



ELECTRICAL SAFETY
GUARD



EXPLORER

SAFELY EXPLORING
LEADING SMART FUTURE

INDUSTRIAL CONTROL
AND PROTECTION



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A JOINT VENTURE OF



COMPANY PROFILE

Huanyu High-Tech Co., Ltd. is a high tech enterprise focusing on the development, manufacturing and marketing of low-voltage electrical components. Established on Zhejiang High Tech. Co, Ltd of Huanyu Group in early 2021, we are a joint venture of Huanyu Group, a large national conglomerate company, and Eaton Group, a global power management company.

Our products are widely used in many applications including power grids, network communications, new energy, metallurgy, chemical industry, transportation, manufacturing and construction, serving various well-known customers such as the State Grid, China Southern Power Grid, Evergrande Real Estate, Vanke, Country Garden, Poly Real Estate, R&F Properties, the Three Gorges of the Yangtze River, Daqing Oilfield, Jiangsu Power Grid, Xi'an Jiaotong University, Guangzhou Baiyun Airport, Shanghai Disney, China FAW, China Railway, and China Railway Construction. Now we have 10+ integrated service centers, 30+ sales offices, 600+ terminal image specialty shops, and over 800 sales outlets in mainland China.

We have been awarded the National Contract-honoring and Trustworthy Enterprise, National Customer-satisfied Enterprise, National High-Tech Enterprise, Zhejiang Well-known Trade Name, Zhejiang Green Enterprise, Zhejiang Major Taxpayer, and Wenzhou

Mayor Quality Award. In addition, we have been certified with ISO9001 Quality Management System, ISO14001 Environmental Management System and ISO45001 Occupational Health and Safety Management System, and passed more than 10 international certification including the KEMA standard of Netherlands, UL standard of the United States, CE standard of the European Union, TÜV standard of Germany, FI standard of France, and CB system. We have a national post-doctoral research station, a provincial technology research institute, and a nationally accredited CNAS laboratory. We also have more than 100 national invention patents and utility model patents, and has implemented the National Torch Plan and major provincial scientific research and development projects. Our products have been rated as China Famous Brand Products, National Customer-satisfied Products, and Zhejiang Famous Brand Products. Besides, we have been awarded Zhejiang Manufacturing Quality Certificate and have the right to use Zhejiang "Pin", a word mark meaning quality.

Committed to smart electric to make life better, we will continue to focus on product innovation, talent development, and smart manufacturing, to build a modernized global electrical enterprise.

Safe Exploring, Leading Smart Future



The Simples with unique design make our products to be more classics and quality.



Use high-quality materials to meet the harsh environment need and ensure the absolute safety of people and device



Operating environment temperature
-35°C~+70°C



EXC3 has two additional new currents 6A and 38A , covering the main models from 9A to 95A



EXC3 Full range have built in 1NO+1NC contacts



Complete various mounting accessories to meet the diversified use needs of customers.



EXC3 Coil pull- in voltage from 70%~120% Us with stable and safety operation



EXC3 Mechanical life up to 10 million times.
Electrical life(AC-3) up to 1 million times.



Safe alternative to EXC3 and EXR3 on the market
New EXC3 will be more safely than old generations of EXC3 and EXR3



Omnibearing dust proof design, can be equipped with transparent dust proof cover on the top side



The special knockouts design on the side and fully sealing design at the bottom to provide better protection.



CONTENT

AC Contactor

Product Introduction

Product accessory

Overall and mounting dimensions

Thermal relay

Product Introduction

Product accessory

Overall and mounting dimensions

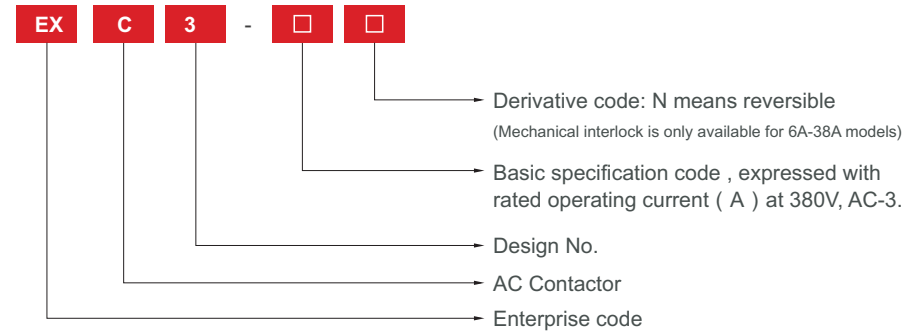


General

The Explorer EXC3 series AC Contactor (hereinafter referred to as Contactor) is mainly used for circuit of AC 50Hz (or 60Hz), rated voltage up to 690V, and rated operating current up to 95A under the AC-3 usage category. It is mainly used for frequent start and control of AC motor, closing and breaking the circuit remotely, and can be assembled as an electromagnetic AC motor, closing and breaking the circuit remotely, and can be assembled as an electromagnetic starter with an appropriate thermal overload relay to protect the circuit from possible overload.

Conform to standard: GB/T 14048.1/IEC 60947-1、GB/T 14048.4/IEC 60947-4-1

Model Meaning



Operating Conditions

1. Ambient temperature: Limited temperature -5°C~ +70°C, Normally working temperature -5°C ~ +40°C. Average value in 24 hours ≤ +35°C. It will be derated if temperature exceeds +40°C.
2. Altitude: ≤2000m
3. Atmospheric conditions :The relative humidity of the air does not exceed 50% at the temperature of +40°C . Higher relative humidity permitted at lower temperature, for example 90% relative humidity at 20°C. Special measures are necessary in case of occasional condensation due to variations in temperature.
4. Pollution degree: 3
5. Installation category: III
6. Protection degree: Ip20
7. Mounting conditions: The inclination of the mounting surface and the vertical is not more than ± 5°
8. Impact vibration: The contactor should be in the stable place without any shake, impact and vibration.
9. Transportation and storage: During transportation the contactor should not be subjected to severe collisions and vibrations, neither attacked by rain / snow in any time. Contactor is suitable for transportation and storage at temperatures range from -25°C ~ +55°C, can up to +70°C in a short time(within 24h).

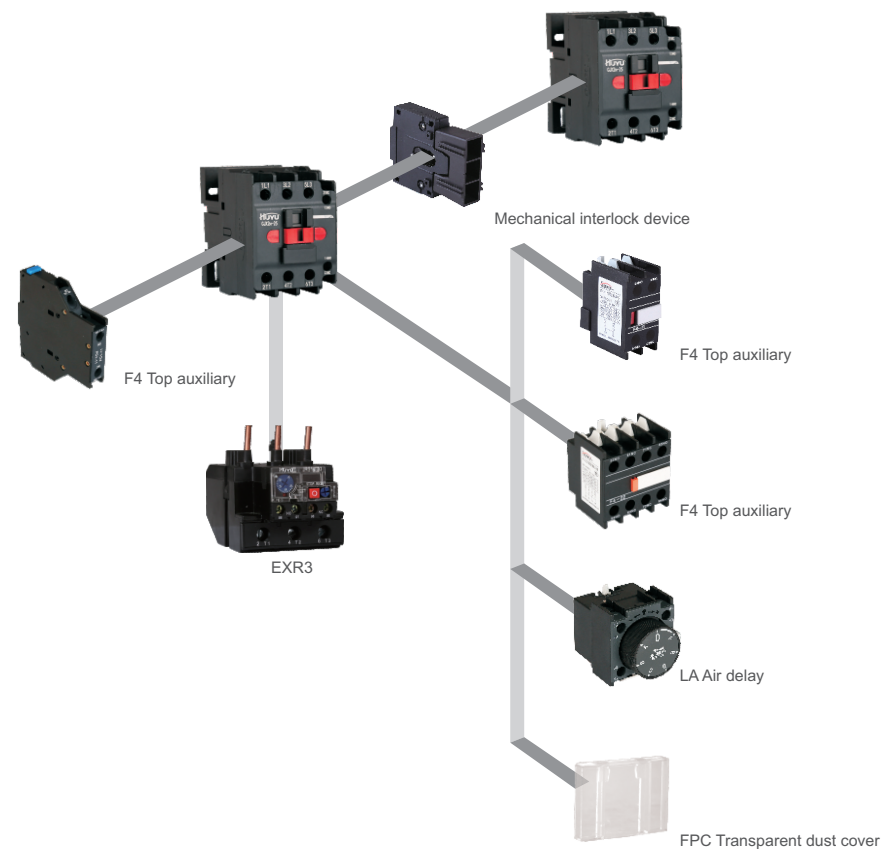
Main Parameters and Performance

AC Contactor model	EXC3													
	06	09	12	18	25	32	38	40	50	65	80	95		
Main circuit characteristics														
Rated Insulation voltage Ui(V)	690													
Conventional thermal current Ith(A)	20			32	40	50		60	80		125			
Rated operating current Ie (A)	220V (230V)	AC-3	6	9	12	18	25	32	38	40	50	65	80	95
	380V (400V)	AC-3	6	9	12	18	25	32	38	40	50	65	80	95
		AC-4	2.6	3.5	5	7.7	8.5	12	14	18.5	24	28	37	44
	660V (690V)	AC-3	3.8	6.6	8.9	12	18	21	22	34	39	42	49	55
AC-4		1	1.5	2	3.8	4.4	7.5	8.9	9	12	14	17.3	21.3	
Controllable three-phase squirrel cage motor power Pe (AC-3) kW	220V	1.5	2.2	3	4	5.5	7.5	9	11	15	18.5	22	22	
	380V	2.2	4	5.5	7.5	11	15	18.5	18.5	22	30	37	45	
	660V	3	5.5	7.5	9	15	18.5	18.5	30	33	37	45	55	
Recommended fuse SCPD	RT16-00 16A	RT16-0020A			RT16-00 32A	RT16-00 40A	RT16-00 50A	RT16-00 63A	RT16-00 63A	RT16-00 80A	RT16-00 80A	RT16-00 100A	RT16-00 125A	
Operating Frequency (Times/H)	AC-3	1200						600						
	AC-4	300												
Electrical life (1x10 ⁴ times)	AC-3	100						80				60		
	AC-4	20						15				10		
Mechanical life (1x10 ⁴ times)	1000						800							
Coil														
Rated control circuit voltage (US)	50Hz	24V、36V、110V、127V、220V、380V , For other specification please discuss with Huanyu												
Permissible control circuit voltage(US)	Operating	70% ~ 120%Us												
	Release	20% ~ 75%Us												
Coil power	Pull in VA	50 ~ 70						190 ~ 220						
	Hold on	7 ~ 11.4						19 ~ 25						
	Power consumption	1.8 ~ 4						6 ~ 10						
Terminal wiring capacity														
Flexible wire without terminal	1 PCS(mm ²)	1 ~ 4			1.5 ~ 10			2.5 ~ 25			4 ~ 50			
	2 PCS(mm ²)	1 ~ 4			1.5 ~ 6			2.5 ~ 16			4 ~ 25			
Flexible wire with terminal	1 PCS(mm ²)	1 ~ 4			1 ~ 6			2.5 ~ 25			4 ~ 50			
	2 PCS(mm ²)	1 ~ 2.5			1 ~ 4			2.5 ~ 10			4 ~ 16			
Hard wire without terminal	1 PCS(mm ²)	1 ~ 4			1.5 ~ 6			2.5 ~ 25			4 ~ 50			
	2 PCS(mm ²)	1 ~ 4			1.5 ~ 6			2.5 ~ 16			4 ~ 25			
Terminal screw specification		M3.5×9.5			M4×15.5			M8×16			M10×20			
Fastening Torque N·m		0.8			1.8			5			9			

EXC3-N Series Mechanical interlock contactor technical parameters and performance

Model	Ui (V)	Ith (A)	Ie @ AC-3 (A)		Pe @ AC-3 (kW)			Ie @ AC-4 (A)		Pe @ AC-4 (kW)	
			380V	660V	220V	380V	660V	380V	660V	380V	660V
EXC3-06N	690	20	6	3.8	1.5	2.2	3	2.6	1	1.1	0.75
EXC3-09N		20	9	6.6	2.2	4	5.5	3.5	1.5	1.5	1.1
EXC3-12N		20	12	8.9	3	5.5	7.5	5	2	2.2	1.5
EXC3-18N		32	18	12	4	7.5	9	7.7	3.8	2.2	1.5
EXC3-25N		40	25	18	5.5	11	15	8.5	4.4	4	4
EXC3-32N		50	32	21	7.5	15	18.5	12	7.5	5.5	5.5
EXC3-38N		50	38	22	9	18.5	18.5	14	8.9	5.5	6

AC Contactor accessories and mounting position



1.FPC Transparent dust cover

2.F4 top auxiliary contacts: The model has 2 contacts and 4 contacts choice

2 contacts choice: 2NO+0NC , 1NO+1NC , 0NO+2NC

4 contacts choice: 2NO+0NC , 1NO+1NC , 0NO+2NC

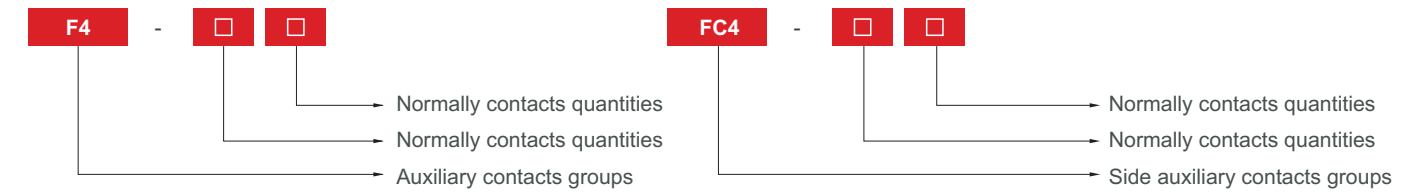
3.FC4 Side auxiliary contacts: 2 Contacts , choice of 2NO , 1NO+1NC , 2NC

4.LA series air delay : There are two selections of power-on delay LA2 and power-off delay LA3,

1NC+1NO contacts time adjustable range: 0.1~3s, 0.1~30s, 10~180s

Accessories main parameters and technical performance

1、Auxiliary contacts

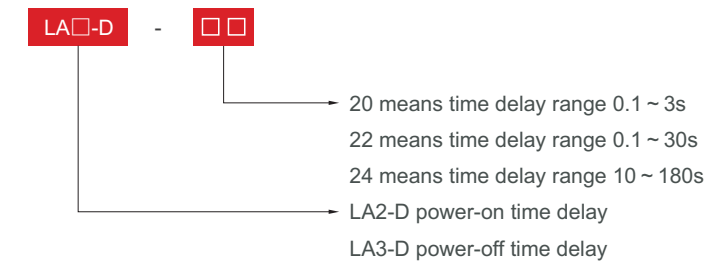


Auxiliary contacts model	F4-02	F4-11	F4-20	F4-22	F4-40	F4-04	F4-13	F4-31	FC4-02	FC4-11	FC4-20
Contacts quantities	2NC	1NO+1NC	2NO	2NO+2NC	4NO	4NC	1NO+3NC	3NO+1NC	2NC	1NO+1NC	2NO

Auxiliary contacts basic parameters

Usage category	Rated operating voltage(V)	Conventional thermal current(A)	Rated operating current(A)	Control capacity	
				Closing	Breaking
AC-15	380	10	0.95	3600VA	360VA
DC-13	220	10	0.15	33W	33W

2、Air delay



Model	Time delay range	Time delay contacts quantities
LA2-D20	0.1 ~ 3s	1NO+1NC
LA2-D22	0.1 ~ 30s	
LA2-D24	10 ~ 180s	
LA3-D20	0.1 ~ 3s	
LA3-D22	0.1 ~ 30s	
LA3-D24	10 ~ 180s	

Air delay basic parameters

Usage category	Rated operating voltage(V)	Rated Insulation voltage Ui(V)	Conventional thermal current(A)	Control capacity
AC-15	Up to 660	660	10	360VA
DC-13	Up to 660	660	10	33W

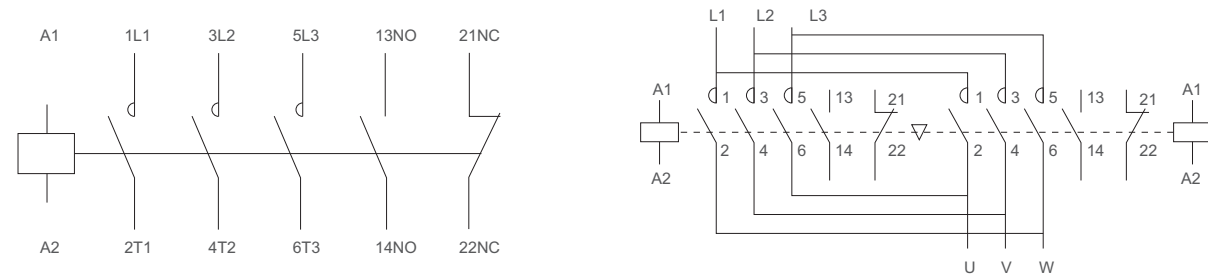
3、FPC Transparent dust cover

Model FPC, universal to the whole series.

4、The contactor pull-in coil power consumption and energy efficiency index

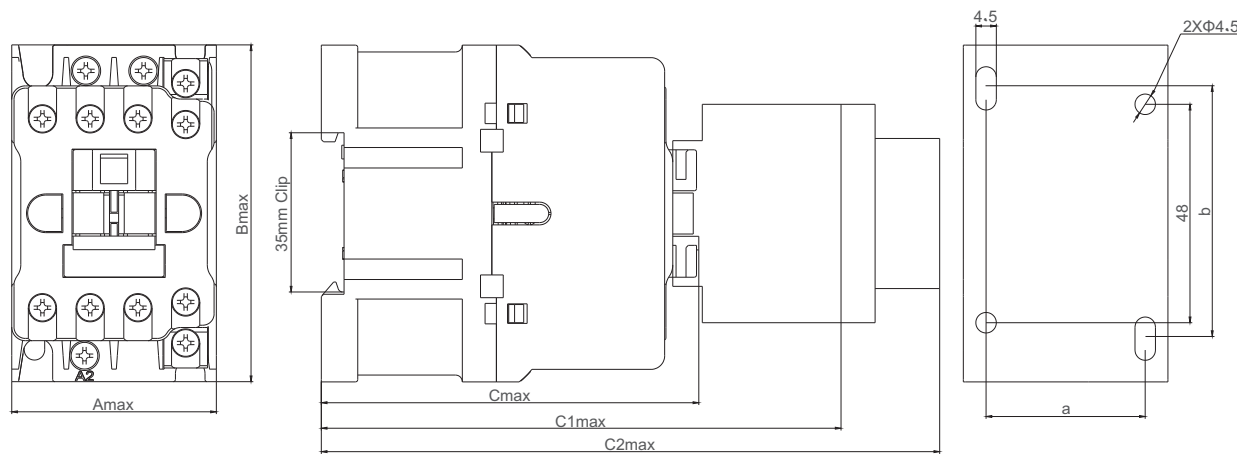
Model	EXC3-06 ~ 18	EXC3-25 ~ 38	EXC3-40 ~ 95	Remark
Holding power/VA	9.0	11.4	36.6	Conformity to GB 21518-2008
Energy Efficiency Index	3	2	2	Conformity to GB 21518-2008

Wiring Diagram

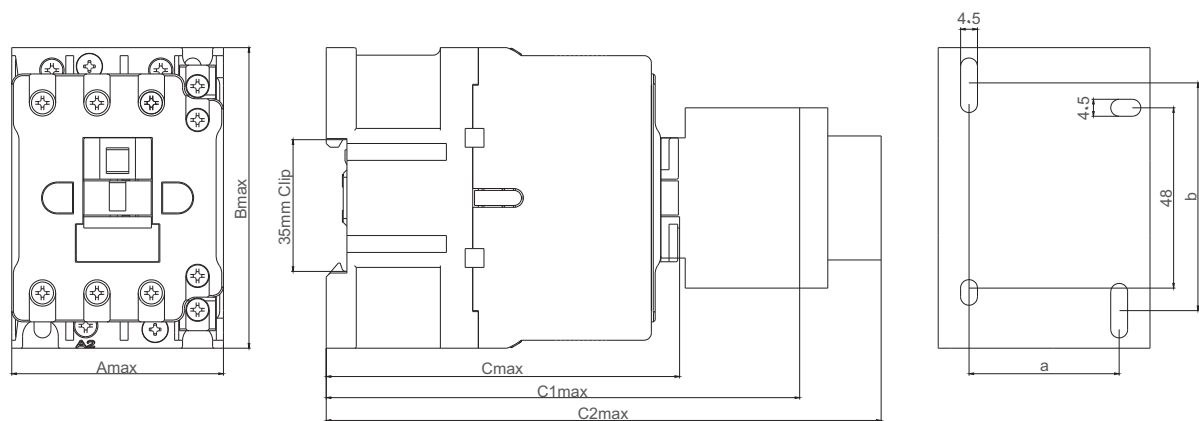


Overall and mounting dimensions

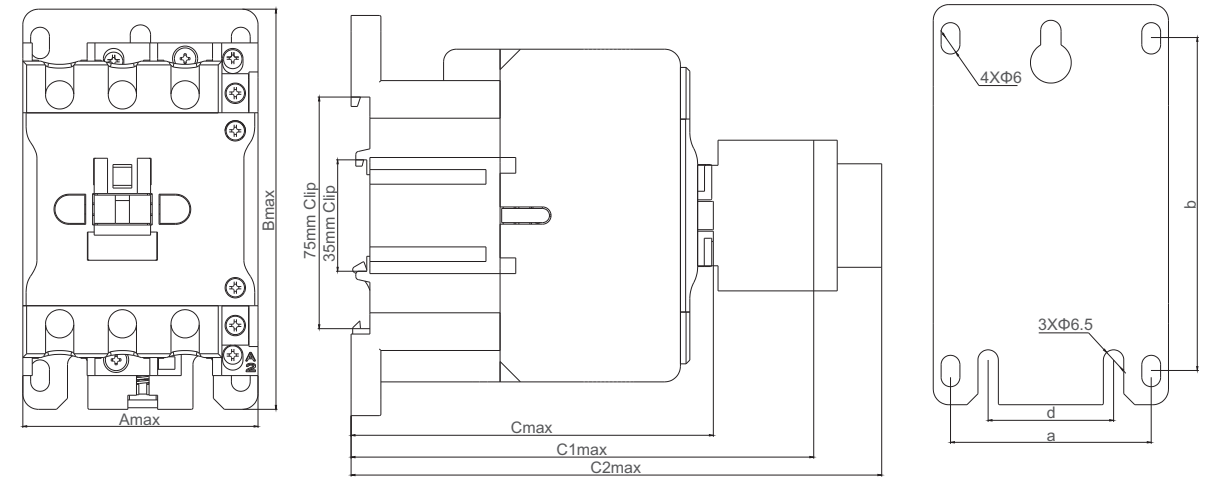
EXC3-06~18



EXC3-25~38



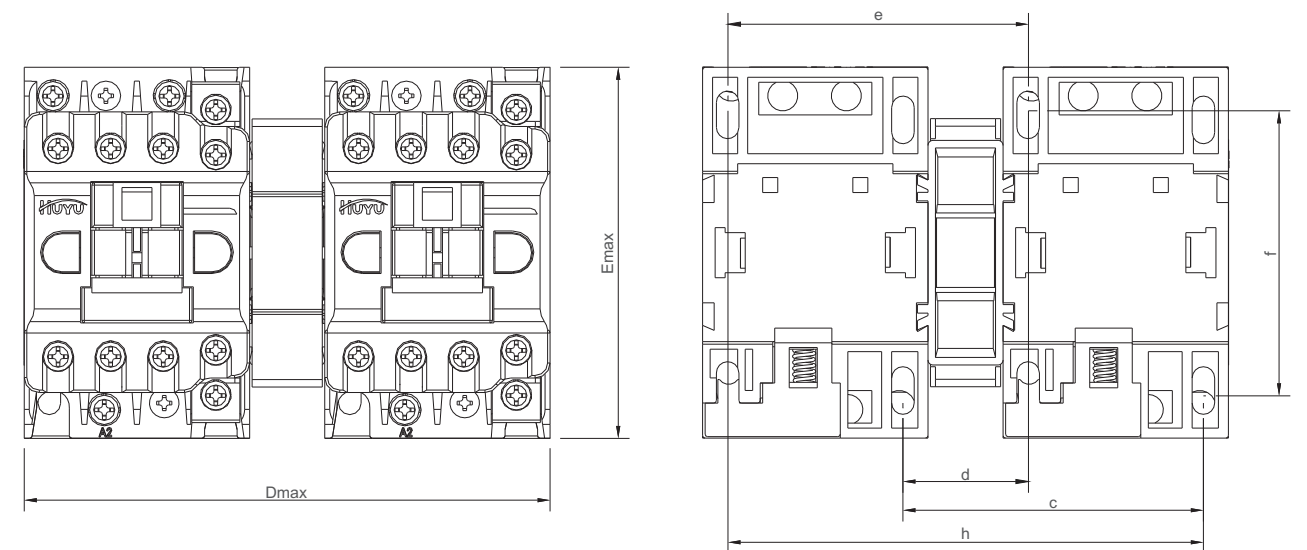
EXC3-40~95



Model	Amax	Bmax	Cmax	C1max	C2max	a	b	d
EXC3-6~18	45.5	74.5	83	115	137	35	50/60	-
EXC3-25~38	56.5	80.5	94.5	127	149	40	50/70	-
EXC3-40~65	75	127.5	116	148	170	64	102/110	40
EXC3-80, 95	85	127.5	118.5	150.5	172.5	64	102/110	40

Note: C1MAX-AC CONTACTOR+F4 C2MAX-AC CONTACTOR+LA2/LA3

EXC3-06~38N



	Dmax	Emax	c	d	e	f	h
EXC3-06N ~ 18N	106	74.5	60.5	25.5	60.5	50/60	95.5
EXC3-25N ~ 38N	128	80.5	72	32	72	50/70	112

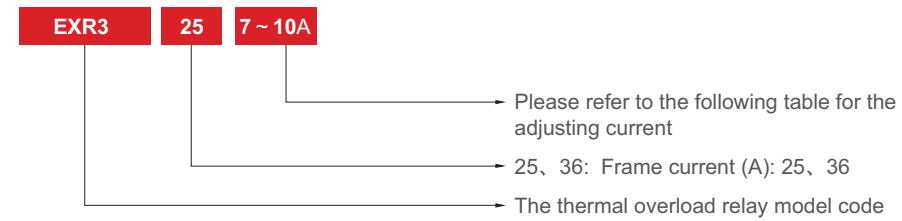


General

EXR3 series thermal overload relay is mainly used in circuits of AC 50Hz, rated operating voltage up to 660V, and rated operating current from 0.1 to 93A. It is used to start and accelerate the motor to normal speed and for overload and open phase protection of the circuit and three-phase AC motors, as well used as a starter together with matched AC contactor. Similar models:LR2/JR28. It is a perfect alternative of JRS1 .

Conforming to Standard GB/T14048.4 and IEC60947-4-1

Model



The thermal overload relay adjusting current and matching product

Product Model	Adjusting current A	Matching fuse specification(RAT16)A	Matching contactor model
EXR3-25	0.1 ~ 0.16	2	EXC3-06、09 12、18 25、32 38
	0.16 ~ 0.25	2	
	0.25 ~ 0.40	2	
	0.40 ~ 0.63	2	
	0.63 ~ 1	4	
	1 ~ 1.6	4	
	1.6 ~ 2.5	6	
	2.5 ~ 4	10	
	4 ~ 6	16	
	5.5 ~ 8	20	
EXR3-36	7 ~ 10	20	EXC3-25、32、38
	9 ~ 13	25	
	12 ~ 18	35	
	17 ~ 25	50	
	23 ~ 32	63	
EXR3-93	30 ~ 40	80	EXC3-40、50、65 80、95
	23 ~ 32	63	
	30 ~ 40	80	
	37 ~ 50	100	
	48 ~ 65	100	
	55 ~ 70	125	
63 ~ 80	125		
80 ~ 93	160		

Products parameters

Usage ambient	~5°C ~ +40°C
Tripping grade	10A
Rated insulation voltage Ui (V)	660
Product Features	
Overload protection	YES
Open phase protection	YES
Manual reset	YES
Auto reset	YES
Stop button	YES
Test button	YES
Tripping indication	YES

Auxiliary circuits parameter

Auxiliary circuits	AC-15		DC-13	
Usage category				
Rated insulation voltage Ue (V)	500		500	
Rated operating voltage Ue (V)	380	220	220	110
Rated operating voltage Ue (V)	0.95	1.64	0.15	0.3
Conventional thermal current Ith (A)	6		6	
Auxiliary contacts type	1NO+1NC		1NO+1NC	

Operating characteristic

State	No.	Adjusting current times	Operating time	Initial condition	Ambient air temperature (°C)	
Load balance in each phase	1	1.05	>2H	Start at cold state	+ 20	
	2	1.20	<2H	Heat state (Start after No. 1 test)		
	3	1.50	10A < 2minutes			Start at cold state
			10 < 4minutes			
4	7.2	10A 2s < TP ≤ 10s	Start at cold state			
		10 4s < TP ≤ 10s				
Load un-balance in each phase (open phase)	5	Any two phase 1.0 another phase 0.9	>2H	Start at cold state		
	6	Any two phase 1.15 another phase 0	<2H	Heat state (Start after No. 5 test)		
Temperature compensation performance	7	1.0	>2H	Start at cold state		+ 40
	8	1.20	<2H	Heat state (Start after No. 7 test)		
	9	1.05	>2H	Start at cold state	-5	
	10	1.3	<2H	Heat state (Start after No. 9 test)		

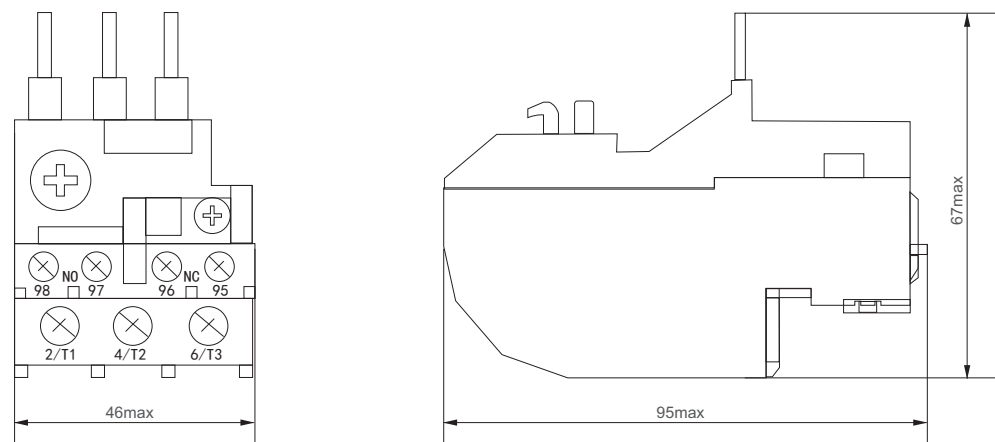
Accessories



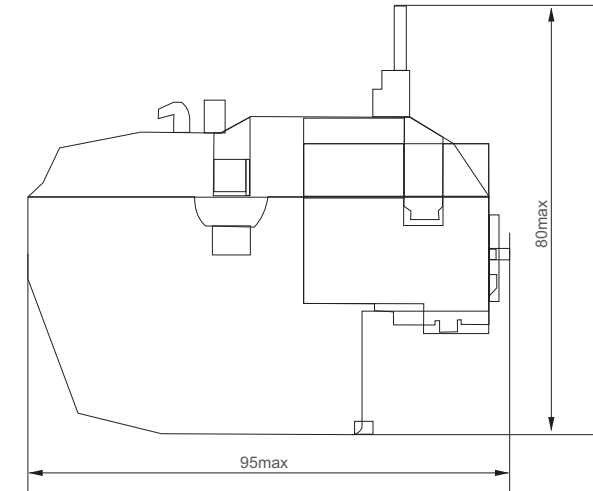
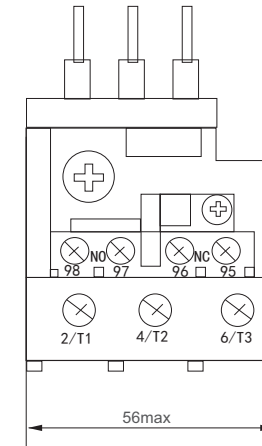
No.	Name
1	EXR3-25 Mounting base
2	EXR3-36 Mounting base
3	EXR3-93 Mounting base

Overall and mounting dimensions

1, EXR3- 25 Overall and mounting dimensions (mm)



2, EXR3-36 Overall and mounting dimensions (mm)



3, EXR3-93 Overall and mounting dimensions (mm)

