

Motor Control and Protection Product Overview

■ Definite Purpose Contactor



HDC9 **246**

Current: 25-65A
Poles: 3P

Application: Power factor correction

■ Control Relay



HDZ6 **248**

Contact:
41,32

Coil Voltage:
AC24-440V

■ Control Relay



HDZ8P **251**

Contact:
2Z,3Z,4Z

Coil Voltage:
AC6-220V
DC6-220V



HJSZ3 **253**

Rated working voltage: 120V,240V,400V
Relay Time: 0.05s-24h



HXJ9 **256**

Voltage: 380V,400V



HDTL17 **257**

Poles: 1P
Rated Current: 16A

■ Motor Protector



HDP6 **258**

Frame Current: 32A
Setting Current: 0.1-32A

■ Magnetic Starter



HDS2 **265**

Frame Current: 13, 25, 95A
Setting Current: 1-93A

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Order Information



Product Name	Rated Current	Auxiliary Contact	Coil Voltage	Coil Frequency
HDC6	09	11	M	
	↓	↓	↓	↓
	09:9A ... 630:630A	11:1NO+1NC 00:0NO+0NC	B:24V ... X:440V	Default:50HZ 7:50/60HZ

AC-3,380/400V		Instant Auxiliary Contact		Reference
Rated Current (A)	Rated Power (KW)	1	1	
9	4	1	1	HDC6 09 11 □□
12	5.5	1	1	HDC6 12 11 □□
18	7.5	1	1	HDC6 18 11 □□
25	11	1	1	HDC6 25 11 □□
32	15	1	1	HDC6 32 11 □□
40	18.5	1	1	HDC6 40 11 □□
50	22	1	1	HDC6 50 11 □□
65	30	1	1	HDC6 65 11 □□
80	37	1	1	HDC6 80 11 □□
95	45	1	1	HDC6 95 11 □□
115	55	-	-	HDC6 115 00 □□
150	75	-	-	HDC6 150 00 □□
185	90	-	-	HDC6 185 00 □□
225	110	-	-	HDC6 225 00 □□
265	132	-	-	HDC6 265 00 □□
330	160	-	-	HDC6 330 00 □□
400	200	-	-	HDC6 400 00 □□
500	250	-	-	HDC6 500 00 □□
630	335	-	-	HDC6 630 00 □□

Note: "□□" means coil voltage code.

Code Table of Coil Voltage

Coil Voltage (V)	24	36	48	110	127	220	230	240	380	400	415	440
50HZ	B	C	E	F	S	M	N	U	Q	V	L	X
50/60HZ	B7	-	E7	F7	-	M7	N7	U7	Q7	V7	-	-

Note: 115-630AF refer to the actual situation.

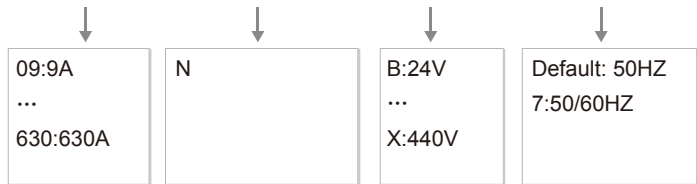
HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Order Information

Product Name	Rated Current	Directional Conactor	Coil Voltage	Coil Frequency
HDC6	09	N	M	



AC-3,380/400V		Instant Auxiliary Contact		Reference
Rated Current (A)	Rated Power (KW)	$\{$	$\}$	
9	4	1	1	HDC6 09N □□
12	5.5	1	1	HDC6 12N □□
18	7.5	1	1	HDC6 18N □□
25	11	1	1	HDC6 25N □□
32	15	1	1	HDC6 32N □□
40	18.5	1	1	HDC6 40N □□
50	22	1	1	HDC6 50N □□
65	30	1	1	HDC6 65N □□
80	37	1	1	HDC6 80N □□
95	45	1	1	HDC6 95N □□
115	55	-	-	HDC6 115N □□
150	75	-	-	HDC6 150N □□
185	90	-	-	HDC6 185N □□
225	110	-	-	HDC6 225N □□
265	132	-	-	HDC6 265N □□
330	160	-	-	HDC6 330N □□
400	200	-	-	HDC6 400N □□
500	250	-	-	HDC6 500N □□
630	335	-	-	HDC6 630N □□

Note: "□□" means coil voltage code.

Code Table of Coil Voltage

Coil Voltage (V)	24	36	48	110	127	220	230	240	380	400	415	440
50HZ	B	C	E	F	S	M	N	U	Q	V	L	X
50/60HZ	B7	-	E7	F7	-	M7	N7	U7	Q7	V7	-	-

Note: 115-630AF refer to the actual situation.

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Main Technical Parameter



Model	HDC6-09	HDC6-12	HDC6-18	HDC6-25	HDC6-32	HDC6-40	HDC6-50	HDC6-65	HDC6-80	HDC6-95
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Main circuit Characteristics

Rated Operational Current	I_e , AC-3	9 A	12 A	18 A	25 A	32 A	40 A	50 A	65 A	80 A	95 A
	I_e , AC-1	20 A	20 A	32 A	40 A	50 A	60 A	80 A	80 A	125 A	125 A
Rated Isolation Voltage (Ui)		690V									
Rated Operational Voltage (Ue)		690V									
Number of Pole		3									
Rated Operational Power Class AC-3	220/240V	2.2kW	3 kW	4 kW	5.5kW	7.5kW	11 kW	15 kW	18.5kW	22 kW	25 kW
	380/400V	4 kW	5.5kW	7.5kW	11 kW	15 kW	18.5kW	22 kW	30 kW	37 kW	45 kW
	415/440V	4 kW	5.5kW	9 kW	11 kW	15 kW	22 kW	25 kW	37 kW	45 kW	45 kW
	660/690V	5.5kW	7.5kW	10 kW	15 kW	18.5kW	30 kW	33 kW	37 kW	45 kW	45 kW
AC-3	Electric durabilities (10 thousand times)	100	100	100	100	80	80	80	80	60	60
	Operating Rate (time/h)	1200	1200	1200	1200	600	600	600	600	600	600
Mechanical Durabilities	(10 thousand times)	1000	1000	1000	1000	800	800	800	800	800	800

Coil

Rated Control Circuit Voltage (Us)	50Hz	24V,36V,48V,110V,127V,220V,380V,400V,415V,440V										
	50/60Hz	24V,48V,110V,220V,230V,240V,380V,400V										
Allowable Control Circuit Voltage (Us)	Operation	85%~110% Us										
	Drop-out	20%~75% Us										
Coil Power	Inrush VA	70				110		200				
	Sealed VA	8				11		20				
	Heat dissipation W	1.8~2.7				3~4		6~10				

Terminal Wiring Ability

Flexible Wire Without Terminal Block	1 pc (Section of Connecting Conduction mm ²)	1~4	1~4	1.5~6	1.5~10	2.5~10	2.5~25	2.5~25	2.5~25	4~50	4~50
	2 pcs (Section of Connecting Conduction mm ²)	1~4	1~4	1.5~6	1.5~6	2.5~10	2.5~16	2.5~16	2.5~16	4~25	4~25
Flexible Wire With Terminal Block	1 pc (Section of Connecting Conduction mm ²)	1~4	1~4	1~6	1~6	1~10	2.5~25	2.5~25	2.5~25	4~50	4~50
	2 pcs (Section of Connecting Conduction mm ²)	1~2.5	1~2.5	1~4	1~4	1.5~6	2.5~10	2.5~10	2.5~10	4~16	4~16
Fixed Wire Without Terminal Block	1 pc (Section of Connecting Conduction mm ²)	1~4	1~4	1.5~6	1.5~6	1.5~10	2.5~25	2.5~25	2.5~25	4~50	4~50
	2 pcs (Section of Connecting Conduction mm ²)	1~4	1~4	1.5~6	1.5~6	2.5~10	2.5~16	2.5~16	2.5~16	4~25	4~25

Auxiliary Contact

Rated Thermal Current (Ith)	A	10
Rated Operational Voltage (Ue)	AC V	400
	DC V	230
Rated Control Capacity	AC-15 VA	360
	DC-13 W	33

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Contactor Type	HDC6-115	HDC6-150	HDC6-185	HDC6-225	HDC6-265	HDC6-330	HDC6-400	HDC6-500	HDC6-630
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Main circuit Characteristics

Rated Operational Current	le, AC-3	115 A	150 A	185 A	225 A	265 A	330 A	400 A	500 A	630 A
	le, AC-1	200 A	200 A	275 A	275 A	315 A	380 A	450 A	630 A	800 A
Rated Isolation Voltage (Ui)		1000V								
Rated Operational Voltage (Ue)										
Number of Pole										
Rated Operational Power Class AC-3	220/240V	30 kW	40 kW	55 kW	63 kW	75 kW	100kW	110kW	147kW	200kW
	380/400V	55 kW	75 kW	90kW	110kW	132kW	160kW	200kW	250kW	335kW
	415/440V	59 kW	80 kW	100kW	110kW	140kW	180kW	220kW	280kW	375kW
	660/690V	80 kW	100kW	110kW	129kW	160kW	220kW	280kW	335kW	450kW
AC-3	Electric durabilities (10 thousand times)	120	120	100	100	80	80	80	80	80
	Operating Rate (time/h)	600	600	600	600	600	600	300	300	300
Mechanical Durabilities	(10 thousand times)	1000	1000	600	600	600	600	600	600	600

Coil

Rated Control Circuit Voltage (Us)	50Hz	110V, 127V, 220V, 230V, 240V, 380V, 400V, 440V								
	50/60Hz	110V, 220V, 380V (115-225AF)								
Allowable Control Circuit Voltage (Us)	Operation	85%~110% Us								
	Drop-out	20%~75% Us								
Coil Power	Inrush VA	550	800	1200	1200	1250	1650			
	Sealed VA	45	55	13	20	24	22			
	Heat dissipation W	16	24	12	14	18	20			

Terminal Wiring Ability

Fixed Wire Without Terminal Block	1 pc (Section of Connecting Conduction mm ²)	95	120	150	185	240	240	-	-	-
	2 pcs (Section of Connecting Conduction mm ²)	-	-	-	-	-	-	150	240	-
Copper Bar	2 pcs (Size mm ²)	20*3	25*3	25*3	32*4	32*4	30*5	30*5	40*5	60*5

Auxiliary Contact

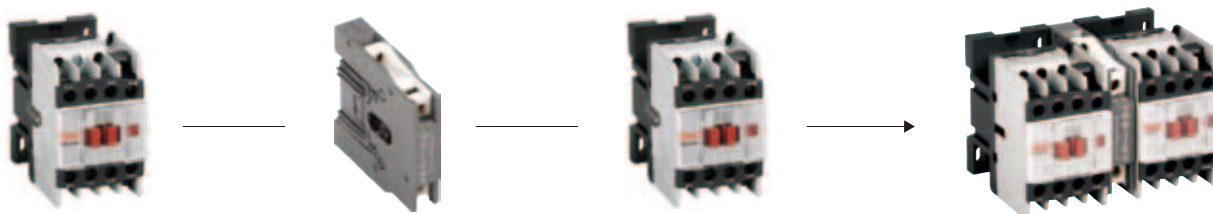
Rated Thermal Current (Ith)	A	10
Rated Operational Voltage (Ue)	AC V	400
	DC V	230
Rated Control Capacity	AC-15 VA	360
	DC-13 W	33

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Directional Contactor



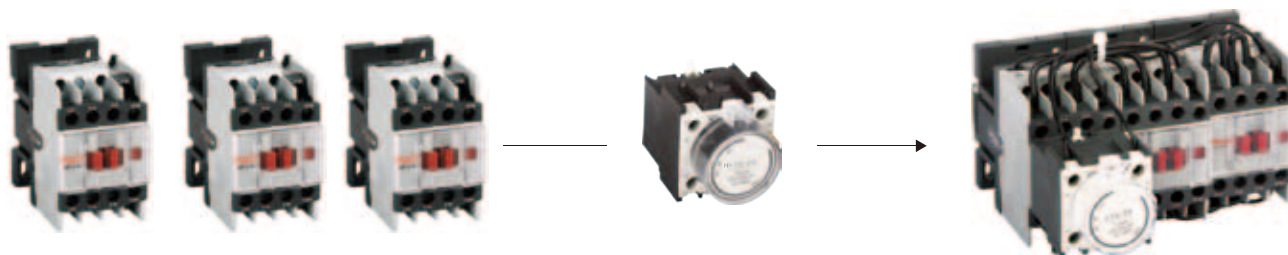
Directional Contactor (Horizontal Installation)	Rated Capacity (kW) AC-3		Rated Current (A) AC-3		Rated Thermal Current (A) AC-1
	400V	690V	400V	690V	
HDC6-09N	4	5.5	9	6.6	20
HDC6-12N	5.5	7.5	12	8.9	20
HDC6-18N	7.5	10	18	12	32
HDC6-25N	11	15	25	18	40
HDC6-32N	15	18.5	32	21	50
HDC6-40N	18.5	30	40	34	60
HDC6-50N	22	33	50	39	80
HDC6-65N	30	37	65	42	80
HDC6-80N	37	45	80	49	125
HDC6-95N	45	45	95	55	125
HDC6-115N	55	80	115	86	200
HDC6-150N	75	100	150	108	200
HDC6-185N	90	110	185	118	275
HDC6-225N	110	129	225	137	275
HDC6-265N	132	160	265	170	315
HDC6-330N	160	220	330	235	380
HDC6-400N	200	280	400	303	450
HDC6-500N	250	335	500	353	630
HDC6-630N	335	450	630	462	800

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Option for Star Delta Starter



Contactor (HDC6-09~95)

Max. Starting Frequency, 30 time/h; Max. Starting Time, 30s							
Motor			Contactor	Contactor	Contactor	Thermal Overload Relay	
Class AC-3 50Hz 3-Phase Electromotor			Straight Connection	Delta Connection	Star Connection		
Delta Connection			KM2	KM3	KM1(3)		
P (KW)	I _n (A)	I _{rD} (A)	Type	Type	Type	Type	Setting Range (A)
1.5	3.5	2	HDC6-09	HDC6-09	HDC6-09	HDR6-18	1.8~2.5
2.2	5	3	HDC6-09	HDC6-09	HDC6-09	HDR6-18	2.5~3.6
3	6.6	4	HDC6-09	HDC6-09	HDC6-09	HDR6-18	3.5~4.8
4	8.5	5	HDC6-09	HDC6-09	HDC6-09	HDR6-18	4.5~6.3
5.5	11.5	6	HDC6-09	HDC6-09	HDC6-09	HDR6-18	5~7
7.5	15.5	9	HDC6-12	HDC6-12	HDC6-09	HDR6-18	9~12
9	18.5	11	HDC6-18	HDC6-18	HDC6-12	HDR6-18	11~15
11	22	13	HDC6-18	HDC6-18	HDC6-12	HDR6-18	11~15
15	30	16	HDC6-25	HDC6-25	HDC6-18	HDR6-32	14~18
18.5	37	22	HDC6-25	HDC6-25	HDC6-18	HDR6-32	18~25
22	44	26	HDC6-32	HDC6-32	HDC6-25	HDR6-32	23~32
30	60	35	HDC6-40	HDC6-40	HDC6-32	HDR6-95	30~40
37	72	40	HDC6-50	HDC6-50	HDC6-40	HDR6-95	37~50
45	85	47	HDC6-65	HDC6-65	HDC6-50	HDR6-95	37~50
55	105	58	HDC6-80	HDC6-80	HDC6-65	HDR6-95	55~70
75	138	78	HDC6-95	HDC6-95	HDC6-80	HDR6-95	63~80

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1

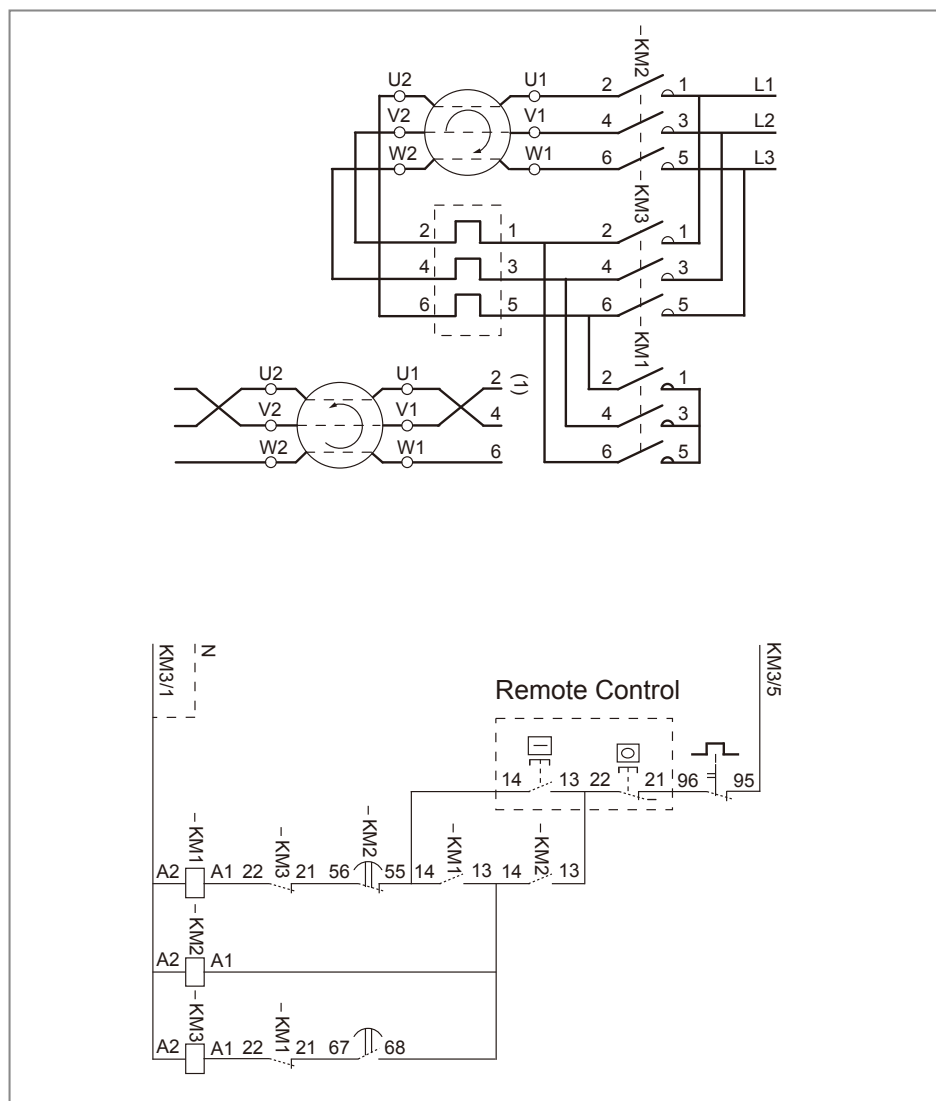


Option for Star-Delta Starter

Environmental Requirements

- Ambient Temperature:
-5°C~+40°C
- Altitude: ≤2000m
- Pollution Level: III
- No obvious shaking and shock vibration

Wiring Diagram for Star-Delta Starter



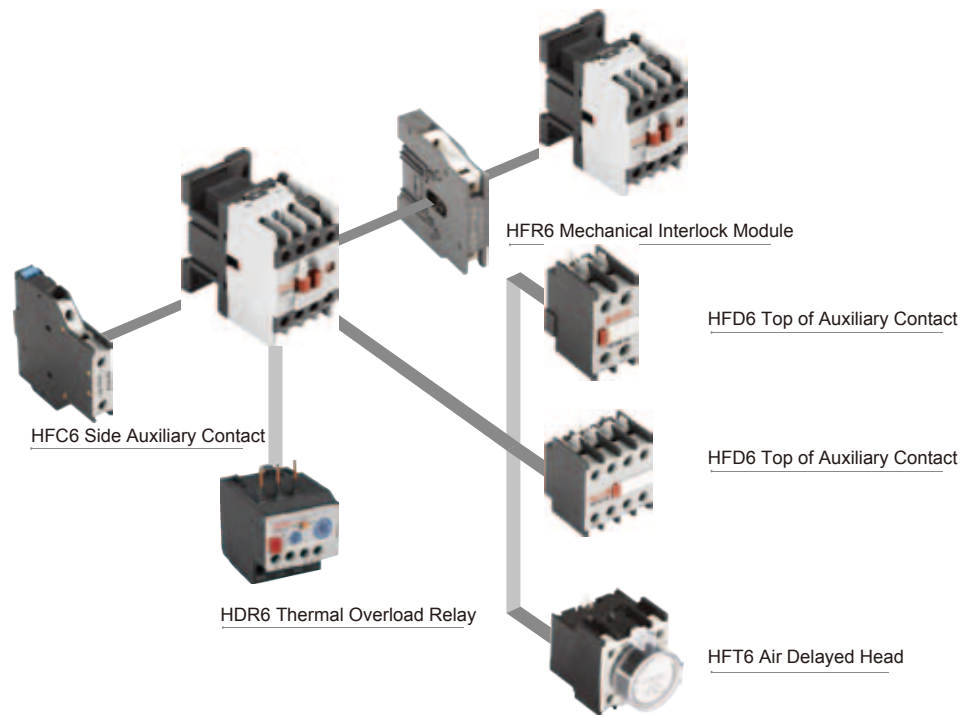
HDC6 AC Contactor







Standard: IEC60947-1, IEC 60947-4-1



Accessories

HDC6-9~95A Contactor Accessories



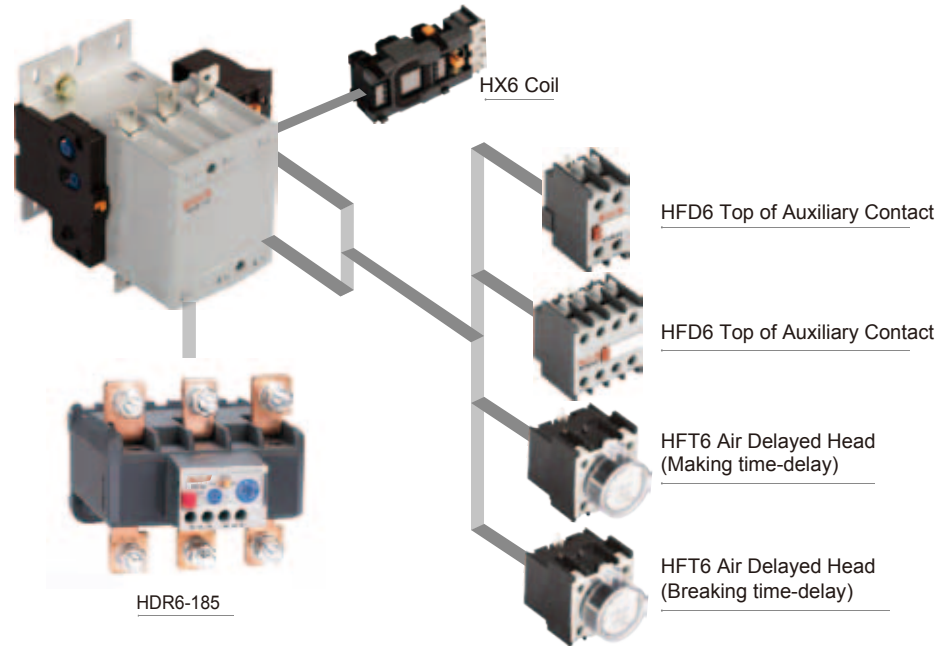
Top of Auxiliary Contact		2 poles: HFD6-11, HFD6-20, HFD6-02 4 poles: HFD6-22, HFD6-13, HFD6-31, HFD6-40, HFD6-04																				
Side Auxiliary Contact		2 poles: HFC6-11, HFC6-20, HFC6-02																				
Air Delayed Head		Making time-delay: HFT6-20, HFT6-22, HFT6-24 Breaking time-delay: HFT6-30, HFT6-32, HFT6-34																				
Mechanical Interlocking module		HFR6-32 Adaptive to Product of 9-32A, Horizontal Installation HFR6-95 Adaptive to Product of 40-95A, Horizontal Installation																				
HX6 Coil		Order reference: HX6+AF+Us+frequency For example: HX632N7																				
Thermal Overload Relay		<table border="1"> <thead> <tr> <th></th> <th>HDR6-18</th> <th>HDR6-32</th> <th>HDR6-95</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.10-0.15A</td> <td>6.3-9A</td> <td>30-40A</td> </tr> <tr> <td></td> <td>0.12-0.18A</td> <td>9-12A</td> <td>37-50A</td> </tr> <tr> <td></td> <td>...</td> <td>...</td> <td>...</td> </tr> <tr> <td></td> <td>14-18A</td> <td>23-32A</td> <td>80-95A</td> </tr> </tbody> </table>		HDR6-18	HDR6-32	HDR6-95		0.10-0.15A	6.3-9A	30-40A		0.12-0.18A	9-12A	37-50A			14-18A	23-32A	80-95A
	HDR6-18	HDR6-32	HDR6-95																			
	0.10-0.15A	6.3-9A	30-40A																			
	0.12-0.18A	9-12A	37-50A																			
																			
	14-18A	23-32A	80-95A																			

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



HDC6-115~630A Contactor Accessories



Top of Auxiliary Contact		2 poles: HFD6-11, HFD6-20, HFD6-02 4 poles: HFD6-22, HFD6-13, HFD6-31, HFD6-40, HFD6-04										
Side Auxiliary Contact		No Side Auxiliary Contact										
Air Delayed Head		Making time-delay: HFT6-20, HFT6-22, HFT6-24 Breaking time-delay: HFT6-30, HFT6-32, HFT6-34										
Mechanical Interlocking module		Horizontal Installation and Vertical Installation										
HX6 Coil		Spare parts, HX6-115-630 (Voltage AC:230V, 400V for Option)										
Main Contact		Spare parts, HMC6-115~630										
Thermal Overload Relay		<table border="0"> <tbody> <tr> <td>HDR6-185</td> <td>HDR6-630F</td> </tr> <tr> <td>48-65A</td> <td>145-200A</td> </tr> <tr> <td>55-70A</td> <td>180-250A</td> </tr> <tr> <td>...</td> <td>...</td> </tr> <tr> <td>150-185A</td> <td>460-630A</td> </tr> </tbody> </table>	HDR6-185	HDR6-630F	48-65A	145-200A	55-70A	180-250A	150-185A	460-630A
HDR6-185	HDR6-630F											
48-65A	145-200A											
55-70A	180-250A											
...	...											
150-185A	460-630A											

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Auxiliary Contact



Installation Position	Pole	Composition		Contact Point Layout	Reference
		NO	NC		
Top	2	0	2		HFD6 02
		1	1		HFD6 11
		2	0		HFD6 20
	4	0	4		HFD6 04
		1	3		HFD6 13
		2	2		HFD6 22
		3	1		HFD6 31
		4	0		HFD6 40
Side	2	0	2		HFD6 02
		1	1		HFD6 11
		2	0		HFD6 20

HFT6 Air Delayed Contact



Installation Position	Delay Type	Wiring Diagram	Delay Range	Reference
Top	Making time-delay		0.1-3s	HFT6 20
			0.1-30s	HFT6 22
			10-180s	HFT6 24
	Breaking time-delay		0.1-3s	HFT6 30
			0.1-30s	HFT6 32
			10-180s	HFT6 34

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Mechanical Interlock Module



Horizontal Installation		
Interlock Method	Contact Type	Reference
Mechanical Interlock	HDC6-9~32	HFR6 32 H
Electricity Interlock	HDC6-40~95	HFR6 95 H
Interlock without Electricity	HDC6-115~150	HFR6 FF H
	HDC6-185~225	HFR6 GG H
	HDC6-265~330	HFR6 HH H
	HDC6-400~500	HFR6 KK H
	HDC6-630	HFR6 LL H



Vertical Installation (Mechanical without Electricity)		
Contact Type		Interlock Device Reference
Bottom	Top	
HDC6-115	HDC6-115	HFR6 FF V
or	HDC6-150	HFR6 FF V
HDC6-150	HDC6-185	HFR6 FG V
	HDC6-225	HFR6 FG V
	HDC6-265	HFR6 FH V
	HDC6-330	HFR6 FH V
	HDC6-400	HFR6 FH V
	HDC6-500	HFR6 FH V
	HDC6-630	HFR6 FL V
HDC6-185	HDC6-185	HFR6 GG V
or	HDC6-225	HFR6 GG V
HDC6-225	HDC6-265	HFR6 GK V
	HDC6-330	HFR6 GK V
	HDC6-400	HFR6 GK V
	HDC6-500	HFR6 GK V
	HDC6-630	HFR6 GL V
HDC6-265	HDC6-265	HFR6 HK V
or	HDC6-330	HFR6 HK V
HDC6-330	HDC6-400	HFR6 HK V
	HDC6-500	HFR6 HK V
	HDC6-630	HFR6 HL V
HDC6-400	HDC6-400	HFR6 HK V
	HDC6-500	HFR6 HK V
	HDC6-630	HFR6 HL V
HDC6-500	HDC6-500	HFR6 HK V
	HDC6-630	HFR6 HL V
HDC6-630	HDC6-630	HFR6 LL V



Note: Vertical installation adopts mechanical Interlock Device equipped with the interlock without electricity

HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



HX6 Coil



Adaptive Contactor	Coil Voltage	Reference
115A-150A	220V	HX6 150 M
	380V	HX6 150 Q
185A-225A	220V	HX6 225 M
	380V	HX6 225 Q
265A-330A	220V	HX6 330 M
	380V	HX6 330 Q
400A	220V	HX6 400 M
	380V	HX6 400 Q
500A	220V	HX6 500 M
	380V	HX6 500 Q
630A	220V	HX6 630 M
	380V	HX6 630 Q

HMC6 Main Contact



Number of Pole	Contactor Current Specification	Reference
3	115A	HMC6 115
	150A	HMC6 150
	185A	HMC6 185
	225A	HMC6 225
	265A	HMC6 265
	330A	HMC6 330
	400A	HMC6 400
	500A	HMC6 500
	630A	HMC6 630

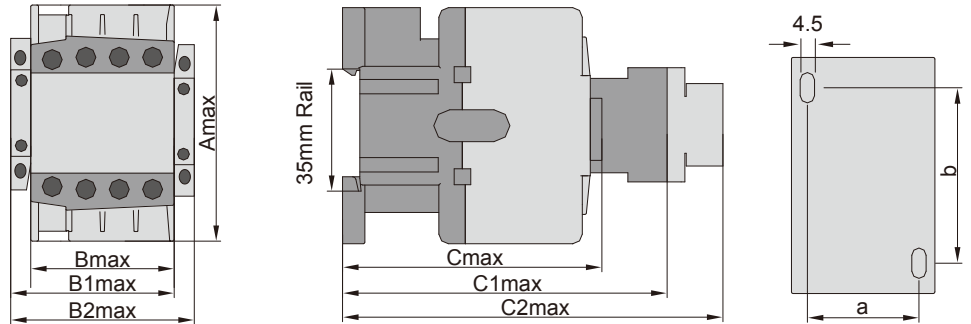
HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



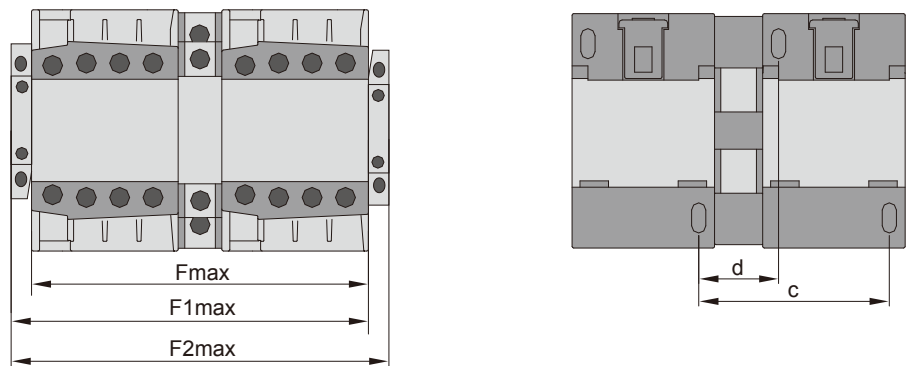
Overall Dimension of Installation

HDC6-9~32



HDC6	9/12	18	25/32
A	74.5	74.5	80
B (without accessory)	45.5	45.5	56.5
B1 (with a FC6)	58	58	69
B2 (with two FC6)	71	71	82
C (without accessory)	84	89	99.5
C1 (with FD6)	116	122	132
C2 (with FT6)	141	145	156
a	35	35	40
b	50/60	50/60	50/70

HDC6-9~32N



HDC6	9N/12N	18N	25N/32N
F (without accessory)	108	108	132
F1 (with a FC6)	119	119	143
F2 (with two FC6)	131	131	155
c	60	60	71.5
d	25	25	31.5

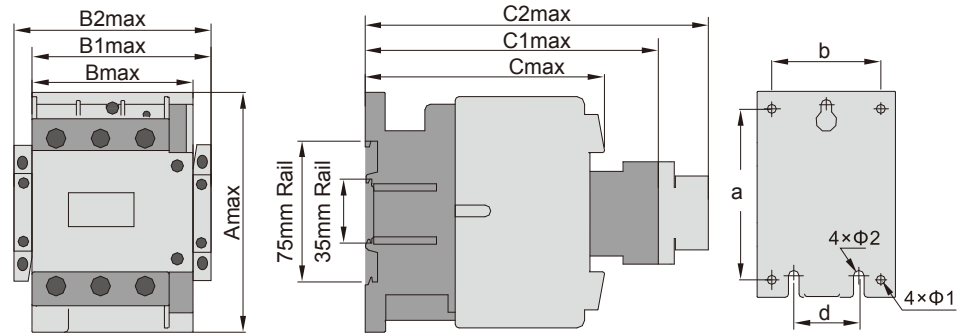
HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



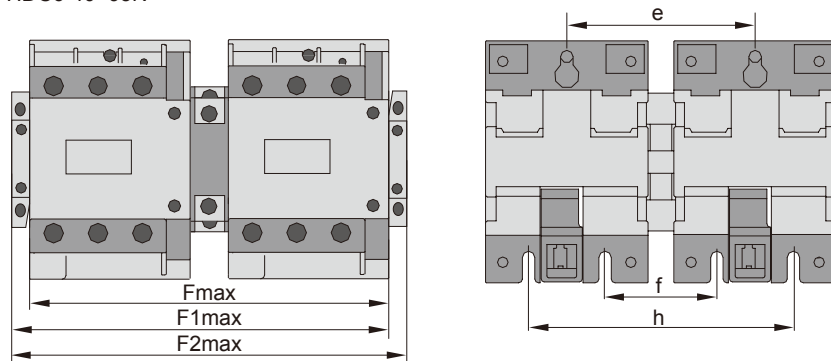
Overall Dimension of Installation

HDC6-40~95



HDC6	40/50/65	80/95
A	127	127
B (without accessory)	75	85
B1 (with a FC6)	89	99
B2 (with two FC6)	102	112
C (without accessory)	118.5	127.5
C1 (with FD6)	150	160
C2 (with FT6)	175	185
a	105	105
b	59	67
c	105	105
d	40	40
Φ1	5.5	5.5
Φ2	6.5	6.5

HDC6-40~95N



HDC6	40N/50N/65N	80N/95N
F (without accessory)	169	190
F1 (with a FC6)	182	203
F2 (with two FC6)	195	216
e	90	100.5
f	50	60.5
h	130	140

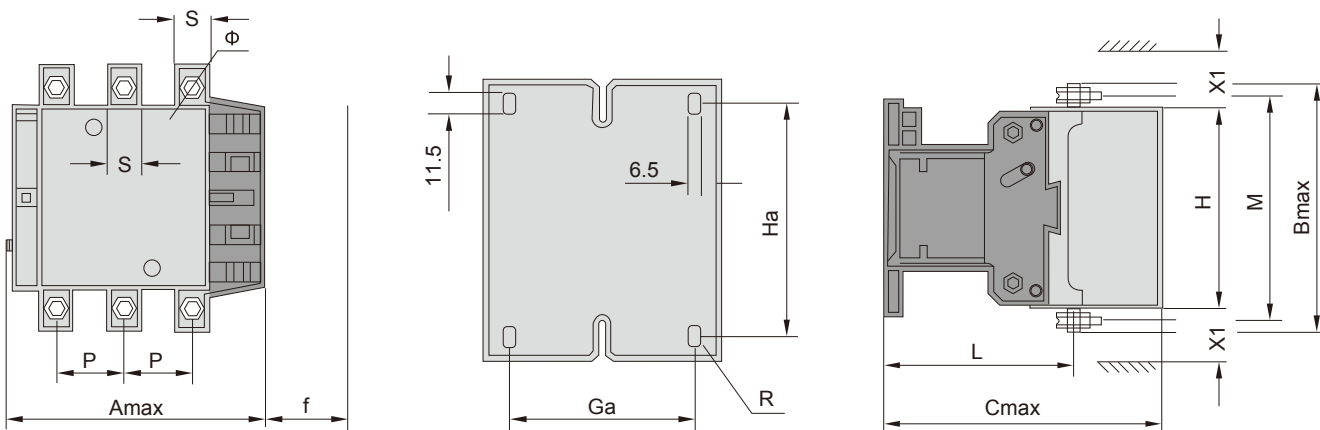
HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Overall Dimension of Installation

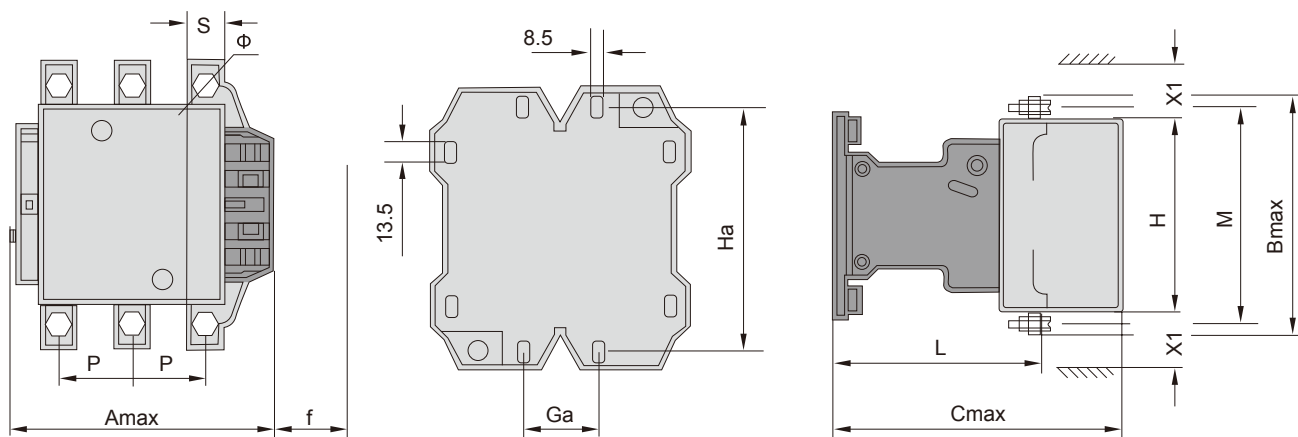
HDC6-115-330



Type	Amax	Bmax	Cmax	P	S	φ	f	M	H	L	X1	X1	Ga	Ha
											(200-550V)	(600-1000V)		
HDC6-115	167	163	172	37	20	M6	131	147	124	107	10	15	80	110~120
HDC6-150	167	171	172	40	20	M8	131	150	124	107	10	15	80	110~120
HDC6-185	171	174	183	40	20	M8	131	154	127	113.5	10	15	80	110~120
HDC6-225	171	197	183	48	25	M10	131	172	127	113.5	10	15	80	110~120
HDC6-265	202	203	215	48	25	M10	147	178	147	141	10	15	96	110~120
HDC6-330	213	206	220	48	25	M10	147	181	158	145	10	15	96	110~120

Note: " f " reserved space to ensure draw-out coil can take out easily.

HDC6-400~500



Type	Amax	Bmax	Cmax	P	S	φ	f	M	H	L	X1	X1	Ga	Ha
											(200-550V)	(600-1000V)		
HDC6-400	213	206	220	48	25	M10	146	181	158	145	15	20	80	170~180
HDC6-500	223	233	233	55	30	M10	150	208	172	146	15	20	80	170~180

Note: " f " reserved space to ensure draw-out coil can take out easily.

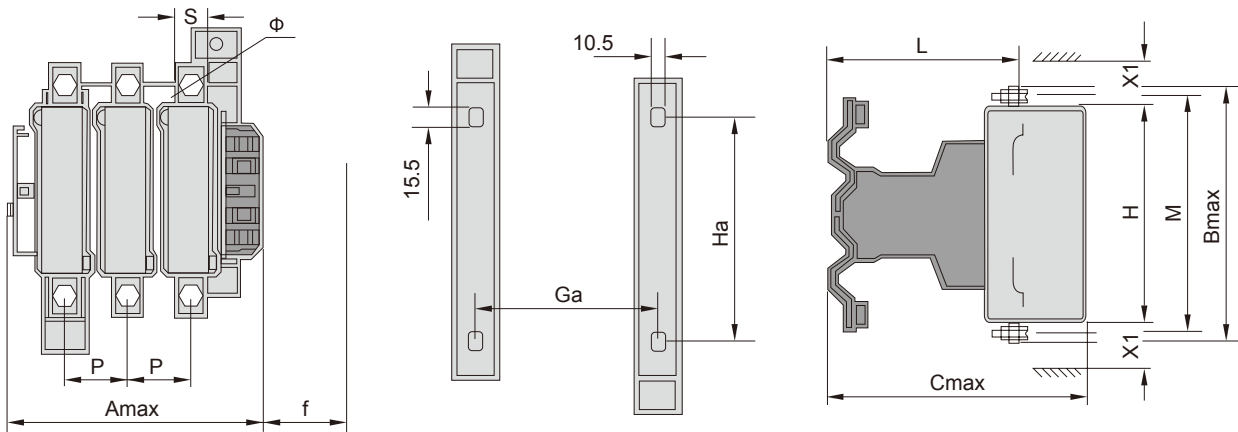
HDC6 AC Contactor

Standard: IEC60947-1, IEC 60947-4-1



Overall Dimension of Installation

HDC6-630

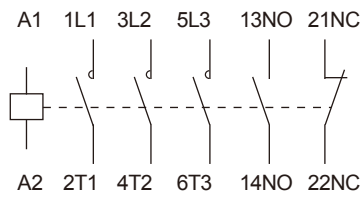


Type	Amax	Bmax	Cmax	P	S	Φ	f	M	H	L	X1	X1	Ga	Ha
											(200-550V)	(600-1000V)		
HDC6-630	309	304	256	80	40	M12	181	264	202	155	20	30	180	180~190

Note: " f " reserved space to ensure draw-out coil can take out easily.

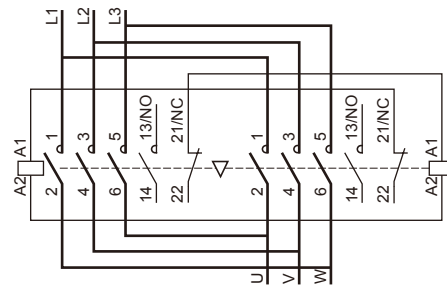
Wiring Diagram

HDC6-09~95

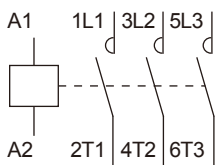


HDC6-09N~95N

(Horizontal Installation, Mechanical + Electrical Interlock)

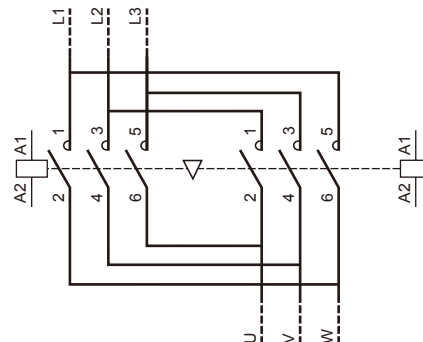


HDC6-115~630



HDC6-115N~630N

(Horizontal Installation, Mechanical Interlock)



HDR6 Thermal Overload Relay

Order Information



Product Type	Frame Current	Setting Current	Installation Type
HDR6	18	P15	
	↓	↓	↓
	18:18A ... 630:630A	P15: 0.1-0.15 ... 630:460-630A P means decimal point	Default:None F:Independent installation

Range for Setting Current	Fuse used for Matching with Relay		Matched Contactor	Reference
	aM	gG		
0.10-0.15A	0.25	2	HDC6-09~18	HDR6 18 P15
0.12-0.18A	0.25	2	HDC6-09~18	HDR6 18 P18
0.18-0.25A	0.5	2	HDC6-09~18	HDR6 18 P25
0.25-0.36A	1	2	HDC6-09~18	HDR6 18 P36
0.35-0.50A	1	2	HDC6-09~18	HDR6 18 P5
0.50-0.70A	1	2	HDC6-09~18	HDR6 18 P7
0.63-0.90A	2	4	HDC6-09~18	HDR6 18 P9
0.90-1.20A	2	4	HDC6-09~18	HDR6 18 1P2
1.20-1.80A	4	6	HDC6-09~18	HDR6 18 1P8
1.80-2.50A	4	6	HDC6-09~18	HDR6 18 2P5
2.50-3.60A	6	10	HDC6-09~18	HDR6 18 3P6
3.50-4.80A	8	16	HDC6-09~18	HDR6 18 4P8
4.50-6.30A	8	16	HDC6-09~18	HDR6 18 6P3
5-7A	12	20	HDC6-09~18	HDR6 18 7
6.3-9A	12	20	HDC6-09~18	HDR6 18 9
9-12A	16	25	HDC6-09~18	HDR6 18 12
11-15A	20	35	HDC6-09~18	HDR6 18 15
14-18A	20	35	HDC6-09~18	HDR6 18 18
6.3-9A	12	20	HDC6-25~32	HDR6 32 9
9-12A	16	25	HDC6-25~32	HDR6 32 12
12-18A	20	35	HDC6-25~32	HDR6 32 18
18-25A	25	50	HDC6-25~32	HDR6 32 25
23-32A	40	63	HDC6-25~32	HDR6 32 32
18-25A	25	50	HDC6-40~95	HDR6 95 25
23-32A	40	63	HDC6-40~95	HDR6 95 32
30-40A	40	100	HDC6-40~95	HDR6 95 40
37-50A	63	100	HDC6-40~95	HDR6 95 50
48-65A	63	100	HDC6-40~95	HDR6 95 65
55-70A	80	125	HDC6-40~95	HDR6 95 70
63-80A	80	125	HDC6-40~95	HDR6 95 80
80-95A	100	160	HDC6-40~95	HDR6 95 95



Base

Adaptive Thermal Relay Type	Reference
HDR6-18	HDR6 18 J
HDR6-32	HDR6 32 J
HDR6-95	HDR6 95 J

Motor Control & Protection

HDR6 Thermal Overload Relay

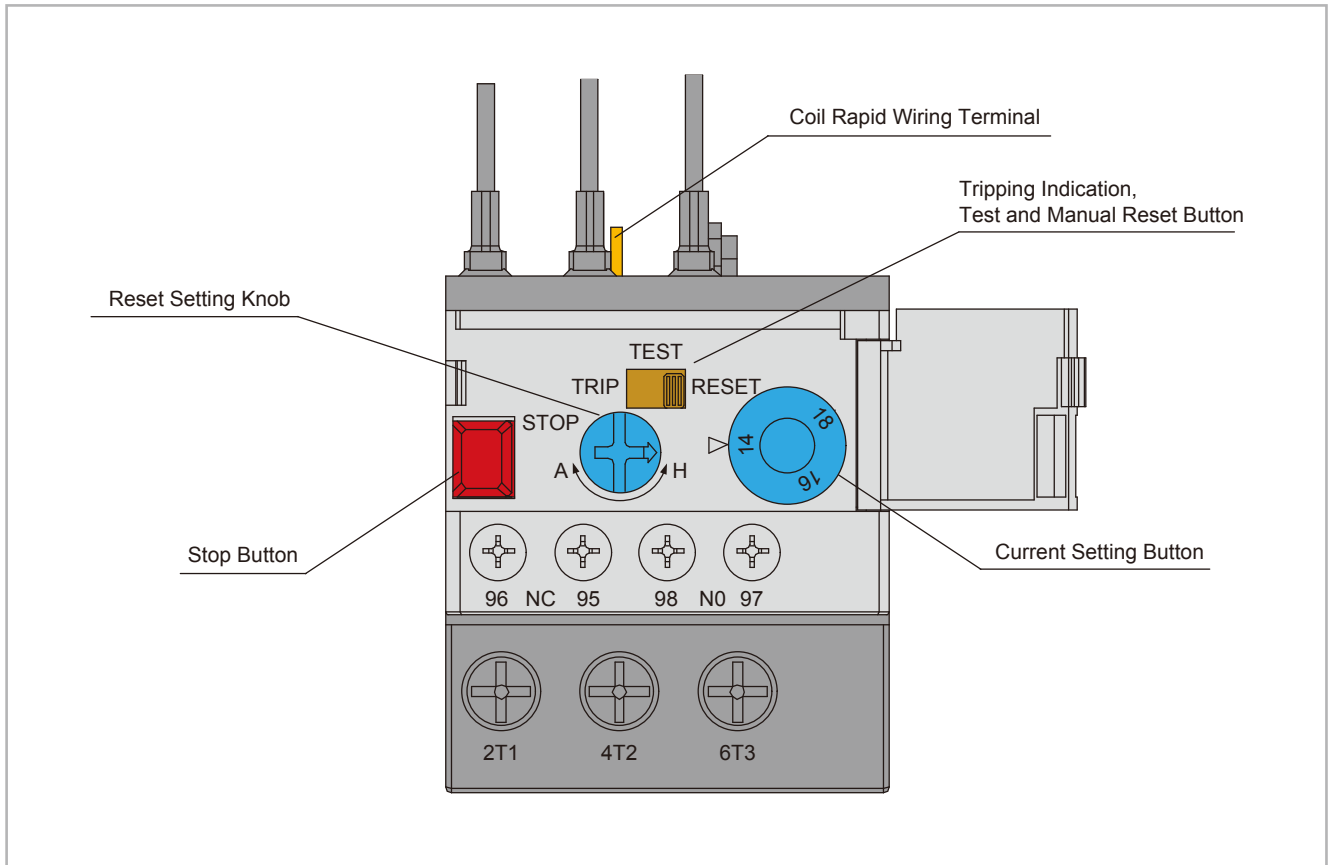
Order Information



Range for Setting Current	Fuse used for Matching with Relay		Matched Contactor	Reference
	aM	gG		
48-65	80	100	HDC6-115~185	HDR6 185 65
55-70	80	100	HDC6-115~185	HDR6 185 70
63-80	80	100	HDC6-115~185	HDR6 185 80
75-95	100	125	HDC6-115~185	HDR6 185 95
90-115	125	200	HDC6-115~185	HDR6 185 115
105-135	160	200	HDC6-115~185	HDR6 185 135
120-150	160	200	HDC6-115~185	HDR6 185 150
130-160	160	250	HDC6-115~185	HDR6 185 160
150-185	200	250	HDC6-115~185	HDR6 185 185
145-200	200	400	HDC6-225~630	HDR6 630 200F
180-250	250	400	HDC6-225~630	HDR6 630 250F
230-320	355	500	HDC6-225~630	HDR6 630 320F
290-400	400	630	HDC6-225~630	HDR6 630 400F
350-480	500	800	HDC6-225~630	HDR6 630 480F
460-630	630	800	HDC6-225~630	HDR6 630 630F

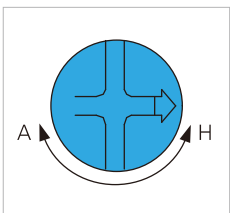
HDR6 Thermal Overload Relay

Introduction for Functions



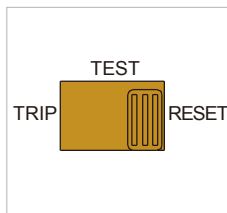
Motor Control & Protection

1. Reset Setting Knob



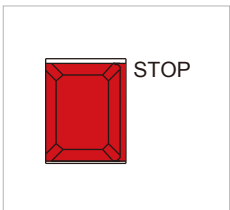
- Manual Reset for Arrow Pointing to "H"
- Automatic Reset for Arrow Pointing to "A"

2. Tripping Indicator, Test and Manual Reset Button



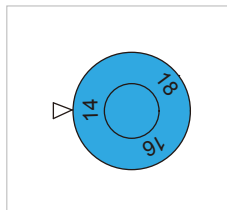
- After the operation of tripping indication and thermal overload relay, yellow button to "Trip" position means "tripping";
- After the operation of manual reset, the reset is realized to put yellow button back to "Reset" position;
- Implement the test to simulate the tripping (use NO and NC Contact to operate) and check the control circuit. When carrying out the test under manual reset state, put back to "Reset" position after reaching "Trip". Automatically rebound to "Reset" after switching to "Trip" for automatic reset.

3. Stop Button



- Make NC Contact operate, but not influence NO contact. After pressing Stop Button, cut control circuit off and the electromotor stops working.

4. Current Setting Button



- Set the value of setting current for rated electromotor.

HDR6 Thermal Overload Relay

Technical Parameter



Main Technical Parameter

Temperature Compensation	-10° C~+55° C	
Trip class	HDR6-18,32,630/F: 10A HDR6-95,185: 10	
Frame Current	HDR6-18	0.1~18A
	HDR6-32	6.3~32A
	HDR6-95	18~95A
	HDR6-185	48~185A
	HDR6-630/F	145~630A
Rates impulse withstand voltage (Uimp)	6kV	
Protection Function	Over-load Protection Phase Failure Protection Manual and Automatic Reset Tripping Indication Stop Button Test Button	
Installation Method	Assembly / Independent: HDR6-18~185 Independent: HDR6-630/F	
Auxiliary Circuit		
Rated Thermal Current	6A	
Contact Type	1NO+1NC	
Rated Insulating Voltage	690V	
Control Capacity	AC-15 220V/240V	1.64A
	AC-15 380V/415V	0.95A
	DC-13 220V/240V	0.23A
Wiring Ability	Section of Connecting Conduction	1mm ²
	Fastened Torque	1.2N·m

Main Circuit Wiring Ability					
Setting Current Range A	Section of Connecting Conduction mm ²	Fastened Torque N · m	Setting Current Range A	Section of Connecting Conduction mm ²	Fastened Torque N · m
0≤I≤8	1	1.2	75≤I≤95	35	8
8≤I≤12	1.5		90≤I≤115		
12≤I≤20	2.5		105≤I≤135		
20≤I≤25	4	120≤I≤150	50		
25≤I≤32	6	130≤I≤160			
32≤I≤50	10	1.7	150≤I≤185	70	
50≤I≤65	16		145≤I≤200		
65≤I≤85	25		6	180≤I≤250	95
85≤I≤100	35			230≤I≤320	
48≤I≤65	16	8	290≤I≤400	240	14
55≤I≤70	25		350≤I≤480		
63≤I≤80			8	460≤I≤630	

HDR6 Thermal Overload Relay

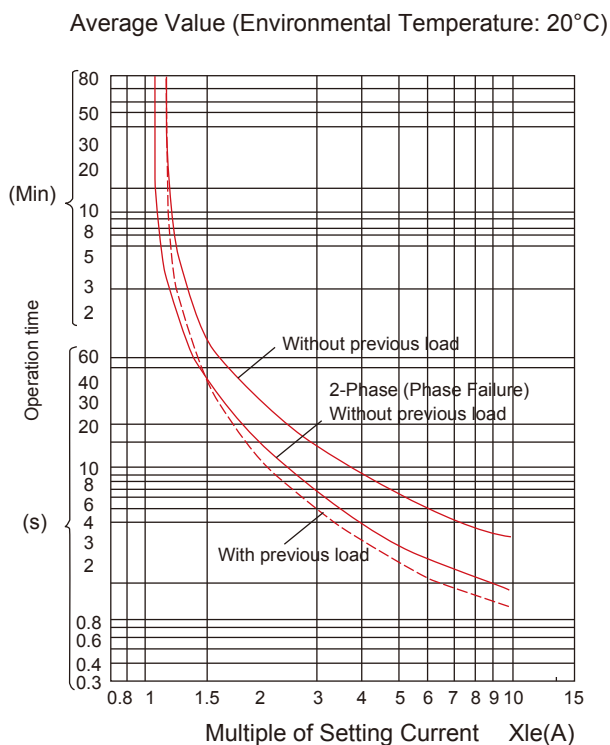
Tripping Characteristics and Wiring Diagram



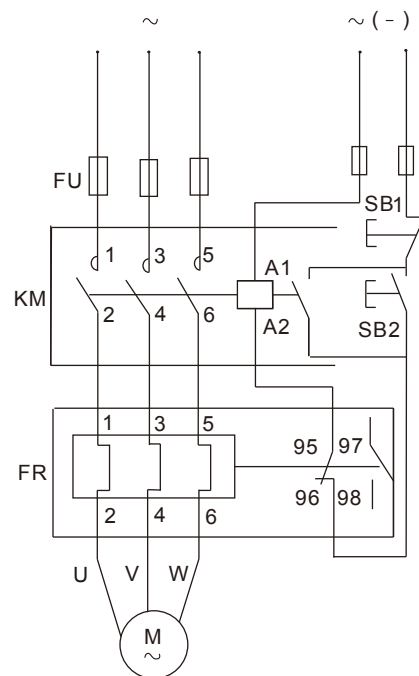
Tripping Characteristics

No.	Multiple of Setting Current	Tripping Time		Initial Condition	Ambient Temperature	
		Trip class 10A	Trip class 10			
Tripping Characteristics for Current Balance						
1	1.05	Non-tripping within 2h	Non-tripping within 2h	Without previous load	+20°C	
2	1.2	Tripping within 2h	Tripping within 2h	After No.1 Test		
3	1.5	<2min	<4min	After No.1 Test		
4	7.2	2s < Tp ≤ 10s	4s < Tp ≤ 10s	Without previous load	+20°C	
Tripping Characteristics for Current Imbalance						
Any 2-Phase, 3rd Phase						
1	1.0	0.9	Non-tripping within 2h	Non-tripping within 2h	Without previous load	+20°C
2	1.15	0	Tripping within 2h	Tripping within 2h	After No.1 Test	

Tripping Characteristics



Wiring Diagram



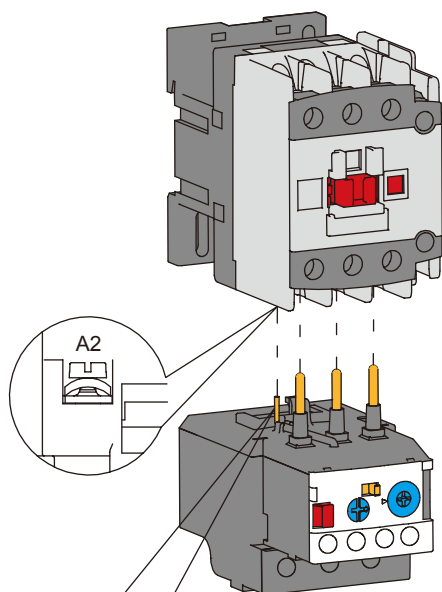
HDR6 Thermal Overload Relay

Installation Methods

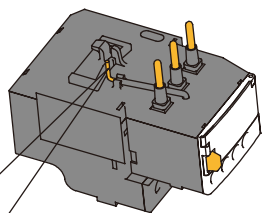
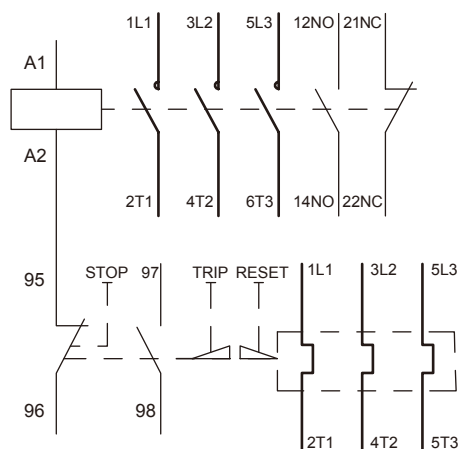


HDR6-9~95

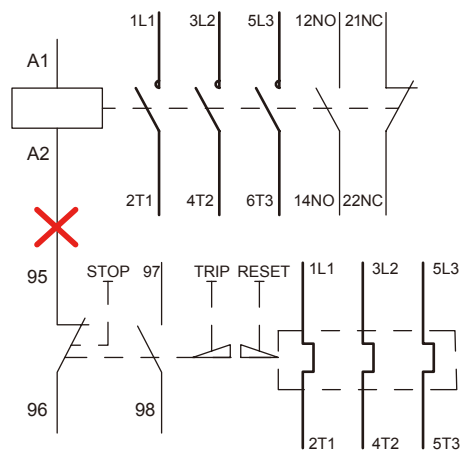
Assembly Installation



This wire is the coil rapid wiring terminal, which can be used as the assembly with the contactor. When two are completely connected, it is to ensure that the screw in A2 contact point of the contactor coil is tightened.



If this wiring terminal is not used, it can be cut short and then insulating tape can be used in conductive parts.



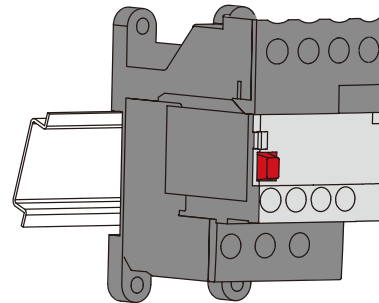
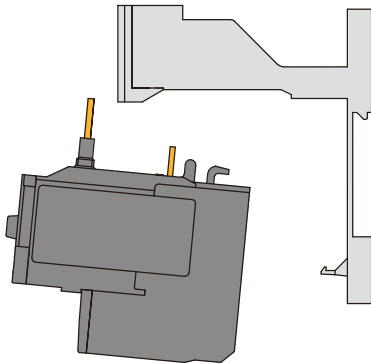
HDR6 Thermal Overload Relay

Installation Methods



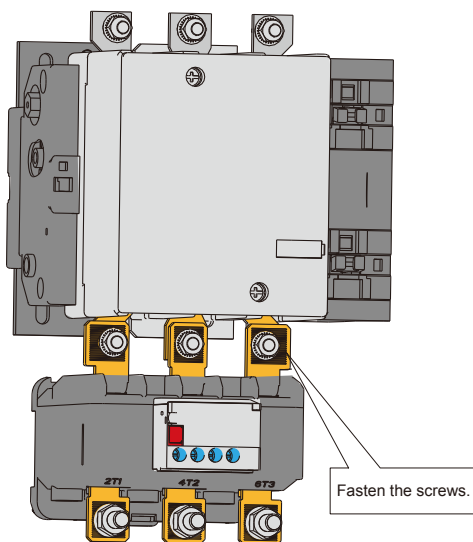
HDR6-9~95

Independent Installation

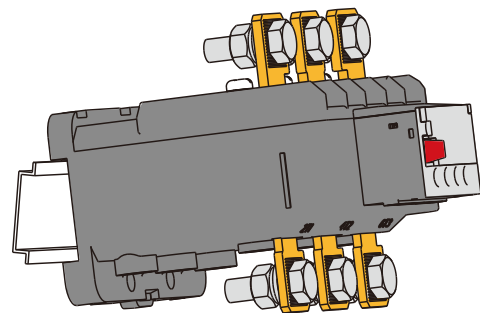


HDR6-185

Assembly Installation



Independent Installation



Note: It also can be fixed by screws.

HDR6-630/F

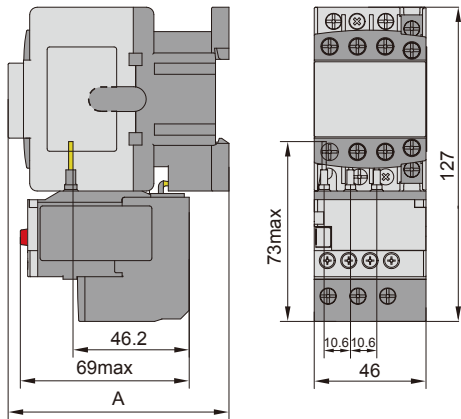
It only can be fixed by 75mm railway or screws.

HDR6 Thermal Overload Relay

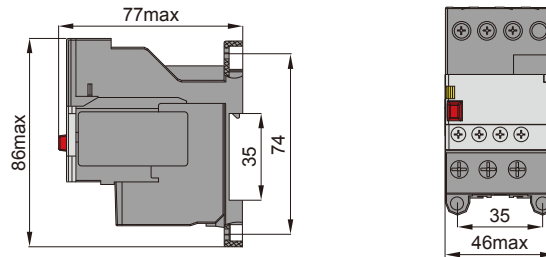
Overall Dimension of Installation



HDR6-18 Assembly Installation



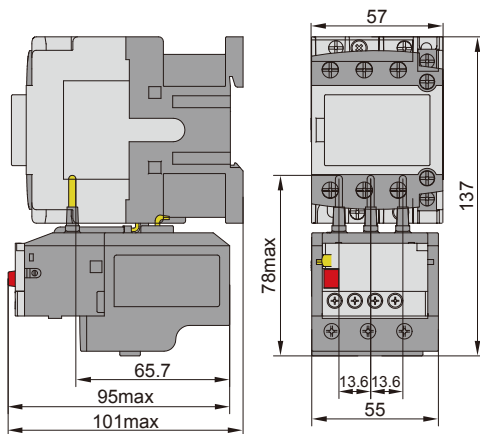
HDR6-18 Independent Installation



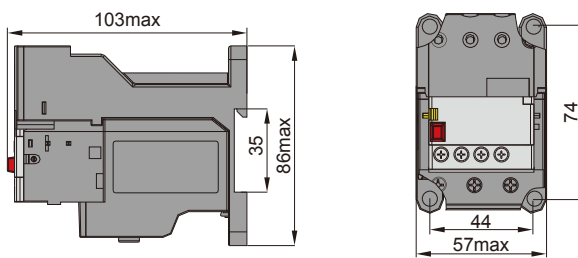
Assembly Installation for HDR6-18 and HDC6-09, 12, 18

	HDC6-09	HDC6-12	HDC6-18
A	84	84	89

HDR6-32 Assembly Installation



HDR6-32 Independent Installation

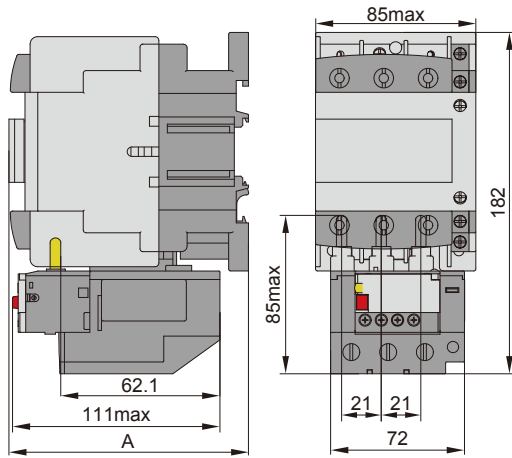


HDR6 Thermal Overload Relay

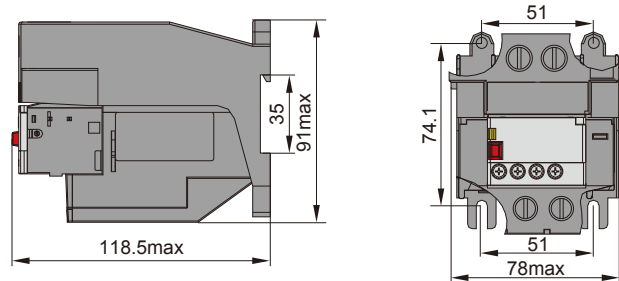
Overall Dimension of Installation



HDR6-95 Assembly Installation



HDR6-95 Independent Installation



Assembly Installation for HDR6-95 and HDC6-40~95

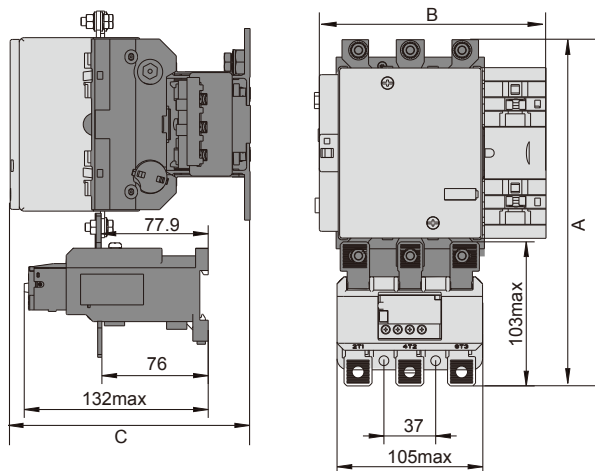
	HDC6-40	HDC6-50	HDC6-65	HDC6-80	HDC6-95
A	118.5	118.5	118.5	127.5	127.5

HDR6 Thermal Overload Relay

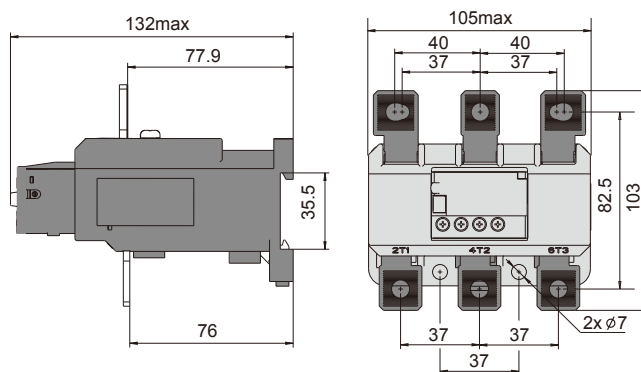
Overall Dimension of Installation



HDR6-185 Assembly Installation



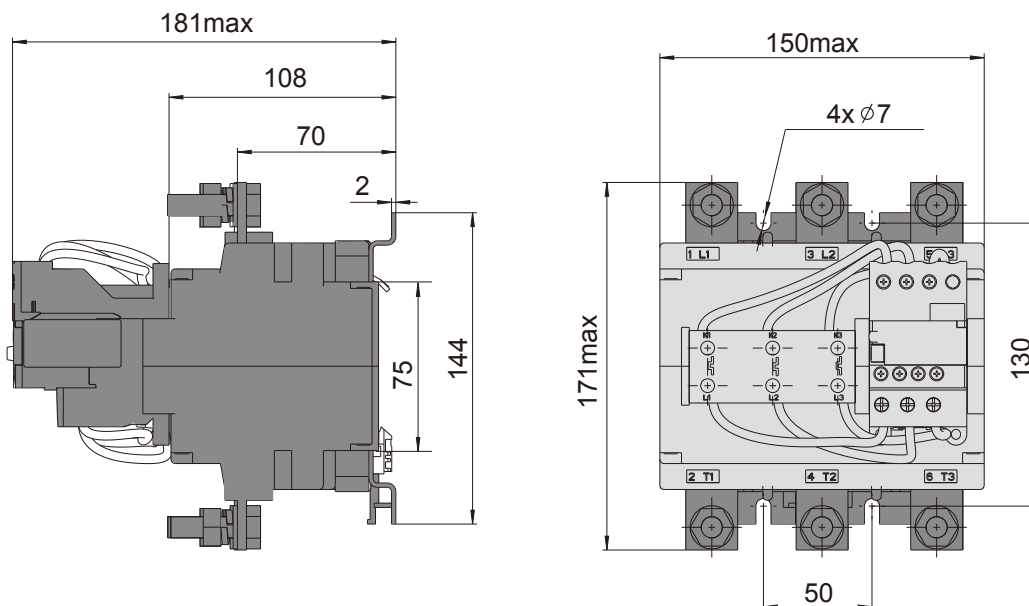
HDR6-185 Independent Installation



Assembly Installation for HDR6-185 and HDC6-115~185

	HDC6-115	HDC6-150	HDC6-185
A	248	253	257
B	167	167	171
C	172	172	183

HDR6-630/F Independent Installation



HDC17-K Mini AC Contactor

Standard: IEC 60947-4-1

Function

HDC17-K AC contactor provide:

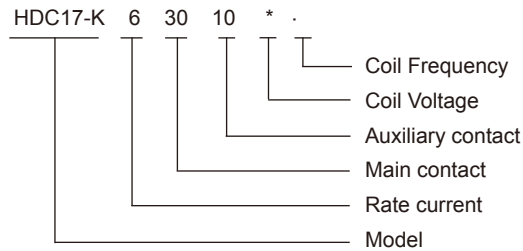
- Remote make & break of circuits
- Frequent start and stop of motors

Order Information



Moter P(kW) 380V	Rated current(A)	Main contact		Auxiliary contact		Reference
		NO	NC	NO	NC	
2.2	6	3	0	1	0	HDC17K63010*
		3	0	0	1	HDC17K63001*
		4	0	0	0	HDC17K64000*
		2	2	0	0	HDC17K62200*
4	9	3	0	1	0	HDC17K93010*
		3	0	0	1	HDC17K93001*
		4	0	0	0	HDC17K94000*
4	12	2	2	0	0	HDC17K92200*
		3	0	1	0	HDC17K123010*
		3	0	0	1	HDC17K123001*
4	12	4	0	0	0	HDC17K124000*
		4	0	0	0	HDC17K124000*

Reference Description



■ Coil voltage code

coil voltage	24V	36V	110V	127V	220V	380V	400V
*	B	C	F	S	M	Q	V

■ Coil frequency code

coil frequency	50Hz	60Hz
.	5	6

HDC17-K Mini AC Contactor

Standard: IEC 60947-4-1

Technical Data

Model			HDC17-K06	HDC17-K09	HDC17-K12
Main circuit characteristics					
Rated operational current	380V/400V, AC-3	A	6	9	12
	380V/400V, AC-4	A	2.6	3.5	5
	660V/690V, AC-3	A	3.5	5	6
	660V/690V, AC-4	A	1.2	1.5	2
Rated operational voltage	V		220/230, 380/400, 660/690		
Rated insulation voltage	V		690		
Rated conventional thermal current	A		16	20	
Pole			3, 4		
Power of controlled	220V/230V, AC-3	kW	1.5	2.2	3
3-phase cage motor	380V/400V, AC-3	kW	2.2	4	5.5
	660V/690V, AC-3	kW	3	4	7.5
Electric durabilities	AC-3	$\times 10^4$ operations	100		
Operating rate		cycles/h	1200		
Electric durabilities	AC-4	$\times 10^4$ operations	20		
Operating rate		cycles/h	600		
Mechanical durabilities		$\times 10^4$ cycles	1000		
Matched Fuse			HRT16-16	HRT16-20	
Cable connection	Inflexible cable	number of piece	2		
	Cross Section of Cable	mm ²	4		
Coil					
Coil voltage(Us)	V		AC 24,36,110,127,220,380,400		
Operational voltage	V		85%~110% Us		
Drop-out voltage	V		20%~75% Us		
Inrush	VA		30		
Sealed	VA		4.5		
Auxiliary contact					
Rated conventional thermal current	V		690		
Rated insulation voltage	A		10		
Rated operational current	380V, AC-15	A	0.95		
	220V, DC-13	A	0.15		
Control capacity	AC-15	VA	360		
	DC-13	W	33		

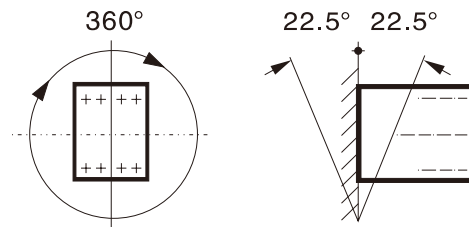
HDC17-K Mini AC Contactor

Standard: IEC 60947-4-1

Working Conditions

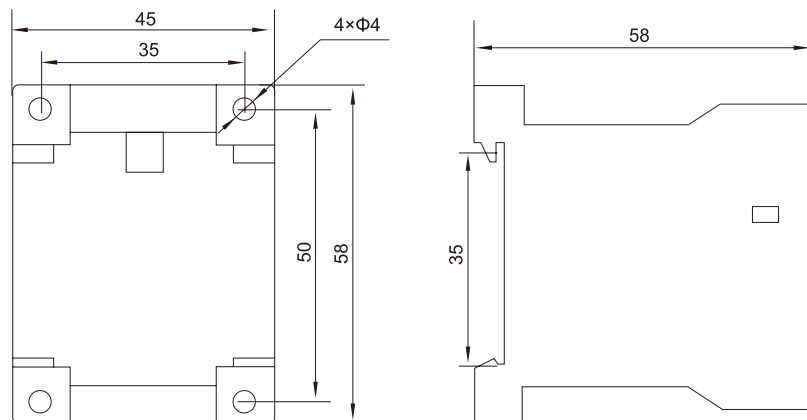
- Ambient temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, the daily average temperature $\leq 35^{\circ}\text{C}$
- Altitude: ≤ 2000 m
- Humidity: Maximum temperature is $+40^{\circ}\text{C}$, air relative humidity of not more than 50%, at a lower temperature allows a higher relative humidity. For example, 20°C , when up to 90%, and occasionally due to temperature changes resulting from Gel should take special measures
- Pollution Level: 3
- Installation Type: III
- Installation position: should be installed in the absence of a significant shake and shock and vibration place

Install Location



Overall Dimensions

Unit: mm



HDR17-18 Thermal Overload Relay

Standard: IEC 60947-4-1



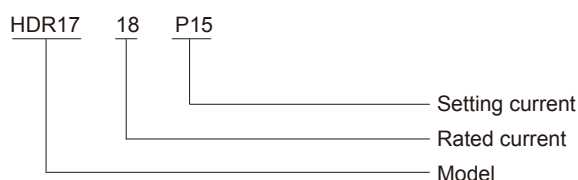
Function

HDR17 series thermal overload relay provide:

- Protection of circuits and motors against overload
- Protection of circuits and motors against phase loss
- Motor starters installation in association with contactors

Order Information

Reference Description



Type	Rated insulation voltage Ui V	Frame size rated current	Range of current setting A	Reference	Recommended contactor
HDR17-18	690	18	0.1~0.13~0.15	HDR1718P15	HDC17-K-9~18
			0.12~0.16~0.18	HDR1718P18	HDC17-K-9~18
			0.18~0.2~0.25	HDR1718P25	HDC17-K-9~18
			0.25~0.32~0.36	HDR1718P36	HDC17-K-9~18
			0.35~0.4~0.5	HDR1718P5	HDC17-K-9~18
			0.5~0.6~0.7	HDR1718P7	HDC17-K-9~18
			0.63~0.72~0.9	HDR1718P9	HDC17-K-9~18
			0.9~1~1.2	HDR17181P2	HDC17-K-9~18
			1.2~1.6~1.8	HDR17181P8	HDC17-K-9~18
			1.8~2~2.5	HDR17182P5	HDC17-K-9~18
			2.5~3.2~3.6	HDR17183P6	HDC17-K-9~18
			3.5~4~4.8	HDR17184P8	HDC17-K-9~18
			4.5~5~6.3	HDR17186P3	HDC17-K-9~18
			5~6~7	HDR17187	HDC17-K-9~18
			6.3~7.2~9	HDR17189	HDC17-K-9~18
			9~10~12	HDR171812	HDC17-K-9~18
11~13~15	HDR171815	HDC17-K-9~18			
14~16~18	HDR171818	HDC17-K-9~18			

HDR17-18 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Technical Data

Temperature compensation	-10°C~+55°C			
Trip class 10A	HDR17-18			
Rated insulation voltage Ui V	690V			
Structure characteristics				
Protection Function	Overload protection			
	Phase-failure protection			
	Manual reset			
	Automatic reset			
	Stop button			
	Test button			
Tolerance on slope in any direction	±22.5°			
Control circuit				
Utilization category	AC-15			DC-13
Rated frequency Hz	50	50	50	
Rated insulation voltage Ui V	690	690	690	690
Rated operational voltage Ue V	220/230	380/400	660/690	220/230
Rated operational current Ie A	1.64/1.57	0.95/0.9	0.55/0.52	0.23/0.22
Conventional free air thermal current Ith A	6	6	6	6
Contact circuit				
Utilization category	AC-15			DC-13
Rated frequency Hz	50			
Rated insulation voltage Ui V	690			690
Rated operational voltage Ue V	660/690			220/230
Rated operational current Ie A	6			6
Conventional free air thermal current Ith A	6			6

HDR17-18 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Trip Characteristic

Sequence	Multiples of setting current		Trip time		Initial condition	Ambient temperature
			Trip class 10A			
Limits of operation of relays when energized on all poles						
1	1.05		>2h		From cold state	+20°C
2	1.2		<2h		From hot state(immediately following sequence 1 test)	
3	1.5		<2min		From hot state(immediately following sequence 1 test)	
4	7.2		2s < T _p ≤ 10s		From cold state	+20°C
Limits of operation when energized on two poles						
	Any two poles	The third-pole				
1	1.0	0.9	>2h		From cold state	+20°C
2	1.15	0	<2h		From hot state(immediately following sequence 1 test)	

HDR17-18 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1

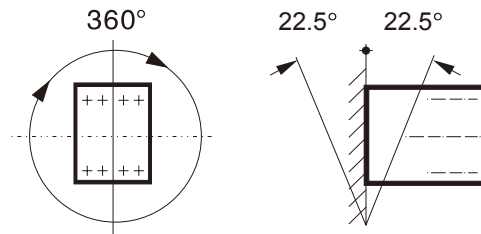


Work conditions

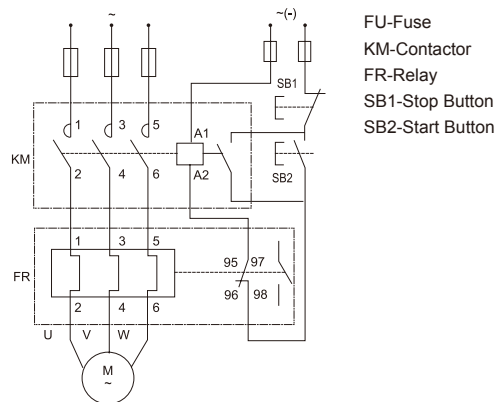
- Ambient temperature: $-10^{\circ}\text{C} \sim +55^{\circ}\text{C}$, daily average temperature $\leq 35^{\circ}\text{C}$
- Altitude: $\leq 2000\text{m}$
- Humidity: The relative humidity of the installation position shall not exceed 50% when the maximum temperature reaches $+40^{\circ}\text{C}$. But there can be higher relative humidity under lower temperature. For example, it can reach 90% when temperature is at 20°C . Special measures should be taken against condensation occurring on product surface caused by temperature change
- Pollution class: 3

Installation conditions

- Installation Type: III
- Installation position: Unobvious shake and impact shock is necessary. Vertically mounting. Tolerance on slope in any direction shall not exceed 22.5°



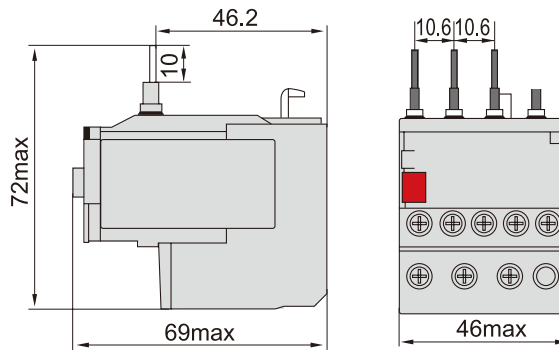
Wire Connection Picture



Overall Dimensions

Unit: mm

- HDR17-18



HJX2 AC Contactor

Standard: IEC 60947-4-1



Function

HJX2 AC contactors provide:

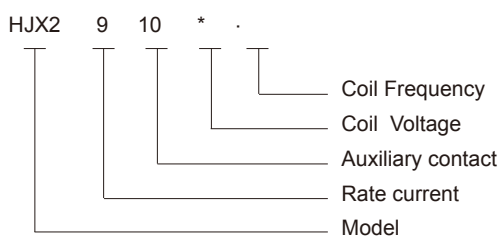
- Remote make & break of circuits
- Frequent start and stop of motors

Order Information

Motor P(kW) 380V	Rated current(A)	Auxiliary contact		Reference
		NO	NC	
5.5	9	1	0	HJX2910*
		0	1	HJX2901*
7.5	12	1	0	HJX21210*
		0	1	HJX21201*
10	18	1	0	HJX21810*
		0	1	HJX21801*
15	25	1	0	HJX22510*
		0	1	HJX22501*
18.5	32	1	0	HJX23210*
		0	1	HJX23201*
30	40	1	1	HJX24011*
33	50	1	1	HJX25011*
37	65	1	1	HJX26511*
45	80	1	1	HJX28011*
55	95	1	1	HJX29511*



Reference Description



■ Coil voltage code

coil voltage	24V	36V	110V	127V	220V	380V	400V
*	B	C	F	S	M	Q	V

■ Coil frequency code

coil frequency	50Hz	60Hz
.	5	6

Motor Control & Protection

HJX2 AC Contactor

Standard: IEC 60947-4-1



Technical Data

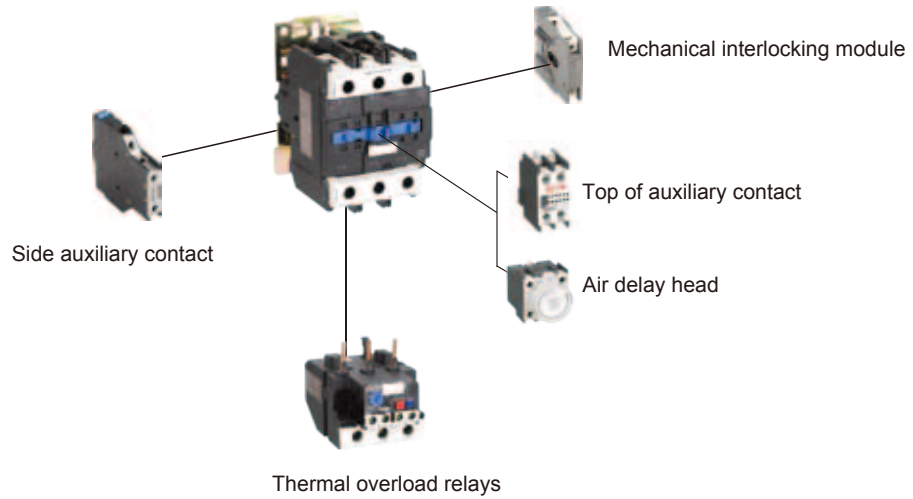
Model		HJX2-09	HJX2-12	HJX2-18	HJX2-25	HJX2-32	HJX2-40	HJX2-50	HJX2-65	HJX2-80	HJX2-95
Main circuit characteristics											
Rated operational voltage	V	400, 690									
Rated insulation voltage	V	690									
Conventional thermal current	A	25	25	32	40	50	60	80	80	125	125
Rated operational current	400V AC-3 A	9	12	18	25	32	40	50	65	80	95
	400V AC-4 A	3.5	5	7.7	18	21	34	39	42	49	55
	690V AC-3 A	6.6	8.9	12	8.5	12	18.5	24	28	37	44
	690V AC-4 A	1.5	2	3.8	4.4	7.5	9	12	14	17.3	21.3
Power of controlled 3-phase cage motor	400V, AC-3 kW	4	5.5	7.5	11	15	18.5	22	30	37	45
	690V, AC-3 kW	5.5	7.5	10	15	18.5	30	33	37	45	55
Electric durabilities	AC-3 ×10 ⁴ operations	100				80	80	60			
	AC-4 ×10 ⁴ operations	20				20	15	10			
Mechanical durabilities	×10 ⁴ cycles	1000				800	800	600			
Operating rate	AC-3 cycles/h	1200				600	600	600			
	AC-4 cycles/h	300				300	300	300			
Matched Fuse		HRT16-20	HRT16-20	HRT16-32	HRT16-40	HRT16-50	HRT16-63	HRT16-80	HRT16-80	HRT16-100	HRT16-125
Cable connection cross section	mm ²	1.5	1.5	2.5	4	6	10	16	16	25	35
Coil											
Coil voltage(Us)	V	AC24,36,110,127,220,380,400									
Operational voltage	V	85%~110%Us									
Drop-out voltage	V	20%~75%Us									
Inrush	VA	70			110	200					
Sealed	VA	9			11	24					
Heat dissipation	W	2.7			4	10					
Accessories											
Auxiliary contact	Front mount	HF4									
	Side mount	HFC6									
Time-delay block	Front mount	HSK4									
Mechanical Interlock		HFR632H					HFR695HX				
Rated conventional thermal current	A	10									
Rated operational voltage	AC V	400									
	DC V	230									
Rated control capacity	AC-15 VA	360									
	DC-13 W	33									

HJX2 AC Contactor

Standard: IEC 60947-4-1



HJX2 Contactor Accessories



■ Contactor



	9	12	18	25	32	40	50	65	80	95
Top of auxiliary contact	2 Poles: HF411, HF402, HF420 4 Poles: HF404, HF413, HF422, HF431, HF440									
Side auxiliary contact	2 Poles: HFC611, HFC602, HFC620									
Air delayed head	Making time-delay: HSK420, HSK422, HSK424 Breaking time-delay: HSK430, HSK432, HSK434									
Mechanical interlocking module	9-32A: HFR632H 40-95A: HFR695HX									
Thermal overload relays	HJRS1D-25 0.1-0.16A ... 17-25A			HJRS1D-36 23-32A 30-40A			HJRS1D-93 23-32A ... 80-93A			

Motor Control & Protection

HJX2 AC Contactor

Standard: IEC 60947-4-1



Accessories

HF4 Top of auxiliary contact



Pole	Contact		Wiring diagram	Reference
	NO	NC		
2P	1	1		HF411
	0	2		HF402
	2	0		HF420
4P	0	4		HF404
	1	3		HF413
	2	2		HF422
	3	1		HF431
	4	0		HF440

HSK4 Air delayed head



Delay Type	Wiring diagram	Delay Range	Reference
Making time-delay		0.1-3S	HSK420
		0.1-30S	HSK422
		10-180S	HSK424
Breaking time-delay		0.1-3S	HSK430
		0.1-30S	HSK432
		10-180S	HSK434

HFC6 Side auxiliary contact



Pole	Contact		Wiring diagram	Reference
	NO	NC		
2P	0	2		HFC602
	1	1		HFC611
	2	0		HFC620

HJX2 AC Contactor

Standard: IEC 60947-4-1



Accessories



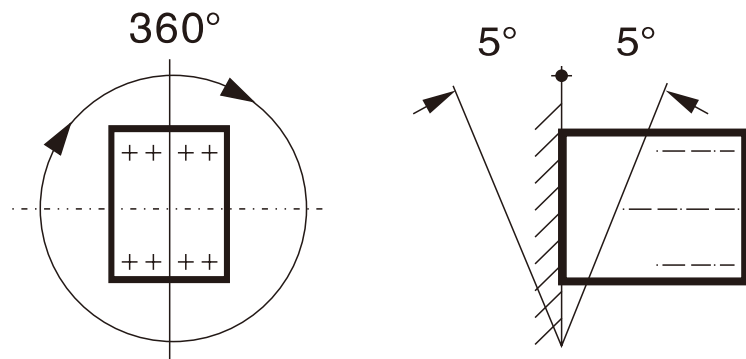
■ Mechanical interlocking module

Contactor Specifications	Reference
HJX2-9~32	HFR632H
HJX2-40~95	HFR695HX

Working Conditions

- Ambient temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, the daily average temperature $\leq 35^{\circ}\text{C}$
- Altitude: ≤ 2000 m
- Humidity: Maximum temperature is $+40^{\circ}\text{C}$, air relative humidity of not more than 50%, at a lower temperature allows a higher relative humidity. For example, 20°C , when up to 90%, and occasionally due to temperature changes resulting from Gel should take special measures
- Pollution Level: 3
- Installation Type: III
- Installation position: should be installed in the absence of a significant shake and shock and vibration place

InstallLocation



HJX2 AC Contactor

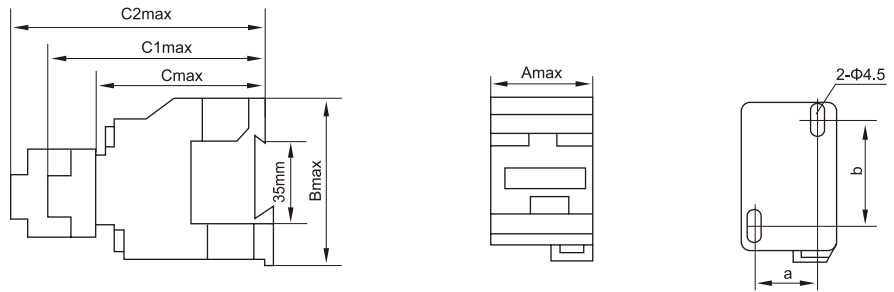
Standard: IEC 60947-4-1



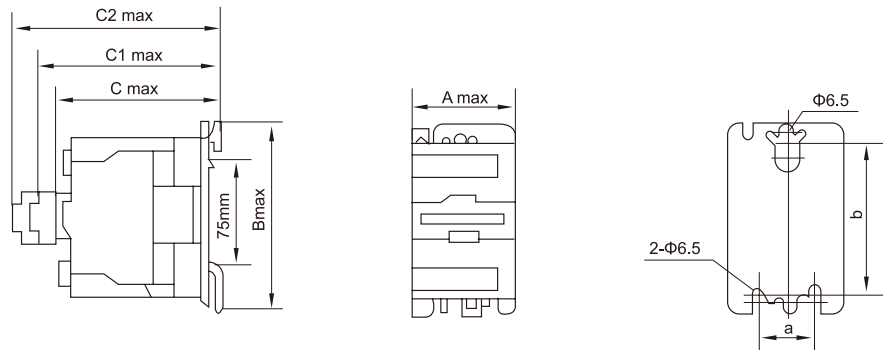
Overall Dimensions

Unit:mm

■ HJX2-09~32



■ HJX2-40~95



Product Type	Amax	Bmax	Cmax	C ₁ max	C ₂ max	a	b	d
HJX2-09~12	47	76	82	115	115	35	50/60	4.5
HJX2-18	47	76	87	120	120			
HJX2-25	57	86	97	130	130	40	50/60	4.5
HJX2-32	57	86	102	135	135			
HJX2-40~65	77	129	116	149	149	40	100/110	6.5
HJX2-80~95	87	129	127	160	160			

Note: C₁max is auxiliary contact group +HF4 C₂max is air-delay contact+HSK4

HJRS1D Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



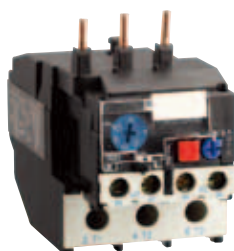
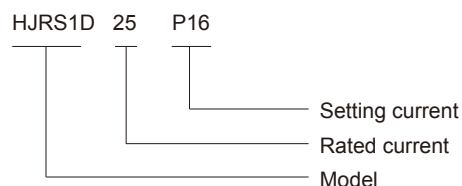
Function

HJRS1D relay provide:

- Protect motor and circuit
- Possess overload and phase failure protection functions.

Order Information

Reference Description



Frame size rated current(A)	Current setting(A)	Reference	Recommended contactor	Recommended fuse
25	0.1~0.16	HJRS1D25P16	HJX2-09~32	HRT16-4
	0.16~0.25	HJRS1D25P25	HJX2-09~32	HRT16-4
	0.25~0.4	HJRS1D25P4	HJX2-09~32	HRT16-4
	0.4~0.63	HJRS1D25P63	HJX2-09~32	HRT16-4
	0.63~1	HJRS1D251	HJX2-09~32	HRT16-4
	1~1.6	HJRS1D251P6	HJX2-09~32	HRT16-4
	1.6~2.5	HJRS1D252P5	HJX2-09~32	HRT16-6
	2.5~4	HJRS1D254	HJX2-09~32	HRT16-10
	4~6	HJRS1D256	HJX2-09~32	HRT16-16
	5.5~8	HJRS1D258	HJX2-09~32	HRT16-20
	7~10	HJRS1D2510	HJX2-09~32	HRT16-20
	9~13	HJRS1D2513	HJX2-12~32	HRT16-25
	12~18	HJRS1D2518	HJX2-18~32	HRT16-35
17~25	HJRS1D2525	HJX2-25~32	HRT16-50	
36	23~32	HJRS1D3632	HJX2-25~32	HRT16-63
	30~40	HJRS1D3640	HJX2-32	HRT16-80
93	23~32	HJRS1D9332	HJX2-40~95	HRT16-63
	30~40	HJRS1D9340	HJX2-40~95	HRT16-80
	37~50	HJRS1D9350	HJX2-50~95	HRT16-100
	48~65	HJRS1D9365	HJX2-50~95	HRT16-100
	55~70	HJRS1D9370	HJX2-65~95	HRT16-125
	63~80	HJRS1D9380	HJX2-80~95	HRT16-125
	80~93	HJRS1D9393	HJX2-95	HRT16-160

HJRS1D Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Technical Data


Temperature compensation	-5°C~+40°C			
Trip class	10A	HJRS1D-25, 36		
	10	HJRS1D-93		
Rated insulation voltage U_i V	660V			
Structure characteristics				
Protection Function	Overload protection			
	Phase-failure protection			
	Manual reset			
	Automatic reset			
	Stop button			
	Test button			
	Trip direction			
Tolerance on slope in any direction	±5°			
Auxiliary circuit				
Utilization category	AC-15	DC-13		
Rated frequency Hz	50	50	50	
Rated insulation voltage U_i V	500	500	500	
Rated operational voltage U_e V	230	400	230	
Rated operational current I_e A	1.64	0.95	0.15	
Conventional free air thermal current I^{th} A	NO	5	5	5
	NC	5	5	5

HJRS1D Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Accessories

	Thermal Overload Relay	Reference
	HJRS1D-25	HJRS1D25J
	HJRS1D-36	HJRS1D36J
	HJRS1D-93	HJRS1D93J

Trip Characteristic

Sequence	Multiples of setting current	Trip time		Initial condition	Ambient temperature
		Trip class 10A	Trip class 10		
Limits of operation of relays when energized on all poles					
1	1.05	>2h	>2h	From cold state	+20°C
2	1.2	<2h	<2h	From hot state(immediately following sequence 1 test)	
3	1.5	<2min	<4min	From hot state(immediately following sequence 1 test)	
4	7.2	2s< Tp≤10s	4s< Tp≤10s	From cold state	+20°C
Limits of operation when energized on two poles					
	Any two poles	The third-pole			
1	1.0	0.9	>2h	>2h	From cold state +20°C
2	1.15	0	<2h	<2h	From hot state(immediately following sequence 1 test)

HJRS1D Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1

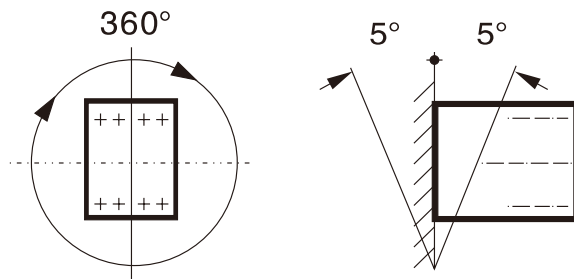


Work Conditions

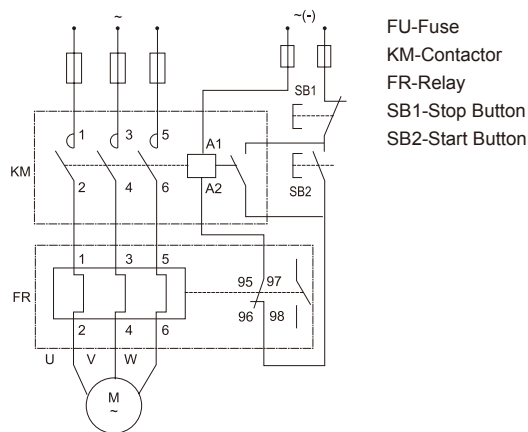
- Ambient temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$, daily average temperature $\leq 35^{\circ}\text{C}$
- Altitude: $\leq 2000\text{m}$
- Humidity: The relative humidity of the installation position shall not exceed 50% when the maximum temperature reaches $+40^{\circ}\text{C}$. But there can be higher relative humidity under lower temperature. For example, it can reach 90% when temperature is at 20°C . Special measures should be taken against condensation occurring on product surface caused by temperature change
- Pollution class: 3

Installation Conditions

- Installation Type: III
- Installation position: Unobvious shake and impact shock is necessary. Vertically mounting. Tolerance on slope in any direction shall not exceed 5°



Wire Connection Picture



HJRS1D Thermal Overload Relay

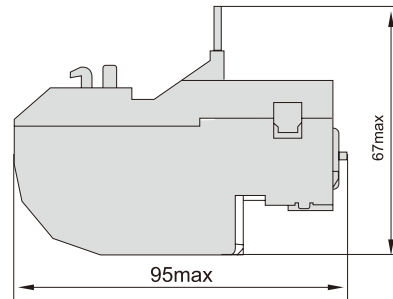
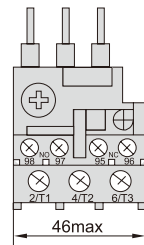
Standard: IEC 60947-4-1 IEC 60947-5-1



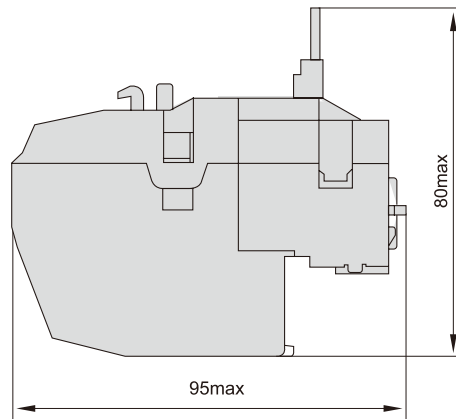
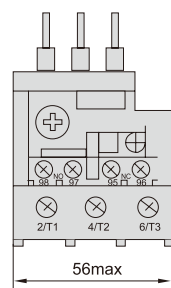
Overall Dimensions

Unit: mm

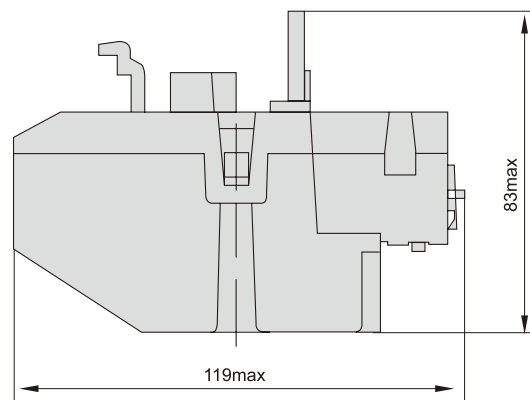
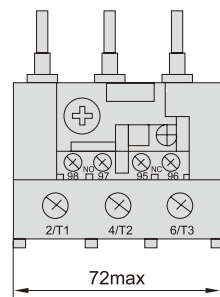
■ HJRS1D-25



■ HJRS1D-36



■ HJRS1D-93



HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



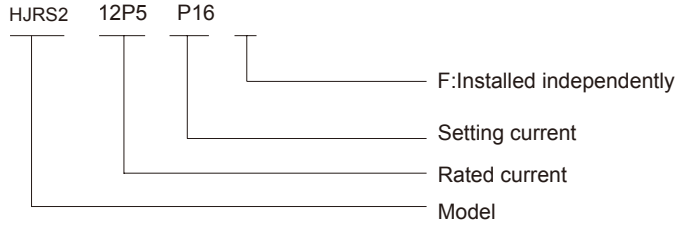
Function

HJRS2 relay provide:

- Protect motor and circuit
- Possess overload and phase failure protection functions.

Order Information

Reference Description



Frame size rated current(A)	Current setting(A)	Reference	Recommended fuse
12.5	0.10~0.16	HJRS212P5P16	HRT16-4
	0.16~0.25	HJRS212P5P25	HRT16-4
	0.25~0.40	HJRS212P5P4	HRT16-4
	0.32~0.5	HJRS212P5P5	HRT16-4
	0.40~0.63	HJRS212P5P63	HRT16-4
	0.63~1.00	HJRS212P51	HRT16-4
	0.80~1.25	HJRS212P51P25	HRT16-4
	1.00~1.60	HJRS212P51P6	HRT16-4
	1.25~2.00	HJRS212P52	HRT16-4
	1.60~2.50	HJRS212P52P5	HRT16-6
	2.00~3.20	HJRS212P53P2	HRT16-6
	2.50~4.00	HJRS212P54	HRT16-6
	3.20~5.00	HJRS212P55	HRT16-6
	4.00~6.30	HJRS212P56P3	HRT16-10
	5.00~8.00	HJRS212P58	HRT16-20
	6.30~10.0	HJRS212P510	HRT16-20
	8.00~12.5	HJRS212P512P5	HRT16-20
10.0~14.5	HJRS212P514P5	HRT16-25	
25	0.10~0.16	HJRS225P16	HRT16-4
	0.16~0.25	HJRS225P25	HRT16-4
	0.25~0.40	HJRS225P4	HRT16-4
	0.40~0.63	HJRS225P63	HRT16-4
	0.63~1.00	HJRS2251	HRT16-4
	0.80~1.25	HJRS2251P25	HRT16-4
	1.00~1.60	HJRS2251P6	HRT16-4
	1.25~2.00	HJRS2252	HRT16-4
	1.60~2.50	HJRS2252P5	HRT16-6
	2.00~3.20	HJRS2253P2	HRT16-6
	2.50~4.00	HJRS2254	HRT16-6
	3.20~5.00	HJRS2255	HRT16-6
	4.00~6.30	HJRS2256P3	HRT16-10
	5.00~8.00	HJRS2258	HRT16-20
	6.30~10.0	HJRS22510	HRT16-20
	8.00~12.5	HJRS22512P5	HRT16-20
	10.0~16.0	HJRS22516	HRT16-25
12.5~20.0	HJRS22520	HRT16-32	
16.0~25.	HJRS22525	HRT16-32	

HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Frame size rated current(A)	Current setting(A)	Reference	Recommended fuse
32	4.00~6.30	HJRS2326P3	HRT16-10
	6.30~10.0	HJRS23210	HRT16-20
	10.0~16.0	HJRS23216	HRT16-25
	12.5~20.0	HJRS23220	HRT16-32
	16.0~25.0	HJRS23225	HRT16-32
	20.0~32.0	HJRS23232	HRT16-50
	25.0~36.0	HJRS23236	HRT16-50
45	16.0~25.0	HJRS24525	HRT16-32
	20.0~32.0	HJRS24532	HRT16-50
	25.0~36.0	HJRS24536	HRT16-50
	32.0~40.0	HJRS24540	HRT16-50
	36.0~45.0	HJRS24545	HRT16-63
63	0.10~0.16	HJRS263P16F	HRT16-4
	0.16~0.25	HJRS263P25F	HRT16-4
	0.25~0.40	HJRS263P4F	HRT16-4
	0.40~0.63	HJRS263P63F	HRT16-4
	0.63~1.00	HJRS2631F	HRT16-4
	0.80~1.25	HJRS2631P25F	HRT16-4
	1.00~1.60	HJRS2631P6F	HRT16-4
	1.25~2.00	HJRS2632F	HRT16-4
	1.60~2.5	HJRS2632P5F	HRT16-6
	2.00~3.20	HJRS2633P2F	HRT16-6
	2.50~4.00	HJRS2634F	HRT16-6
	3.20~5.00	HJRS2635F	HRT16-6
	4.00~6.30	HJRS2636P3F	HRT16-10
	5.00~8.00	HJRS2638F	HRT16-20
	6.30~10.0	HJRS26310F	HRT16-20
	8.00~12.5	HJRS26312P5F	HRT16-20
	10.0~16.0	HJRS26316F	HRT16-25
	12.5~20.0	HJRS26320F	HRT16-32
	16.0~25.0	HJRS26325F	HRT16-32
	20.0~32.0	HJRS26332F	HRT16-50
25.0~40.0	HJRS26340F	HRT16-50	
32.0~45.0	HJRS26345F	HRT16-63	
40.0~57.0	HJRS26357F	HRT16-80	
50.0~63.0	HJRS26363F	HRT16-80	

HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Frame size rated current(A)	Current setting(A)	Reference	Recommended fuse
80	16.0~25.0	HJRS28025	HRT16-32
	20.0~32.0	HJRS28032	HRT16-50
	25.0~40.0	HJRS28040	HRT16-50
	32.0~50.0	HJRS28050	HRT16-63
	40.0~57.0	HJRS28057	HRT16-80
	50.0~63.0	HJRS28063	HRT16-80
	57.0~70.0	HJRS28070	HRT16-100
	63.0~80.0	HJRS28080	HRT16-100
	70.0~88.0	HJRS28088	HRT16-125
180	55~88	HJRS218088F	HRT16-125
	63~90	HJRS218090F	HRT16-125
	80~110	HJRS2180110F	HRT16-200
	90~120	HJRS2180120F	HRT16-200
	110~135	HJRS2180135F	HRT16-200
	120~150	HJRS2180150F	HRT16-200
	135~160	HJRS2180160F	HRT16-250
	150~180	HJRS2180180F	HRT16-250
400	80~125	HJRS2400125F	HRT16-200
	125~200	HJRS2400200F	HRT16-400
	160~250	HJRS2400250F	HRT16-400
	200~320	HJRS2400320F	HRT16-500
	250~400	HJRS2400400F	HRT16-500
630	320~500	HJRS2630500F	HRT16-630
	400~630	HJRS2630630F	HRT16-630

HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Technical Data

Temperature compensation	-5°C~+40°C		
Trip class 10A 10	HJRS2-12,5,25,32,45,63,80,180 HJRS2-400,630		
Rated insulation voltage U_i V	660V		
Structure characteristics			
Protection Function	<ul style="list-style-type: none"> Overload protection Phase-failure protection Manual reset Automatic reset Stop button Test button Trip direction 		
Tolerance on slope in any direction	±5°		
Auxiliary circuit			
Utilization category	AC-15		DC-13
Rated frequency Hz	50	50	50
Rated insulation voltage U_i V	380	380	500
Rated operational voltage U_e V	220	380	220
Rated operational current I_e A	1.64	0.95	0.16
Conventional free	NO	5	5
	NC	5	5

HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Trip Characteristic

Sequence	Multiples of setting current		Trip time		Initial condition	Ambient temperature
			Trip class 10A	Trip class 10		
Limits of operation of relays when energized on all poles						
1	1.05		>2h	>2h	From cold state	+20°C
2	1.2		<2h	<2h	From hot state(immediately following sequence 1 test)	
3	1.5		<2min	<4min	From hot state(immediately following sequence 1 test)	
4	7.2		2s< Tp≤10s	4s< Tp≤10s	From cold state	+20°C
Limits of operation when energized on two poles						
	Any two poles	The third-pole				
1	1.0	0.9	>2h	>2h	From cold state	+20°C
2	1.15	0	<2h	<2h	From hot state(immediately following sequence 1 test)	

HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1

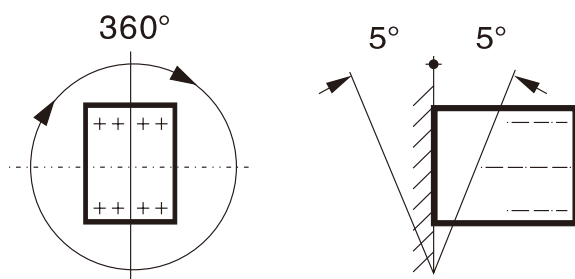
CE

Work Conditions

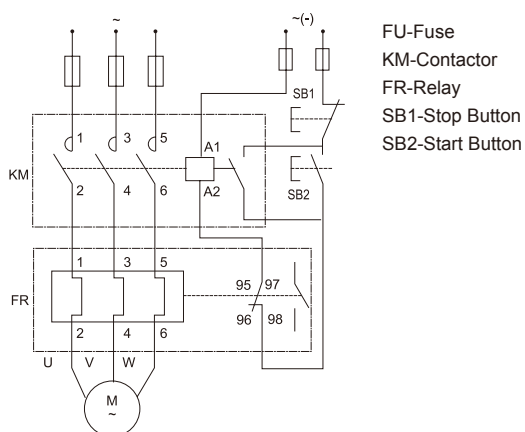
- Ambient temperature: $-5^{\circ}\text{C}\sim+40^{\circ}\text{C}$, daily average temperature $\leq 35^{\circ}\text{C}$
- Altitude: $\leq 2000\text{m}$
- Humidity: The relative humidity of the installation position shall not exceed 50% when the maximum temperature reaches $+40^{\circ}\text{C}$. But there can be higher relative humidity under lower temperature. For example, it can reach 90% when temperature is at 20°C . Special measures should be taken against condensation occurring on product surface caused by temperature change
- Pollution class: 3

Installation Conditions

- Installation Type: III
- Installation position: Unobvious shake and impact shock is necessary. Vertically mounting. Tolerance on slope in any direction shall not exceed 5°



Wire Connection Picture



HJRS2 Thermal Overload Relay

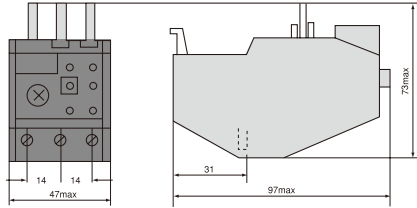
Standard: IEC 60947-4-1 IEC 60947-5-1



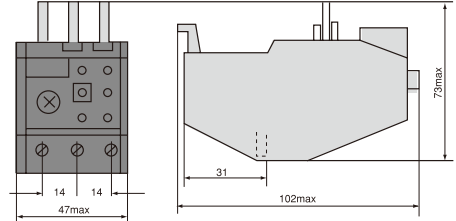
Overall Dimensions

Unit: mm

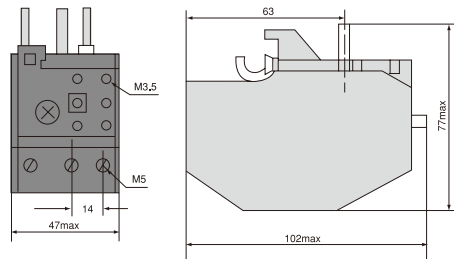
■ HJRS2-12.5/Z



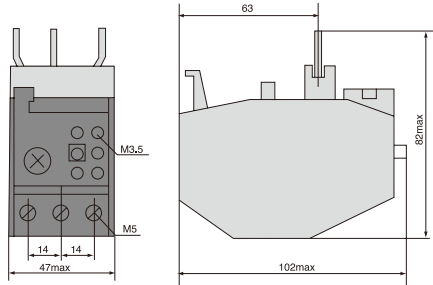
■ HJRS2-25/Z



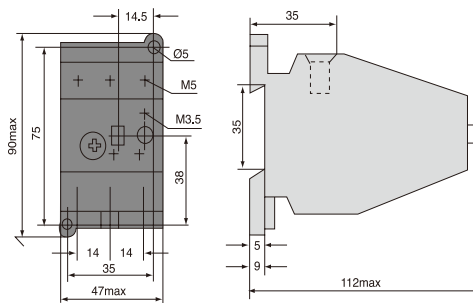
■ HJRS2-32/Z



■ HJRS2-45/Z



■ HJRS2-63/F



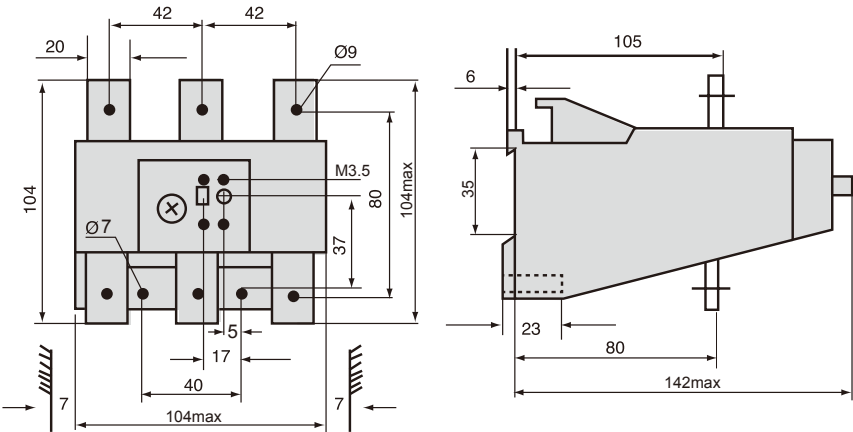
HJRS2 Thermal Overload Relay

Standard: IEC 60947-4-1 IEC 60947-5-1



Overall Dimensions

■ HJRS2-180/F



■ HJRS2-400~630/F

