and control	With the characteristics of an "excavator", the torque can be automatically limited during operation to prevent frequent overcurrent tripping
Brake unit	Built-in brake unit (except the starter edition)

5. Variable-Frequency Drive

Model	0.75 KW-37 KW
personalized functions	
No stop during instantaneous stop	When the instantaneous power decreases, load feedback energy can compensate for voltage drop to make the motor slow down and then stop, so as to avoid machinery damage
Rapid current limiting	Frequent overcurrent fault of the frequency converter can be avoided.
Timing control	Timing control function: time setting range: 0.0 Min-6500.0Min
Multithreaded bus support	One fieldbus is supported: Modbus
Input/output	
Command source	Operation panel setting, control terminal setting and serial communication port setting. Switch in multiple modes
Frequency source	5 frequency sources: digital setting, analog voltage setting, analog current setting, pulse setting and serial port setting. Switch in multiple modes
Auxiliary frequency source	5 auxiliary frequency sources. Fine tuning and synthesis of auxiliary frequency can berea lized flexibly
Input terminals	5 digital input terminals, wherein 1 terminal supports the maximum high-speed pulse input of 50 kHz
	1 analog input terminal, supporting 0-10 V voltage input or 0 - 20 mA current input
	1 rotational potentiometer for analog input
Input terminals	5 digital input terminals, wherein 1 terminal supports the maximum high-speed pulse input of 50 kHz
	1 analog input terminal, supporting 0-10 V voltage input or 0-20 mA current input
	1 rotational potentiometer for analog input
Output terminals	1 high-speed pulse output terminal, supporting square signal output of 50 kHz
	1 relay output terminal
	1 analog output terminal, supporting 0-20 mA current output or 0-10 V voltage output

6. General Specification

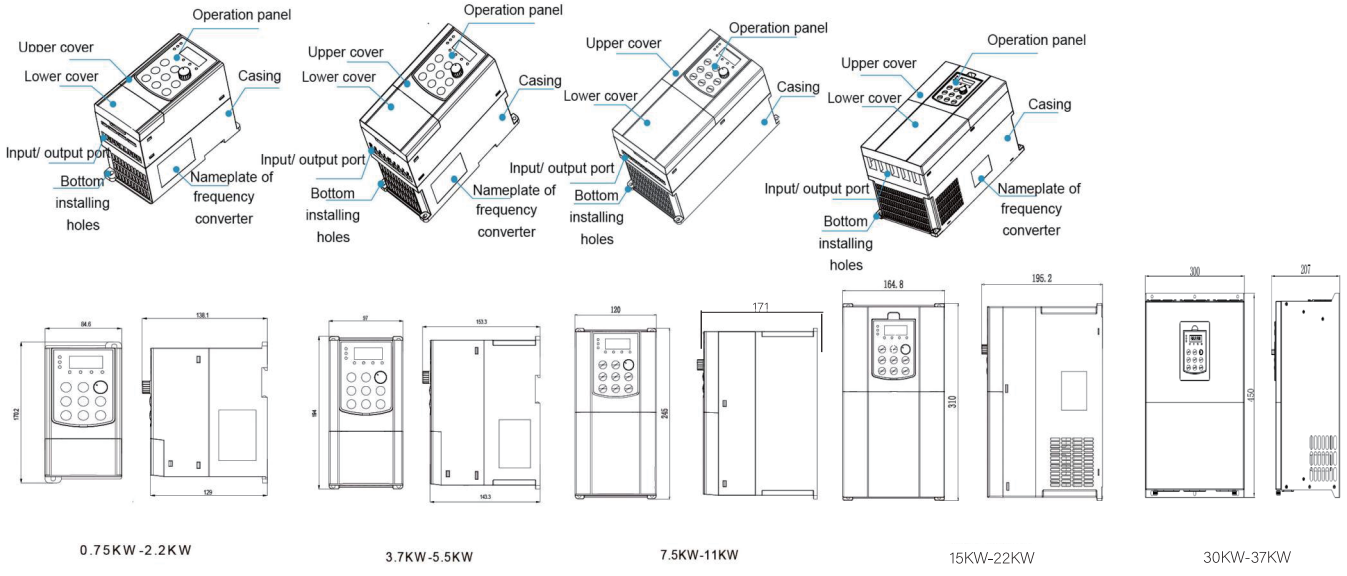
Indication key	Standard movable keyboard
Keyboard	Display parameters
LED display	Partial or full lock of keys can be realized and actuating range of some keys can bedefined to prevent misoperation
Protection functions	Short-circuit detection of power-on motor, output open-phase protection, overcurrent protection, overvoltage protection, undervoltage protection, overheat protection and overload protection etc.

Environmen	
Storage environment	-20° C-60° C
Operating temperature	-10°C-50°C (If the temperature is higher than 40°C, please adjust the rated value according to 1% of reduction for each increase of 1°C.)
Storage humidity	< 90%RH
Operating humidity	< 90%RH
Noise	50dBA max
Others	
EMC	Standards: IEC 61800-3, C3
Safety	Standards: IEC 61800-5-1
Communication	
Communication port	RS-485

These specifications are subject to change without notice

7. Variable-Frequency Drive

Installation dimension (mm)



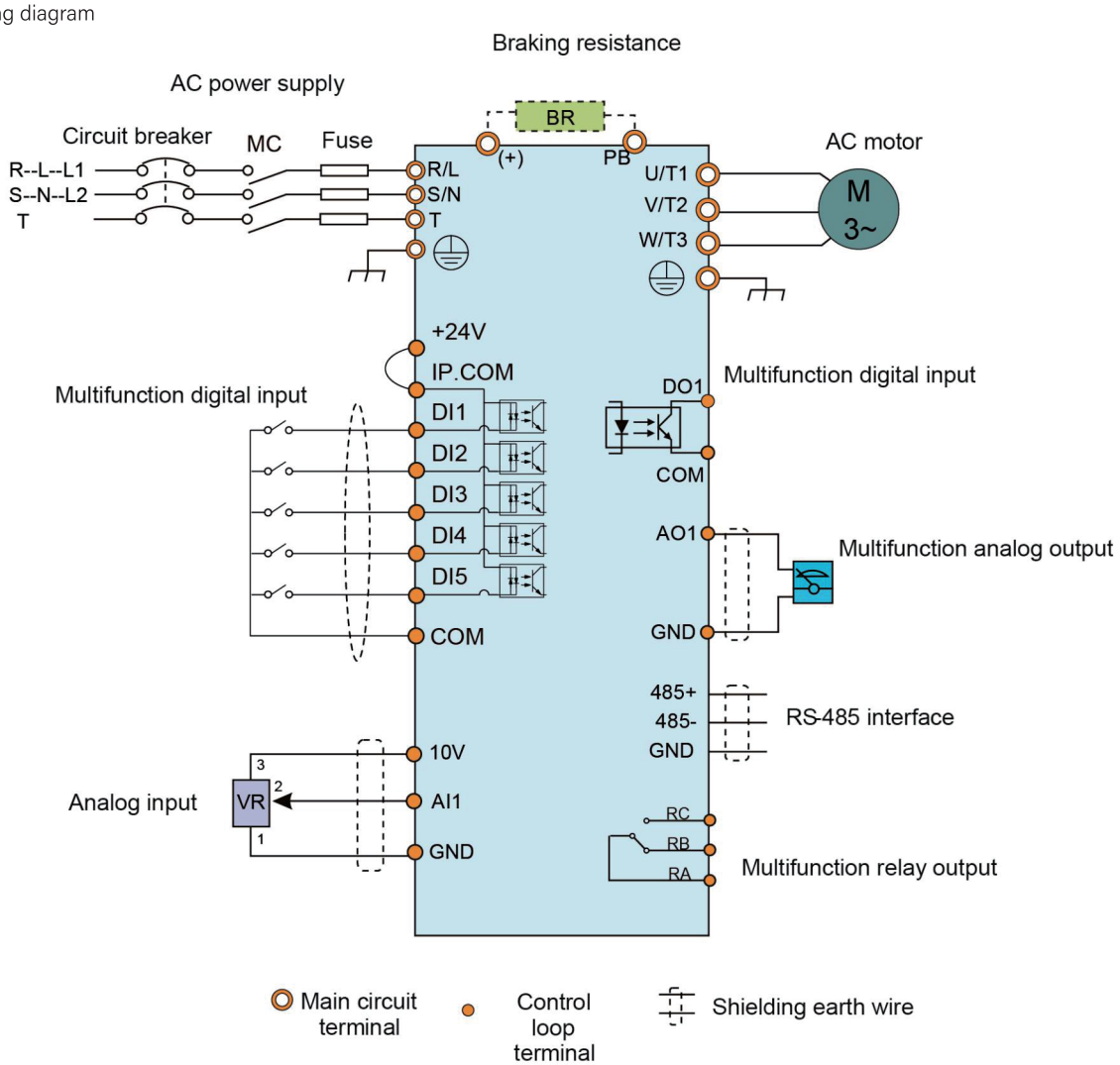
8. 0.75 kW-37kW Installation Dimension

VFD model	Mounting hole location mm		Overall dimension mm			Mounting hole location mm	Weight Kg
	A	B	H	W	D		
ADL180M-0R7BG-S2 ADL180M-1R5GB-S2	66	155	165	78.3	107	5	0.73

ADL180M-2R2GB-S2 ADL180M-0R7GB-T4 ADL180M-1R5GB-T4 ADL180M-2R2GB-T4	67.3	157.5	170.2	84.6	138.1	5	1
ADL180M-3R7GB-T4 ADL180M-5R5GB-T4	85	184	194	97	153.5	4	1.5
ADL180M-7R5GB-T4 ADL180M-11GB-T4	107	235	245	142	168	5.5	3.5
ADL180M-15GB-T4 ADL180M-18R5GB-T4 ADL180M-22GB-T4	147	298	310	164.8	195.2	5.5	5.5
ADL180M-30GB-T4 ADL180M-37GB-T4	260	433.5	450	300	207	6.5	15.5

9. Variable-Frequency Drive

Standard wiring diagram



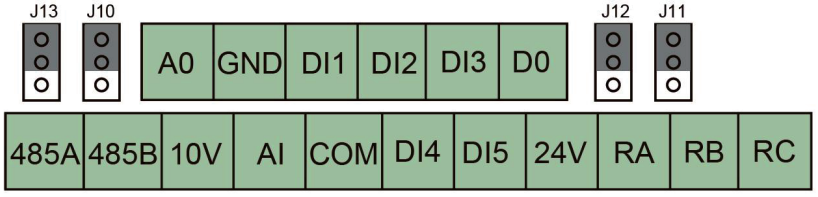
10. Variable-Frequency Drive

Wiring standard

VFD model	Recommended cable size (mm^2)				Set screw	
	RST WUV	PE	P1(+)	PB(+) (-)	Terminal screw specification	Tightening torque (Nm)
ADL180M-0R7BG-S2	1.5	1.5	1-4	1-4	M3	0.8
ADL180M-1R5GB-S2	2.5	2.5	1-4	1-4	M3	0.8
ADL180M-2R2GB-S2	2.5	2.5	1-4	1-4	M3	0.8
ADL180M-0R7GB-T4	1.5	1.5	1.5	1.5	M4	1.2-1.5
ADL180M-1R5GB-T4	1.5	1.5	1.5	1.5	M4	1.2-1.5
ADL180M-2R2GB-T4	2.5	2.5	2.5	2.5	M4	1.2-1.5
ADL180M-3R7GB-T4	2.5	2.5	2.5	2.5	M4	2-2.5
ADL180M-5R5GB-T4	2.5	2.5	2.5	2.5	M4	1.3-1.5
ADL180M-7R5GB-T4	4	4	4	4	M4	1.3-1.5
ADL180M-11GB-T4	6	6	6	6	M4	1.3-1.5
ADL180M-15GB-T4	10	10	10	10	M5	2.0-2.5
ADL180M-18R5GB-T4	10	10	10	10	M5	2.0-2.5
ADL180M-22GB-T4	10	10	10	10	M5	2.0-2.5
ADL180M-30GB-T4	16	16	16	16	M6	2.5-3.0
ADL180M-37GB-T4	16	16	16	16	M6	2.5-3.0

11. Variable-Frequency Drive

Control Terminal Location and Function Description

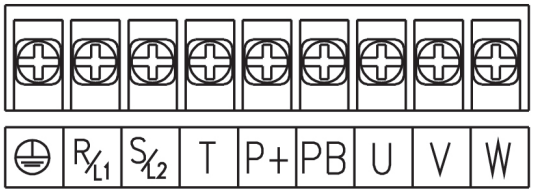


Control terminal diagram

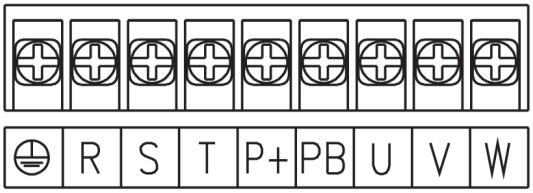
Category	Terminal label	Name	Terminal functiondescription
Communication	485A	RS485 communication interface	RS-485 differential signalpositive terminal
	485B		RS-485 differential signalnegative terminal
Analog input	AI	Analog input terminal	Receiving analogvoltage/magnitude ofcurrent input
Analogue output	AO	Analog output terminal	Providing analogvoltage/magnitude ofcurrent output
Digital input	DI1	Digital input terminal 1	Common digital input
	DI2	Digital input terminal 2	Common digital input
	DI3	Digital input terminal 3	Common digital input
	DI4	Digital input terminal 4	Common digital input
	DI5	Digital input terminal 5	Common digitalinput/high-frequencyimpulse input
Digital output	DO	Digital output terminal	Common digitalinputhigh-frequencyimpulse output

Power supply	10V	External +10 V powersupply	Providing +10 V power supply
	GND	External +10Vpowersupply ground	
	24V	External +24 V powersupply	Providing +24 V power supply
	COM	External +24 V powersupply ground	
Relay output	RA/RB	Relay output	Normally closed terminal
	RA/RC		Normally open terminal

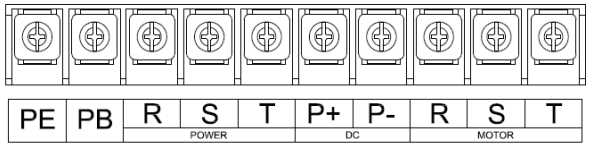
12. 0.75 kW~37 kW Terminal Location and Function Description



0.75kW~2.2kW major circuit terminal diagram



3.7kW~22kW major circuit terminal diagram

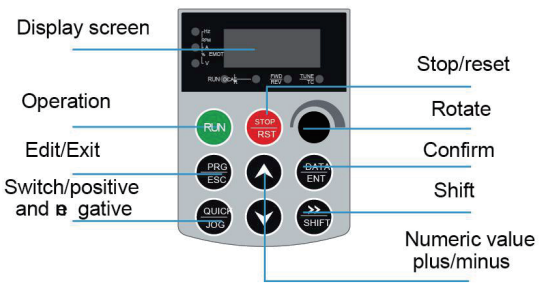


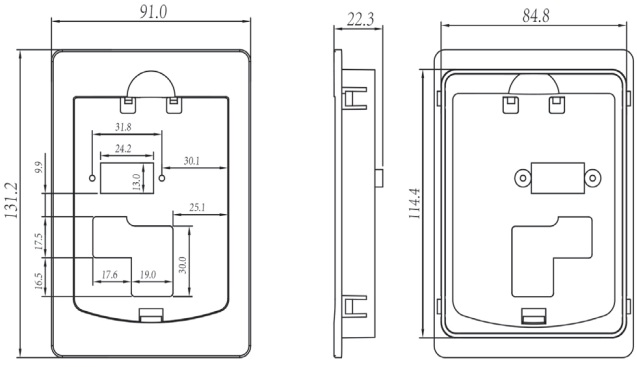
30kW~37kW major circuit terminal diagram

Terminal symbol	Terminal name and functiondescription
⏚	Safety ground terminal
R,S,T L1,L2	Three-phase AC input terminal Single-phase AC input terminal
P+,PB	External braking resistor terminal
P+,P-	DC bus positive and negative terminals
U,V,W	Three-phase AC output terminal

13. Variable-Frequency Drive

Operation Panel





External keyboard bracket

Name	Function description
Edit/Exit	Enter or exit the primary menu
Confirm	Enter the menu page and confirm theparameter setting
Numeric value plus/minus	Increasing and decreasing of data orfunction code
Shift	Select the display parameter byshift left under the stop and runninginterface,when modifyingparameters, you can select themodification bit of the parameter.
Operation	It is used for operation in the keyboardmode
Stop/reset	When in the running status, press thisbutton to stop the operation;when inthe failure alamm status caused by P.04function code, all the control modescan be used to reset the operation
Rotate	Adjustment of the rate and frequency

14. Braking Resistor Model Selection Table

VFD model	Brake unit	100% of braking torque Applicable braking resistance value(Ω)	Braking resistor wasted power(KW) (10% braking amount)	Braking resistor wasted power(KW) (50% braking amount)	Braking resistor wasted power(KW) (80% braking amount)	Minimum allowable resistance value(Ω)
ADL180M-0R7BG-S2	Built-in Standard	192	0.11	0.56	0.90	42
ADL180M-1R5GB-S2		96	0.23	1.10	1.18	30
ADL180M-2R2GB-S2		65	0.33	1.7	2.64	21
ADL180M-0R7GB-T4		635	0.1	0.6	0.9	240
ADL180M-1R5GB-T4		326	0.23	1.1	1.8	170
ADL180M-2R2GB-T4		222	0.33	1.7	2.6	130
ADL180M-3R7GB-T4		122	0.6	3	4.8	80
ADL180M-5R5GB-T4		89	0.75	4.1	6.6	60
ADL180M-7R5GB-T4		65	1.1	5.6	9	47
ADL180M-11GB-T4		44	1.7	8.3	13.2	31
ADL180M-15GB-T4		32	2	11	18	23
ADL180M-18R5GB-T4		27	3	14	22	19
ADL180M-22GB-T4		22	3	17	26	17
ADL180M-30GB-T4		20	4.2	21	32	20
ADL180M-37GB-T4		19	4.5	23	36	16

1. Product Information

Product Overview

The L-series soft starters are based on our latest product architecture platform (developmentcode "Leopard",, which supports a wide range of bypass types. The "Leopard" architecture has beenoptimized and enhanced in terms of hardware and software compared to the previous AJR 2 seriesplatform, Based on the latest 32-bit ARM architecture, the algorithm performance and functionality arefurther enhanced. The high-freguency optocoupler triggered SCR design replaces the traditional analogpulse drive, effectively improving the interal conduction efficiency of the SCR and reducing losses.

- Built-in power supply designed to allow the product to accommodate wide voltage fluctuations;
- Linear temperature detection - real-time monitoring of the product's operating temperature;
- Adjustable three-phase unbalance protection range and adjustable overload thresholds to cope with complex operating conditions;
- Built-in Chinese/English multilingual menu options, being freely switchable;
- Running time/running count function - provide convenience for maintenance;
- Adiustable underload protection for protection against dry burning in pump applications;
- Two programmable output relays/three programmable digital inputs/one analog output - various I/O interfaces,
- Integrated RS485 interface with support for Modbus protocol unicaton tunctions:
- Support for forced start mode (shutdown protection), which can cope with emergency start-up situations such as fire fighting;

Electric Parameters

Standard for compliance	GB/T 14048.6-2016/IEC 60947-4-2:2011
Three-phase power supply	Voltage(AC)380V ±15%
Frequency	50Hz/60Hz
Applicable motors	Three-phase squirel-cage asynchronous motor
Starting frequency	Depending on the load, it is recommended not to exceed 20 times per hour
Protection level	IP(Agreeable, see the Shell Frame No. Marking for details)
Impact resistance	15gms
Seismic resistance	Below 3000m above sea level, with vibration force device below 0.5G
Ambient temperature	No reduction in capacity with the operating temperature between -25°C and +40°C11.2% reduction in curent for every 1°C increase between +40°C and +60*C)
Storage temperature	-25°C ~+70°C
Ambient humidity	95% free from condensation or water droplets
Maximum working height	No reduction in capacity up to an altitude of 1000m (above 1000m, 0.5%reduction in current for every 100m increase)
Maximum working angle	Maximum working angle relative to vertical mounting position No requirement

Operation functions

- current-limiting mode start
- Voltage ramp start
- Jump start
- Soft stop / free stop
- Two programmable relay outputs
- 4~20mA DC analog output
- RS485 communication control
- User password and running locks
- Three sets of fault history data logging

Protection functions

- Soft start for overheating protection
- Input phase loss protection
- Output phase loss protection
- Three-phase unbalanced protection
- Start overcurrent protection
- Operational overload protection
- Low voltage protection of power supply
- Overvoltage protection of power supply
- Underload protection (dry burning protection)

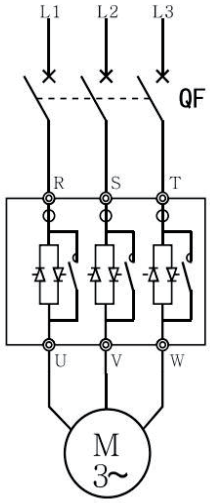
Product Selection

AJR3-LE075TM1-4N
①②③④⑤⑥

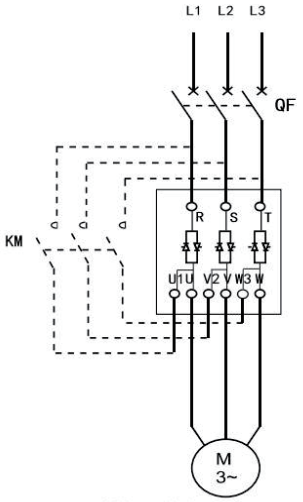
①	Model	AJR3 series soft starters
②	Type	LE: External bypass LB: Built-in bypass LN: SCR Online without bypas&External bypass
③	Rated power	5R5~1000:5.5~1000kW(decimal points are indicated py "R")
④	Shell frame No	Refer to the subsequent appendix for the corresponding dimension ofshell frame number. Due to different product technology iteration oradaptation scenarios, the products with the same ppwer may adapt todifferent shell frames, and the specific size shall be subject to the shellframe number on the order code.
⑤	Main voltage level	2: AC220V-240V 4:AC380V-440V 6:AC660V-690V E: AC1140V
⑥	Control voltage level	N: Internal control voltage (default) D2: External control voltage DC24V W2:External control voltage AC220V W4:External control voltageAC380V

2. Connection

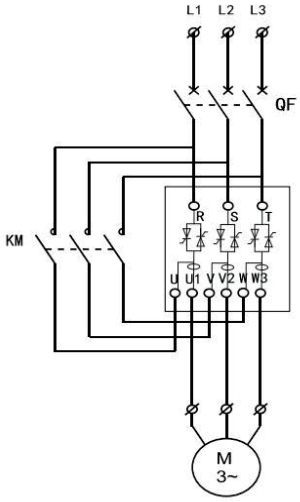
Basic circuit connection diagram



LB built-in bypass type



LN module online type
(Bypass Option)



LE external bypass type

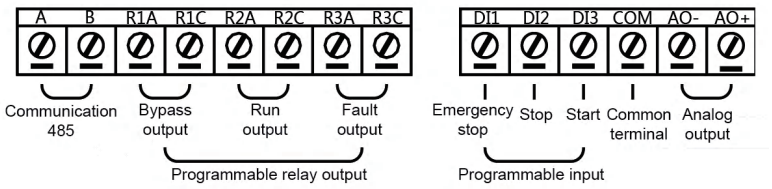
(also support out-built bypass)

Functions of Main Circuit and Grounding Terminals

Marking of terminal	Name of terminal	Notes
L1/R、L2/S、L3/T	Main circuit power input	Connect to three-phase power supply
T1/U、T2/V、T3/W	Output connection of soft start	LD,LB and LN series are connected to three-phase motor. LE series is used to connect the output terminal of bypass contactor
U1、V2、W3	Output terminal of soft start	External bypass is used to connect the output terminal of bypass contactor in application

3. Connection

Connection of Control Terminals



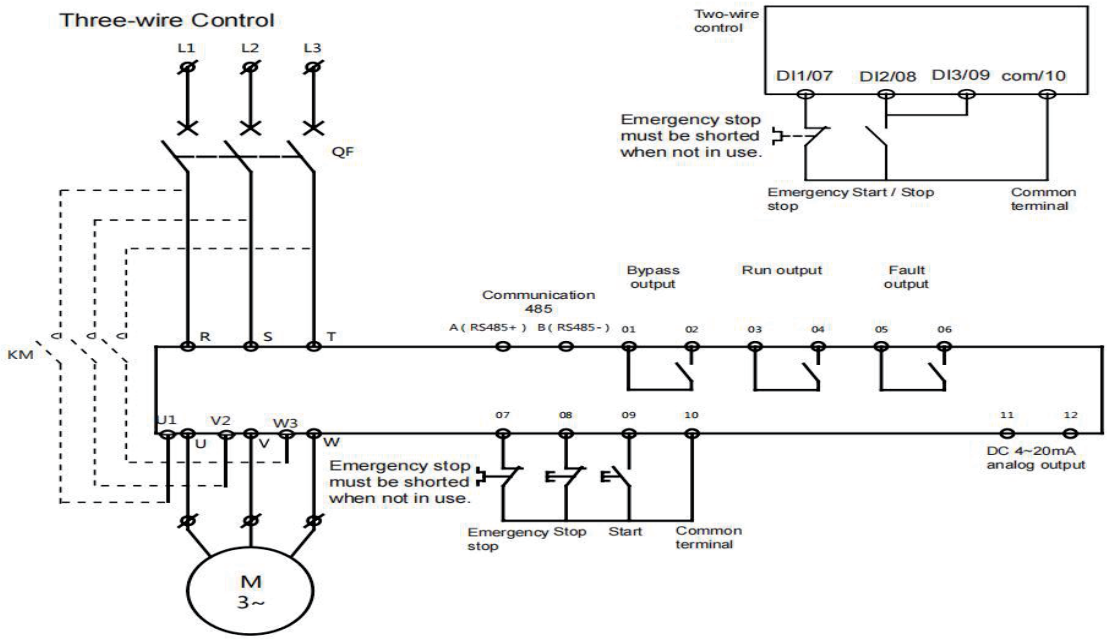
(The terminal function marked in the above figure is only the default setting value, and the actual function can be changed through parameter setting)

4. Description of Control Circuit Terminal

Marking of terminal		Description of function	
A	A	RS485-A	RS485 communication interface
B	B	RS485-B	
01	R1A	K1, programmable relay output (default bypass output)	
02	R1C		
03	R2A	K2,programmable relay cutput (default run output)	
04	R2C		
05	R3A	K3, programmable relay output (default fault output)	
06	R3C		
07	DI1	DI1, programmable input (default emergency stop input)	
08	DI2	DI2, programmable input (default shutdown input)	
09	DI3	DI3, programmable input (default start input)	
10	COM	Programmable input common termina!	
11	AO-	Analog Output -	DC 4~20mA(0~20mA can be preset, function code of F26
12	AO+	Analog Output +	

5. Connection

Standard Application Wiring Diagram



6. Product Selection

Table for Selection of Specifications

Rated power of motor (kW)+10% to -15%		Soft starter rating	Soft starter model	Available appearance
230V	400V	ICL rating(A)		
4	7.5	15	LN-7R5	AS
5.5	11	21	LN-011	AS
7.5	15	29	LN-015	AS
9	18.5	35	LN-018	AS
11	22	42	LN-022	AS
15	30	57	LN-030	AS
18.5	37	69	LN-037	AS
22	45	81	LN-045	AS
30	55	100	LN-055	AS
37	75	131	LN-075	TM3
45	90	162	LN-090	TM3
55	110	195	LN-110	TM2
75	132	233	LN-132	TM2
90	160	285	LN-160	TM2
110	200	388	LN-200	TL2
132	250	437	LN-250	TL2
160	315	560	LN-315	TKL
-	355	605	LN-355	TKL
220	400	675	LN-400	TKL
250	500	855	LN-500	TXL/TXXL
355	630	1045	LN-630	TXXL
450	720	1200	LN-720	TXXL

7. Product Selection

Table for Selection of Specifications

Rated power of motor (kW)+10% to -15%		Soft starter rating	Soft starter model	Available appearance
230V	400V	ICL rating(A)		
4	7.5	15	LE-7R5	SS1/GS2
5.5	11	21	LE-011	SS1/GS2
7.5	15	29	LE-015	SS1/GS2
9	18.5	35	LE-018	SS1/GS2
11	22	42	LE-022	SS1/GS2
15	30	57	LE-030	SS1/GS2
18.5	37	69	LE-037	SS1/GS2
22	45	81	LE-045	SS1/GS2
30	55	100	LE-055	SS1/GS2
37	75	131	LE-075	SS1/GS2
45	90	162	LE-090	SW
55	110	195	LE-110	SW
75	132	233	LE-132	SW
90	160	285	LE-160	SW
110	200	388	LE-200	SW
132	250	437	LE-250	TXL
160	315	560	LE-315	TXL
-	355	605	LE-355	TXL
220	400	675	LE-400	TXL
250	500	855	LE-500	TXL/TXXL
355	630	1045	LE-630	TXXL
450	720	1200	LE-720	TXXL

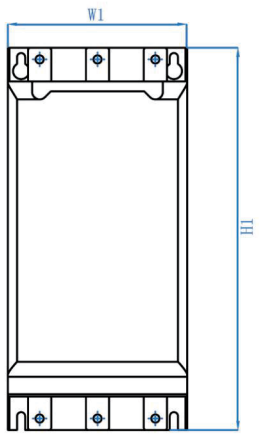
8. Product Selection

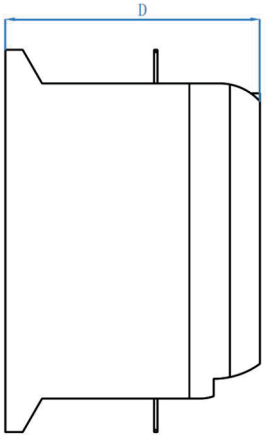
Table for Selection of Specifications

Rated power of motor (kW)+10% to -15%		Soft starter rating	Soft starter model	Available appearance
230V	400V	ICL rating(A)		
4	7.5	15	LB-7R5	SS1
5.5	11	21	LB-011	SS1
7.5	15	29	LB-015	SS1
9	18.5	35	LB-018	SS1
11	22	42	LB-022	SS1
15	30	57	LB-030	SS1
18.5	37	69	LB-037	SS1
22	45	81	LB-045	SS1
30	55	100	LB-055	SS1
37	75	131	LB-075	BSTU
45	90	162	LB-090	BSTU/SM2
55	110	195	LB-110	BSTU/SM2
75	132	233	LB-132	BSTW/SM2
90	160	285	LB-160	BSTW/SM2

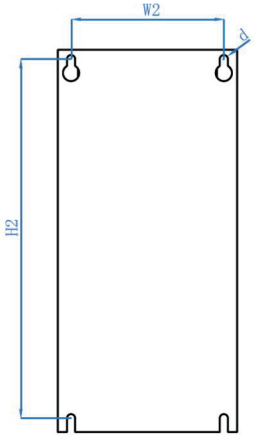
110	200	388	LB-200	SM2
132	250	437	LB-250	SL2
160	315	560	LB-315	SL2
185	355	605	LB-355	SL2

9. Outer Dimensions

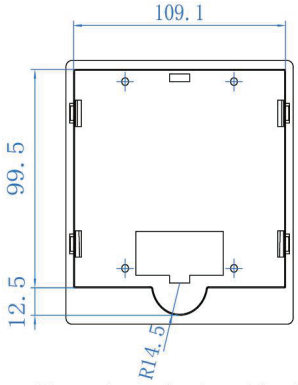




10. Product Selection



11. Operation



Dimensions of external keyboard compartment (optional)

Suitable model	Shell frame No.	Outer dimensions			Mounting dimensions		
		H1	W1	D	H2	W2	ϕ (Mounting hole)
LN	AS	265	145	189	255	120	M6
LN	TL2	380	320	300	350	250	M8
LN	TKL	560	375	338	520	300	M8
LN	TM2	375	215	258	360	160	M6
LN	TM3	314.5	200	229	294.5	160	M6
LN/LE	TXL	560	395	317	523	300	M8
LN/LE	TXXL	810	610	391	770	400	M12
LE/LB	SS1	313	155	187	296	128	M6
LE	GS2	273	145	165	250	135	M6
LE	SW	258	207	171	228	168	M8
LB	SM2	513	270	245	481	237	M8
LB	BSTU	340	200	240	320	160	M6
LB	BSTW	398	327	260	370	250	M8
LB	SL2	620	300	270	575	265	M8

1.Product Overview

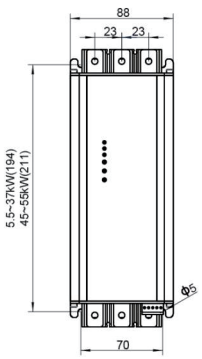
The AJR3-NX series motor soft starter is a new soft starter product launched by ANDELI Electric based on the traditional soft starter structure combined with the latest research and development results, targeting the environmental application characteristics and motor characteristics of small power motors(5.5KW~55KW).

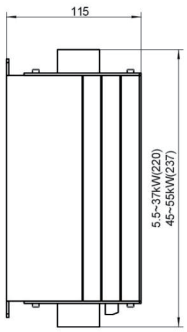
The soft starter can control the phase angle to start the motor smoothly and stably, which can effectively slow down the impact and voltage drop on the power grid during startup, reduce mechanical stress during startup, and reduce wear. Compared with the auto-coupling step-down starting method, it is more adaptable to frequent start and stop operations. Compared with the star-delta start, it can provide higher starting torque and smooth starting effect. Compared with the star-delta start, which also requires 6 motor wires in wring, the wiring of AJR3-NX is simpler, just connect the rated three output wires of the motor. AJR3-NX series soft starters are the best choice to replace traditional starts (direct start, auto-coupling step-down start, star-delta start). By reducing size, weight, equipment loss, maintenance and installation costs, the overall application cost is better Based on the traditional and old startup method.

2. Electrical Parameters

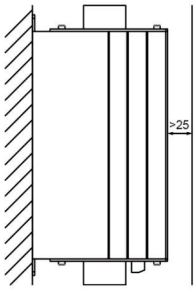
Standard	GBIT 14048.6-2016/IEC 60947-4-2:2011	
Rated operation voltage	200-415V(-15%+10%)	
Max length between softstarter and cable	300m	
Permissible ambient environment	Operafion	-25°C ~+60°C （When the ambient temperature exceeds40°C ,for every 1°C increase, the soft starter raledcurrent will decrease by 1%.)
	Storage	-40°C ~+70°C
Protection grade	IP20	
Rated frequency	50/60Hz	
Permissible installation height	5000m (start to reduce capacity for above 1000m, and the soft starterrated current is reduced by 5% for every 1000m.)	
Starting frequency	≈10times/hour(Class10 standard load)	

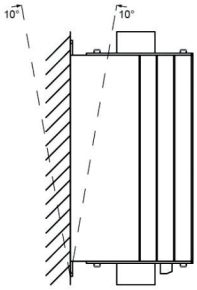
3. Product Dimensions



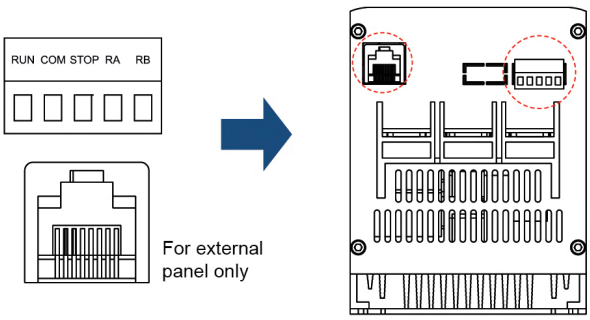


4. Install Sketch





5. Terminal Description



6. Major Loop

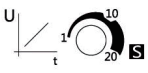
Terminal Marking	Terminal Name	Function
L1/L2/L3	Mains input of major loop	Connect three-phase source
T1/T2/T3	Output connection of soft start	Connect three-phase motor

7. Control Loop

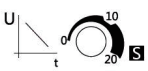
Terminal Marking	TerminalName	Function
RUN	Enable input	When RUN and COM are closed, the motor starts to run: whendisconnected,the motor decelerates and stops (only two-wirecontrol (default), if necessary, please contac;t the manufacturer
COM	Common port	For Run and Stop
STOP	Stop input	The motor stops when STOP and COM are closed (only three-wire control)
RA、RB	Indication ofworking status	Working status: relay output, normally open contact, clasedduring operation, open during shutdown or failure, relay capacity250V/AC 0.3A

8. Parameter Settings

Panel Parameters

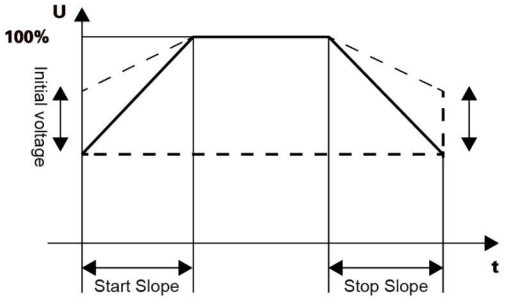


Knob of soft start time: used to adjust the soft start time. Therange is 1~20s.The longer the time is set, the smoother thesoft start process will be, which is beneficial to reduce theimpact on the power grid,



Knob of soft stop time: used to adjust the soft stop time, therange is 0~20s. The soft stop function can effectively avoidthe "water hammer effect" when the pump stops in somepump applications. When the knob is adjusted to 0s, it meansthat the motor parking mode is the free parking mode, andthe soft start stops the output immediately.

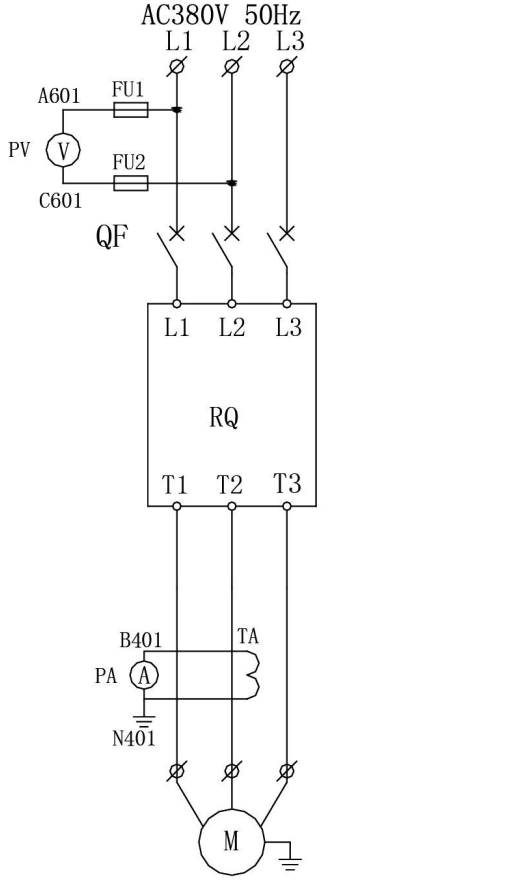
Knob of starting voltage: used to adjust the starting voltageThe range is 40%~70%.When starting, the motor needsto overcome the friction force in the static state. Properlyincrease the starting voltage to obtain a larger startingtorque. The user should refer to the actual load situationand cooperate with the start and stop time to obtain the bestsmooth start effect.



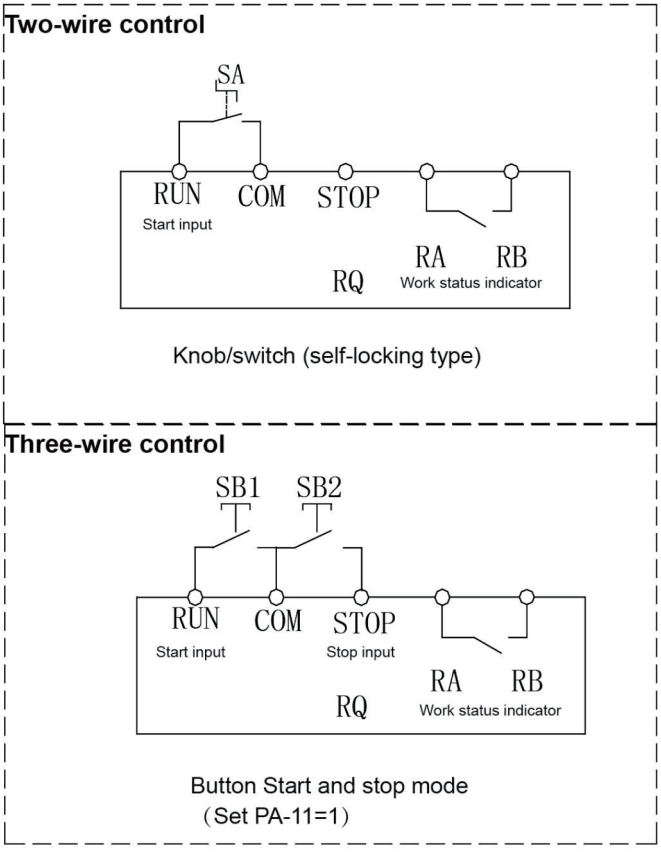
9. Power Diagram

Model	230V/kW	440V/kW	Rated current(A)
AJR3-Nx5R5	3	5.5	13
AJR3-Nx7R5	4	7.5	17
AJR3-Nx11	5.5	11	25
AJR3-Nx15	7.5	15	32
AJR3-Nx18	7.5	18.5	37
AJR3-Nx22	11	22	45
AJR3-Nx30	15	30	60
AJR3-Nx37	18.5	37	75
AJR3-Nx45	22	45	90
AJR3-Nx55	30	55	110

10. Wiring Diagram



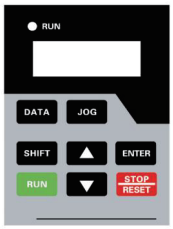
This drawing is for reference only

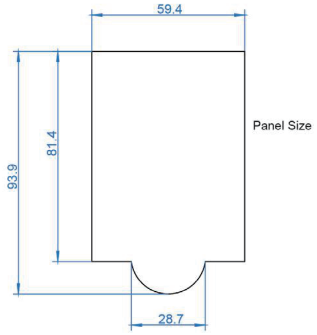


This drawing is for reference only

11. Keyboard setting

This is an optional accessory (not included in the standard product) and isconnected through the RJ45 interface (network cable required). If need it, pleasecontact the manufacturer.





12. Code Setting Instructions

Code	Name	Setting	Default	Description
PA-03	Overload multiplieduring soft start	1.0-5.0	5.0	The soft-start process is based on theoverload multiple of the rated load current,and the value of it is set according to theweight of the load.
PA-04	Rated power operation overload multiple	1.0-2.0	1.5	Based on the rated power current normaloperation overload multiple, the size of theoverload multiple is set based on load siteconditions
PA-05	Overload delay during soft start	1-250	10	The delay time after exceed the rated currentoverload multiple in the soft-start process isset based on the site conditions, in seconds (s)
PA-06	Rated power operation overload delay	1-20min	5min	Based on the delay ofoverload time afterexceed the rated power current overloadmultiple during the operation of the softstarter, in minutes(min)
PA-07	Motor underload protection	0-100%	20%	The curent setting range of underloadpratection is up to 100%: when set to 0. thisprotection is invalid
PA-08	Motor underload protection delay	1-20min	5min	Delay time of underload protecion, in minutes(min)
PA-09	Protection off	0-250	20%	This parameter is used to choose to closethe protection function. If you need to cosethe corresponding protection function, set thecoresponding position in the table below as 1and convert the binary value into decimal andsetit in PA-09. This parameter will cause thepratection to fail, please use this parameterwith caution
PA-11	Operation control mode selection	0/1/2	5min	Operation control mode selection: 0. Terminacontrol (two-wire system);1. Terminal control(three-wire system); 2.Panel control
PA-15	Restore default	0/1	0	Restore default: 0 Invalid; 1.Restore defaultvalue

Power Equipment & Transformer & Solar & VCB

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SVC Automatic Voltage Stabilizer

1. Application

SVC automatic voltage stabilizer consists of contact voltage regulator,sampling control circuit and servomotor as well.It has excellent features,such as small waveform distortion,high efficiency,high power factor,free from the effect or frequency variation of supply.It can be widely used in most situations where the voltage stabilization is required.

2. Specification

Input voltage	110V-250V or 150V-250V
Output voltage	220V±3%, 110V±3%
Frequency	50Hz/60Hz
Response time	1sec. (against 10% input voltage deviation)
Efficiency	>90%
Ambient temperature	-10℃~±40℃
Relative humidity	<90%
Waveform distortion	Non-lack fidelity waveform
Power factor cosø	0.8
Insulation resistance	>5MΩ

3. Outline and Packing Information

Type	Outline(cm)			Weight(kg)	Qty/CTN
	L	W	H		
SVC-500VA	18.5	15	12.5	17	4PCS
SVC-1000VA	21	18	14.5	20	4PCS
SVC-1500VA	21	18	14.5	25	4PCS
SVC-2000VA	27.5	23.5	18.5	7.8	1PC
SVC-3000VA	29	23	22	9.8	1PC
SVC-5000VA	45	24	18.5	14	1PC
SVC-7500VA	47	26	22	19.5	1PC
SVC-5000VA	28	30	46	19	1PC (Cabinet)
SVC-7500VA	34	30	50	25	1PC (Cabinet)
SVC-10000VA	44	32	56	31	1PC (Cabinet)
SVC-15000VA	43	36	56	41	1PC (Cabinet)
SVC-20000VA	47	40	78	79	1PC (Cabinet)
SVC-30000VA	47	40	78	99.5	1PC (Cabinet)

SVC-500VA

SVC-1500VA

SVC-3000VA

SVC-10000VA

SVC-5000VA

SVC-10000VA

SVC-30000VA

SVC(LED) Automatic Voltage Stabilizer

1. Application

SVC(LCD) automatic voltage stabilizer consists of contact voltage regulator,sampling control circuit and servomotor as well.It has excellent features,such as small waveform distortion, high efficiency,high power factor,free from the effect or frequency variation of supply.It can be widely used in most situations where the voltage stabilization is required.

SVC-D2000VA

SVC-D3000VA

SVC-D5000VA

2. Specification

Input voltage	110V-250V or 150V-250V
Output voltage	220V±3%, 110V±3%
Frequency	50H/60Hz
Response time	<1sec. (against 10% input voltage deviation)
Efficiency	>90%
Ambient temperature	-10℃~±40℃
Relative humidity	<90%
Waveform distortion	Non-lack fidelity waveform
Power factor cosø	0.8
Insulation resistance	>5MΩ

3. Outline and Packing Information

Type	Outline(cm)			Weight(kg)	Qty/CTN
	L	W	H		
SVC-D500VA	18.5	15	12.5	17	4PCS
SVC-D1000VA	21	18	14.5	20	4PCS
SVC-D1500VA	21	18	14.5	25	4PCS
SVC-D2000VA	27.5	23.5	18.5	7.8	1PC
SVC-D3000VA	29	23	22	9.8	1PC
SVC-D5000VA	45	24	18.5	14	1PC
SVC-D7500VA	47	26	22	19.5	1PC
SVC-D10000VA	47	26	22	24.5	1PC
SVC-D5000VA	28	30	46	19	1PC (Cabinet)
SVC-D7500VA	34	30	50	25	1PC (Cabinet)
SVC-D10000VA	44	32	56	31	1PC (Cabinet)
SVC-D15000VA	43	36	56	41	1PC (Cabinet)
SVC-D20000VA	47	40	78	79	1PC (Cabinet)
SVC-D30000VA	47	40	78	99.5	1PC (Cabinet)

SVC-D10000VA

SVC-D20000VA

SVC-D30000VA

SVC(Three) Automatic Voltage Stabilizer

1. Application

SVC automatic regulator voltage consists of contact voltage regulator,sampling control circuit and servomotor as well.It has excellent features,such as small waveform distortion,high efficiency, high power factor,free from the effect or frequency variation of supply.It can be widely used in most situations where the voltage stabilization is required.

SVC-6000VA-3

2. Specification

Input voltage	190V-430V or 280V-430V
Output voltage	380V±3%
Phase	Three phase
Frequency	50Hz/60Hz
Response	<1 sec. (against 10% input voltage deviation)
Efficiency	Better than 90%
Ambient temperature	-10℃~+40℃
Relative humidity	Less than 90%
Waveform	Non-lack fidelity waveform
Insulation resistance	>5MΩ

SVC-9000VA-3

3. Outline and Packing Information

Type	Outline(cm)			Qty/CTN
	L	W	H	
SVC-1500VA-3	48.5	22.5	17	1PCS
SVC-3000VA-3	48.5	22.5	17	1PCS
SVC-4500VA-3	48.5	22.5	17	1PCS
SVC-6000VA-3	39	31.5	77	1PCS
SVC-9000VA-3	43.5	36	77	1PCS
SVC-15000VA-3	48	36	70	1PCS
SVC-20000VA-3	51.5	40.5	85	1PCS
SVC-30000VA-3	59	46	109	1PCS
SVC-40000VA-3	64.5	52.5	109	1PCS
SVC-50000VA-3	64.5	52.5	109	1PCS
SVC-60000VA-3	64.5	52.5	109	1PCS
SVC-75000VA-3	67	56.5	130	1PCS
SVC-100000VA-3	67	56.5	130	1PCS

SVC-15000VA-3

SVC-30000VA-3

SVC-40000VA-3

SVC(LED)(Three) Automatic Voltage Stabilizer

1. Application

SVC-D6000VA-3

SVC(LCD)(Three) automatic regulator voltage consists of contact voltage regulator,sampling control circuit and servomotor as well.It has excellent features,such as small waveform distortion, high efficiency,high power factor,free from the effect or frequency variation of supply.It can be widely used in most situations where the voltage stabilization is required.

2. Specification

Input voltage	190V-430V or 280V-430V
Output voltage	380V±3%
Phase	Three phase
Frequency	50Hz/60Hz
Response	<1 sec. (against 10% input voltage deviation)
Efficiency	Better than 90%
Ambient temperature	-10˚C~+40˚C
Relative humidity	Less than 90%
Waveform	Non-lack fidelity waveform
Insulation resistance	>5MΩ

SVC-D9000VA-3

3. Outline and Packing Information

Type	Outline(cm)			Qty/CTN
	L	W	H	
SVC-D1500VA-3	48.5	22.5	17	1PCS
SVC-D3000VA-3	48.5	22.5	17	1PCS
SVC-D4500VA-3	48.5	22.5	17	1PCS
SVC-D6000VA-3	39	31.5	77	1PCS
SVC-D9000VA-3	43.5	36	77	1PCS
SVC-D15000VA-3	48	36	70	1PCS
SVC-D20000VA-3	51.5	40.5	85	1PCS
SVC-D30000VA-3	59	46	109	1PCS
SVC-D40000VA-3	64.5	52.5	109	1PCS
SVC-D50000VA-3	64.5	52.5	109	1PCS
SVC-D60000VA-3	64.5	52.5	109	1PCS
SVC-D75000VA-3	67	56.5	130	1PCS

SVC-D15000VA-3

SVC-D30000VA-3

SVC-D75000VA-3

SVR Series Fully Automatic Voltage Regulator

SVR-1000VA

SVR-1500VA

SVR-3000VA

SVR-5000VA

SVR-10000VA

1. Application

SVR Series voltage regulators have advanced equipment, abundant technology, reliable quality and distinguished credit,AVR,AR series are designed at JB3717-84 request. These products conform to fully automatic control of integrated circuit. They are of quick speed, good reliable of sensitive action, convenient use and assure the stale result. They are suitable for families, schools, enterprises, hotels and diets etc., where need a stable civil power. They can make the illumination lap, TV set, refrigerator, air-conditioner, computer and copy machine etc. work at a normal condition and have a long using time.

2. Technical Specification

Frequency	Regulating Time	Temperature Rise	Withstand Voltage	Low Voltage Protection	Over Voltage Protection
50-60Hz	Less Than 0.5	<60˚C	Accord With Ministry Issued Standard	Output 160V	Output 260V

Model	Range	Input Civil Power Voltage(V)	Output Precision of Stabling Voltage
500VA To 5000VA	Current	160-260	220V±3%
	Over-Low Voltage	130-260	220V±8%
	Special Over-Low Voltage	115-265	220V±10%
	High Precision of Stabling Voltage	160-265	220V±5%

SDW Series Wall Mount Automatic Voltage Regulator

SDW-2000VA

1.SDW series

Wall Mount Servo Motor Automatic Voltage Regulator

- Input Range:150V-250V,110V-250V
- Over voltafe & Under voltage protection
- Over temperature protection
- Reaction time(voltage stabilization time)<1 sec
- Short delay(3~6s)

2. Product Description

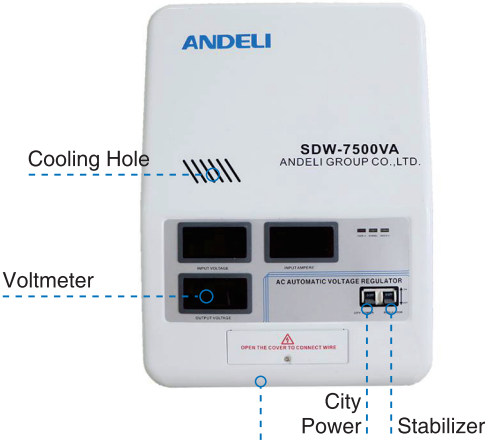
SDW Single Phase AC Stabilizer

SDW series servo type AC voltage stabilizer,which is an improved design of SVC series products, which comes with superior quality, enhanced functions and modern design. It is capable of being mounted on wall, saving space significantly.

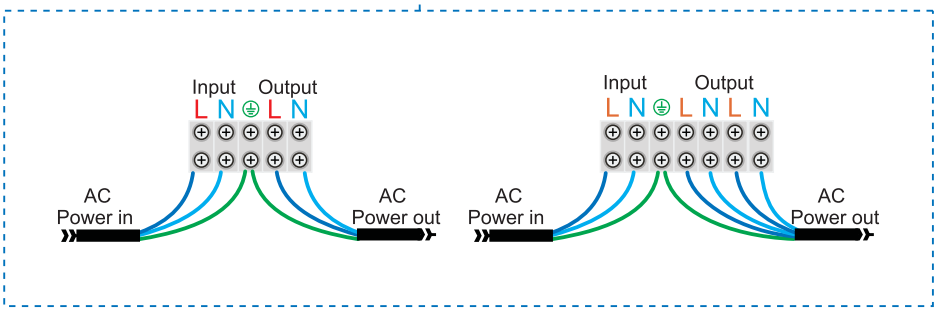
It mainly features in a modern design and various protections against, over-voltage, under-voltage, overload, over temperature and time delay, enjoying a great popularity for residential, hospital, commercial applications etc.

SDW-7500VA

3. Product Dominance



SDW-15000VA



4. Technical Parameter

Specification		500VA	1000VA	1500VA	2000VA	3000VA
Input	Phase	Single phase				
	Voltage	AC 150V-250V/70V-150V				
	Frequency	50Hz / 60Hz				
Output	Voltage	220V/230V/240V±3% or 110V/120V/130V±3%(Optional)				
	Capacity	400W	800W	1200W	1600W	2400W
	Frequency	50Hz 60Hz				
Protection	Low voltage	NO				AC 184V±4V
	Over voltage	NO				AC 246±4V
	Time Delay	NO				3-6 sec
	Overload/ short circuit	YES				
Packaging	Pcs per Carton	4				1
	Shipping Wt.(Kg)	19.9	21.1	22.8	27.7	10.8
	Packing dimensions(mm)	460x335x360	460x335x360	460x335x360	460x335x360	460x340x230
Efficiency	AC-AC	> 95%				
Acoustic	Noise level	≤50dB				
Environment	Temperature	-5℃to 40℃				
	Humidity	20% to 90%				

Specification		5000VA	7500VA	10000VA	15000VA
Input	Phase	Single phase			
	Voltage	AC 150V-250V/110V-250V			
	Frequency	50Hz/60Hz			
Output	Voltage	220V±3% or 110v±3%(Optional)			
	Capacity	4000W	6000W	8000W	12000W
	Frequency	50Hz / 60Hz			
Protection	Low voltage	AC 184V±4V			
	Over voltage	AC 246±4V			
	Time Delay	3-6 sec			
	Overload/ short circuit	YES			
Packaging	Pcs per Carton	1			
	Shipping Wt.(Kg)	14.7	17.0	24.8	27.8
	Packing dimensions(mm)	460x335x230	460x335x230	495x365x240	495x365x240
Efficiency	AC-AC	> 95%			
Acoustic	Noise level	≤50dB			
Environment	Temperature	-5℃to 40℃			
	Humidity	20% to 90%			

AVR Series Eleectronic Automatic Voltage Regulator

Product Features

The product is 220V automatic relay regulator, using LED digital display design, novel appearance, stable voltage, fast voltage regulator speed, wide voltage regulator range.

Application

Widely used in all walks of life small office equipment and refrigerators, electric fans, air conditioning, TV and other household appliances.

Specification

AVR-500VA

MODEL	AVR-500VA
INPUTVOLTAGE	AC160-260V
OUTPUTVOLTAGE	AC220V±10%50Hz
DELAYTIME	3s/180s
PROTECTION	HighandLowPressureProtection，High TemperatureProtection，WithUSBPort
POWER	500VA
PRODUCTSIZE(CM)	11*15.5*23
PACKINGSIZE(CM)	49.2*31*36.5
PCS/CARTON	8
N.W.(KGS)	22
G.W.(KGS)	24

AVR-2000VA

MODEL	AVR-1000	AVR-1500	AVR-2000
INPUTVOLTAGE	AC100-260V		
OUTPUTVOLTAGE	AC220V±10% 50Hz		
DELAYTIME	3s/180s		
PROTECTION	HighandLowPressureProtection，HighTemperatureProtection，WithUSBPort		
POWER	1000VA	1500VA	2000VA
PRODUCTSIZE(CM)	19*15.2*29.5		
PACKINGSIZE(CM)	64*31*21		
PCS/CARTON	4		
N.W.(KGS)	18	20	24
G.W.(KGS)	20	22	26

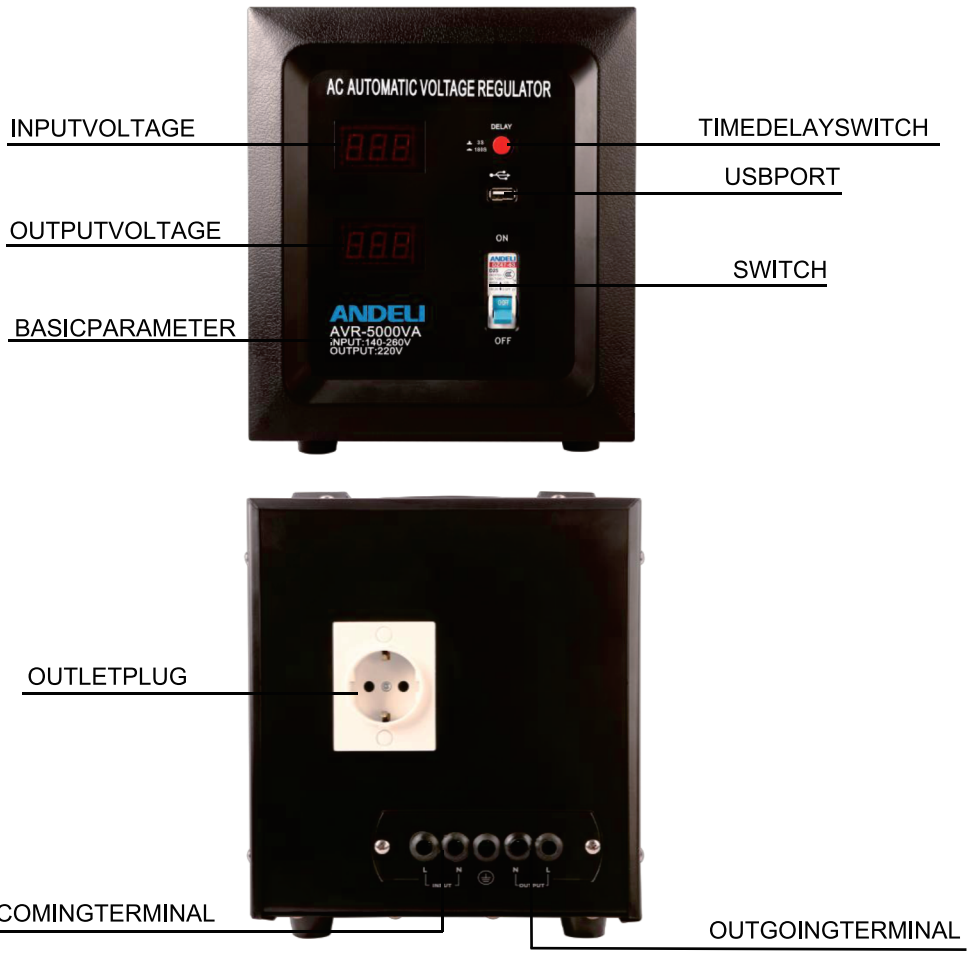
ANDELI

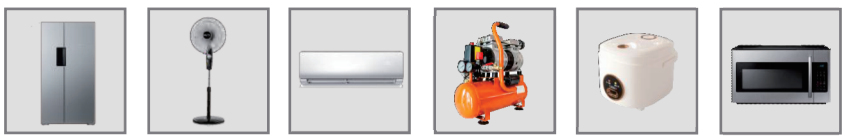
AVR

AVR5000VA

MODEL	AVR-3000	AVR-5000
INPUTVOLTAGE	AC140-260V	
OUTPUTVOLTAGE	AC220±10%50Hz	
DELAYTIME	3s/180s	
PROTECTION	HighandLowPressureProtection， HighTemperatureProtection，WithUSBPort	
POWER	3000VA	5000VA
PRODUCTSIZE(CM)	29*25.5*41.2	
PACKINGSIZE(CM)	42.5*26.8*31	
PCS/CARTON	1	
N.W.(KGS)	11	15
G.W.(KGS)	12.5	16.5

FUNCTIONICON





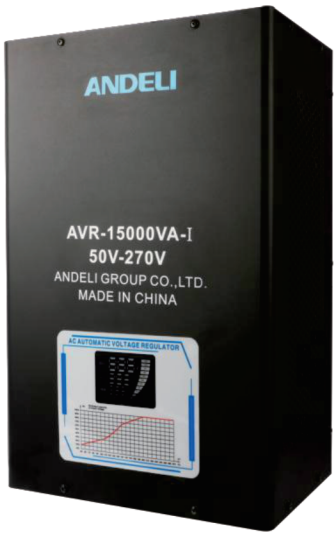
ICEBOX FAN AIRCONDITIONER AIRCOMPRESSOR ELECTRICCOOKER MICROWAVEOVEN

AVRW Series Wall-Mounted Electronic Product Features

Theproductis220Vautomaticrelayregulator,usingLEDdigitaldisplaydesign,novelappearance,stablevoltage,fastvoltageregulatorspeed,widevoltage regulatorrange,usingwall-mountedinstallation.

Application

Widelyusedinallwalksoflifesmallofficeequipmentandrefrigerators,electricfans,air conditioning,TVandotherhouseholdappliances.

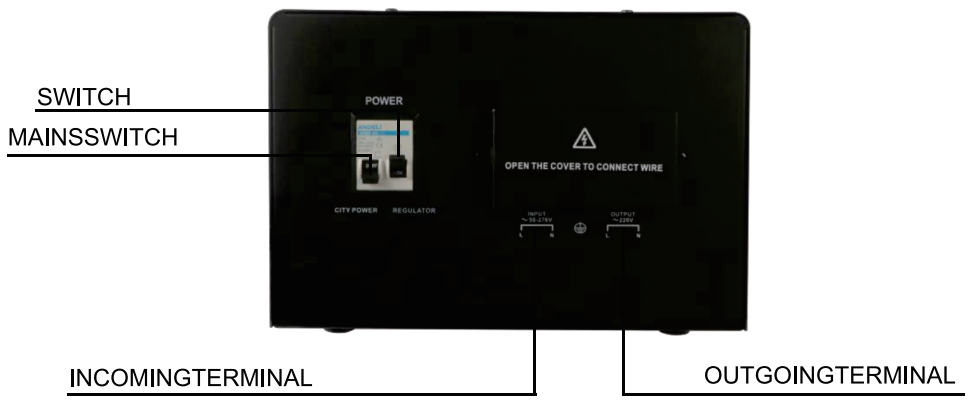


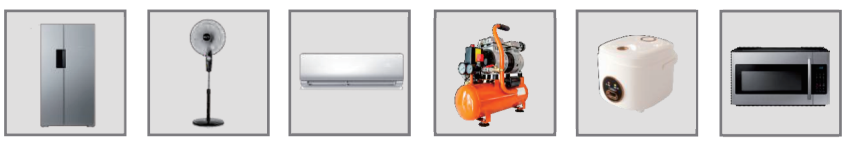
AVR-15000VA

Specification

MODEL	AVRW-10000VA	AVRW-15000VA
INPUTVOLTAGE	AC50-270V	
OUTPUTVOLTAGE	AC220±10%	
DELAYTIME	5s/180s	
PROTECTION	OverVoltage,OverCurrent,HighTemperatureProtection	
POWER	10000VA	15000VA
PRODUCTSIZE(CM)	21.4*30.2*498	
PACKINGSIZE(CM)		
PCS/CARTON	1	
N.W.(KGS)	21.7	25.6
G.W.(KGS)	23.2	27.2

FUNCTION ICON





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AVR-III

AVR Series Electroinc Voltage

Product Features

The product is 220V automatic relay regulator, using LCD digital display design, novel appearance, stable voltage, fast voltage regulator speed, wide voltage regulator range.

AVR-500VA

Appliction

Widely used in all walks of life small office equipment and refrigerators, electric fans, air conditioning, TV and other household appliances.

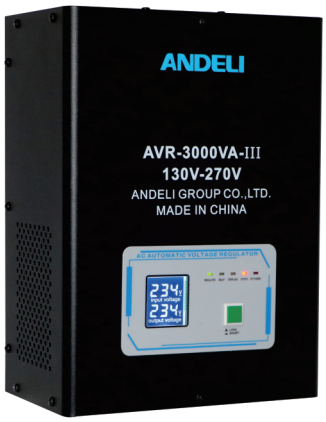
Products Specification

MODEL	AVR-500-III
INPUT VOLTAGE	AC130-270V
OUTPUT VOLTAGE	AC220V±10% 50 Hz
DELAY TIME	3s/180s
PROTECTION	High and Low Pressure Protection, High Temperature Protection
POWER	500VA
PRODUCT SIZE(CM)	21*18*11.5
PACKING SIZE(CM)	
PCS/CARTON	4
N.W.(KGS)	10
G.W.(KGS)	12

MODEL	AVR-1000-III	AVR-1500-III	AVR-2000-III
INPUT VOLTAGE	AC100-260V		
OUTPUT VOLTAGE	AC220V±10% 50 Hz		
DELAY TIME	3s/180s		
PROTECTION	High and Low Pressure Protection, High Temperature Protection		
POWER	1000VA	1500VA	2000VA
PRODUCT SIZE(CM)	35.5*25*16		
PACKING SIZE(CM)			
PCS/CARTON	4		
N.W.(KGS)	10.5	11	11.5
G.W.(KGS)	12.5	13	13.5

ANDELI

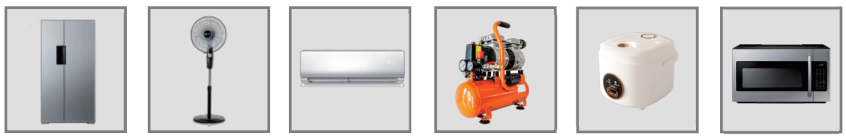
AVR-III



AVR-3000VA

MODEL	AVR-3000 - III	AVR-5000 - III
INPUT VOLTAGE	AC130-270V	
OUTPUT VOLTAGE	AC220±10% 50Hz	
DELAY TIME	3s/180s	
PROTECTION	High and Low Pressure Protection, High Temperature Protection	
POWER	50Hz	
PRODUCT SIZE(CM)	37.5*24.5*21.5	
PACKING SIZE(CM)		
PCS/CARTON	1	
N.W.(KGS)	8.3	8.8
G.W.(KGS)	9.5	10

Function Icon

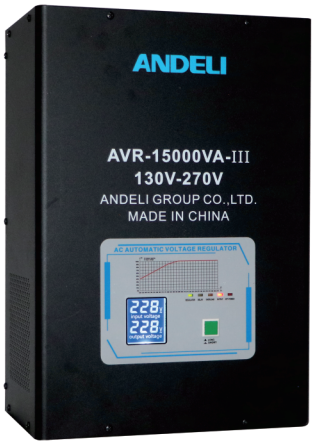


ICEBOX FAN AIR CONDITIONER AIR COMPRESSOR ELECTRIC COOKER MICROWAVE OVEN

ANDELI

AVR-III

AVR Series Wall-Mounted Electronic Product Features



AVR-15000VA

The product is 220V automatic relay regulator, using LCD digital display design, novel appearance, stable voltage, fast voltage regulator speed, wide voltage regulator range, using wall-mounted installation.

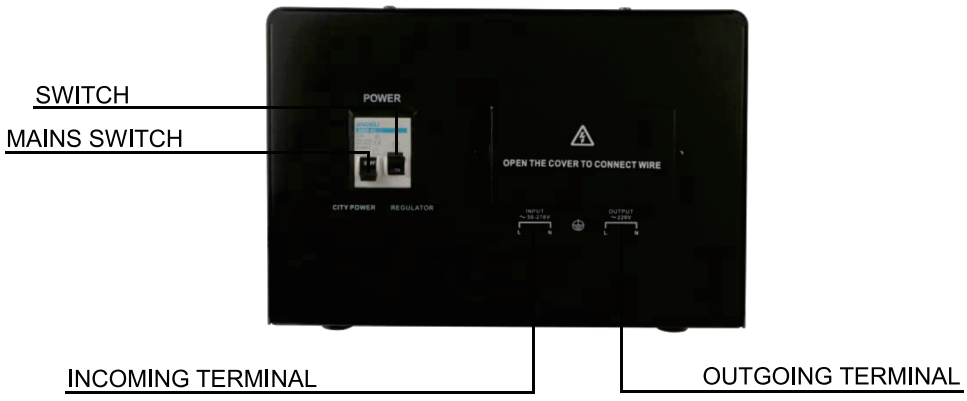
Appliction

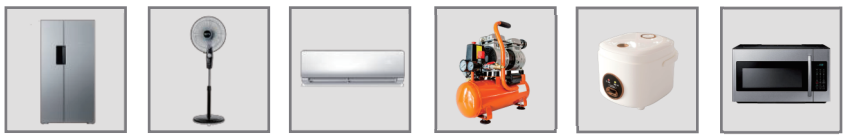
Widely used in all walks of life small office equipment and refrigerators, electric fans, air conditioning, TV and other household appliances.

Products Specification

MODEL	AVR-10000-III	AVR-15000-III
INPUT VOLTAGE	AC130-270V	
OUTPUT VOLTAGE	AC220±10%	
DELAY TIME	5s/180s	
PROTECTION	Over Voltage, Over Current, High Temperature Protection	
POWER	10000VA	15000VA
PRODUCT SIZE(CM)	46.5*30.5*24	
PACKING SIZE(CM)		
PCS/CARTON	1	
N.W.(KGS)	20. 5	22. 5
G.W.(KGS)	22. 5	24

Function Icon





ICEBOX FAN AIR CONDITIONER AIR COMPRESSOR ELECTRIC COOKER MICROWAVE OVEN

DBW SBW Compensated Voltage Stabilizer

1. Application

SBW -100KVA

DBW SBW compensated voltage stablilizer is a contact adjustable automatic voltage compensation high-power regulating power device. When voltage from supply network is varied or due to loading current effect, it automatically regulates the output voltage to ensure the normal function of the varied of electric equipments.

2. Specification

Input voltage	Single phase: 220V±20% or 220V±30% Three phases four-line: 380V±20% or 380V±30%
Output voltage	Single phase: 220V±2%; Three phases: 380V±2%
Phase	Single phase; Three phases four-line
Frequency	50Hz/60Hz
Response	within 1 sec.(against 10% input voltage deviation)
Efficiency	Better than 95%
Ambient temperature	-10°C~+40°C
Waveform	Non-lack fidelity waveform
Insulation restortion	Better than 5MΩ
Overload	Double rated current, one min
Protection	Overvoltage, overcurrent, feed phases

SBW-150KVA

SBW-300KVA

3. Outline and Packing

Type	Outpower(kVA)	Outline(cm)	Weight(Kg)	Cabinet
DBW-20kVA	20	70 x 50 x 135	283	1
DBW-30kVA	30	70 x 50 x 135	310	1
DBW-40kVA	40	70 x 50 x 135	330	1
DBW-50kVA	50	80 x 60 x 150	360	1
DBW-60kVA	60	80 x 60 x 150	380	1
DBW-70kVA	70	80 x 60 x 150	100	1
DBW-80kVA	80	90 x 70 x 170	430	1
DBW-100kVA	100	90 x 70 x 170	480	1
SBW-50kVA	50	80 x 62 x 135	350	1
SBW-60kVA	60	80 x 62 x 135	370	1
SBW-100kVA	110	85 x 52 x 150	420	1
SBW-150kVA	150	100 x 72 x 170	550	1
SBW-180kVA	180	100 x 72 x 170	570	1
SBW-200kVA	200	100 x 72 x 170	630	1
SBW-225kVA	225	110 x 80 x 180	660	1
SBW-250kVA	250	110 x 80 x 200	700	1
SBW-300kVA	300	110 x 80 x 210	740	1
SBW-320kVA	320	110 x 80 x 210	760	1
SBW-400kVA	400	110 x 80 x 210/2	1100	2
SBW-500kVA	500	110 x 80 x 210/2	1500	2
SBW-600kVA	600	110 x 80 x 210/2	2200	2
SBW-800kVA	800	85 x 100 x 220/3	2800	3
SBW-1000kVA	1000	85 x 100 x 220/3	3500	3
SBW-1200kVA	1200	85 x 100 x 220/3	4100	3
SBW-1600kVA	1600	110 x 110 x 220/3	5560	3
SBW-2000kVA	2000	110 x 110 x 220/3	7100	3

JJW SJW A.C. Precision Purity Regulated Power Supply

JJW-1000VA

1. JJW SJW A.C. Precision Purity Regulated Power Supply Feature

A.C. Precision purity regulated power supply is our new, high characteristic electronic A.C. regulated equipment as KUPA doctor's theory, combining Asymmetrical Digital Subscriber Loop colander net, which integrates multi-functions such as purity regulation and anti-disturbance. They are of wide range in regulation, fast speed in response, high precision in regulation etc.,to refrain all kinds of noise from power net and disturbance from peak. They are your first choice among of A.C. regulated power supply at present, which are 614 series electronic A.C. regulated power supply and ideal substitution regulated power supply.

It often happens that the electrical equipment are damaged because of lack of power. The experts of power point out most 80% malfunctions of computer are caused by A.C. power supply directly or indirectly. So as to ensure the safe operation of electrical equipment, the power supply must be improved. Our products fulfill the requirements in such places for his spurious characteristic. Our products are suitable for the following fields: science department, university, corporation, hospital, broadcasting station, communication equipment, traffic system, test equipment and all automatic production equipment.

JJW-2000VA

2. JJW/2 A.C. Intelligence Percision Purity Regulated Power Supply Feature

JJW/2 A.C. intelligence precision purity regulated power supply is new high characteristic electronic A.C. regulated power supply, which is one of advanced characteristic A.C. regulated power supply at present, and widely suitable for high precision electrical equipment and general electrical power equipment. In America, the products have been used into military and aviation etc. A.C. intelligence precision purity regulated power supply adopt advanced technology, integration purity, regulation, anti-disturbance and automatic protection etc. With the advantages such as wide range in regulation, fast speed in response, high precision, anti-disturbance, low distortion, strong capacity in anti-load impact, long life, low noise and so on.

JJW-3000VA

3. Capability index

Range of output voltage
Single phase:170-270V Three phases:310-450V
Range of input regulation: Single phase:185-250V, output:220±5%
Three phases:330-450V, output:380±0.5%
Input frequency:50Hz±5%
Alarm value of output voltage
Single phase:output higher than 242V or lower than 198V
Three phases:output higher than 418V or lower than 342V
Value of protection of over voltage(output loop cut down)
Single phase:output voltage more than 247V
Three phases:output voltage more than 427V
Value of protection of short voltage(output loop cut down)
Single phase:output lower than 193V
Value of protection of over current:l .2 times larger than rated current
Response time of instant voltage change: advantage over two weeks of power
Signle pulse restraint of instant high power
Single phase input 3000V, while 75us single pulse, the remained output voltage <30V
Output wave distortion:<3%
Working ambient temperature:-100C±400C
Waste power: ≤l .5%

Switching Power Supply

S-15-12

15W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-15-5	5V,0~3.0A	± 2%	50mV	65%
S-15-12	12V,0~1.3A	± 1%	50mV	68%
S-15-24	24V,0-0.7A	± 1%	50mV	73%

25W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-25-5	5V,0~5.0A	± 2%	50mV	72%
S-25-12	12V,0~2.1A	± 1%	100mV	76%
S-25-15	15V,0~1.7A	± 1%	100mV	77%
S-25-24	24V,0~1.1A	± 1%	100mV	80%

35W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-35-5	5V,0~7.0A	± 2%	75mV	70%
S-35-12	12V,0~3.0A	± 1%	100mV	76%
S-35-15	15V,0~2.4A	± 1%	100mV	78%
S-35-24	24V,0~1.5A	± 1%	100mV	78%

S-40-12

40W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-40-5	5V,0~8.0A	± 2%	75mV	72%
S-40-12	12V,0~3.5A	± 1%	100mV	76%
S-40-15	15V,0~2.8A	± 1%	100mV	76%
S-40-24	24V,0~1.8A	± 1%	100mV	78%

50W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-50-5	5V,0~10A	± 2%	75mV	71%
S-50-12	12V,0~4.2A	± 1%	100mV	78%
S-50-15	15V,0~3.4A	± 1%	100mV	78%
S-50-24	24V,0~2.1A	± 1%	100mV	82%

60W Single Output Switching Power Supply

Model No	Ouput	Tol.	R & N	Effi.
S-60-5	5V,0~12A	± 2%	120mV	73%
S-60-12	12V,0~5.0A	± 1%	120mV	76%
S-60-15	15V,0~4.0A	± 1%	150mV	77%
S-60-24	24V,0~2.5A	± 1%	150mV	79%

S-75-12

70W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-75-5	5V,0~15A	± 2%	80mV	72%
S-75-12	12V,0~6.3A	± 2%	80mV	77%
S-75-15	15V,0~5.0A	± 2%	80mV	79%
S-75-24	24V,0~3.2A	± 1%	100mV	80%

75W PFC Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
SP-75-5	5V,0~15A	± 2%	80mV	72%
SP-75-12	12V,0~6.3A	± 2%	80mV	77%
SP-75-15	15V,0~5.0A	± 2%	80mV	79%
SP-75-24	24V,0~3.2A	± 1%	100mV	80%

S-100-12

100W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-100-3	3V,0~20A	± 2%	100mV	70%
S-100-5	5V,0~20A	± 2%	100mV	78%
S-100-7.5	7.5V,0~13.6A	± 1%	100mV	80%
S-100-10	10V,0~10A	± 1%	100mV	80%
S-100-12	12V,0~8.5A	± 1%	100mV	81%
S-100-15	15V,0~6.7A	± 1%	100mV	81%
S-100-18	18V,0~5.6A	± 1%	100mV	82%
S-100-24	24V,0~4.5A	± 1%	100mV	84%
S-100-27	27V,0~3.7A	± 1%	100mV	84%
S-100-48	48V,0~2.0A	± 1%	100mV	84%
S-100F-5	5V,0~20A	± 2%	100mA	76%
S-100F-7.5	7.5V,0~13.5A	± 1%	125mA	78%
S-100F-12	12V,0~8.5A	± 1%	125mA	80%
S-100F-15	15V,0~6.7A	± 1%	125mA	81%
S-100F-24	24V,0~4.5A	± 1%	125mA	83%
S-100F-48	48V,0~2.2A	± 1%	125mA	84%

S-120-12

120W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-120-3	3V,0~24A	± 2%	100mV	70%
S-120-5	5V,0~24A	± 2%	100mV	78%
S-120-7.5	7.5V,0~16A	± 1%	100mV	80%
S-120-10	10V,0~12A	± 1%	100mV	80%
S-120-12	12V,0~10A	± 1%	100mV	81%
S-120-15	15V,0~8A	± 1%	100mV	81%
S-120-18	18V,0~6.6A	± 1%	180mV	82%
S-120-24	24V,0~5A	± 1%	240mV	84%
S-120-27	27V,0~4.5A	± 1%	240mV	84%
S-120-48	48V,0~2.5A	± 1%	240mV	84%

145W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-145-5	5V,0~25A	± 2%	120mA	72%
S-145-7.5	7.5V,0~18A	± 2%	120mA	74%
S-145-12	12V,0~12A	± 2%	120mA	77%
S-145-13.5	13.5V,0~10.7A	± 2%	120mA	78%
S-145-15	15V,0~9.6A	± 2%	80mA	79%
S-145-24	24V,0~6.0A	± 1%	150mA	80%
S-145-27	27V,0~5.4A	± 1%	150mA	80%
S-145-48	48V,0~3.0A	± 1%	150mA	80%

S-150-12

150W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-150-7	5V,0~30A	± 2%	150mV	78%
S-150-7.5	7.5V,0~20.0A	± 1%	150mV	80%
S-150-9	9V,0~16.7A	± 1%	180mV	80%
S-150-12	12V,0~12.5A	± 1%	180mV	82%
S-150-15	15V,0~10.0A	± 1%	180mV	84%
S-150-24	24V,0~6.5A	± 1%	240mV	85%
S-150-48	48V,0~3.2A	± 1%	240mV	87%
S-150-13.5	13.5V,0~11.2A	± 1%	180mV	83%
S-150-27	27V,0~5.6A	± 1%	240mV	86%

S-200-12

200W PFC Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
SP-200-3.3	3.3V,0~40.0A	± 2%	100mA	72%
SP-200-5	5V,0~40.0A	± 2%	100mA	77%
SP-200-12	12V,0~16.7A	± 2%	100mA	85%
SP-200-15	15V,0~13.4A	± 2%	100mA	84%
SP-200-24	24V,0~8.40A	± 2%	125mA	87%
SP-200-48	48V,0~4.20A	± 2%	250mA	86%

200W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-200-3.3	3.3V,0~40.0A	± 2%	100mV	65%
S-200-5	5V,0~40.0A	± 2%	100mV	71%
S-200-7.5	7.5V,0~26.7A	± 2%	100mV	76%
S-200-12	12V,0~16.7A	± 2%	100mV	79%
S-200-13.5	13.5V,0~14.9A	± 2%	100mV	80%
S-200-15	15,0~14.3A	± 2%	100mV	81%
S-200-24	24V,0~8.40A	± 1%	150mV	83%
S-200-27	27V,0~7.5A	± 1%	150mV	83%
S-200-48	48V,0~4.2A	± 1%	250mV	84%

S-201-12

201W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-201-5	5V,0~40.0A	± 2%	150mA	73%
S-201-7.5	7.5V,0~26.5A	± 2%	150mA	76%
S-201-12	12V,0~16.5A	± 1%	150mA	79%
S-201-13.5	13.5V,0~14.7A	± 1%	150mA	79%
S-201-15	15V,0~13.0A	± 1%	150mA	80%
S-201-24	24V,0~8.3A	± 1%	150mA	81%
S-201-27	27V,0~7.4A	± 1%	200mA	82%
S-201-48	48V,0~4.2A	± 1%	240mA	83%

240W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	PP
S-240-5	5V,0~40A	± 2%	150mA	135
S-240-7.5	7.5V,0~30.0A	± 2%	200mA	135
S-240-12	12V,0~18.0A	± 1%	150mA	135
S-240-15	15V,0~15.0A	± 1%	150mA	135
S-240-24	24V,0~10.0A	± 1%	180mA	135
S-240-30	30V,0~8.0A	± 1%	180mA	135
S-240-48	48V,0~5.0A	± 1%	200mA	135

S-250-12

250W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-250-5	5V,0~40.0A	± 2%	80mA	74%
S-250-12	12V,0~18A	± 1%	120mA	79%
S-250-15	15V,0~15A	± 1%	120mA	80%
S-250-24	24V,0~10.0A	± 1%	120mA	81%
S-250-27	27V,0~9.4A	± 1%	150mA	82%
S-250-48	48V,0~5.2A	± 1%	200mA	82%

300W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-300-5	5V,0~45.0A	± 2%	150mA	73%
S-300-12	12V,0~25.0A	± 1%	200mA	82%
S-300-13.5	13.5V,0~22.0A	± 1%	200mA	82%
S-300-24	24V,0~12.5A	± 1%	200mA	84%
S-300-27	27V,0~11.0A	± 1%	200mA	84%
S-300-48	28V,0~6.5A	± 1%	240mA	86%

S-320-12

320W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-320-5	5V,0~50.0A	± 2%	150mA	77%
S-320-7.5	7.5V,0~36.0A	± 2%	150mA	80%
S-320-12	12V,0~25A	± 1%	150mA	82%
S-320-13.5	13.5V,0~22.0A	± 1%	150mA	83%
S-320-15	15V,0~20.0A	± 1%	150mA	84%
S-320-24	24V,0~12.5A	± 1%	150mA	86%
S-320-27	27V,0~11.0A	± 1%	200mA	86%
S-320-48	48V,0~6.5A	± 1%	240mA	87%

320W PEC Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
SP-320-5	5V,0~50.0A	± 2%	150mA	79%
SP-320-7.5	7.5V,0~40.0A	± 2%	150mA	83%
SP-320-12	12V,0~25.0A	± 1%	150mA	86%
SP-320-13.5	13.5V,0~22.0A	± 1%	150mA	86%
SP-320-15	15V,0~20.0A	± 1%	150mA	86%
SP-320-24	24V,0~13.0A	± 1%	150mA	87%
SP-320-27	27V,0~11.7A	± 1%	200mA	88%
SP-320-48	48V,0~6.7A	± 1%	240mA	89%

S-350-12

350W PEC Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
SP-350-5	5V,0~50A	± 2%	150mA	73%
SP-350-7.5	7.5V,0~46.0A	± 1%	150mA	76%
SP-350-12	12V,0~30.0A	± 1%	150mA	79%
SP-350-13.5	13.5V,0~25.8A	± 1%	150mA	79%
SP-350-15	15V,0~23.2A	± 1%	150mA	80%
SP-350-24	24V,0~14.6A	± 1%	150mA	81%
SP-350-27	27V,0~13.0A	± 1%	200mA	82%
SP-350-48	48V,0~7.3A	± 1%	240mA	83%

350W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-350-5	5V,0~50A	± 2%	150mA	73%
S-350-7.5	7.5V,0~46.0A	± 1%	150mA	76%
S-350-12	12V,0~30.0A	± 1%	150mA	79%
S-350-13.5	13.5V,0~25.8A	± 1%	150mA	79%
S-350-15	15V,0~23.2A	± 1%	150mA	80%
S-350-24	24V,0~14.6A	± 1%	150mA	81%
S-350-27	27V,0~13.0A	± 1%	200mA	82%
S-350-48	48V,0~7.3A	± 1%	240mA	83%

S-400-12

400W Single Output Switching Power Supply

Model No.	Ouput	Tol.	R & N	Effi.
S-400-5	5V,0~55.0A	± 2%	80mA	72%
S-400-9	9V,0~43.0A	± 2%	80mA	76%
S-400-12	12V,0~33.0A	± 1%	120mA	82%
S-400-15	15V,0~26.0A	± 1%	150mA	84%
S-400-24	24V,0~17.0A	± 1%	150mA	86%
S-400-48	48V,0~8.3A	± 1%	240mA	88%

ANDELI

Power Supply

- High efficiency and high reliability
- Protections:Short circuit/Over load
- Air cooling
- 2 years warranty

MS-15-12

Model NO.	MS-15-5	MS-15-12	MS-15-15	MS-15-24	MS-15-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	±2%	±1%	±1%	±1%	±1%
Rated current	3A	1.25A	1A	0.7A	0.32A
Current range	0~3A	0~1.25A	0~1.0A	0~0.7A	0~0.32A
Rated power	15W	15W	15W	16.8W	15.36W
Ripple&noise	50mVP-P	50mVP-P	100mVP-P	100mVP-P	120mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 20ms at full load				
Voltage adj.range	170~265VAC auto switch 254~375VDC 47~63Hz				
AC current	0.25A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	30A/230VAC				
Leakage current	<0.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10°C~+60°C):20%~90%RH				
Protect temp. Humidity	(-20°C~+85°C):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 2Kg				
Dimension	120×50×31mm(L×W×H)				

MS-35-12

Model NO.	MS-35-5	MS-35-12	MS-35-15	MS-35-24	MS-35-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	±1%	±1%	±1%	±1%	±1%
Rated current	7.0A	3.0A	2.4A	1.5A	0.8A
Current range	0~7A	0~3.0A	0~2.4A	0~1.5A	0~0.8A
Rated power	36W	36W	36W	36W	38.4W
Ripple&noise	75mVP-P	100mVP-P	100mVP-P	100mVP-P	150mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 20ms at full load				
Voltage adj.range	170VAC~265VAC auto switch 254~375VDC				
AC current	0. 65A/230VAC				
Efficiency	74%	81%	81%	83%	83%
Inrush current	cold start 36A 230VAC				
Leakage current	<0. 6mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 2Kg				
Dimension	85×58×38mm(L×W×H)				

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25°C of ambient temperature.
2. Ripple&noise are measured at 20MHz of bandwidth by using a 12″twisted pair-wire terminated with a 0.1uf&47uf parallel capacitor.
3. Tolerance:includes set up tolerance, line regulation and load regulation.

ANDELI

Power Supply

- High efficiency and high reliability
- Protections:Short circuit/Over load
- Air cooling
- 2 years warranty

MS-50-12

Model NO.	MS-50-5	MS-50-12	MS-50-15	MS-50-24	MS-50-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	±2%	±1%	±1%	±1%	±1%
Rated current	10A	4.2A	3.4A	2.1A	0.8A
Current range	0~10A	0~4.2A	0~3.4A	0~2.1A	0~1A
Rated power	50W	50.4W	51W	50.4W	50.4W
Ripple&noise	75mVP-P	100mVP-P	120mVP-P	120mVP-P	150mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 20ms at full load				
Voltage adj.range	170~265VAC auto switch 254~375VDC 47~63Hz				
AC current	0.65A/230VAC				
Efficiency	74%	81%	81%	83%	83%
Inrush current	36A/230VAC				
Leakage current	<0.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 33Kg				
Dimension	99×97×36mm(L×W×H)				

MS-60-12

Model NO.	MS-60-5	MS-60-12	MS-60-15	MS-60-24	MS-60-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	±2%	±1%	±1%	±1%	±1%
Rated current	12A	5A	4A	2.5A	1.25A
Current range	0~12A	0~5A	0~4A	0~2.5A	0~1.25A
Rated power	50W	50.4W	51W	50.4W	50.4W
Ripple&noise	100mVP-P	120mVP-P	120mVP-P	150mVP-P	150mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 20ms at full load				
Voltage adj.range	170~265VAC auto switch 254~375VDC 47~63Hz				
AC current	0.65A/230VAC				
Efficiency	74%	81%	81%	83%	83%
Inrush current	36A/230VAC				
Leakage current	<0.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 33Kg				
Dimension	99×97×36mm(L×W×H)				

NOTE

1.All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25℃ of ambient temperature.

2. Ripple&noise are measured at 20MHz of bandwidth by using a 12″twisted pair-wire terminated with a 0.1uf&47uf parallel capacitor.

3. Tolerance:includes set up tolerance, line regulation and load regulation.

- High efficiency and high reliability
- Protections:Short circuit/Over load
- Air cooling
- 2 years warranty

RS-60-12

Model NO.	RS-60-5	RS-60-12	RS-60-15	RS-60-24	RS-60-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	4.5~5.6V	10~13.2V	13.5~18V	20~26.4V	41~56V
Rated current	12A	5A	4A	2.5A	1.25A
Current range	0~12A	0~5A	0~4A	0~2.5A	0~1.25A
Rated power	60W	60W	60W	60W	60W
Ripple&noise	75mVP-P	100mVP-P	100mVP-P	100mVp-p	120mVp-p
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 30ms at full load				
Voltage adj.range	110~265VAC auto switch 254~375VDC 47~63Hz				
AC current	0.8A/110VAC 0.45A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	45A/165VAC 45A/230VAC				
Leakage current	<3.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 57Kg				
Dimension	129×98×38mm(L×W×H)				

RS-100-12

Model NO.	RS-100-5	RS-100-12	RS-100-15	RS-100-24	RS-100-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	4.5~5.6V	10~13.2V	13.5~18V	20~26.4V	41~56V
Rated current	20A	8.3A	6.7A	4.2A	2.1A
Current range	0~20A	0~8.3A	0~6.7A	0~4.2A	0~2.1A
Rated power	100W	100W	100W	100W	100W
Ripple&noise	100mVP-P	120mVP-P	120mVP-P	150mVP-P	240mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 30ms at full load				
Voltage adj.range	110~265VAC auto switch 254~375VDC 47~63Hz				
AC current	2A/110VAC 1A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	45A/165VAC 45A/230VAC				
Leakage current	<3.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDAC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 57Kg				
Dimension	159×97×38mm(L×W×H)				

NOTE

1.All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25℃ of ambient temperature.

2. Ripple&noise are measured at 20MHz of bandwidth by using a 12″twisted pair-wire terminated with a 0.1uf&47uf parallel capacitor.

3. Tolerance:includes set up tolerance, line regulation and load regulation.

- High efficiency and high reliability
- Protections:Short circuit/Over load
- Air cooling
- 2 years warranty

RS-120-12

Model NO.	RS-120-5	RS-120-12	RS-120-15	RS-120-24	RS-120-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	4.5~5.6V	10~13.2V	13.5~18V	20~26.4V	41~56V
Rated current	20A	10A	8A	5A	3.2A
Current range	0~20A	0~10A	0~8A	0~5A	0~2.5A
Rated power	100W	100W	100W	100W	120W
Ripple&noise	100mVP-P	120mVP-P	120mVP-P	150mVP-P	240mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms at full load				
Voltage adj.range	110~265VAC auto switch 254~375VDC 47~63Hz				
AC current	2A/110VAC 1A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	45A/110VAC 45A/230VAC				
Leakage current	<3.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 6Kg				
Dimension	199×98×38mm(L×W×H)				

RS-150-12

Model NO.	RS-150-5	RS-150-12	RS-150-15	RS-150-24	RS-150-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	4.5~5.6V	10~13.2V	13.5~18V	20~26.4V	41~56V
Rated current	25A	12.5A	10A	6.25A	3.2A
Current range	0~25A	0~12.5A	0~10A	0~6.25A	0~3.2A
Rated power	125W	150W	150W	150W	153.6W
Ripple&noise	120mVP-P	150mVP-P	150mVP-P	150mVP-P	240mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms, 30ms at full load				
Voltage adj.range	110~265VAC auto switch 254~375VDC 47~63Hz				
AC current	3A/110VAC 1.6A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	45A/165VAC 45A/230VAC				
Leakage current	<3.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0. 5KVAC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0. 6Kg				
Dimension	199×98×38mm(L×W×H)				

NOTE

1.All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25℃ of ambient temperature.

2. Ripple&noise are measured at 20MHz of bandwidth by using a 12″twisted pair-wire terminated with a 0.1uf&47uf parallel capacitor.

3. Tolerance:includes set up tolerance, line regulation and load regulation.

ANDELI

Power Supply

- High efficiency and high reliability
- Protections:Short circuit/Over load
- Air cooling
- 2 years warranty

RS-200-12

Model NO.	RS-200-5	RS-200-12	RS-200-15	RS-200-24	RS-200-48
DC voltage	5V	12V	15V	24V	48V
Voltage tolerance	4.5~5.6V	10~13.2V	13.5~18V	20~26.4V	41~56V
Rated current	35A	16.5A	13A	8.3A	4.2A
Current range	0~35A	0~16.5A	0~13A	0~8.3A	0~4.2A
Rated power	200W	198W	198W	199.2W	201.6W
Ripple&noise	120mVP-P	150mVP-P	150mVP-P	150mVP-P	240mVP-P
DC voltage adj.range	±10%	±10%	±10%	±10%	±10%
Setup,rise time	200ms, 100ms at full load				
Voltage adj.range	165~265VAC auto switch 254~375VDC 47~63Hz				
AC current	3A/165VAC 2A/230VAC				
Efficiency	74%	80%	81%	83%	83%
Inrush current	45A/165VAC 45A/230VAC				
Leakage current	<3.5mA/240VAC				
Over load	±110%~±150%				
Working temp. Humidity	(-10℃~+60℃):20%~90%RH				
Protect temp. Humidity	(-20℃~+85℃):10%~95%RH				
Aseismicity	10~500Hz.2G 10min./1 cycle.60min.each along X.Y.Z axes				
Withstand voltage	I/P-FG:1.5KVAC O/P-FG:0.5KVC				
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100m 0hms/500VDAC				
Safety standards	Compliance to UL 1012				
Emc standards	Compliance to EN55022 CLASSA				
Weight	0.5Kg				
Dimension	165×99×45mm(L×W×H)				

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input,rated load and 25℃ of ambient temperature.
2. Ripple&noise are measured at 20MHz of bandwidth by using a 12″twisted pair-wire terminated with a 0.1uf&47uf parallel capacitor.
3. Tolerance:includes set up tolerance, line regulation and load regulation.

LV-30-12

Single Output LED Switching Power Supply(Size:167×28.5×21mm)

Model NO.	Housing material	AC input voltage range	Max.output power	Output voltage	Output current	Working temperature	Weight	Connect the line request
LV-15-12	Aluminum	110-250V AC	15W	12V±0.5V	1.25A	-20℃ ~40℃	170g	The wire of VDE (200mm)
LV-15-24		110-250V AC	15W	24V±0.5V	0.625A		170g	
LV-18-12		110-250V AC	18W	12V±0.5V	1.5A		170g	
LV-18-24		110-250V AC	18W	24V±0.5V	0.75A		170g	

Single Output LED Switching Power Supply(Size:200×30.5×20.5mm)

Model NO.	Housing material	AC input voltage range	Max.output power	Output voltage	Output current	Working temperature	Weight	Connect the line request
LV-30-12	Aluminum	170-250V AC	30W	12V±0.5V	2.5A	-20℃ ~40℃	250g	The wire of VDE (200mm)
LV-30-24		170-250V AC	30W	24V±0.5V	1.25A		250g	
LV-36-12		170-250V AC	36W	12V±0.5V	3A		250g	
LV-36-24		170-250V AC	36W	24V±0.5V	1.5A		250g	

LV-60-12

Single Output LED Switching Power Supply（Size：178×70×50mm）

Model NO.	Housing material	AC input voltage range	Max.output power	Output voltage	Output current	Working temperature	Weight	Connect the line request
LV-60-12	Aluminum	90-130V AC	60W	12V ± 0.5V	5A	−20℃ ~40℃	850g	The wire of VDE (200mm)
LV-60-24		90-130V AC	60W	24V ± 0.5V	2. 5A		850g	
LV-60-12		170-250V AC	60W	12V ± 0.5V	5A		850g	
LV-60-24		170-250V AC	60W	24V ± 0.5V	2. 5A		850g	

Single Output LED Switching Power Supply（Size：178×70×50mm）

Model NO.	Housing material	AC input voltage range	Max.output power	Output voltage	Output current	Working temperature	Weight	Connect the line request
LV-100-12	Aluminum	90-130V AC	100W	12V ± 0.5V	8. 33A	−20℃ ~40℃	1200g	The wire of VDE (200mm)
LV-100-24		90-130V AC	100W	24V ± 0.5V	4. 17A		1200g	
LV-100-12		170-250V AC	100W	12V ± 0.5V	8. 33A		1200g	
LV-100-24		170-250V AC	100W	24V ± 0.5V	4. 17A		1200g	

Single Output LED Switching Power Supply（Size：228×120×63mm）

Model NO.	Housing material	AC input voltage range	Max.output power	Output voltage	Output current	Working temperature	Weight	Connect the line request
LV-150-12	Aluminum	170-250V AC	150W	12V ± 0.5V	12. 5A	−20℃ ~40℃	2500g	The wire of VDE (200mm)
LV-150-24		170-250V AC	150W	24V ± 0.5V	6. 25A		2500g	
LV-200-12		170-250V AC	200W	12V ± 0.5V	16. 7A		2500g	
LV-200-24		170-250V AC	200W	24V ± 0.5V	8. 33A		2500g	

BK Machine Tool Control Transformer

1. Application

BK series machine tool control transformer is suitable for circuit of 50~60Hz, voltage up to 500V, usually applied as power supply for machine tool electrical appliances, local lightings and indicator lamps.

BK-20VA

2. Structure character

According to different structures, BK transformer belongs to shell type, and according to the installation mode, it belongs to vertical type.

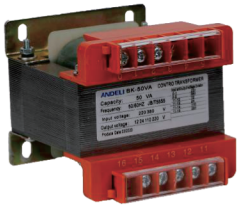
3. Type and Meaning

B K - □

- □ — Rated capacity
- K — Control
- B — Transformer

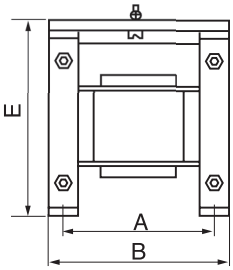
4. Working environment

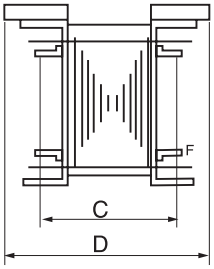
1. Ambient air temperature: -5°C ~ +40°C, the highest monthly mean temperature should not exceed +30°C;
2. Altitude for installing place should not exceed 1000m;
3. When the ambient air temperature is +40, the relative humidity should not exceed 50%, and it allows higher relative humidity under lower temperature. Max average humidity in the dampest month is 90%, meanwhile the lowest average temperature of this month is +25°C, and condensation on the product surface caused by temperature change should be taken into consideration.

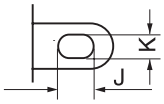


BK-5 0VA

5. Outline and Installation Dimension







F direction view

Type	Outline dimension (mm)	Mounting size (mm)	Primary voltage	Secondary voltage	QTY/CTN
BK-25VA	76 × 80 × 75	63 × 44	220V 380V	380V,220V, 110V,36V, 24V,12V,6V (to be chosen)	16
BK-50VA	85 × 90 × 80	71 × 61			16
BK-100VA	103 × 92 × 95	87 × 69			12
BK-150VA	103 × 100 × 95	87 × 76			8
BK-200VA	103 × 106 × 95	87 × 81			8
BK-250VA	115 × 110 × 130	95 × 84			6
BK-300VA	115 × 115 × 130	95 × 86			6
BK-400VA	134 × 132 × 150	107 × 93			4
BK-500VA	134 × 137 × 150	107 × 98			4
BK-1000VA	153 × 149 × 168	128 × 115			2
BK-1500VA	175 × 185 × 185	140 × 135			1
BK-2000VA	175 × 195 × 185	140 × 145			1
BK-2500VA	207 × 250 × 230	168 × 163			1
BK-3000VA	207 × 250 × 230	168 × 173			1
BK-4000VA	240 × 240 × 250	200 × 160			1
BK-5000VA	240 × 250 × 250	200 × 170			1

BK-100VA

JBK3 Machine Tool Control Transformer

1. Application

JBK3-63VA

JBK3 series machine tool control transformer is kind of new product, it accords with standards like VDE0550, IEC204-1, IEC439,GB5226, etc. It is suitable for AC50/60Hz, output rated voltage lower than 220V,input rated voltage lower than 500V, worked as control power supply for mechanical equipment and general electrical appliance and as power supply for work lighting and signal lamp.

2. Type and Meaning

JBK3-160VA

JB K 3 - □

- Rated capacity
- Design No.
- Control
- Machine tool transformer

3.Technical Parameter

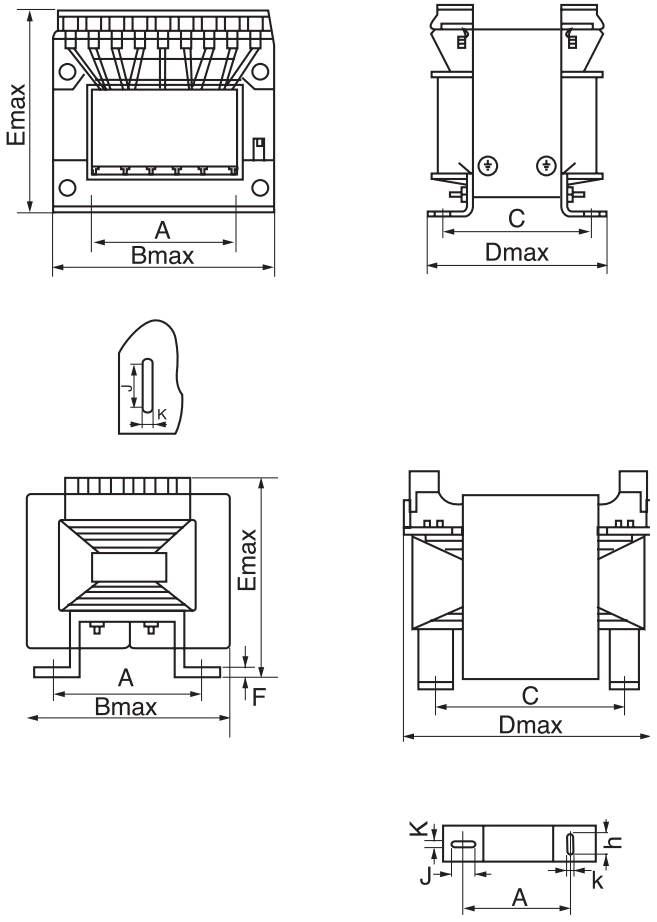
JBK3-250VA

JBK3-1000VA

Type	Rated capacity (VA)	Ue rated input voltage (V)	Rated output voltage		
			Control	Illumination	Indication
JBK3-40VA	40	220±5% 380±5%	110 (127)	24 (36)	6 (12)
JBK3-63VA	63				
JBK3-100VA	100				
JBK3-160VA	160				
JBK3-250VA	250				
JBK3-400VA	400				
JBK3-630VA	630				
JBK3-1000VA	1000		Distribution of capacity for different winding may be according to the user's request.		
JBK3-1600VA	1600				
JBK3-2500VA	2500				

4. Outline and Installation Dimension

Type	Outline Dimension (mm)			Hole dimension for installation (mm)		Installation hole K or K x J(mm)	Fmax (mm)
	Bmax	Dmax	Emax	A	C		
JBK3-40,60VA	78	72	89	56±0.4	51±2	4.8 × 9	12
JBK3-100VA	85	85	94	64±0.4	66±2	4.8 × 9	12
JBK3-160VA	96	91	109	84±0.4	73±2	5.8 × 11	14
JBK3-250VA	96	105	109	84±0.4	87±2	5.8 × 11	14
JBK3-400VA	120	109	123	90±0.4	90±2	7 × 12	18
JBK3-630VA	150	112	150	122±0.5	90±2	7 × 12	22
JBK3-1000VA	160	195	151	126±2	152±2	7 × 12	18
JBK3-1600VA	184	220	163	140±2	176±2	7 × 12	18
JBK3-2500VA	200	250	171	172±2	200±2	7 × 12	18



TDGC2 TSGC2 TDGC2J Voltage Regulator

TDGC2J-1.5KVA

TDGC2-5KVA

TSGC2-15KVA

1. Application

The product is special auto transformer which is connected in different forms.Its output voltage can be regulated smoothly and continuously from zero to the maximum value.The provision of an indicating meter is made for the models TDGC2 TDGC2J 0.2,0.25,0.5/0.5(M).All the models find popular applications in industries,agriculture and scientific researches,and are particularly suited to serves as ancillary facilities for such equipment as various machine tools,transistor curve tracers, projecting TV sets,and analytical instruments in petroleum industry,etc.

2. Specification

Type	Capacity (kVA)	Phase	Frequency (Hz)	Input voltage (V)	Output voltage (V)	Max. output current(A)
TDGC2J TDGC2 TDGC-0.5(C)	0.5	1	50/60	110/220	0-250	0.88/2
TDGC2J TDGC2 TDGC-1/0.5	1					1.6/4
TDGC2J TDGC2 TDGC-2	2					3.2/8
TDGC2J TDGC2 TDGC-3/0.5	3					4.8/12
TDGC2J TDGC2 TDGC-5/0.5	5					8/12
TDGC2J TDGC2 TDGC-10/0.5	10					16/40
TDGC2J TDGC2 TDGC-15/0.5	15					24/60
TDGC2J TDGC2 TDGC-20/0.5	20					80
TSGC2J TSGC2 TSGC-3/0.5	3	3	50/60	220/380	0-430	1.6/4
TSGC2J TSGC2 TSGC-6/0.5	6					3.2/8
TSGC2J TSGC2 TSGC-10/0.5	10					5.4/13.4
TSGC2J TSGC2 TSGC-15/0.5	15					20
TSGC2J TSGC2 TSGC-20/0.5	20					28
TSGC2J TSGC2 TSGC-30/0.5	30					40

Uninterruptable Power Supply(UPS)

1. Application

Back-up UPS is a technically-modified new product of the company on the basis of the previous UPS-500VA one and has multifunction as automatic voltage regulation of local electricity, sychronous switches for users load,protections of over-voltage,overvoltage,overcurrent,overcharge of batterise,feed and so on.

2. Specification

Input voltage / Output voltage	220V±20% / 220V±10%
Frequency	50Hz/60Hz
Efficiency	more than 80%
Ambient temprature	-10˚C~+40˚C
Charger time	8 hours/time
Inverter supply time	(Rating power 80%) 3-4mins (rating power 50%)8-10mins
Inverter charge time	<10ms
Output waveform	Square wave
Yawp	<50dB

UPS-500VA

UPS-1000VA

3. Outline & Packing

Type	Time	Outline(cm)			Weight(kg)
		L	W	H	
UPS-350VA	3-7min	26	10	14	4.3
UPS-500VA	5-15min	36	11	16	7.2
UPS-1000VA	5-15min	36	15	23	11.5

Technical Specification

Product Series		High Frequency On Line UPS (1~3kVA)					
Model		G1K	G2K	G3K	G1KS	G2KS	G3KS
Capacity	VA/W	1kVA/0.7kW	2kVA/1.4kW	3kVA/2.1kW	1kVA/0.7kW	2kVA/1.4kW	3kVA/2.1kW
Input	Nominal Voltage	110/115/120VAC or 220/230/240VAC					
	Voltage Range	180~300VAC					
	Frequency Range	50Hz: 46~54Hz; 60Hz: 56~64Hz					
	Phase	Single phase					
	Power Factor	> 0.98					
	Connection	IEC320-10A inlet	IEC320-10A inlet	IEC320-16A inlet	IEC320-10A inlet	IEC320-10A inlet	IEC320-16A inlet
Output	Voltage	110/115/120 x (1 ± 2%)VAC or 220/230/240 x (1 ± 2%)VAC					
	Frequency	Synchronization range (line mode); 50 or 60 x (1 ± 0.2%)Hz (Battery mode)					
	Phase	Single phase					
	Wave Form	Sine Wave					
	Power Factor	0.7 or 0.8 optional					
	Voltage Distortion	3%					
	Overload Capability	110%~150% for 30 sec., ≥150% for 200 ms					
	Current Crest Ratio	3:1					
	Connections	IEC320 *4	IEC320 *6	IEC320*3 & terminal block	IEC320 *4	IEC320 *6	IEC320*3 & terminal block
Battery	Type	Sealed, Maintenance free, Lead-acid					
	Nominal DC Voltage				36VDC	96VDC	96VDC
	Quantity	3 pieces	8 pieces	8 pieces	Depends on the requested back-up time		
	Back-up Time(full load)	5 min	9 min	5 min	Depends on the capacity of the external battery bank		
	Recharge Time	5 hrs to 90% of capacity			Depends on the capacity of the external battery bank		
Bypass	Automatic Transfer	On overload and UPS failure					
	Before UPS Power-on	Default "ON" user adjustable to "YES"					
	Voltage Range	40~132VAC (Default), user adjustable within 40~143VAC or 80~264VAC (Default), user adjustable within 80~286VAC					
Transfer Time	AC to DC Zero	Inverter to Bypass 4ms(Typical)					
Indicators	LED display	Load level / Battery level, Battery, Utility power, Inverter, Bypass, Overload, Fault					
Audible Alarm		Bypass, On battery mode, Battery low, Overload, Fault					
Acoustic noise	At 1 meter distance	<45 dB	<50 dB	<50 dB	<45 dB	<50 dB	<50 dB
Communications	DB-9 Port	RS-232 serial interface					
	Intelligent Slot	Options: SMNP Card, AS400 Card or Winpower CMC / (USB Port)					
Environmental	Operating Temperature	0~40°C					
	Operating Humidity	20~90% non-condensing					
Physical Feature	Weight(Kg)	13	31.5	32	7	13.5	14
	Dimensons(WxDxH)mm	145x400x220	195x455x350		145x400x220	195x455x350	

Technical Specification

Product Series		On Line UPS with LCD Display (1~3kVA)					
Model		G1KN	G1KNS	G2KN	G2KNS	G3KN	G3KNS
		G1KD	G1KDS	G2KD	G2KDS	G3KD	G3KDS
Capacity	VA/W	1000VA/700W		2000VA/1400W		3000VA/2100W	
Input		Base on load percentage (100%-80% / 80%-70% / 70%-80% / 60%-0%)					
	Low Line Transfer	160VAC/140VAC/120VAC/110VAC ± 5VAC					
	Low Line Comeback	175VAC ± 5VAC					
	High Line Transfer	300VAC ± 5VAC					
	High Line Comeback	285VAC ± 5VAC					
	Frequency Range	50Hz: 46~54Hz; 60Hz: 56~64Hz					
	Phase	Single phase with ground					
	Power Factor	≥0.98					
Output	Voltage	220VAC/230VAC/240VAC					
	Voltage Regulation	± 2%					
	Frequency	Synchronization range (line mode); 50 or 60 x (1 ± 0.2%)Hz (Battery mode)					
	Current Crest Ratio	3:1					
	Voltage Distortion	≤3% THD (Linear Load)		≤4% THD (Linear Load)			
		≤6% THD (Non-Linear Load)		≤7% THD (Non-Linear Load)			
	Output Waveform	Pure Sinewave					
Battery	Battery Type	12V/7Ah	Depending on the capacity of external batteries	12V/7Ah	Depending on the capacity of external batteries	12V/7Ah	Depending on the capacity of external batteries
	Numbers of Batteries	3		8		8	
	Backup Time(Full Load)	> 5 minutes		> 9 minutes		> 5 minutes	
	Recharge Time	5 hours to 90%		5 hours to 90%		5 hours to 90%	
	Charging Current(Max.)	1.0A	8A	1.0A	8A	1.0A	8A
	Charging Voltage	41.1Vdc ± 0.6V		110Vdc ± 0.4V		110Vdc ± 0.4V	
Transfer Time	AC to DC	Zero					
	Inverter to Bypass	2.5ms(Typical)					
Indicators	Status	Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault					
Audible Alarm	Battery Mode	Sounding every 4 seconds					
	Low Battery	Sounding every second					
	Overload	Sounding twice every second					
	Fault	Continuously Sounding					
Interface	Smart RS232	Software supports Windows family, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX and MAC					
	SNMP(optional)	Power management from SNMP manager and web browse					
	USB(optional)	Windows family and Mac OS					
Environmental	Operating Temperature	0~40°C					
	Relative Humidity	20-90%(NON-CONDENSING)					
	Noise Level	<45dB@1 Meter		<50dB@1 Meter			
Physical Feature	Weight	13kgs	7kgs	32kgs	15kgs	33kgs	16kgs
	Dimensions(WxDxH) mm	145x400x220		195x450x350			

Technical Specification

Product Series		On Line UPS Parallel Redundancy (6~10kVA 1Ph/1Ph)				On Line UPS Parallel Redundancy (10~20kVA 3Ph/1Ph)		
Model		G6KN	G6KNS	G10KN	G10KNS	3G10KNS	3G15KNS	3G20KNS
		G6KD	G6KDS	G10KD	G10KDS	3G10KDS	3G15KDS	3G20KDS
Capacity	VA/W	6kVA/4.2kW		10kVA/7kW		10kVA/7kW	15kVA/10.5kW	20kVA/14kW
Input	Low Line Transfer	176VAC ± 3VAC				304VAC ± 3VAC		
	Low Line Comeback	185VAC ± 3VAC				322VAC ± 3VAC		
	High Line Transfer	276VAC ± 3VAC				478VAC ± 3VAC		
	High Line Comeback	266VAC ± 3VAC				461VAC ± 3VAC		
	Frequency Range	50Hz: 46Hz~54Hz; 60Hz: 56Hz~64Hz						
	Phase	Single phase with ground				Three phase with ground		
	Power Factor	≥ 0.98				≥ 0.95		
Output	Voltage	220VAC/230VAC/240VAC						
	Voltage Regulation	± 1%						
	Frequency	Synchronization range (line mode); 50 or 60 x (1 ± 0.05%)Hz (Battery mode)						
	Current Crest Ratio	3:1						
	Voltage Distortion	≤ 2% THD(Linear Load)		≤ 6% THD(Non-Linear Load)				
	Output Waveform	Pure Sinewave						
Battery	Battery Type	12V/7Ah		12V/7Ah				
	Numbers of Batteries	20	Depending on the capacity of external batteries	20	Depending on the capacity of external batteries			
	Backup Time(Full Load)	8 minutes		5 minutes				
	Recharge Time	7 hours to90%		8 hours to90%				
	Charging Current(Max.)	2A	4.2A	2A	4.2A	4.2A	4.2A	4.2A
	Charging Voltage	274Vdc ± 1V						
Transfer Time	AC to DC	Zero						
	Inverter to Bypass	2.5ms (Typical)						
Indicators	Status	Load Level / Battery Level / Battery Mode / AC Mode / Bypass Mode / Fault						
Audible Alarm	Battery Mode	Sounding every 4 seconds						
	Low Battery	Sounding every second						
	Overload	Sounding twice every second						
	Fault	Continuously Sounding						
Interface	Smart RS232	Software supports Windows family, Linux, Sun Solaris, IBM Aix, Compaq True64, SGI IRIX, FreeBSD, HP-UX and MAC						
	SNMP(option)	Power management from SNMP manager and web browse						
	USB(option)	Windows family and Mac OS						
Environmental	Operating Temperature	0~40°C						
	Relative Humidity	20-90%(NON-CONDENSING)						
	Noise Level	<55dB@1 Meter					<60dB@1 Meter	
Physical Feature	Weight	90kgs	35kgs	93kgs	38kgs	39kgs	55kgs	55kgs
	Dimensions(WxDxH) mm	260x570x717						

Technical Specification

Product Series		6~20KVA(1PH/1PH)				10~30KVA(3PH/1PH)			
Model		GP1106	GP1110	GP1115	GP1120	GP3110	GP3115	GP3120	GP3130
Capacity		6kVA	10kVA	15kVA	20kVA	10kVA	15kVA	20kVA	30kVA
Input	Voltage	220 x (1 ± 25%) VAC(single phase 2 wire+G)				220/380 x (1 ± 20%)VAC (three phase 4 wire+G)			
	Frequency	50 x (1 ± 10%)Hz							
	Power Factor	0.8(0.95 if UPS with filter)							
Output	Voltage	220 x (1 ± 1%)VAC (steady state)				220 x (1 ± 2%)VAC (steady state)			
	Frequency	Free synchronized to the main power(line mode); 50x(1+5%)HZ; (0 ⇌100% abrupt change)							
	Power Factor	0.8(lagging)							
	Wave Form	Sine wave							
	Distortion	≤ 3% (linear load), ≤ 5% (non linear load)							
	Crest Factor	3:1							
	Transitory Recover	220 x (1 ± 4%)VAC (0 ⇌100% Abrupt change)				220 x (1 ± 5%)VAC (0 ⇌100% Abrupt change)			
	Efficiency	≥ 90%							
Battery	Type	12VDC sealed lead acid battery, maintenance free							
	Nominal Voltage	192VDC (16PCS)						384VDC(32PCS)	
	Backup Time	As per the request of customer							
	Recharge Time	7~10 hours up to 90% capacity							
	Charge Current	10~25A (adjustable)							
Transfer Time		0 ms (AC to DC or DC to AC); < 4 ms (Bypass to Inverter or Inverter to Bypass)							
LCD Display		UPS work situation, AC power situation, Battery situation, Automatic turn to bypass, Overload							
Protection		Over Voltage, Under Voltage, Over Load, Over Temperature, Short Circuit, Lighting Stroke etc.							
Alarm		Over Temperature, Battery, Bypass, AC Power Abnormal, Over Load, Over Voltage							
Noise(1m distance)		≤50dB							
Communicate Interface		RS232 (or RS422), SNMP card (optional), RJ45							
Cooling way		FAN							
EMC		EN50091-2, GB9254							
Ability of Antijamming		IEC61000-4							
Protection D-egree		IP20							
Environmental	Temperature	0~40°C							
	Humidity	10%~90% (no dewfall)							
	Elevation	< 2000m							
Physical Feature	Weight	95	140	175	225	181	235	285	320
	Dimensions(WxDxH)mm	230x580x712	306x585x866	415x750x1300		305x585x860	416x747x1115		423x772x1190

Technical Specification

Product Series			10~400KVA(3PH/3PH)						
Model			GP3310	GP3315	GP3320	GP3330	GP3340	GP3360	GP3380
Capacity			10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA
Input		Voltage	220/380 x (1 ± 20%)VAC (three phases+N+G)						
		Frequency	50 x (1 ± 10%)Hz						
		Power Factor	0.8(0.95 if UPS with filter)						
	Bypass	Phase	Three phase 4 wires+G						
	Bypass	Voltage	380 x (1 ± 15%)VAC						
	Bypass	Frequency	50 x (1 ± 2%)Hz						
Output	Voltage		380 x (1 ± 1%)VAC (steady state)						
	Frequency		50 x (1 ± 5%)Hz (AC power mode); 50 x (1 ± 0.1%)Hz (battery mode)						
	Power Factor		0.8(lagging)						
	Wave Form		Sine wave						
	Distortion		≤ 3% (linear load), ≤ 5% (non linear load)						
	Transitory Voltage of Dynamic Load		± 5%(0⇌100% Abrupt change)						
	Transitory Recover Time		< 10ms(± 5%)						
	Unbalance Voltage		< 3%, < 1%(balanced load)						
	Overload Capability		150% for 1 minute, 125% for 10 minutes, more than 150% for 200ms						
	Crest Factor		3:1						
	Efficiency		≥ 90%, 95%(ECO mode)						
Battery	Type		12VDC sealed lead acid battery, maintenance free						
	Nominal Voltage		384VDC (32PCS)						
	Recharge Time		< 10 hours up to 90% capacity						
	Charge Current		10~25A (adjustable)						
Transfer Time			0 ms (AC to DC or DC to AC); < 4 ms (Bypass to Inverter or Inverter to Bypass)						
LCD Display			UPS work situation, AC power situation, Battery situation, Automatic turn to bypass, Overload						
Protection			Over Voltage, Under Voltage, Over Load, Over Temperature, Short Circuit, Lighting Stroke etc.						
Alarm			Over Temperature, Battery, Bypass, AC Power Abnormal, Over Load, Over Voltage						
Noise(1m distance)			< 50dB		<55dB		< 65dB		
Communicate Interface			RS232 (or RS422), SNMP card (optional), RJ45						
Cooling way			Fan						
EMC			EN50091-2, GB9254						
Ability of Antijamming			IEC61000-4						
Protection D-egree			IP20						
Environmental	Temperature		0~40°C						
	Humidity		10%~90% (no dewfall)						
	Elevation		< 2000m						
Physical Feature	Weight		210	220	240	282	330	450	570
	Dimensions(WxDxH)mm		700x520x1100		800x600x1200		900x600x1500		1250x900x1600

Technical Specification

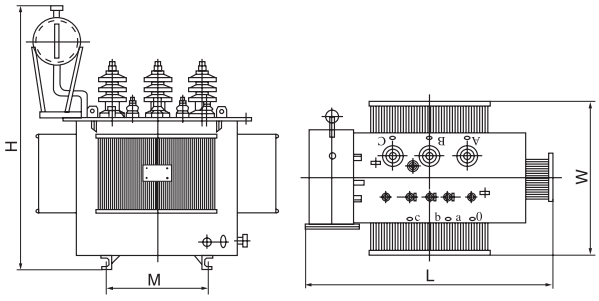
Product Series			10~400KVA(3PH/3PH)						
Model			GP33100	GP33120	GP33160	GP33200	GP33250	GP33300	GP33400
Capacity			100kVA	120kVA	160kVA	200kVA	250kVA	300kVA	400kVA
Input		Voltage	220/380 x (1 ± 20%)VAC (three phases+N+G)						
		Frequency	50 x (1 ± 10%)Hz						
		Power Factor	0.8(0.95 if UPS with filter)						
	Bypass	Phase	Three phase 4 wires+G						
	Bypass	Voltage	380 x (1 ± 15%)VAC						
	Bypass	Frequency	50 x (1 ± 2%)Hz						
Output	Voltage		380 x (1 ± 1%)VAC (steady state)						
	Frequency		50 x (1 ± 5%)Hz (AC power mode); 50 x (1 ± 0.1%)Hz (battery mode)						
	Power Factor		0.8(lagging)						
	Wave Form		Sine wave						
	Distortion		≤ 3% (linear load), ≤ 5% (non linear load)						
	Transitory Voltage of Dynamic Load		± 5%(0⇌100% Abrupt change)						
	Transitory Recover Time		< 10ms(± 5%)						
	Unbalance Voltage		< 3%, < 1%(balanced load)						
	Overload Capability		150% for 1 minute, 125% for 10 minutes, more than 150% for 200ms						
	Crest Factor		3:1						
	Efficiency		≥ 90%, 95%(ECO mode)						
Battery	Type		12VDC sealed lead acid battery, maintenance free						
	Nominal Voltage		396VDC (33PCS)						
	Recharge Time		< 10 hours up to 90% capacity						
	Charge Current		10~25A (adjustable)						
Transfer Time			0 ms (AC to DC or DC to AC); < 4 ms (Bypass to Inverter or Inverter to Bypass)						
LCD Display			UPS work situation, AC power situation, Battery situation, Automatic turn to bypass, Overload						
Protection			Over Voltage, Under Voltage, Over Load, Over Temperature, Short Circuit, Lighting Stroke etc.						
Alarm			Over Temperature, Battery, Bypass, AC Power Abnormal, Over Load, Over Voltage						
Noise(1m distance)			< 65dB		<68dB				
Communicate Interface			RS232 (or RS422), SNMP card (optional), RJ45						
Cooling way			Fan						
EMC			EN50091-2, GB9254						
Ability of Antijamming			IEC61000-4						
Protection D-egree			IP20						
Environmental	Temperature		0~40°C						
	Humidity		10%~90% (no dewfall)						
	Elevation		< 2000m						
Physical Feature	Weight		700	780	970	1150	1250	1450	1450
	Dimensions(WxDxH)mm		1250x900x1600			2000x900x1800		2400x900x1800	

S9 Series Distribution Transformer

1. Application

This kind of product feature has high efficiency and low consumption. It can save a lot of power consumption and operating costs The new S9 Series transformer is impoldered on the basis of the 10 kV Distribution transformer. It accords with the GB1094-96,GB/T6451-99,IEC76 standard.

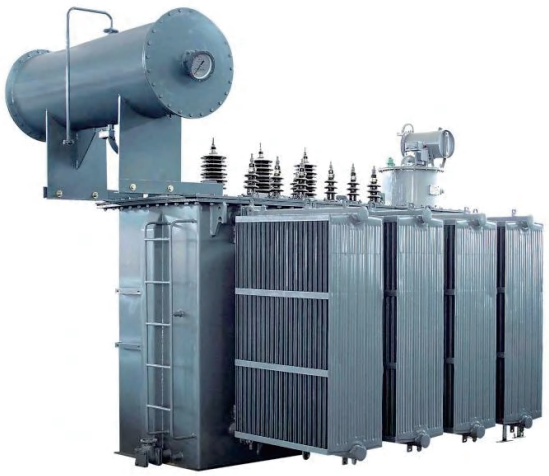
2. Outline and Installation Dimension



3. Technical Specification

Rated Capacity (kVA)	Voltage Schedule			Connecting Group	Consumption(W)		No-load current (%)	Short circuit imped-ance(%)	Weight(kg)			Outline dimension (mm±10%)			Gauging Distance
	HV	Tapping	LV		N0-load (kW)	load (kW)			Body	oil	Total	Length	Width	Height	
10					65	330	3.5		90	35	150	760	400	950	350 × 350
20					105	480	3.0		135	60	225	885	400	955	350 × 350
30					130	600	2.1		180	70	285	985	380	1015	400 × 400
50					170	870	2.0		230	75	350	985	510	1035	400 × 450
63					200	1040	1.9		285	90	430	1060	465	1135	400 × 450
80					250	1250	1.8	4	295	95	475	1010	775	1070	400 × 450
100					290	1500	1.6		330	100	520	1010	740	1095	400 × 450
125					340	1800	1.5		380	110	600	1040	770	1135	400 × 550
160	6				400	2200	1.4		440	120	685	1235	735	1165	550 × 550
200	6.3	±5%			480	2600	1.6		515	135	800	1280	765	1210	550 × 550
250	10		0.4	Yyn0,	560	3050	1.2		610	160	940	1345	800	1315	550 × 550
315	10.5	(±2x2.5%)		Dyn11	670	3650	1.1		715	180	1105	1395	850	1375	660 × 660
400	11				800	4300	1.0		880	205	1310	1435	820	1460	660 × 660
500					960	5150	1.0		1005	230	1515	1525	965	1450	660 × 660
630					1200	6200	0.9		1155	265	1770	1615	1080	1615	660 × 660
800					1400	7500	0.8		1420	315	2160	1700	1120	1705	820 × 820
1000					1700	10300	0.7	4.5	1580	425	2520	1750	1140	1880	820 × 820
1250					1950	12000	0.6		1940	495	3040	1850	1245	1835	820 × 820
1600					2400	14500	0.6		2355	560	3800	1865	1285	2020	820 × 820
2000					2600	17000	0.5	5	3165	755	4950	2300	1165	2305	1070 × 1070
2500					3000	20700	0.5		3880	1300	6580	2440	1315	2490	1070 × 1070

SZ9 ON-load Tap-changer Power Transformer



1. Application

The SZ9 on-load tap-changer power transformer is widely applies to urban and rural electric network construction. The iron core is in ladder shape and changes the traditional piling way of iron core as well as the inner distribution of magnetic way. It also decrease the no-load consumption, no-load current consumption and noise pollution all by 20%. The new product applies CAD tool and marked with advanced design, reasonable structure, high quality material. It accords with GB1094-1996 and GB/T6451-1999.

2. Technical Specification

Rated Capacity (kVA)	Voltage Schedule			Connecting Group	Consumption(W)		N0-load current (%)	Short circuit imped-ance(%)	Weight(kg)			Outline dimension (mm±10%)			Gauging Distance
	HV	Tapping	LV		No-load (kW)	load (kW)			Body	oil	Total	Length	Width	Height	
200	6 6.3 10 10.5 11	±4 × 2.5%	0.4	Yyn0, Dyn11	430	3060	1.6	4	610	450	1430	950	950	1600	550 × 550
250					510	3600	1.5		760	500	1700	1100	1100	1640	550 × 550
315					610	4320	1.5		1060	550	2120	1200	1200	1750	660 × 660
400					740	5220	1.4		1100	660	2160	1250	1250	1800	660 × 660
500					870	6210	1.4		1330	700	2850	1300	1300	1950	660 × 660
630					1120	7650	1.3		1850	740	3410	1300	1300	2110	820 × 820
800					1330	9360	1.3		1980	780	3830	1480	1480	2330	820 × 820
1000					1550	10980	1.3	4.5	2300	1020	4800	1500	1500	2525	820 × 820
1250					1880	13040	1.2		2870	1460	5950	1530	1530	2730	820 × 820
1600					2400	15570	1.1		3450	1730	6950	1550	1550	3000	820 × 820

S9-M.R, S11-M-M.R Ribbon-wound Core Oil Complete Transformer

1. Application

This type of transformer adopts high-permedibility cool-rolling si-steel piece as iron core. It is processed with big fill factor and there is no spacing inside the mangnetic path. The HV and LV coil is continuously winded around the core with good concentricity and compact winding. The product is of low consumption and slight noise pollution by combining new generation of technolgy good performance and energy saving. It is widely used in power distribution system.

2. Technical Specification

S11-M.R Series three-phase ribbon-wound core oil complete sealed distribution transformer

Capacity (kVA)	Voltage schedule		Connecting group	Consumption		Short-circuit impedance (%)	No load current (%)	Outline dimension mm(± 10%)			Weight(kg) (± 10%)		Gauging distance (mm)
	HV(kV)	LV(kV)		No load(W)	load(W)			Length	Width	Height	Oil	Total	
30	6 6.3 11	0.4	Dy11 Yyn0	90	600	4 4.5	0.6	1020	600	1090	95	370	400 x 550
50				120	870		0.6	1050	620	1120	110	450	400 x 400
63				140	1040		0.57	1120	650	1150	120	520	550 x 550
80				175	1250		0.54	1160	670	1170	130	570	550 x 550
100				200	1500		0.48	1200	700	1210	150	640	550 x 550
125				235	1800		0.45	1250	730	1250	170	750	550 x 550
160				280	2200		0.39	1290	750	1300	200	860	550 x 550
200				335	2600		0.36	1330	780	1345	245	990	550 x 550
250				390	3050		0.33	1370	780	1410	270	1230	660 x 660
315				465	3650		0.3	1420	800	1470	290	1380	660 x 660
400				560	4300		0.3	1460	800	1530	320	1760	660 x 660
500				670	5100		0.27	1505	805	1590	350	1960	660 x 660
630				840	6200		0.27	1590	850	1650	400	2400	660 x 660
800				980	7500		0.27	1655	935	1690	550	2530	820 x 820
1000				1150	10300		0.27	1755	1035	1750	630	2840	820 x 820
1250				1360	12800		0.27	1895	1125	1820	710	3300	820 x 820
1600				1640	14500		0.27	1970	1240	1950	830	3640	820 x 820

S9-M.R Series three-phase ribbon-wound core oil complete sealed power distribution transformer

Capacity (kVA)	Voltage schedule		Connecting group	Consumption		Short-circuit impedance (%)	No load current (%)	Outline dimension mm(± 10%)			Weight(kg) (± 10%)		Gauging distance (mm)
	HV(kV)	LV(kV)		No load(W)	load(W)			Length	Width	Height	Oil	Total	
30	6 6.3 11 ± 2x 2.5% or 5%	0.4	Dy11 Yyn0	130	600	4 4.5	0.6	1000	590	980	80	320	400 x 400
50				170	870		0.6	1100	610	1035	90	400	400 x 400
63				200	1040		0.57	1050	630	1055	100	460	550 x 550
80				240	1250		0.54	1080	650	1120	110	510	550 x 550
100				290	1500		0.48	1090	680	1160	120	570	550 x 550
125				340	1800		0.45	1130	710	1210	130	670	550 x 550
160				400	2200		0.39	1240	730	1280	160	780	550 x 550
200				480	2600		0.36	1290	760	1320	175	920	550 x 550
250				560	3050		0.33	1320	770	1380	205	1120	660 x 660
315				670	3650		0.3	1335	780	1440	235	1250	660 x 660
400				800	4300		0.3	1430	790	1500	285	1500	660 x 660
500				960	5100		0.27	1480	800	1520	330	1750	660 x 660
630				1200	6200		0.27	1520	830	1580	380	2210	660 x 660
800				1400	7500		0.27	1620	900	1630	430	2320	660 x 660
1000				1700	10300		0.27	1680	920	1710	550	2580	660 x 660
1250				1950	12800		0.27	1740	1060	1790	670	2730	820 x 820
1600				2400	14500		0.27	1870	1130	1860	780	2910	820 x 820

S9-35kV Series Transformers

1. Application

The product conforms to the technical parameters and requirements of IEC60076 and China Standard GB1094 & GB/T6451, and a series of significant innovation is applied in aspects of material,design and structure.It has the features of high efficiency and low loss.It can save a lot of operation cost,and the social benefits are very significant.In conclusion,it is a nationally promoted new product and it is deeply favored by customers.

Installation type:indoor/outdoor type

Altitude:≤ 1000m

Installation site:in places without corrosive gases and obvious dusts.

2. Applicable Standards

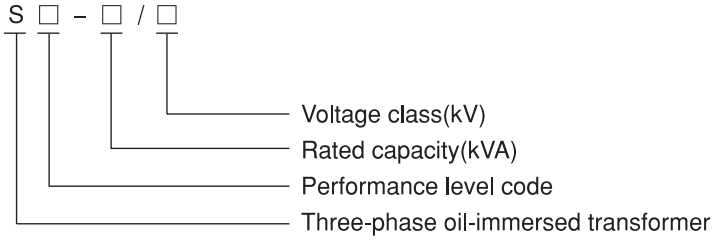
IEC 60076 -1-2-3 2000 Power Transformer

GB1094.1-2-1996 Power Transformer

GB1094.3-5-2003 Power Transformer

GB/T6451-1999 Technical parameters and requirements for three-phase oil-immersed power transformer

3. Model Designation



4. Performance Characteristics

1.The features of this product are high efficiency and low loss.It can save a lot of operation cost, and the social benefits are very significant.

2.The iron cores are made of the imported high-conduction magnetism,cold-roll,and grain-oriented silicon-steel sheets.The iron cores and windings adopt the vacuum drying and vacuum oil-filling processes,which make the internal moisture down to the very low level.

3.The conservator is hermetically sealed,which make the internal running oil to insolate with oxygen and moisture efficiently.

4.The above features guarantee the transformer does not need do replace the oil during the normal operation,greatly decrease the maintenance cost,and prolong the service life.

5. Main Technical Parameters of S9-M-50~2500/35 Series of Transformers

Rated capacity (kVA)	Voltage combination(kV)			Connect-ing group	No-load lossess (W)	Load-loss (W)(75˚C)	Short circuit impedance (%)	No-load current (%)	Weight(kg)			Overal dimension (mm)	Gauge (mm)
	High voltage (kV)	Tapping (%)	Low voltage (kV)						Body	Oil	Gross weight	Lengthxwidthxheight	
50	35	± 5	0.4	Yyno	215	1210	6.5	2.00	230	320	650	1150x720x1200	550x550
100					305	2020		1.80	380	400	980	1200x740x1300	550x550
125					340	2380		1.75	440	430	1100	1250x780x1380	550x550
160					360	2830		1.65	510	460	1200	1300x800x1400	660x660
200					430	3300		1.55	600	500	1400	1400x840x1500	660x660
250					510	3950		1.40	690	530	1500	1530x860x1580	660x660
315					610	4750		1.40	800	570	1670	1600x890x1630	660x660
400					735	5750		1.30	930	650	1950	1730x50x1700	660x660
500					870	6900		1.30	1070	710	2300	1800x980x1800	820x820
630					1040	8250		1.25	1300	830	2650	1900x1000x1850	820x820
800					1250	9900		1.05	1600	900	3100	1950x1060x1900	820x820
1000					1480	12150		1.00	1800	1080	3700	1980x1100x1950	820x820
1250					1760	14600		0.90	2100	1150	4000	2010x1160x1980	820x820
1600					2130	17500		0.85	2550	1250	4730	2040x1310x2000	820x820
2000					2500	20680		0.75	3100	1400	5600	2170x1380x2700	1070x1070
2500					2975	24500		0.75	3650	1500	6300	2300x1450x2900	1070x1070

6. Main Technical Parameters of S9-M-800~20000/35 Series of Transformers

Rated capacity (kVA)	Voltage combination(kV)			Connect-ing group	No-load lossess (W)	Load-loss (W)(75˚C)	Short circuit impedance (%)	No-load current (%)	Weight(kg)			Overal dimension (mm)	Gauge (mm)
	High voltage (kV)	Tapping (%)	Low voltage (kV)						Body	Oil	Gross weight	Lengthxwidthxheight	
800	35	± 5	3.15 6.3 10.5	Yd11	1250	9900	6.5	1.05	1680	970	3200	2000x1100x1950	820x820
1000					1480	12150		1.00	1800	1100	3570	2100x1200x2100	820x820
1250					1760	14650		0.90	2060	1200	4040	2150x1250x2150	820x820
1600					2130	17500		0.85	2400	1250	4550	2200x1340x2180	820x820
2000					2600	19350		0.75	2820	1420	5720	2250x1380x2210	1070x1070
2500					3150	20700		0.75	3330	1550	6000	2300x1400x2300	1070x1070
3150	35 38.5	± 5	3.15 6.3 10.5		3860	24300	7.0	0.70	3800	1670	7060	2480x1900x2450	1070x1070
4000					4630	28800		0.70	4500	1830	8200	2800x2250x2500	1070x1070
5000					5480	33000		0.60	5300	2000	9500	3000x2370x2800	1070x1070
6300					6570	36900	7.5	0.60	6550	2300	11280	3200x2520x2900	1070x1070
8000		± 2x2.5	3.15 6.3 10.5		9000	40500		0.55	8150	2700	14000	3300x2700x3200	1475x1475
10000					10600	47700		0.55	9600	3050	16250	3400x2800x3400	1475x820
12500					12600	56700	8	0.50	11000	3660	18800	3500x2930x3500	1475x1070
16000					15300	69300		0.50	13650	430	22250	3620x3040x3600	1475x1070
20000					18090	83500		0.50	15500	5530	25000	3700x3100x3700	1475x1475

ZGS11 Series Combined Transformer

1. Application

ZGS11 Combined transformer is one of the high-tech product developed by our company on the basis of bad-mounted Transformer. Range of capacity:200-1000 kVA . The product is suitable for the neutral-point distribution system or small-resistance earthing system in a 10kV distribution network, or the neutral-point solid grounding system of a three-phase four-wire system in a 400V distribution network, well-integrated, reliable in power supply, compact, light in weight, low noise, etc; It has two types of cable outlet net type and terminal type.

The product can be placed directly into the load center of 10kV network, thus the line loss in reduced and power distribution reliability in increased.

2. Technical Specification

Type	Rated Capacity (kVA)	Voltage Schedule			Vector Group	Consumption(w)		No-load current (%)
		HV(kV)	Tapping	LV(kV)		No-load (kW)	load (kW)	
ZGS9-H(Z)-100/10	100					0.29	1.50	1.6
ZGS9-H(Z)-125/10	125					0.34	1.80	1.5
ZGS9-H(Z)-160/10	160					0.40	2.20	1.4
ZGS9-H(Z)-200/10	200					0.48	2.60	1.3
ZGS9-H(Z)-250/10	250		±5%			0.56	3.05	1.2
ZGS9-H(Z)-315/10	315		(±2×2.5%)	0.4	Dyn11	0.67	3.65	1.1
ZGS9-H(Z)-400/10	400					0.80	4.30	1
ZGS9-H(Z)-500/10	500					0.96	5.10	1
ZGS9-H(Z)-630/10	630					1.20	6.20	0.9
ZGS9-H(Z)-800/10	800					1.40	7.50	0.8
ZGS9-H(Z)-1000/10	1000					1.70	10.30	0.7

Dry-Type Power Transformer

1. Application

SC(B) 10 resin-insulated dry-type transformer is designed basing on the Dupont(the USA) NOMEX paper insulation system. the other key components are made from imported materials (such as German MKM copper foil). with advanced manufacturing equipment and technology, the product have high performance, low energy loss, safety and reliability, its especially suitable for high buildings, airports, substations and commercial centers, and any other anti-fire, anti-explode, anti-moisture places etc

2. Specification

Type	Rated current (A)	Voltage combination(kV)		Connection group	No-load current(%)	Loss(W)		Impedance (%)
		HV	LV			No-load	load	
SC10-30	1.73/43.3	6 ± 2.5% 6 ± 5% 10 ± 2.5% 10 ± 5% 10.5 ± 2.5% 10.5 ± 5% 11 ± 2.5% 11 ± 5%	0.4	Dyn11 Yyn0	2.5	190	700	4
SC10-50	2.89/72.2				2.2	270	990	
SC10-80	4.62/115.5				2.1	370	1380	
SC10-100	5.77/144.3				1.9	400	1570	
SC10-125	7.22/180.4				1.7	470	1840	
SC10-160	9.24/230.9				1.7	540	2120	
SC10-200	11.6/288.7				1.5	620	2520	
SC10-250	14.43/360.8				1.5	720	2750	
SC10-315	18.19/454.7				1.3	880	3470	
SC10-400	23.09/577.4				1.3	980	3990	
SC10-500	28.9/721.7				1.3	1160	4880	
SC10-630	36.4/909				1.2	1340	5870	
SC10-630	36.4/909				1.2	1300	5960	
SC10-800	46.2/1154.7				1.2	1520	6950	6
SC10-1000	57.7/1443.4				1	1770	8130	
SC10-1250	72.2/1804.3				1	2090	9690	
SC10-1600	92.4/2309				1	2450	11730	
SC10-2000	115.5/2886.7				0.9	3320	14450	
SC10-2500	144.3/3608.4				0.9	4000	17170	

110kV Power Transformer

1. Application

110KV oil immersed on-load regulation power transformer has a seires of big changes in material, technical and construction with the characters of small size, light weight, high efficiency with low loss and low noise, stable operation which cutting down large number of loss from energy GRID and minising operation charge, improving the industrial economic benefit, it is used in power plant, transformer substation, big-sized and chemistry factory and etc. the product is according to national and IEC standards.

Installation:outdoor

Ambient temperature:-30˚C-+40˚C

Altitude: 1000m

Relative humidity:90%(25C)

2. Specification

Rated capacity (kVA)	Voltage combination and tap range (kV)		Vector group	S9 series		S10 series		No-load current (%)	Short-circuit inpedance (%)
	HV	LV		No-load loss	load loss	No-load loss	load loss		
6300	110 ± 2*2.5% 121 ± 2*2.5%	6.3 6.6 10.5 11	Ynd11	9.3	36	8.4	34	0.77	10.5
8000				11.2	45	10.1	43	0.77	
10000				13.2	53	11.9	50	0.72	
12500				15.6	63	14.0	60	0.72	
16000				18.8	77	17.0	73	0.67	
20000				22.0	93	19.8	88	0.67	
25000				26.0	110	23.4	105	0.62	
31500				30.8	133	27.7	126	0.60	
40000				36.8	156	33.1	148	0.56	
50000				44.0	194	39.6	184	0.52	
63000				52.0	234	46.8	222	0.48	
75000		13.8 15.75 18 20		59.0	278	53.1	264	0.42	12-14
90000				68.0	320	61.2	304	0.38	
120000				84.8	397	76.3	377	0.34	
150000				100.2	472	90.2	448	0.30	
180000				112.5	532	101.3	505	0.25	

ZW8-12 Series High-voltage Vacuum Circuit Breaker

1. Application

ZW8-12 series high-voltage vacuum circuit breaker is a kind of outdoor high-voltage switch equipment with 50Hz three-phase alternating current 12Kv rated voltage. It mainly apply to break and close the load current, overload and short-circuit in country power net, city power net and mini-type power system. The general framework of this product adopts the form of three-phase using same box, i.e. put the three-phase arc-extinguishing chamber inside of the metal box. For the SMG material has the advantage of space insulation and grounding insulation, the breaker has perfect performance and high insulation strength.

ZW8-12G is made of ZW8-12 circuit breaker and isolating switch, called the combination of circuit breakers, use for disconnect switches and self-prepare power supply. There are built-in PT and outer PT.

This series of operating mechanism for the CT23-type spring operating mechanism energy storage can be divided into two kinds of electric and manual.

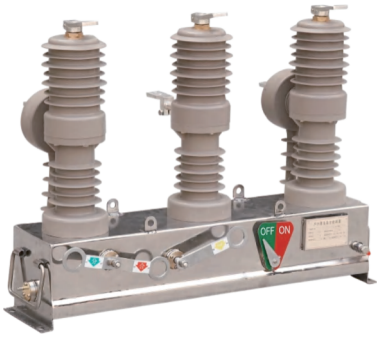
2. Technical Parameter

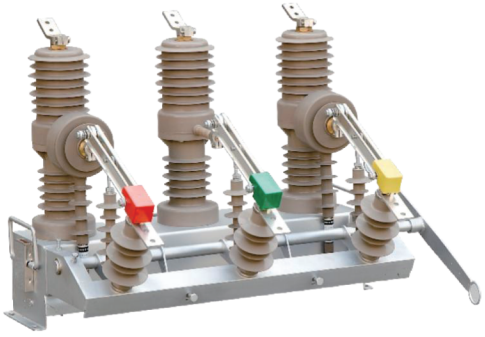
No.	Item		Unit	Data		
				6.3kA	12.5kA	20kA
1	Rated voltage		kV	12		
2	Maximum working voltage		kV	12		
3	Rated current		A	630		
4	Rated short circuit load dropout current		kA	6.3	12.5	20
5	Rated short-circuit making current		kA	16	31.5	50
6	Rated peak withstand current		kA	16	31.5	50
7	Rated short time 1 min tolerance current		kA	6.3	12.5	20
8	Rated insulation level	High-voltage test with working frequency	kV	42		
		Lightning shock pressure		75		
9	Rated operating sequence			Part-0.3S- Joint points -180S- Joint points		
10	Institutions life		time	10000		
11	Rated short open circuit current switch frequency		time	30		
12	Operating mechanism rated switching voltage		V	110,220		
13	Operating mechanism rated points brake current		V	110,220		
14	Contact clearance		mm	11±1		
15	Super stroke (contact spring compression length)		mm	3		
16	Three phase points, closing not synchronism		ms	≤2		
17	Contact switching bounce time		ms	≤2		
18	Average opening speed		m/s	1.0±0.2		
19	Average closing speed		m/s	0.7±0.15		
20	Opening time	The highest operating voltage	s	0.015-0.05		
		The minimum operating voltage		0.03-0.06		
21	Closing time		s	0.025-0.05		
22	Each phase main loop resistance		μΩ	≤120(≤200)		
23	Action contact allowed to wear accumulative thickness		mm	3		

ANDELI

ZW32-12

ZW32-12 Type Outdoor High Voltage Vacuum Circuit Breaker





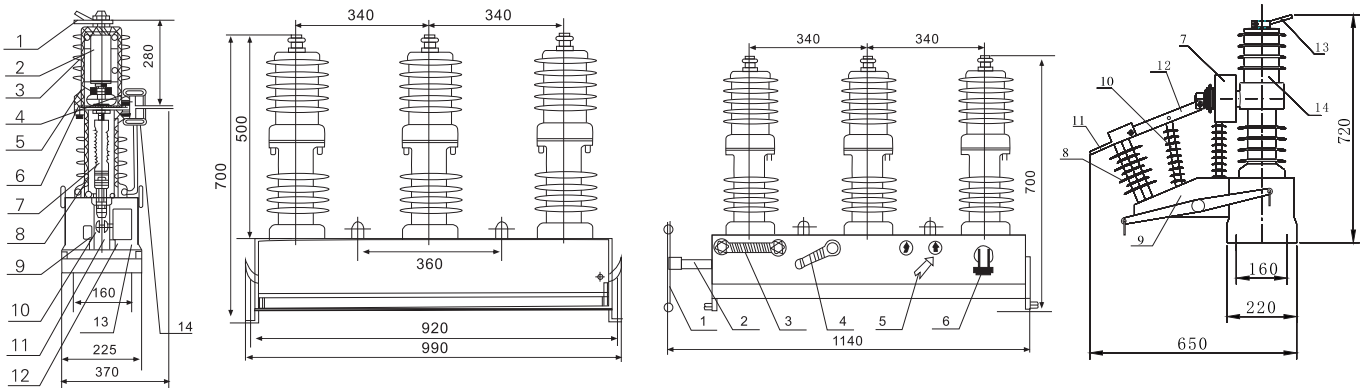
1. Application

ZW32-12 type outdoor high voltage vacuum circuit breaker is 3-phase AC50/60Hz outdoor power distribution equipment with the rated voltage of 12kV. It is mainly used to break and close the load current, over load current, and short circuit current in the electric power system. It fits to be used to protect and control the circuit in substation, mining and industrial enterprises. and the frequently operation places such as the rural power network.It can also be the section switch of power grid, after adding controller, distribution network automation is available.

2. Technical Parameter

No.	Item	Unit	Value
1	Rated voltage	kV	12
2	Rated frequency	Hz	50
3	Rated current	A	630
4	Rated short-circuit breaking current	kA	20
5	Rated peak withstand current	kA	50
6	Rated short-time withstand current (4 s)	kA	20
7	Rated short circuit close current (peak)	kA	50
8	Mechanical life	times	10000
9	Rated short open circuit current switching frequency	times	30
10	1 min power frequency withstand voltage (wet) (dry) alternate with, on/fracture	kV	42/48
11	Lightning impulse withstand voltage (peak) relative to ground/fracture	kV	75/85
12	Secondary loop 1 min power frequency withstand voltage	kV	2

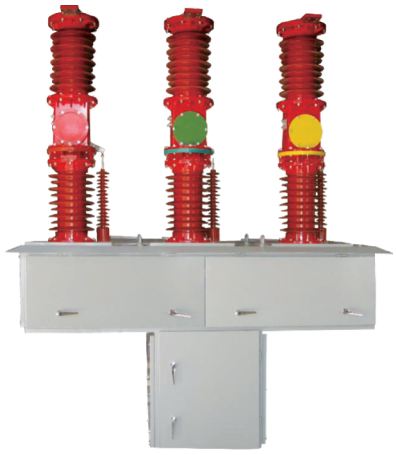
3. Outline and Installing Dimensions(mm)



1. the outlet 2. interrupter 3. insulation tube
4. next outlet 5. conductive clip 6. soft link
7. insulation rod 8. contact pressure spring
9. tripping spring 10. driver board 11. body output shaft
12. actuator 13. body box 14. CT

1. Operating handle 2. Isolation spindle 3. manual cut-off circuit breaker handle
4. story energy circuit breaker handle 5. cut-off instructions 6. wring plug
7. CT 8. insulators 9. insolation rack 10. insulation rod
11. wring board(inlet side) 12. isolated blade 13. wring board(outlet side)
14. circuit breaker

ZW7-40.5 Series Outdoor High Voltage Vacuum Circuit Breaker



1. Application

ZW7-40.5 series outdoor high voltage vacuum circuit breaker is used at three phase AC 50Hz, rated voltage is 40.5kV outdoor high-voltage electrical equipment,attached the spring operator or electromagnetic actuator can be well controlled electric opening and closing can also be Manaul storage, manually open and close. Design performance meet GB1984-89 <AC high voltage circuit breakers>; national standards, and meet the IEC-56 <high voltage AC circuit breakers> ; International Electro-technical Commission standards. ZW7-40.5 series vacuum circuit breaker is mainly used for outdoor 35kV power transmission system control and protection also applies to urban and rural power distribution networks and industrial and mining enterprises in the normal operation and short circuit protection purposes. The overall structure of the insulator pillar product type; built vacuum interrupter type on the case, porcelain vase for the next pillar case. For frequent operation place. And has good sealing, anti-aging, high pressure, no burning, no explosion, long life, convenient installation and maintenance features.

2. Type and Meaning

Z W 7 - 40.5 / □ - □

- Rated short circuit breaking current
- Rated current
- Rated voltage
- Design No.
- Outdoor
- Vacuum circuit breaker

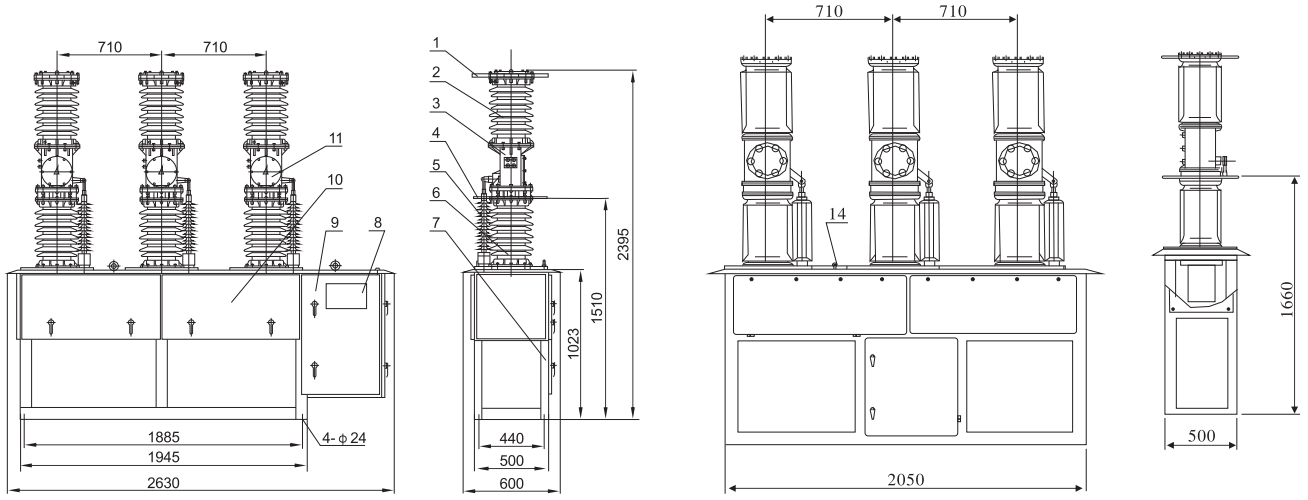
3. Technical Parameter

No.	Item	Unit	Value		
1	Rated voltage	KV	40.5		
2	Rated current	A	1600		
3	Rated frequency	Hz	50		
4	Rated short-circuit breaking current(valid)	kA	20	25	31.5
5	Rated short-circuit making current(peak)	kA	50	63	80
6	Rated peak withstand current	kA	50	63	80
7	4S Rated short time tolerance current	kA	20	25	31.5
8	1 min power frequency withstand voltage(valid)	kV	dry-type:95 (wet-type:80)		
9	Lightning shock pressure(peak)	kV	185		
10	Rated operating sequence		Part-0.3S- Joint points -180S- Joint points		
11	Rated short open circuit current switch frequency	times	20		
12	Operating mechanism rated switching voltage	times	10000		
13	weight	kg	1000		

4. Main Mechanical Parameters

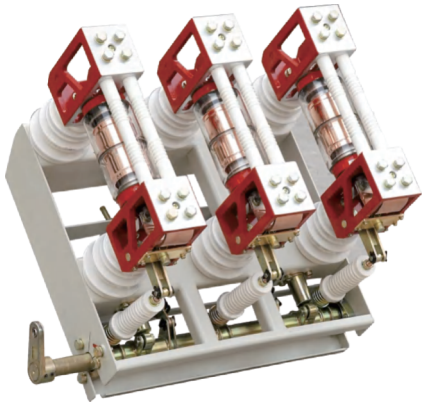
No.	Item	Unit	Value
1	Arcing chamber contact clearance	mm	22±2
2	Arcing chamber Super stroke	mm	5±1
3	Phases center distance	mm	710
4	Arcing chamber Contact switching bounce time	ms	≤5
5	Three phase points, closing not synchronism	ms	≤2
6	Average closing speed	m/s	0.75±0.2
7	Average opening speed	m/s	1.7±0.2
8	Closing time	ms	30~100
9	Opening time	ms	15~60
10	Each phase main loop resistance(without CT)	μΩ	≤100
11	Action contact allowed to wear accumulative thickness	mm	3

5. Outline and Installation Dimension (mm)



1. Upper terminal
2. Vacuum arcing chamber porcelain sets
3. Holder
4. Under against terminal
5. Insulating tension pole
6. Strut porcelain
7. Chassis
8. Nameplate
9. CT19BW framework box
10. CT
11. Hand hole cover board

ZN28(A)-12 Series Vacuum Circuit Breaker



1. Application

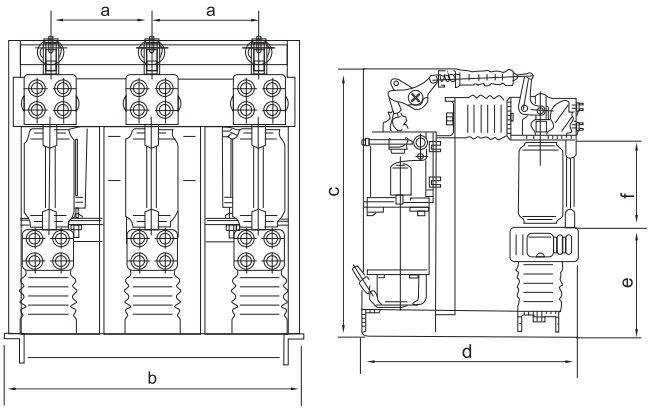
ZN28(A)-12 series vacuum circuit breakers are a kind of indoor high voltage switch device which is used in the AC three-phase power system of frequency 50Hz , rated voltage 12kV. This device is conformed to the standard GB1984-89.This device adopts unibody installation of operating mechanism and circuit breaker technology,which has two styles , respectively, ZN28-12 unibody structure and ZN28(A)-12 separable structure. it is suitable to various fixed switchgears, such as GG1A, XGN2A-10, etc.

This products can match with CD17 DC electromagnetic operating mechanism and CT19I, CD19II spring energy storage type operating mechanism.

2. Technical Parameter

Item	Unit	Value			
Rated voltage	kV	12			
Rated current	A	630,1000,1250	1250,1600	1250,1600,2000,2500	1600,2500,3150
Rated short-circuit breaking current	kA	20	25	31.5	40
Rated short-circuit switch off current (virtual value)	kA	50	63	80	100
Rated peak withstand current (peak)	kA	50	63	80	100
Rated thermo stability current(valid)	kA	20	25	31.5	40
Rated thermo stability time	s	4			
Rated operations of short-circuit breaking current interruption	times	30(50)			
Breaking time CD10 magnetic control mechanism	ms	<80			
Rated operation sequence		0.3			
Power frequency withstand voltage (1 min)	kV	42(fracture 48)			
Impulse withstand voltage	kV	75(fracture 85)			
Mechanical life	times	10000			

3. Outline and Installation Dimension (mm)



Data / Model / Code	20kA 25kA 31.5kA	40kA
a	230	275±1
b	600	690
c	707	842
d	560	652
e	293^{2}_{0}	342^{+2}_{0}
f	227±1	227±1

ZN63(VS1)-12 High Voltage Vacuum Circuit Breaker

1. Application

ZN63(VS1)-12 indoor high voltage vacuum circuit breaker is used in the three-phase AC power system of frequency 50Hz, rated voltage 12kV. It is applied in the grid equipment, the power distribution system of industrial and mining enterprises as well as the places where requires repeated opening short-circuit current and frequent operation.

This circuit breaker adopts unibody design of operating mechanism and circuit breaker technology, which can not only be used as fixed installation unit, but also can constitute the handcart unit with dedicated advanced mechanism.

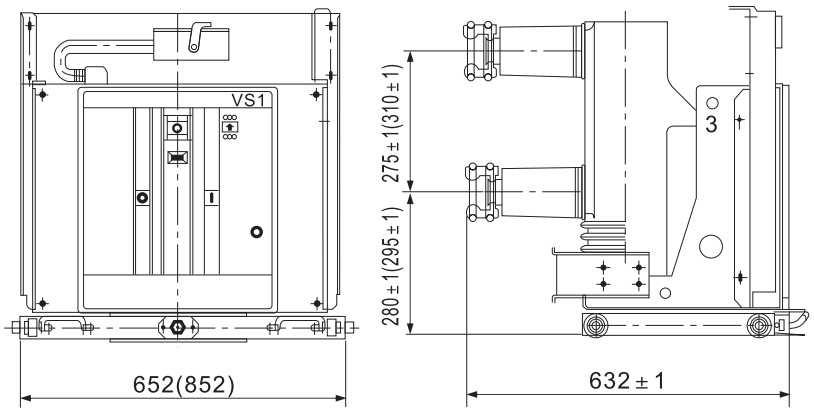
ZN63(VS1)-12 is indoor medium-voltage solid type seal vacuum circuit breaker, ZN63(VS1)-12 vacuum breaker suitable for the insulation in the indoor air switch for 50Hz, rated voltage 12kV and below the grid from the control and protection, ZN63(VS1)-12 vacuum circuit breaker and the frequent need for short-circuit breaking current of occasions with very good performance, fully meet the requirements of automatic re-closing and have higher reliability and service life.

2. Technical Parameter

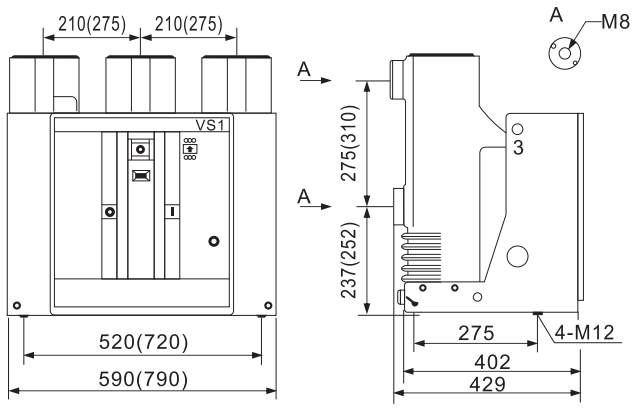
No.	Item		Unit	Value		
1	Rated voltage		kV	12		
2	High test operating voltage		kV	12		
3	Rated current		A	630	630	1250
4	Rated short-circuit breaking current		kA	20	25	31.5
5	Rated short-circuit closing current		kA	50	63	80
6	Rated peak withstand current		kA	50	63	80
7	4Srated short time withstand current		kA	20	25	31.5
8	Rated insulation level	P.F.withstand voltage(Before and after the rated breaking)	kV	42(Fracture48)		
		Impulse witstand voltage(Before and after the rated breaking)	kV	75(Fracture84)		
9	Rated operating order			O-0.3S-CO-180S-CO		
10	Mechanical life		times	3000		
11	Rated short-circuit breaking current breaking times		times	50		
12	Actuator Rated closing voltage(DC)		V	110,220		
13	Actuator Rated opening voltage(DC)		V	110,220		
14	Clearance between opencontacts		mm	11±1		
15	Supper Travel(Compressed length of contact springs)		mm	3.5±0.5		
16	Non corresponding time period between tri-phase opening and closing		ms	⩽2		
17	Bounce time of closing contacts		ms	⩽2		
18	Average time of opening		s	0.9~0.12		
19	Average time of closing		s	0.4~0.8		
20	Opening time		ms	50		
21	Closing time		ms	100		
22	Main loop resistance of each phase		μΩ	60		50
23	Allowed acumination thickness between moving contact and static contact		mm	3		

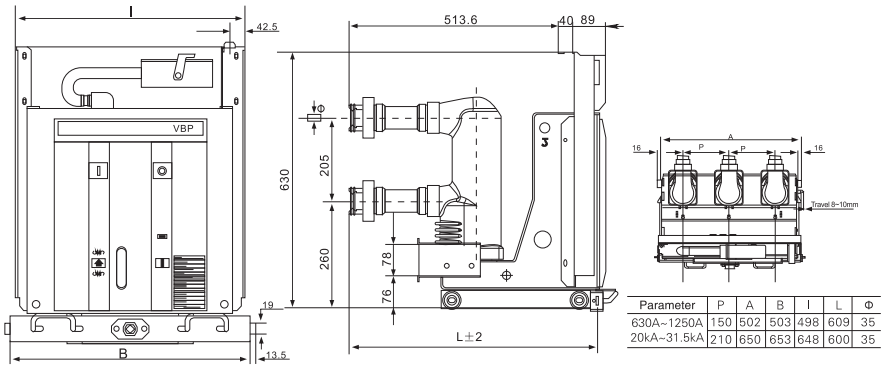
3. Outline and Installation Dimension (mm)

Vacuum circuit breaker with chassis

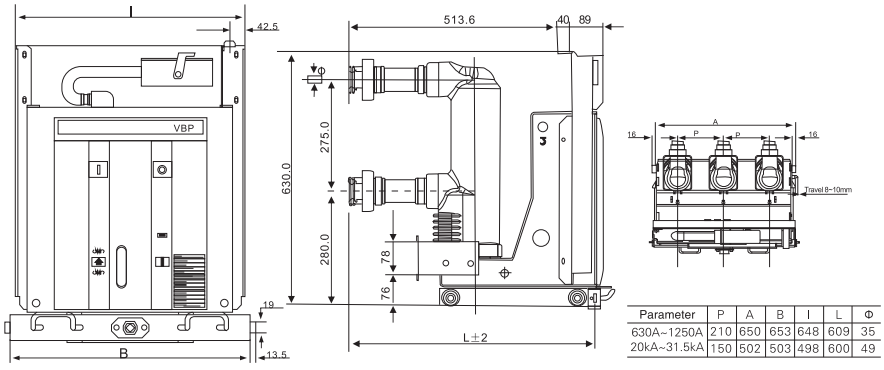


Vacuum circuit breaker without chassis

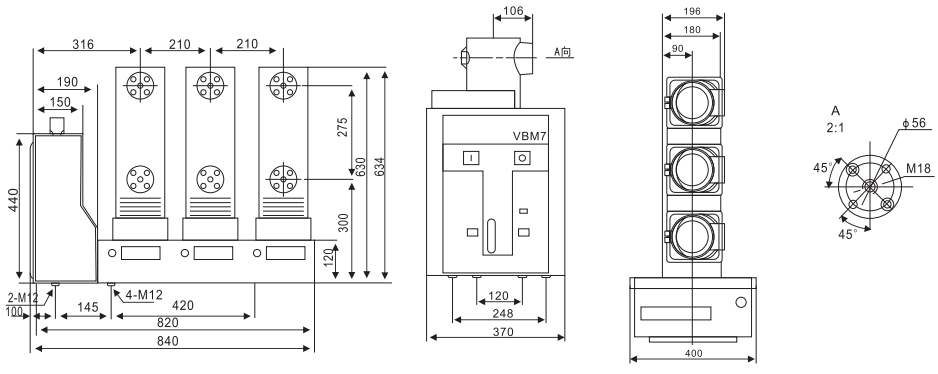




Parameter	P	A	B	I	L	Φ
630A~1250A	150	502	503	498	609	35
20kA~31.5kA	210	650	653	648	600	35



Parameter	P	A	B	I	L	Φ
630A~1250A	210	650	653	648	609	35
20kA~31.5kA	150	502	503	498	600	49



ZN85-40.5G(3AV3)
Indoor AC HV Vacuum Circuit Breaker

1. Application

ZN85-40.5G(3AV3) indoor AC HV Vacuum circuit breaker is applicable for power system with three-phase AC50Hz,40.5kV, used for industrial and mining enterprises, power plants and transformer transformer substations to protect and control equipemnts, also, it can be used in the location where with frequent operating.

2. Type and Meaning

ZN 85 - 40.5G / 2000 - 31.5

- 31.5 — Rated short circuit breaking current
- 2000 — Rated current
- 40.5G — Rated voltage
- 85 — Design No.
- ZN — Indoor vacuum circuit breaker

3. Service Environment

Environmental temperature is from:-15~40°C;
Environmental humidity:
Daily average relative humidity≤95%
Monthly average relative humidity≤90%
Earthquake intensity≤8
Keep away from such environment as subject to dust, dirt, smog, corrosive of flammable gas, vapor and salt pollution.

4. Technical Parameter

Item	Unit	Value
Rated voltage	kV	40.5
1 min power frequency withstand voltage (virtual value)	kV	95
Lighting impulse withstand voltage (peak)	kV	185
Rated frequency	Hz	50
Rated current	A	1250,1600,2000
Rated short-time withstand current	kV	25 31.5
Rated peak withstand current	kV	63 80
Rated short circuit duration	S	4
Rated short-circuit breaking current	kA	25 31.5
Rated short-circuit making current	kA	63 80
Rated operating sequence		0-0.3s-CO-180s-CO
Break time	ms	<80
Rated short-circuit breaking current times	times	20
Rated breaking current of capacitor bank	A	630
Rated back-back capacitor bank drop-out current	A	400
Rated operating voltage	V	-110/~110 -220/~220
Mechanical endurance		10000

5. Structrue Feature

The arc-extinguish chamber is on the upper part and the mechanism is on the lower part. This structure is convenient for debug .

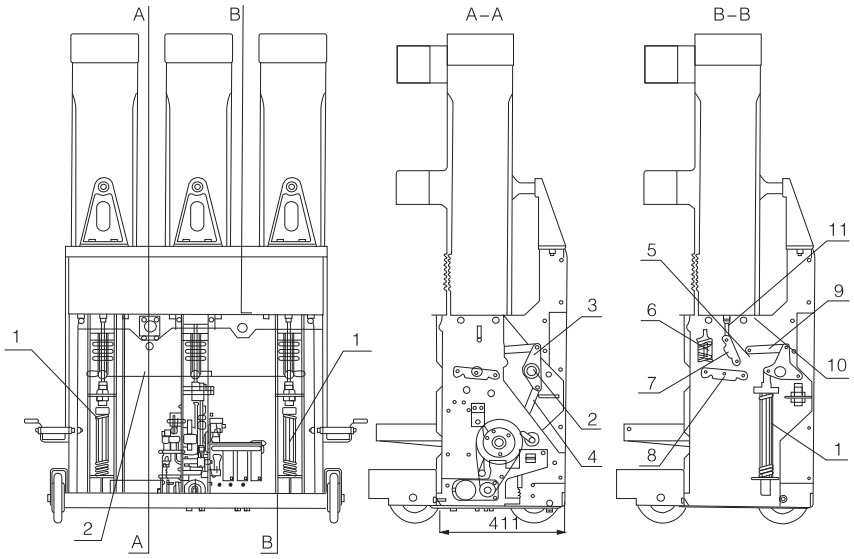
Complex insulating structure using air and organic material; Compactable dimension and small weight.

Vacuum arc-extinguish chamber of Cutler-Hammer Company (USA) and domestic ZMD are both appli cable for th e VCB. Both two kinds of chambers extinguish arc by vertical magnetic field and featuring with low cut-off and good on-off capability with asymmetry.

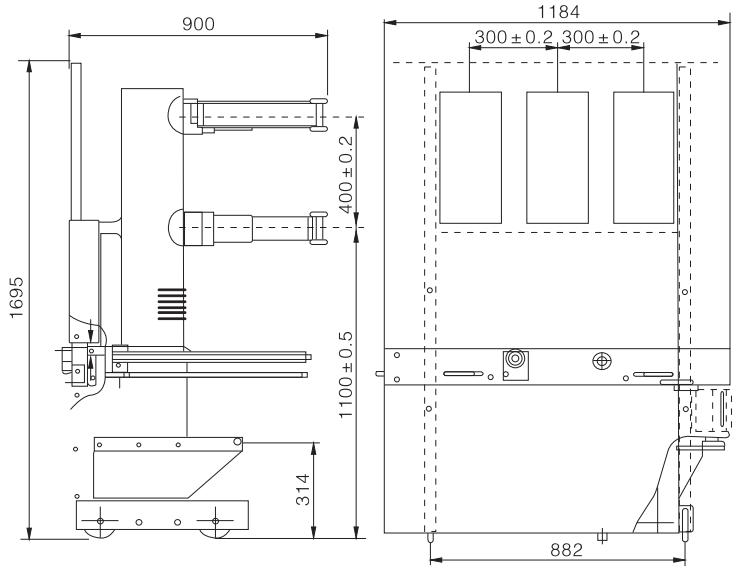
Simple spring operation mechanism is free from maintenance within 10000 times of operations.

Lead-screw propeller, easy and stable operation and good self-locking capability.

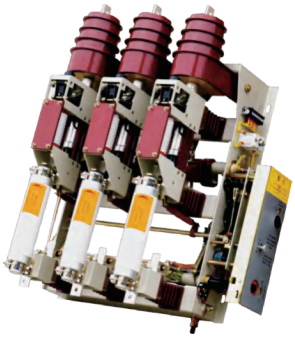
6. Outline and Installation Dimension (mm)



1. Break-brake spring
2. Large shaft
3. Middle connecting lever
4. Transmission rod
5. Drive connecting plate
6. Contact spring
7. Drive connecting plate3
8. Drive connecting plate4
9. Drive connecting plate1
10. Side connecting lever
11. Rod end joint bearing



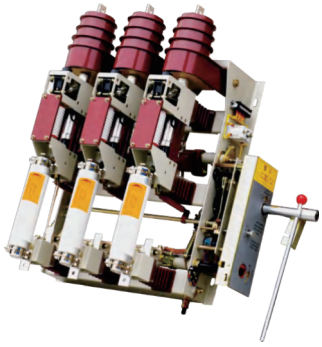
FZ(R)N25-12 Indoor AC High Voltage Vacuum Load Switch



1. Application

FZN25-12D/T630-20 Type Indoor AC switch is three-phase AC 50Hz, rated voltage of 12kV and indoor installations, for industrial and mining enterprises for distribution in clinics and substations and other occasions, as electrical protection and control facilities for the division and load current, loop current, no load transformer and cable charging current.

FZRN25-12D/T200-31.5 type indoor AC high voltage vacuum load switch- fuse combination units is three-phase AC 50Hz, rated voltage of 12kV for indoor installations for industrial and mining enterprises and other occasions to change the station distribution Institution for load control and short circuit protection purposes. Equipped with grounding switch can withstand short-circuit current. Actuator can be manual and electric, easy remote control three power system requirements.

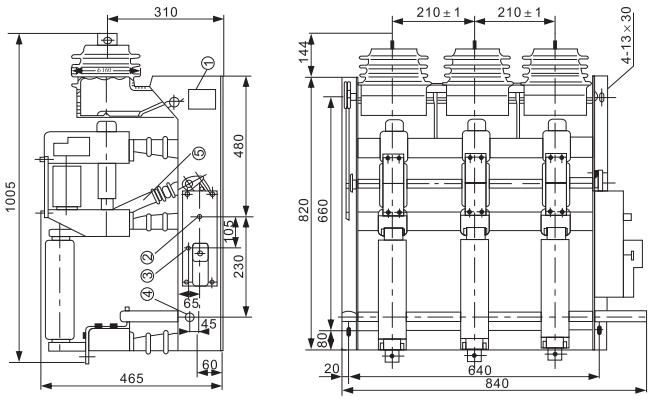


FZN25-12D, FZRN25-12D-type load switch and the combination of electric three-phase are for city distribution and industrial power equipment of three phase ring network or terminal power supply ,for load control and short circuit protection. As the combination of electrical transformers and other electrical equipment on the protective effect than the circuit more reliable, more economical, especially for rings, double radiation power supply units and box-type substation.

2. Technical Parameter

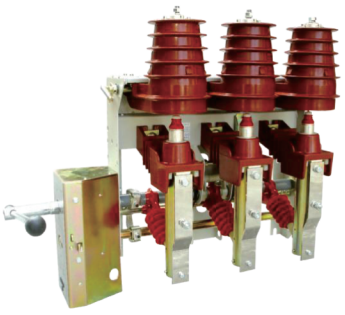
No.	Item		Unit	Value	
				FZN25-12D/T630-20	FZN25-12D/T125-31.5
1	Rated voltage		kV	12	
2	Rated frequency		Hz	50	
3	Rated current		A	630	125
4	Rated insulation level	1min power frequency withstand voltage (effective value)	kV	Arc-quenching chamber fracture 30	
				Earth ,phase 42, insulating fracture 48	
		Lightning impulse withstand voltage (peak)	kV	Earth ,phase 75, insulating fracture 85	
5	Rated dynamic current (peak)		kA	50	-
6	4S thermal current		kA	20	-
7	Rated power load breaking current		A	630	125
8	Rated closed-loop breaking current		A	630	125
9	Rated cable charge breaking current		A	10	10
10	Rated breaking no-load transformer capacity		kVA	1600	1600
11	Rated open circuit breaking current		KA	-	31.5
12	Rated transfer current		A	-	2000
13	Fuse model			-	SDLAJ-12, SFLAJ-12
14	Striker output energy		J	-	2-5
15	Rated short-circuit closed current		kA	50	
16	Earth switch rated dynamic current		kA	50	
17	Earth switch 2s thermal current		kA	20	
18	Auxiliary circuit rated voltage		V	AC DC220	AC DC110
19	Mechanical life		times	10000	

3. Outline and Installation Dimension (mm)



1.nameplate
2.Energy storage shaft
3.trip
4.Grounding knife shaft
5. Operating lever

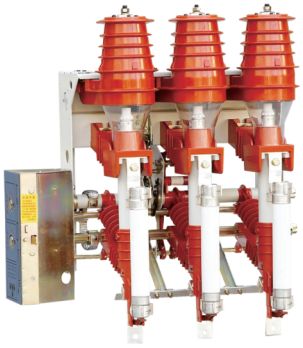
FKN12-12(R)Air High Voltage Load Break Switch With Fuse



1. Application

FKN12-12D/630-20 air high voltage load break switch with fuse is a three phase high voltage switch equipment of 12kv,50hz for breaking or closing load current, loop closed current. no-load transformer and cable charging electric current, close short circuit current. The load switch with earthing switch can bear short-circuit current.

FKN12-12RD/125-31.5 air high voltage load break switch-- fuse-combination unit is made of FKN2-12D load switch and S□LAJ-12(XRNT□-12) H.V current-limiting fuse box. It can be a reliable short-circuit breaking current up to any current: breaking work load switch current, fuse short-circuit breaking current breaking joint working between the current and the full short-circuit current in any over-current, while fuse allows, through its impact load switch sub-gate.



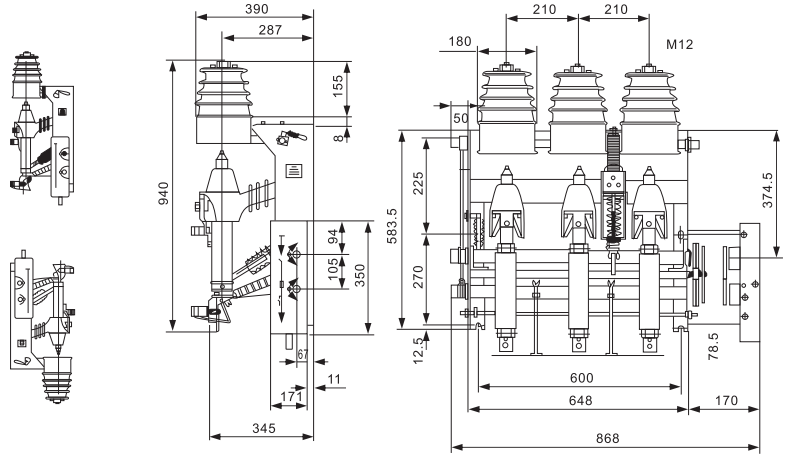
2. Using Condition

a. Ambient temperature -25°C-+40°C
b. Elevation≤1000m
c. Humidity:daily average humidity≤95%,monthly≤90%
d. No risk of fire, explosion, serious pollution, chemical corrosion and severe vibration
e. Pollution degree: II
If use out of above condition,please contact with the manufacture

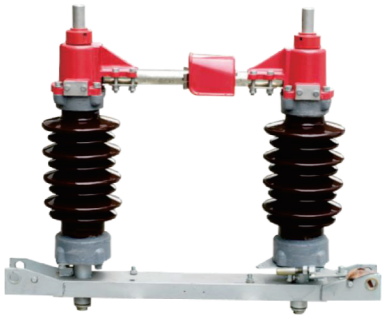
3. Technical Parameter

No.	Item	Unit	FKN-12D/630-20	FZN-12R.D/125-31.5
1	Rated voltage	kV	12	
2	Rated frenquence	Hz	50	
3	Rated amper	A	630	125
4	Thunder voltage	kV	Isolation:85	
5	1min Voltage	kV	Earthing 42,Isolation:48	
6	Amper	kA	20(4S)	
7	Stable current	kA	50	
8	Current	kA	50	-
9	Breaking current	kA	-	31.5
10	Moving current	kA	-	1.5
11	Breaking amper	kA	1.8	
12	Transformer capacity	kVA	1250	
13	Power charge current	A	10	
14	Breaking times	times	>100	
15	Breaking time	S	-	>0.06
16	Current	kA	20(2S)	20(2S)
17	Earthing switch voltage	kA	50	50
18	Motor voltage	V	AC220, DC48	

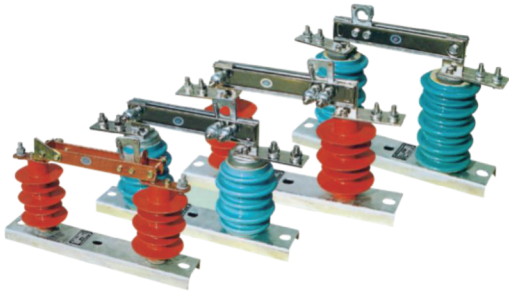
4. Outline and Installation Dimension (mm)



GW Series Outdoor High Voltage Disconnecting Switch

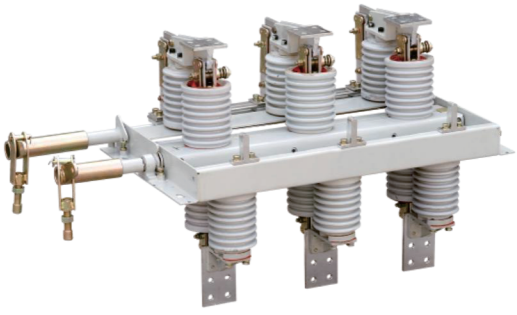


GW4-40.5KV perfect COMPLETE
Outdoor High voltage Disconnecting Switch



(H)GW9-12 series
outdoor High Voltage Disconnecting Switch

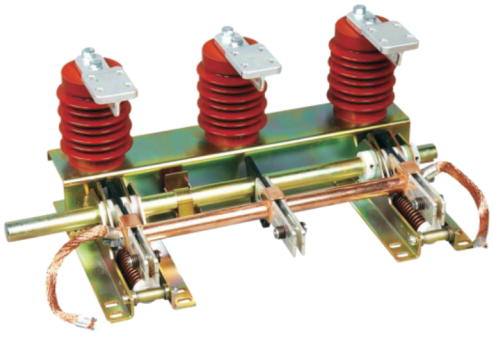
GN Series Indoor Type High Voltage Isolator Switch



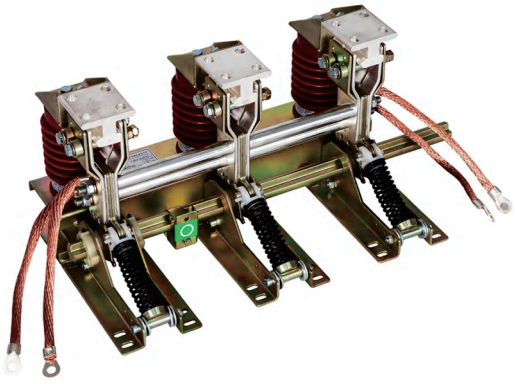
GN30-12 series
Indoor Rotary High Voltage Disconnecting Switch

GN19-12 series
Indoor High Voltage Disconnecting Switch

JN Series Indoor High Voltage Ground Switch

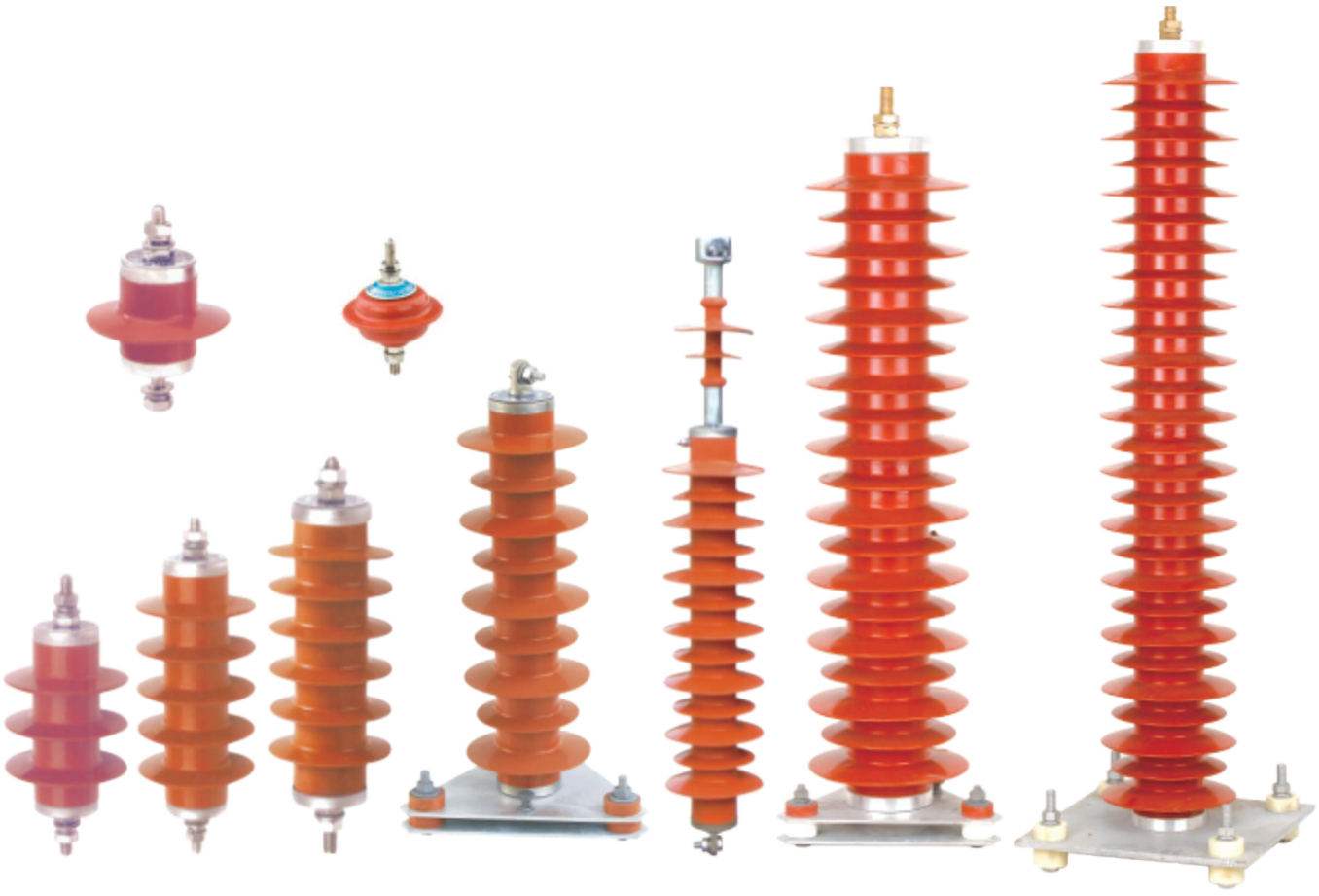


JN15-12/31.5 series
indoor High Voltage ground switch

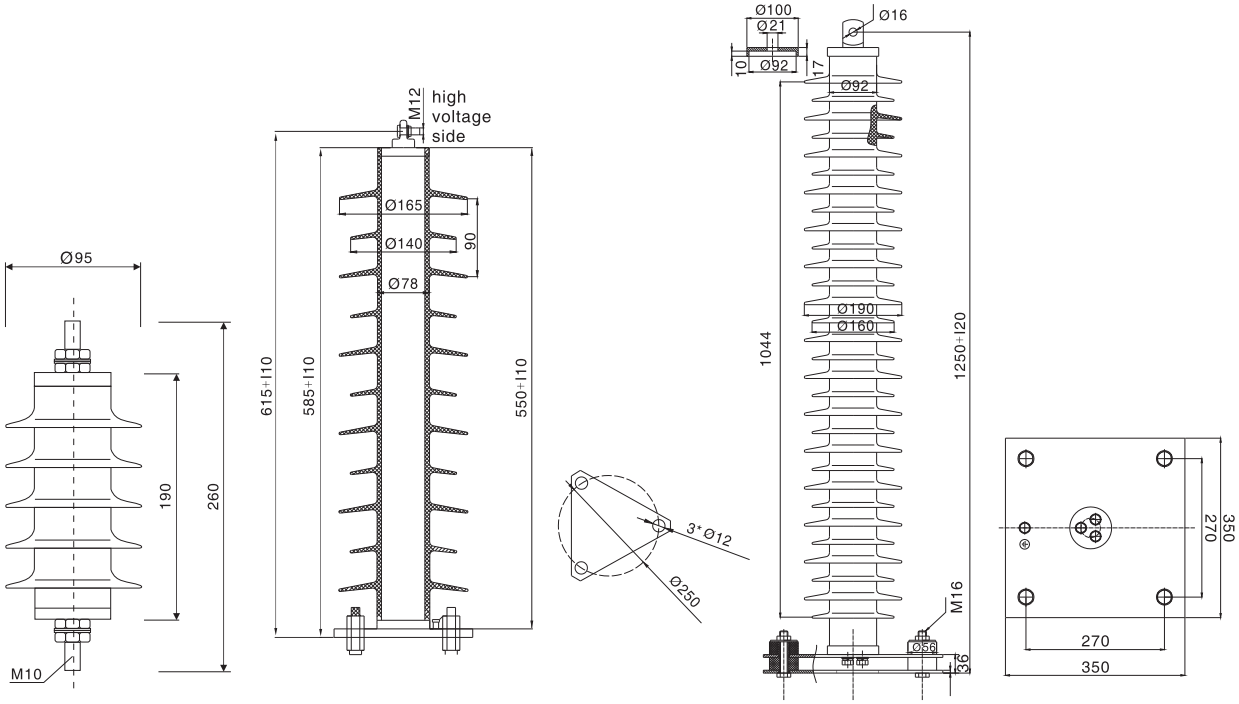


JN15-12/40 series
indoor High Voltage ground switch

HY series Polymer type Zinc Oxide Lightning Arrester



Outline and Installation Dimension (mm)



HY5WS-10KV HY5WZ-51/134KV HY10W-110KV

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