

HITIO[®]

PRODUCT CATALOGUE
HC6 SERIES CONTACTOR
HCR6 SERIES OVERLOAD RELAY

ZHEJIANG HECHENG SMART ELECTRIC CO., LTD.

Electrical suppliers used by the world's top 500



HIITIO

Zhejiang Hecheng Smart Electric Co, Ltd. (referred to as Hecheng Electric) was established in 2004 and is now headquartered at No.1125, Zhixing Road, Xiaoshan Economic and Technological Development Zone, Hangzhou City Zhejiang Province. Hecheng headquarters base 30000 square meters. Hecheng is a leading supplier of new energy industry and industrial control solutions in the world. At present, another large production base of Hecheng Electric is located in Mingguang, Anhui Province, with an area of 14 acres and a plant area of 20000 square meters. Hecheng Electric focuses on new energy vehicles, photovoltaic, energy storage, HVAC/R, industrial control, etc. Hecheng's main R&D production and operation products include: ceramic high-voltage DC relay/contactor, high-voltage DC fuse, airconditioning contactor, IEC contactor, UL 489 circuit breaker and disconnect box, etc. Hecheng's products all have passed UL, CSA, INTERTEK CE, CCC and other certifications.

Hecheng Electric aims at product research and development, 10% of the company's annual revenue is spent on R&D and 2% on IT penetration. Currently, the proportion of R&D personnel with more than 10 years of working experience in the industry is as high as 35%.

In addition, Hecheng Electric has introduced advanced automatic production lines and advanced laboratory testing equipment. We strictly implemented the IATF16949 system in the whole process. PLM + ERP + MES technology realizes the digitalization and intellectualization of the factory. The whole process of R&D, production and sales is able to be traced.



APPLICATION AREA

Electrical System

Building Facilities Management

Industrial control

Machinery

HVAC



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Reliable Quality

- More than 20 years of electrical experience and contactor development has accumulated valuable experience to ensure that we can provide products with the highest quality.
- In order to ensure the highest reliability and safety, comprehensive verification and testing have been carried out, and excellent performance can be achieved under AC-3, AC-4, AC-1

Product Certificated

- Comply with IEC60947-4-1, GB/T 14048.4, UL 60947-4-1 standards.
- With CCC,CE,CB,SEMKO,UL certification.

Environmental Protection

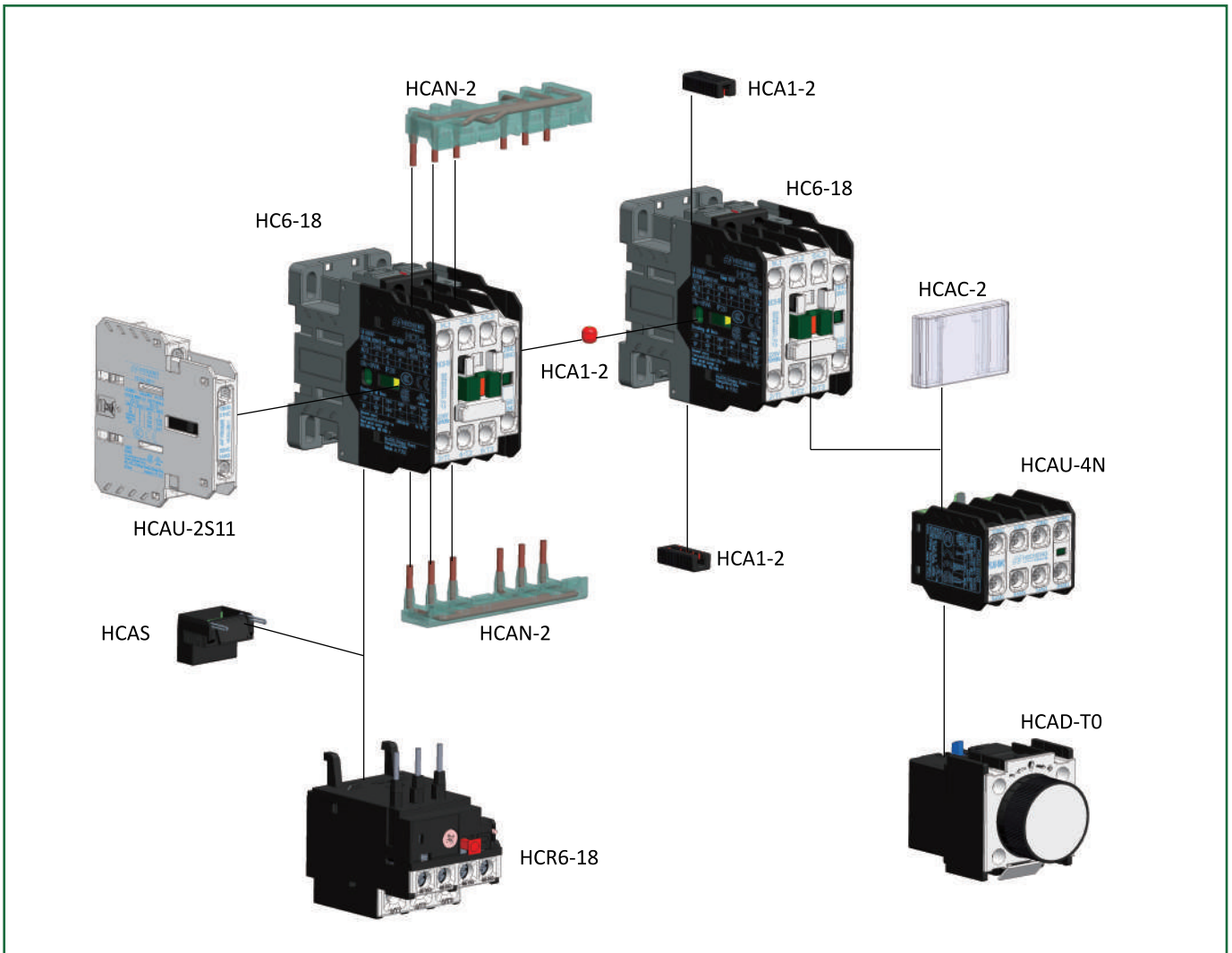
- Energy efficient

In line with the high emphasis on protecting the environment, the newly designed HC6 series contactors fully meet the national energy efficiency standards.

- Material

In order to reduce the impact on the environment, we choose product materials that comply with the RoHS directive and relevant domestic regulations.

Contactor Family (Take HC6-18 for example)



HC6-18: AC Contactor

HCAU-4N: Auxiliary Contact GroupTop-mounting

HCAU-2S11: Auxiliary Contact GroupSide-mounting

HCR6: Thermal Overload Relay

HCAD: Time Delay Module

HCA1: Mechanical Interlock

HCAS: Surge Suppressor

HCAN: Reversible Contactor Wiring Kit

HCAC: Dust Cover

Product Features



Long lifespan, fully functional

- The silver contact contains more than 85% silver, ensuring that its electrical life can reach more than 1 million cycles under AC-3 conditions.
- Operating temperature: -50°C to +60°C, without any decrease in performance at altitudes below 3000 meters.
- With a comprehensive range of models, the a rated current ranging from 6 to 800A,
- Complete coverage of control coil voltage, with 34 options for voltage and frequency.
- The control coil is universal for both AC and DC, with a wide control voltage range from 24V to 250V, and minimum power consumption of 3W.
- Two surge suppressor type options are available, Resistor-capacitor type or Varistor type.

• Compact installation and flexible integration

Top-mounting auxiliary contact and side-mounting auxiliary contact is available for optional purchase, tool-free disassembly.

Narrowed width by 20%, reversible contactor with zero gap.

Dust cover, sealed base, to prevent accidental contactor engagement and enhance dustproof, for greater stability and reliability.

HC6 Series Contactors



Product Features

- Modular design, compact product structure
- Safe and reliable operation performance
- The special process of the contacts ensures continuous and reliable conduction
- Convenient installation without tools to install and remove accessories
- A variety of connection wire terminal options, wide range of wiring capabilities
- Better impact resistance and seismic performance
- Low power consumption coil
- Dustproof performance, optional dustproof accessories can be added
- Complete accessories
- CCC,CB,CE,SEMKO,UL certification

Main Parameters

- Rated operational current (Ie): 6-800A
- Rated operational voltage (Ue): Up to 1000V
- Rated insulation voltage (Ui): 1000V
- Number of Poles: 3P, 4P (4P only for HC6-06M~12M)
- Coil control type: AC,DC

Normal service conditions and mounting conditions

Item	Description
Installation Category	III
Pollution Degree	3
Enclosure Protection Degree	IP20/IP00
Ambient Air Temperature	Normal operational temperature -13°F~+140°F (-25°C~+60°C)
Atmospheric Conditions	The relative air humidity does not exceed 50% at a maximum temperature of +140°F (+60°C). Higher relative humidity may be permitted at lower temperatures, Such as 90% at +68°F (+20°C).
Mounting Condition	The inclination of mounting surface and vertical plane is not more than±30°.
Mounting:	DIN Rail, Plate

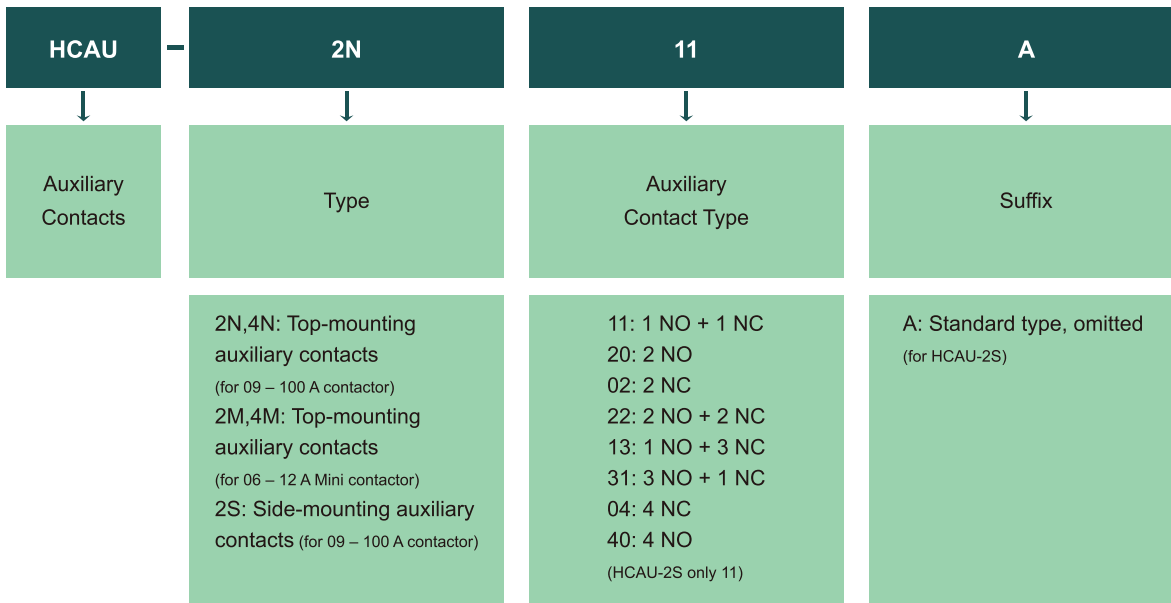
Type Description

HC6	06	M	10	/22	/N	220V	50/60Hz
Company Code	Rated Current	Contactor Type	Auxiliary Contact Type	Main Contact Type	Special Function	Control Circuit Voltage	Frequency
	06=6A 09=9A 12=12A 18=18A 25=25A 32=32A 38=38A 40=40A 50=50A 65=65A 75=75A 85=85A 100=100A	M: For 06M–12M contactor Nil: For 09–100A contactor	10: 1 NO (only Mini contactor) 01: 1 NC (only Mini contactor) Nil: For 09–100A contactor And reversing contactor (09-18 A contactors are equipped with 1 NO and 1NC auxiliary contacts.)	22: 2 NO+2 NC (only 06M-12M 4-Poles contactor) 40: 4 NO (only 06M-12M 4-Poles contactor) Nil: For 09–100 A contactor	N: Reversing contactor Nil: Non-Reversing contactor	24V 36V 42V 48V 110V 120V 127V 208V 220V 230V 240V 277V 380V 400V 415V 440V 480V 500V 600V 24-60V DC (Only 09-100) 110-250V DC (Only 09-100)	50Hz 50/60Hz (208V 277V 408V 600V No 50Hz)

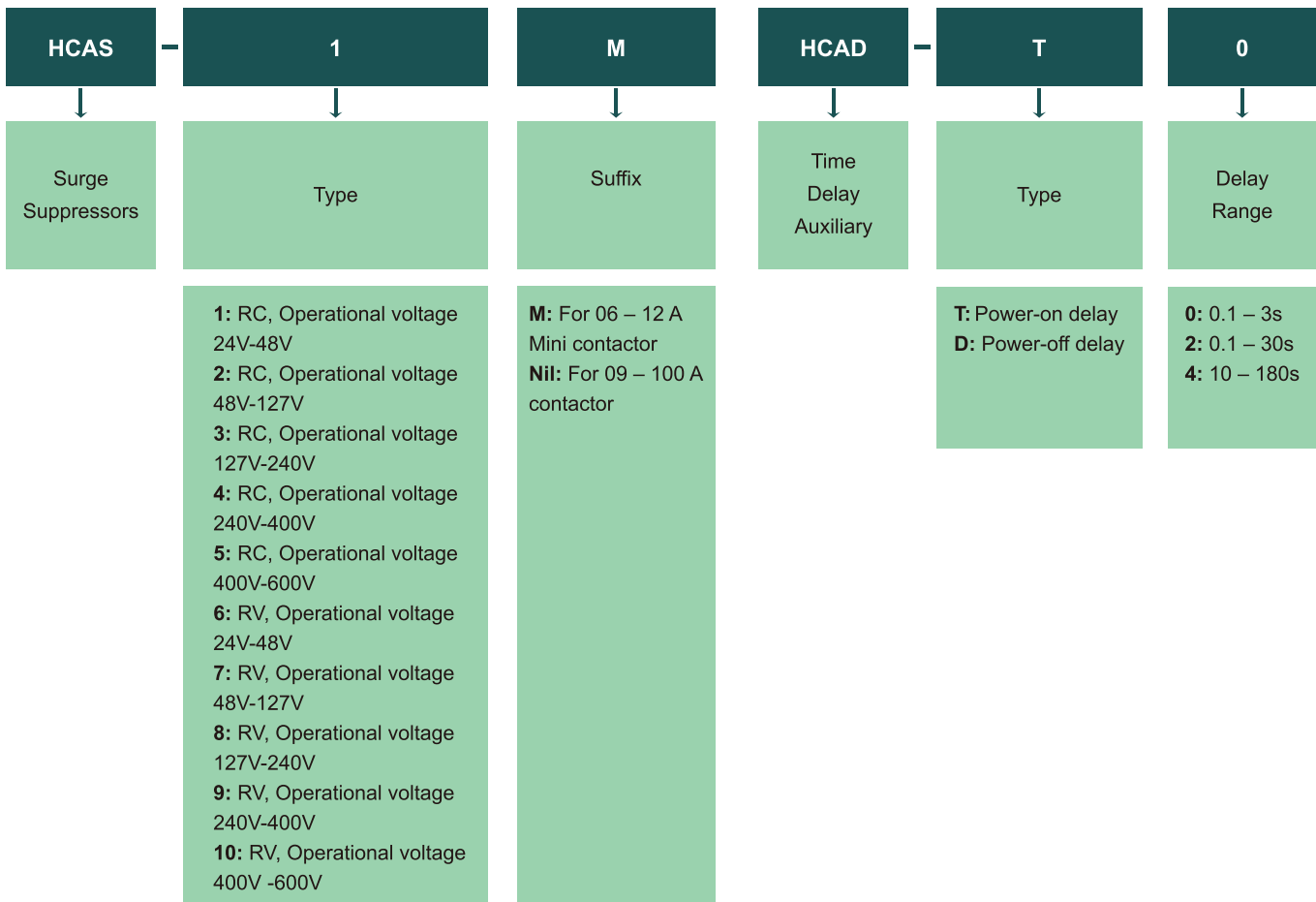
e.g: HC6-12 220V 50/60Hz: HC6-12 Contactor, Coil 220V 50/60Hz

HC6	115	N	4	220V	50Hz
Company Code	Rated Current	Special Function	Pole	Control Circuit Voltage	Frequency
	115=115A 150=150A 185=185A 225=225A 265=265A 330=330A 400=400A 500=500A 630=630A 800=800A	Nil: Non-Reversing contactor N: Horizontal interlock L: Vertical interlock	Nil: 3P NO 4: 4P NO	24V 48V 110V 220V 380V 415V	50Hz 50/60Hz DC

Type Description



e.g: HCAU-4M31 Top-Mounting auxiliary contact,3NO and 1NC.



HC6-06M~100

Motor operational power Pe kW $\theta \leq 60^{\circ}\text{C}$ (140°F) AC-3				Rated operational current A (380V/415V)	Auxiliary contact composition		Contactor type
220V/240V	380V/415V	500V	660V/690V		NO	NC	
1.5	2.2	3	3	6	1NO	/	HC6-06M10
1.5	2.2	3	3	6	/	1NC	HC6-06M01
2.2	4	4	4	9	1NO	/	HC6-09M10
2.2	4	4	4	9	/	1NC	HC6-09M01
2.2	4	5.5	5.5	9	1NO	1NC	HC6-09
3	5.5	5	5	12	1NO	/	HC6-12M10
3	5.5	5	5	12	/	1NC	HC6-12M01
3	5.5	7.5	7.5	12	1 NO	1NC	HC6-12
4	7.5	10	10	18	1 NO	1NC	HC6-18
5.5	11	15	15	25	/	/	HC6-25
7.5	15	18.5	18.5	32	/	/	HC6-32
9	18.5	18.5	18.5	38	/	/	HC6-38
11	18.5	22	22	40	/	/	HC6-40
15	22	30	30	50	/	/	HC6-50
18.5	30	33	33	65	/	/	HC6-65
22	37	37	37	75	/	/	HC6-75
25	45	55	45	85	/	/	HC6-85
30	45	55	55	100	/	/	HC6-100

Control circuit voltage

HC6-06M~100

AC(V) 50Hz	24V	36V	42V	48V	110V	120V	127V		220V	230V	240V		380V	400V	415V	440V		500V	
AC(V) 50/60Hz	24V	36V	42V	48V	110V	120V	127V	208V	220V	230V	240V	277V	380V	400V	415V	440V	480V	500V	600V
DC(09~100)	24-60V DC								110-250V DC										

HC6-115~800

Maximum operational power Pe kW $\theta \leq 40^{\circ}\text{C}$ (104°F) AC-3							Rated operational current A (380V/415V)	Auxiliary contact composition		Contactor type
220V/240V	380V/400V	415V	440V	500V	660V/690V	1000V		NO	NC	
30	55	59	59	75	80	75	115	/	/	HC6-115
40	75	80	80	90	100	90	150	/	/	HC6-150
55	90	100	100	110	110	100	185	/	/	HC6-185
63	110	110	110	129	129	100	225	/	/	HC6-225
75	132	140	140	160	160	147	265	/	/	HC6-265
100	160	180	200	200	220	160	330	/	/	HC6-330
110	200	220	250	257	280	185	400	/	/	HC6-400
147	250	280	295	335	335	335	500	/	/	HC6-500
200	335	375	400	400	450	450	630	/	/	HC6-630
250	450	450	450	450	475	450	800	/	/	HC6-800

Control circuit voltage

HC6-115~800

50Hz	24V	48V	110V	220V	380V	415V	HC6-115~225
50/60Hz	24V	48V	110V	220V	380V	415V	
DC	24V	48V	110V	220V	/	/	HC6-265~330
50/60Hz	24V	48V	110V	220V	380V	415V	
DC	24V	48V	110V	220V	/	/	HC6-400~800
50/60Hz	/	48V	110V	220V	380V	415V	
DC	/	48V	110V	220V	/	/	

HC6-06M~800

UL

Motor operational power HP three Phases				General use	Auxiliary contact composition		Contactor type
200-208 V	220-240V	440-480V	550-600V	current A	NO	NC	
1-1/2	1-1/2	3	3	20	1NO	/	HC6-06M10
1-1/2	1-1/2	3	3	20	/	1NC	HC6-06M01
2	2	5	5	20	1NO	/	HC6-09M10
2	2	5	5	20	/	1NC	HC6-09M01
2	3	5	7-1/2	25	1NO	1NC	HC6-09
3	3	7-1/2	7-1/2	20	1NO	/	HC6-12M10
3	3	7-1/2	7-1/2	20	/	1NC	HC6-12M01
3	3	7-1/2	10	25	1 NO	1NC	HC6-12
5	5	10	15	32	1 NO	1NC	HC6-18
7-1/2	7-1/2	15	20	40	/	/	HC6-25
10	10	20	25	50	/	/	HC6-32
10	10	20	25	50	/	/	HC6-38
10	10	30	30	60	/	/	HC6-40
15	15	40	40	70	/	/	HC6-50
20	20	40	50	80	/	/	HC6-65
25	30	50	60	100	/	/	HC6-75
25	30	60	60	100	/	/	HC6-85
25	30	60	60	125	/	/	HC6-100
40	50	100	125	160	/	/	HC6-115
50	60	125	150	185	/	/	HC6-150
60	75	150	200	215	/	/	HC6-185
60	75	150	200	275	/	/	HC6-225
75	100	200	250	300	/	/	HC6-265
100	125	250	300	400	/	/	HC6-330
125	150	300	400	500	/	/	HC6-400
150	200	400	500	610	/	/	HC6-500
250	500	600	/	800	/	/	HC6-630
300	600	700	/	900	/	/	HC6-800

Control circuit voltage

HC6-06M~100



AC(V) 50Hz	24V	36V	42V	48V	110V	120V	127V		220V	230V	240V		380V	400V	415V	440V		550V	
AC(V) 50/60Hz	24V	36V	42V	48V	110V	120V	127V	208V	220V	230V	240V	277V	380V	400V	415V	440V	480V	500V	600V
DC(09~100)	24-60V DC											110-250V DC							

Control circuit voltage




HC6-115~800



50Hz	24V	48V	110V	220V	380V	415V	HC6-115~225
50/60Hz	24V	48V	110V	220V	380V	415V	
DC	24V	48V	110V	220V	/	/	HC6-265~330
50/60Hz	24V	48V	110V	220V	380V	415V	
DC	24V	48V	110V	220V	/	/	HC6-400~ 800
50/60Hz	/	48V	110V	220V	380V	415V	
DC	/	48V	110V	220V	/	/	




Main circuit technical parameters

Main circuit technical parameters								
Contactor type			HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18
								
Conventional free air thermal current (I _{th}) ≤140°F (≤60°C)	A		20	20	20	25	25	32
AC-1								
Rated operational current(I _e)	≤104°F (≤40°C)	A	20	20	20	25	25	32
	≤140°F (≤60°C)	A	20	20	20	25	25	32
Rated operational power(P _e)	220/240V	kW	8	8	8	8	8	8
	380/415V	kW	14	14	14	15	15	20
	500V	kW	17	17	17	20	20	23
	660/690V	kW	22	22	22	27	27	34
AC-3								
Rated operational current(I _e)	220V/240V	A	7	9	12	9	12	18
	380V/415V	A	6	9	12	9	12	18
	500V	A	5	6	7	6.6	9	12
	660V/690V	A	4	5	5	6.6	9	12
Rated operational power(P _e)	220V/240V	kW	1.5	2.2	3	2.2	3	4
	380V/415V	kW	2.2	4	5.5	4	5.5	7.5
	500V	kW	3	4	5	5.5	7.5	10
	660V/690V	kW	3	4	5	5.5	7.5	10
AC-4								
Rated operational Current(I _e)	380V/415V	A	6	9	9	9	12	18
	660V/690V	A	3.8	5	5	6.7	8.3	11.7
Rated operational power(P _e)	380V/415V	kW	3.2	4	4	4	5.5	7.5
	660V/690V	kW	3	4	4	5.5	7	10
AC-4 (Rated power and rated current for 200000 life cycles)								
Rated operational Current(I _e)	380V/415V	A	2.7	4.5	4.5	4.5	5.6	8.5
	660V/690V	A	2.1	2.8	2.8	4.5	5	8
Rated operational power(P _e)	380V/415V	kW	1.5	2.2	2.2	2.2	2.6	4
	660V/690V	kW	1.2	2.2	2.2	3.6	4.4	6.5

Main circuit technical parameters

Main circuit technical parameters											
Contactor type			HC6-25	HC6-32	HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100
											
Conventional free air thermal current (I _{th}) ≤140°F (≤60°C)		A	40	50	50	60	70	80	100	100	125
AC-1											
Rated operational current(I _e)	≤104°F (≤40°C)	A	40	50	50	60	70	80	100	100	125
	≤140°F (≤60°C)	A	40	50	50	60	70	80	100	100	125
Rated operational power(P _e)	220/240V	kW	14	18	18	21	29	29	45	45	45
	380/415V	kW	25	31	31	37	50	50	78	78	78
	500V	kW	33	41	41	49	65	65	102	102	102
	660/690V	kW	43	54	54	65	80	80	135	135	135
AC-3											
Rated operational current(I _e)	220V/240V	A	25	32	38	40	50	65	75	85	100
	380V/415V	A	25	32	38	40	50	65	75	85	100
	500V	A	18	22	22	34	39	42	64	78	78
	660V/690V	A	18	22	22	32	39	42	42	42	49
Rated operational power(P _e)	220V/240V	kW	5.5	7.5	9	11	15	18.5	22	22	25
	380V/415V	kW	11	15	18.5	18.5	25	30	37	37	45
	500V	kW	15	18.5	18.5	22	30	37	45	45	45
	660V/690V	kW	15	18.5	18.5	30	33	37	45	45	45
AC-4											
Rated operational Current(I _e)	380V/415V	A	25	32	32	40	50	65	75	85	100
	660V/690V	A	15	17.5	17.5	25	28	35	39	42	42
Rated operational power(P _e)	380V/415V	kW	11	15	15	18.5	22	30	32	37	45
	660V/690V	kW	11	15	15	22	26	33	37	42	42
AC-4 (Rated power and rated current for 200000 life cycles)											
Rated operational Current(I _e)	380V/415V	A	11.5	15	15	19	15	25	30	36	36
	660V/690V	A	10	12	12	14	17	20	21	27	27
Rated operational power(P _e)	380V/415V	kW	5.5	6	6	9.5	12.6	12.6	15.1	17.9	17.9
	660V/690V	kW	8.5	10	10	12	14	17	18.5	25	25

Contactor type			HC6-115	HC6-150	HC6-185	HC6 -225
						
Conventional free air thermal current (Ith) ≤140°F (≤ 60°C)		A	200	250	275	315
AC-1						
Rated operational current (Ie)	≤104°F (≤40°C)	A	200	250	275	315
Rated operational power (Pe)	380/415V	kW	120	140	165	175
	660/690V	kW	205	240	280	300
AC-3						
Rated operational current (Ie)	380V/400V	A	115	150	185	225
	660V/690V	A	115	150	170	225
Rated operational power (Pe)	220V/240V	kW	30	40	55	63
	380V/400V	kW	55	75	90	110
	415V	kW	59	80	100	110
	440V	kW	59	80	100	110
	500V	kW	75	90	110	129
	660V/690V	kW	80	100	110	129
	1000	kW	75	90	100	100
AC-4						
Rated operational Current (Ie)	230V	A	61	72	96	96
	380V/400V	A	54	68	81	96
	660V/690V	A	48	57	65	85
Rated operational power (Pe)	230V	kW	18.5	22	30	30
	380V/400V	kW	30	37	45	55
	660V/690V	kW	50	55	63	80
	1000V	kW	50	55	63	63
Short-time withstand current ≤40°C (≤104°F)	10s	A	1100	1200	1500	1800
	30s	A	640	700	920	1000
	1min	A	520	600	740	850
	3min	A	400	450	500	560
	10min	A	320	350	400	440

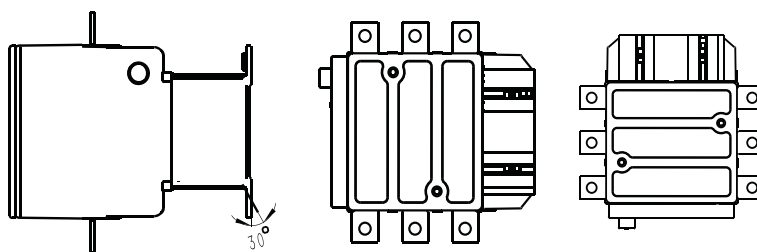
Contactor type			HC6-265	HC6-330	HC6-400	HC6-500	HC6-630	HC6-800
								
Conventional free air thermal current (Ith) ≤140°F (≤ 60°C)	A		350	400	500	700	1000	1000
AC-1								
Rated operational current (Ie)	≤104°F (≤40 °C)	A	350	400	500	700	1000	1000
Rated operational power (Pe)	380/415V	kW	210	250	300	430	600	600
	660/690V	kW	370	400	530	740	1000	1000
AC-3								
Rated operational current (Ie)	380V/400V	A	265	330	400	500	630	800
	660V/690V	A	265	280	400	450	560	650
Rated operational power (Pe)	220V/240V	kW	75	100	110	147	200	250
	380V/400V	kW	132	160	200	250	335	450
	415V	kW	140	180	220	280	375	450
	440V	kW	140	200	250	295	400	450
	500V	kW	160	200	257	335	400	450
	660V/690V	kW	160	220	280	335	450	475
	1000	kW	147	160	185	335	450	450
AC-4								
Rated operational Current (Ie)	230V	A	115	130	140	169	230	230
	380V/400V	A	117	125	150	175	225	242
	660V/690V	A	105	115	135	150	200	215
Rated operational power (Pe)	230V	kW	37	40	45	55	75	75
	380V/400V	kW	63	75	90	100	110	132
	660V/690V	kW	100	110	132	150	185	200
	1000V	kW	80	80	110	110	150	200
Short-time withstand current ≤40°C (≤104°F)	10s	A	2200	2650	3600	4200	5050	5500
	30s	A	1230	1800	2400	3200	4400	4600
	1min	A	950	1300	1700	2400	3400	3600
	3min	A	620	900	1200	1500	2200	2600
	10min	A	480	750	1000	1200	1600	1700

Contactor type			HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18
Poles			3,4			3		
Rated insulation voltage (Ui)	V		690			690		
Rated impulse (withstand) voltage (Uimp)	kV		6			6		
Rated making capacity			Making Current: 10×Ie (AC-3), 12×Ie (AC-4)					
Rated breaking capacity			Breaking Current: 8×Ie (AC-3), 10×Ie (AC-4)					
Electrical durability ×10 ⁴	AC-3	Ops	120	120	120	120	120	120
	AC-4	Ops	Characteristic curves see Page 32					
Operation frequency	AC-3	Ops/h	1200					
	AC-4	Ops/h	300					
Mechanical durability ×10 ⁴	Ops		1500	1500	1500	1200	1200	1200
Operation frequency	Ops/h		3600					
Matching fuse type			NT00-20	NT00-20	NT00-20	NT00-20	NT00-20	NT00-25
Overload relay type			HCR6-12M			HCR6-18		
Auxiliary contact composition			1 NO or 1 NC			1 NO + 1 NC		
Ambient temperature			-13 ~ +140°F (-25 ~ +60°C)					
Installation position								
Enclosure Protection Degree			IP20			IP20		
Impact resistance 1/2 sine wave = 11 ms	Open	g	10			10		
	Close	g	15			15		
Seismic performance 5-300 Hz	Open	g	2			2		
	Close	g	4			4		
Weight	g		181			350		

Contactor type			HC6-25	HC6-32	HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100
Poles			3			3			3		
Rated insulation voltage (Ui)	V		690			690			690		
Rated impulse (withstand) voltage (Uimp)	kV		8			8			8		
Rated making capacity			Making Current: 10×Ie (AC-3), 12×Ie (AC-4)								
Rated breaking capacity			Breaking Current: 8×Ie (AC-3), 10×Ie (AC-4)								
Electrical durability ×10 ⁴	AC-3	Ops	120	120	120	100	100	100	80	80	80
	AC-4	Ops	Characteristic curves see Page 32								
Operation frequency	AC-3	Ops/h	1200			600					
	AC-4	Ops/h	300			150					
Mechanical durability ×10 ⁴		Ops	1000	1000	1000	1000	1000	1000	1000	1000	1000
Operation frequency		Ops/h	3600								
Matching fuse type			NT00-40	NT00-50	NT00-50	NT00-63	NT00-80	NT00-80	NT00-100	NT00-100	NT00-125
Overload relay type			HCR6-38			HCR6-65			HCR6-100		
Auxiliary contact composition			-			-			-		
Ambient temperature			-13 ~ +140°F (-25 ~ +60°C)								
Installation position											
Enclosure Protection Degree			IP20			IP00			IP00		
Impact resistance 1/2 sine wave = 11 ms	Open	g	10			10			10		
	Close	g	15			15			15		
Seismic performance 5-300 Hz	Open	g	2			2			2		
	Close	g	4			4			4		
Weight		g	436			772			1380		

Contactor type			HC6-115	HC6-150	HC6-185	HC6-225	HC6-265
Poles			3	3	3	3	3
Rated insulation voltage (Ui)		V	1000				
Rated impulse (withstand) voltage (Uimp)		kV	8				
Rated making capacity			Making Current: 10×Ie (AC-3), 12×Ie (AC-4)				
Rated breaking capacity			Breaking Current: 8×Ie (AC-3), 10×Ie (AC-4)				
Auxiliary contact composition			-				
Maximum operating frequency		Ops/h	1200				600
Electrical durability ×10 ⁴	AC-3	Ops	85	80	50	50	50
Mechanical durability ×10 ⁴		Ops	100	100	100	100	100
Average impedance per pole at Ith&50Hz		mΩ	0.37	0.35	0.33	0.32	0.3
Matching fuse type			RT16-1	RT16-1	RT16-2	RT16-2	RT16-2
Fuse current		A	200	250	315	315	400

Installation position(No Derating)

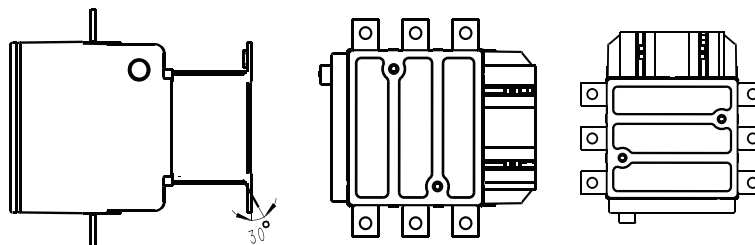


Enclosure Protection Degree			IP00				
Impact resistance 1/2 sine wave = 11 ms	Open	g	9	9	7	7	6
	Close	g	15	15	15	15	15
Seismic performance 5-150Hz	Open	g	2	2	2	2	2
	Close	g	6	6	5	5	5
Weight		kg	3.6	3.7	4.6	4.7	7.1

Connections - terminals			HC6-115	HC6-150	HC6-185	HC6-225	HC6-265	
Main circuit	Cable	mm ²	95	120	150	185	240	
	Tightening torque		N·m	10	18	18	35	35
Control circuit	Cable	Flexible mm ²	1 piece	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5
		Solid mm ²	1 piece	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4
		Solid/stranded	AWG	16-14				
	Tightening torque		N·m	1.2				

Contactor type			HC6-330	HC6-400	HC6-500	HC6-630	HC6-800
Poles			3	3	3	3	3
Rated insulation voltage (Ui)	V	1000					
Rated impulse (withstand) voltage (Uimp)	kV	8					
Rated making capacity			Making Current: 10×Ie (AC-3), 12×Ie (AC-4)				
Rated breaking capacity			Breaking Current: 8×Ie (AC-3), 10×Ie (AC-4)				
Auxiliary contact composition			-				
Maximum operating frequency	Ops/h	600			300		
Electrical durability ×10 ⁴	AC-3	Ops	50	30	30	20	15
Mechanical durability ×10 ⁴		Ops	100	100	100	100	100
Average impedance per pole at Ith&50Hz		mΩ	0.28	0.26	0.18	0.12	0.12
Matching fuse type			RT16-3	RT16-3	RT16-3	RT16-3	RT16-4
Fuse current	A		500	500	500	630	800

Installation position(No Derating)



Enclosure Protection Degree

IP00

Impact resistance 1/2 sine wave = 11 ms	Open	g	6	6	9	6	6
	Close	g	15	15	15	15	15
Seismic performance 5-150Hz	Open	g	2	1.5	2	2	2
	Close	g	5	5	4	4	4
Weight		kg	8.5	8.5	10.8	17.4	17.5

Connections - terminals

			HC6-330	HC6-400	HC6-500	HC6-630	HC6-800	
Main circuit	Cable	mm ²	240	30*5 2 Pieces	40*5 2 Pieces	60*5 2 Pieces	60*5 2 Pieces	
	Tightening torque		N·m	35	35	35	58	58
Control circuit	Cable	Flexible mm ²	1 piece	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5
		Solid mm ²	1 piece	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4
		Solid/stranded	AWG	16-14				
	Tightening torque		N·m	1.2				

Contactor type				HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18
General use current ≤140°F (≤60°C)		A		20	20	20	25	25	32
50/60Hz Motor rated power	Single-phase	110-120V	HP	1/2	1/2	3/4	1/3	1	1
		220-240V	HP	1	1-1/2	2	1	2	3
	Three-phase	200-208V	HP	1-1/2	2	3	2	3	5
		220-240V	HP	1-1/2	2	3	3	3	5
		440-480V	HP	3	5	7-1/2	5	7.5	10
		550-600V	HP	3	5	7-1/2	7-1/2	10	15

Contactor type				HC6-75	HC6-85	HC6-100	HC6-115	HC6-150	HC6-185
General use current ≤140°F (≤60°C)		A		100	100	125	200	250	275
50/60Hz Motor rated power	Single-phase	110-120V	HP	5	5	7.5	15	/	/
		220-240V	HP	15	15	15	25	30	40
	Three-phase	200-208V	HP	25	25	30	40	50	60
		220-240V	HP	30	30	30	50	60	75
		440-480V	HP	50	60	60	100	125	150
		550-600V	HP	60	60	60	125	150	200

Short-circuit protection rating maximum fuse

Fuse type	Short circuit current		HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18	HC6-25
Class J	100kA, 600V	A	20	20	20	45	45	60	80
RK5	5kA 600V	A	20	20	20	45	45	60	80

Fuse type	Short circuit current		HC6-115	HC6-150	HC6-185	HC6-225
Class K5	600V 10kA	A	400	400	400	-
Class RK5	600V 10kA	A	-	-	-	500
Class L	600V 18kA	A	-	-	-	-

Contactor type				HC6-25	HC6-32	HC6-38	HC6-40	HC6-50	HC6-65
General use current ≤140°F (≤60 °C)		A		40	50	50	60	70	80
50/60Hz Motor rated power	Single- phase	110-120V	HP	2	2	2	3	3	5
		220-240V	HP	3	5	5	5	7.5	10
	Three- phase	200-208V	HP	7-1/2	10	10	10	15	20
		220-240V	HP	7.5	10	10	10	15	20
		440-480V	HP	15	20	20	30	40	40
		550-600V	HP	20	25	25	30	40	50

Contactor type				HC6-225	HC6-265	HC6-330	HC6-400	HC6-500	HC6-630	HC6-800
General use current ≤140° F (≤ 60° C)		A		315	350	400	500	700	1000	1000
50/60Hz Motor rated power	Single- phase	110-120V	HP	/	/	/	/	/	/	/
		220-240V	HP	/	/	/	/	/	/	/
	Three- phase	200-208V	HP	60	75	100	125	150	/	/
		220-240V	HP	75	100	125	150	200	250	300
		440-480V	HP	200	200	250	300	400	500	600
		550-600V	HP	250	250	300	400	500	600	700

Short-circuit protection rating maximum fuse										
Fuse type	Short circuit current		HC6-32	HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100
Class J	100kA, 600V	A	80	80	125	150	150	200	200	200
RK5	5kA 600V	A	80	80	125	150	150	200	200	200

Fuse type	Short circuit current		HC6-265	HC6-330	HC6-400	HC6-500
Class K5	600V 10kA	A	-	-	-	-
Class RK5	600V 10kA	A	-	-	-	-
Class L	600V 18kA	A	800	800	1000	1200

Control circuit characteristic











Contactor type				HC6-06M... 12M	HC6-09...18	HC6-25...38	HC6-40...65	HC6-75...100
Control circuit voltage			V	24, 36, 42, 48, 110, 120, 127, 208, 220, 277, 230, 240 380, 400, 415, 480, 600, 50Hz, 50/60Hz				
Voltage range		Pick-up		(75%-120%) Us	(75%-120%) Us	(75%-120%) Us	(75%-120%) Us	(75%-120%) Us
		Drop-out		(20%-65%) Us	(20%-65%) Us	(20%-65%) Us	(20%-65%) Us	(20%-65%) Us
Average power consumption 50/60Hz Coil	50Hz	Pick-up	VA	70	70	106	153	245
		Sealing	VA	7	8	10	13	26
	60Hz	Pick-up	VA	70	70	95	136	245
		Sealing	VA	7.5	7.5	8	10	26
Average power consumption 50Hz Coil	50Hz	Pick-up	VA	70	70	106	153	245
		Sealing	VA	7	8	10	13	26
Operating time	Closing delay		ms	10-20	12-24	14-26	20-26	20-35
	Opening delay		ms	4-18	5-18	4-19	8-12	6-20
Current heat loss	AC		W	1-3	1-3	1-3	4-8	6-10
Control circuit voltage			V	24-60V DC/AC 50/60Hz, 60-250V DC/AC 50/60Hz				
Voltage Range		Pick-up	V	/	70%-110%	70%-110%	70%-110%	70%-110%
		Drop-out	V	/	20%-60%	20%-60%	20%-60%	20%-60%
Average power consumption	50Hz	Pick-up	VA	/	≤20	≤20	≤40	≤40
		Sealing	VA	/	≤4	≤4	≤5	≤5
	60Hz	Pick-up	VA	/	≤20	≤20	≤40	≤40
		Sealing	VA	/	≤4	≤4	≤5	≤5
	DC	Pick-up	W	/	≤60	≤70	≤200	≤200
		Sealing	W	/	≤3	≤4	≤5	≤5
Operating time	Closing delay		ms	/	≤100	≤100	≤100	≤120
	Opening delay		ms	/	≤30	≤30	≤30	≤30

Contactor model			HC6-115...150	HC6-185...225	HC6-265...330	HC6-400	HC6-500	HC6-630...800
Control circuit	Rated control voltage Us	V	AC:24V,48V,110V,220V,380V,415V; DC:24V,48V,110V,220V			AC: 48V,110V,220V,380V,415V; DC:48V,110V,220V		
	Pick-up voltage	V	(85%-110%)Us					
	Drop-out voltage	V	AC:(20%-60%)Us; DC:(10%-60%)Us					
AC single coil 50Hz	Pick-up power consumption	VA	550	805	/	/	/	/
	Sealing power consumption	VA	51	61	/	/	/	/
	Closing delay	ms	23 – 35	23 – 35	/	/	/	/
	Opening delay	ms	5 – 15	7 – 15	/	/	/	/
AC double coil 50/60Hz	Pick up power consumption	VA	855	1180	700	1150	1150	1730
	Sealing	VA	8.1	10.9	10	18	20	25
	Closing delay	ms	≤ 35	≤ 35	45 – 65	40 – 75	40 – 75	40 – 80
	Opening delay	ms	≤ 130	≤ 130	100 – 170	100 – 170	100 – 170	100 – 200
DC coil	Pick up power consumption	W	665	902	803	1140	1220	1920
	Sealing power consumption	W	4.9	5.1	4.6	7.5	8	12.5
	Closing delay	ms	30 – 40	30 – 40	40 – 50	50 – 65	50 – 65	60 – 70
	Opening delay	ms	30 – 50	30 – 50	40 – 65	45 – 65	45 – 65	40 – 50











Contactor auxiliary contact technical parameters

Item.			Technical data	
Rated operational voltage		V	690	
Rated insulation voltage	IEC 60947-1 GB/T 14048.5	V	690	
	UL, CSA	V	600	
Conventional free air thermal current	Ambient temperature ≤140°F (60°C)	A	10	
Rated operational current IEC 60947-5-1 GB/T 14048.1	AC-15			
		24V	A	6
		120V	A	6
		230/240V	A	4
		380/415V	A	3
		600V	A	1
	DC-13			
		24V	A	6
		125V	A	0.55
		220V	A	0.31
	250V	A	0.27	
Operational frequency		Hz	25 - 400	
Min switching capacity λ=10	U min	V	17	
	I min	mA	5	
Short circuit protection	IEC 60947-5-1		gG Fuse: 10A	
Rated making capacity	IEC 60947-5-1, I rms	A	AC:140, DC:250	
Short time withstand current	Allowable duration	1 s	A	100
		500 ms	A	120
		100 ms	A	140
Insulation resistance		MΩ	> 10	

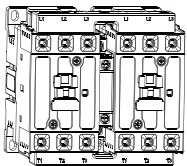
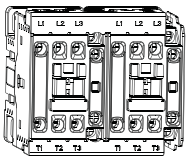
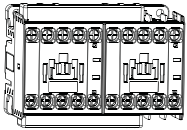
Connections - terminals

Contactor Type			HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18	HC6-25	HC6-32	
Main circuit		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-6	1-6	1-6	1.5-10	1.5-10
		2 pieces		1-1.5	1-1.5	1-1.5	1-6	1-6	1-6	1.5-6	1.5-6
		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-6	1-6	1-6	2.5-10	2.5-10
		2 pieces		1-2.5	1-2.5	1-2.5	1-4	1-4	1.5-6	2.5-10	2.5-10
		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-6	1-6	1-6	2.5-10	2.5-10
		2 pieces		1-2.5	1-2.5	1-2.5	1-6	1-6	1-6	2.5-10	2.5-10
		Max	mm	-	-	-	-	-	-	-	-
		I	mm	3.6	3.6	3.6	3.6	3.6	3.6	4.2	4.2
		L		7.5	7.5	7.5	8.8	8.8	8.8	12	12
		Max	mm	-	-	-	-	-	-	-	-
	Solid/ Stranded		AWG	18-14			18-10			16-8	
	Connection screw/bolt		mm	M3.5			M3.5			M4	
	Tightening torque		N·m	1.2			1.2			2.5	
	Control circuit		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-4	1-4	1-4	1-4
2 pieces			1-1.5		1-1.5	1-1.5	1-4	1-4	1-4	1-4	1-4
		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-4	1-4	1-4	1-4	1-4
		2 pieces		1-2.5	1-2.5	1-2.5	1-4	1-4	1-4	1-4	1-4
		1 piece	mm ²	1-2.5	1-2.5	1-2.5	1-4	1-4	1-4	1-4	1-4
		2 pieces		1-2.5	1-2.5	1-2.5	1-4	1-4	1-4	1-4	1-4
		I	mm	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		L		7.5	7.5	7.5	7.8	7.8	7.8	7.8	7.8
Solid/ stranded		AWG	18-14			18-14			18-14		
Connection screw/bolt		mm	M3.5			M3.5			M3.5		
Tightening torque		N·m	1.2			1.2			1.2		

Connections - terminals

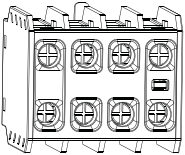
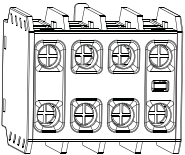
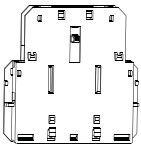
Contactor Type			HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100	
Main circuit		1 piece	mm ²	1.5-10	1-35	1-35	1-35	10-50	10-50	10-50
		2 pieces		1.5-6	1-25	1-25	1-25	6-35	6-35	6-35
		1 piece	mm ²	2.5-10	1-35	1-35	1-35	10-50	10-50	10-50
		2 pieces		2.5-10	1-25	1-25	1-25	6-35	6-35	6-35
		1 piece	mm ²	2.5-10	1-35	1-35	1-35	10-50	10-50	10-50
		2 pieces		2.5-10	1-25	1-25	1-25	6-35	6-35	6-35
		Max	mm	-	9	9	9	10	10	10
		I	mm	4.2	-	-	-	-	-	-
		L		12	-	-	-	-	-	-
		Max	mm	-	9	9	9	10	10	10
Solid/ Stranded		AWG	16-8	16-2			10-0			
Connection screw/bolt		mm	M4	M8(Hexagon socket bolt)			M8(Hexagon socket bolt)			
Tightening torque		N·m	2.5	6			6			
Control circuit		1 piece	mm ²	1-4	1-4	1-4	1-4	1-4	1-4	1-4
		2 pieces		1-4	1-4	1-4	1-4	1-4	1-4	1-4
		1 piece	mm ²	1-4	1-4	1-4	1-4	1-4	1-4	1-4
		2 pieces		1-4	1-4	1-4	1-4	1-4	1-4	1-4
		1 piece	mm ²	1-4	1-4	1-4	1-4	1-4	1-4	1-4
		2 pieces		1-4	1-4	1-4	1-4	1-4	1-4	1-4
		I	mm	3.6	3.6	3.6	3.6	3.6	3.6	3.6
		L		7.8	7.8	7.8	7.8	7.8	7.8	7.8
	Solid/ stranded		AWG	18-14	18-14			18-14		
	Connection screw/bolt		mm	M3.5	M3.5			M3.5		
Tightening torque		N·m	1.2	1.2			1.2			

Reversing Contactor With Mechanical interlock and electrical interlock

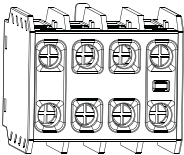
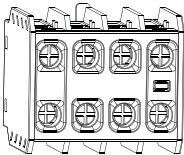
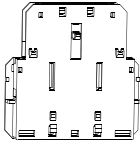


Standard power specifications for AC-3 50-60Hz three-phase motors $\theta \leq 140^{\circ}\text{F}$ ($\theta \leq 60^{\circ}\text{C}$)				Rated operational current of AC-3 415V	Auxiliary contact composition		Type
220V 240V	380V 415V	500V	660V 690V		NO	NC	
kW	kW	kW	kW	A			
1.5	2.2	3	3	6	1	1	HC6-06M/N
2.2	4	4	4	9	1	1	HC6-09M/N
3	5.5	5	5	12	1	1	HC6-12M/N
2.2	4	5.5	5.5	9	1	1	HC6-09/N
3	5.5	7.5	7.5	12	1	1	HC6-12/N
4	7.5	10	10	18	1	1	HC6-18/N
5.5	11	15	15	25	/	/	HC6-25/N
7.5	15	18.5	18.5	32	/	/	HC6-32/N
9	18.5	18.5	18.5	38	/	/	HC6-38/N
11	18.5	22	22	40	/	/	HC6-40/N
15	22	30	30	50	/	/	HC6-50/N
18.5	30	33	33	65	/	/	HC6-65/N
22	37	37	37	75	/	/	HC6-75/N
25	45	55	45	85	/	/	HC6-85/N
30	45	55	55	100	/	/	HC6-100/N

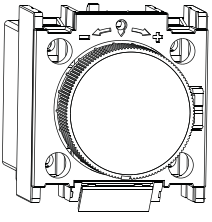
Auxiliary contacts

	Mounting Position	Auxiliary contact composition	For contactor	Accessories type
  	Top mounting	2NO 1NO+1NC 2NC 4NO 3NO+1NC 2NO+2NC 1NO+3NC 4NC	HC6-06M HC6-09M HC6-12M	HCAU-2M20 HCAU-2M11 HCAU-2M02 HCAU-4M40 HCAU-4M31 HCAU-4M22 HCAU-4M13 HCAU-4M04
	Top mounting	2NO 1NO+1NC 2NC 4NO 3NO+1NC 2NO+2NC 1NO+3NC 4NC	HC6-09~18 HC6-25~38 HC6-40~65 HC6-75~100 HC6-115~800	HCAU-2N20 HCAU-2N11 HCAU-2N02 HCAU-4N40 HCAU-4N31 HCAU-4N22 HCAU-4N13 HCAU-4N04
	Side mounting	1NO+1NC	HC6-09~18 HC6-25~38 HC6-40~65 HC6-75~100	HCAU-2S11

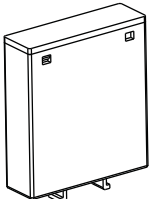
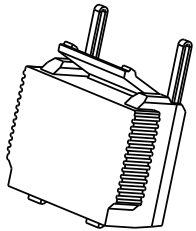
Auxiliary contact and contactor adaptation table

			
	HCAU-2N	HCAU-4N	HCAU-2S
HC6-09	1X	/	1X
HC6-12	/	1X	1X
HC6-18	/	/	1X
HC6-25	1X	/	1X
HC6-32	/	1X	1X
HC6-38	/	/	2X
HC6-40	1X	/	1X
HC6-50	/	1X	1X
HC6-65	/	/	2X
HC6-75	1X	/	1X
HC6-85	/	1X	1X
HC6-100	/	/	2X
HC6-115	1X	1X	/
.....	2X	/	/
HC6-800	/	2X	/

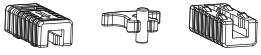
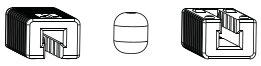
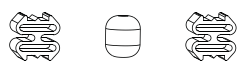
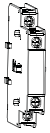
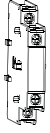
Time delay module

	Contact type	Delay type	Delay range (s)	For coactuator	Accessories type
	1NO+1NC	Power-on delay	0.1 – 3	HC6-09 HC6-12 HC6-18 HC6-25 HC6-32 HC6-38 HC6-40 HC6-50 HC6-65 HC6-75 HC6-85	HCAD-T0
			0.1 – 30	HC6-100 HC6-115 HC6-150 HC6-185 HC6-225 HC6-265 HC6-330 HC6-400 HC6-500 HC6-630 HC6-800	HCAD-T2
			10 – 180		HCAD-T4
		Power-off delay	0.1 – 3		HCAD-D0
			0.1 – 30		HCAD-D2
			10 – 180		HCAD-D4

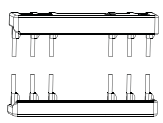
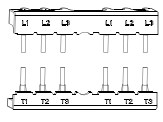
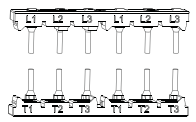
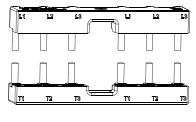
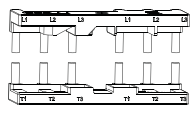
Suppressor

	Accessories	Operational voltage	For contactor	Accessories type
	RC	24-48V 48-127V 127-240V 240-400V 400-600V	HC6-06M HC6-09M HC6-12M	HCAS-1M HCAS-2M HCAS-3M HCAS-4M HCAS-5M
	RV	24-48V 48-127V 127-240V 240-400V 400-600V		HCAS-6M HCAS-7M HCAS-8M HCAS-9M HCAS-10M
	RC	24-48V 48-127V 127-240V 240-400V 400-600V	HC6-09 HC6-12 HC6-18 HC6-25 HC6-32 HC6-38 HC6-40 HC6-50 HC6-65 HC6-75 HC6-85 HC6-100	HCAS-1 HCAS-2 HCAS-3 HCAS-4 HCAS-5
	RV	24-48V 48-127V 127-240V 240-400V 400-600V	HCAS-6 HCAS-7 HCAS-8 HCAS-9 HCAS-10	

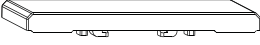
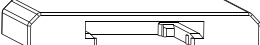
Mechanical interlock

	Accessories	For contactor	Remark
	HCAI-1	HC6-06M HC6-09M HC6-12M	For mechanically linking contactors in combinations 0mm distance between contactors.
	HCAI-2	HC6-09 HC6-12 HC6-18	
	HCAI-3	HC6-25 HC6-32 HC6-38	
	HCAI-4	HC6-40 HC6-50 HC6-65 HC6-75 HC6-85 HC6-100	For mechanically linking contactors in combinations 12.5mm distance between contactors.
	HCAI-5	HC6-40 HC6-50 HC6-65 HC6-75 HC6-85 HC6-100	For mechanically linking contactors in combinations 12.5mm distance between contactors. With 1NO+1NC auxiliary contact

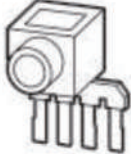
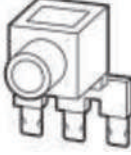
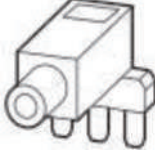
Kits for reversing contactors

	Accessories	For contactor	
	HCAN-1	HC6-06M HC6-09M HC6-12M	
	HCAN-2	HC6-09 HC6-12 HC6-18	
	HCAN-3	HC6-25 HC6-32 HC6-38	
	HCAN-4	HC6-40 HC6-50 HC6-65	
	HCAN-5	HC6-75 HC6-85 HC6-100	

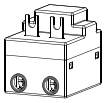
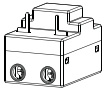
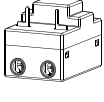
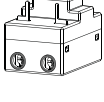
Dust cover

	Accessories	For contactor
	HCAC-1	HC6-06M HC6-09M HC6-12M
	HCAC-2	HC6-09 HC6-12 HC6-18 HC6-25 HC6-32 HC6-38 HC6-40 HC6-50 HC6-65 HC6-75 HC6-85 HC6-100





Paralleling links for main contacts

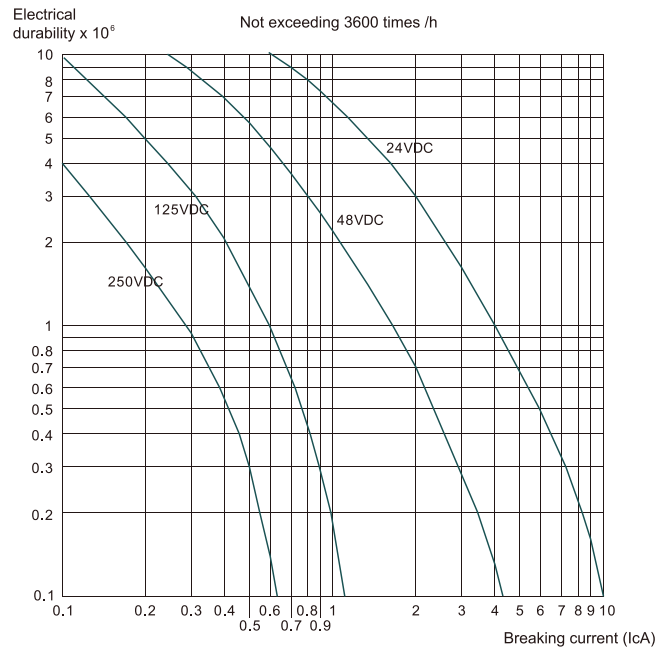
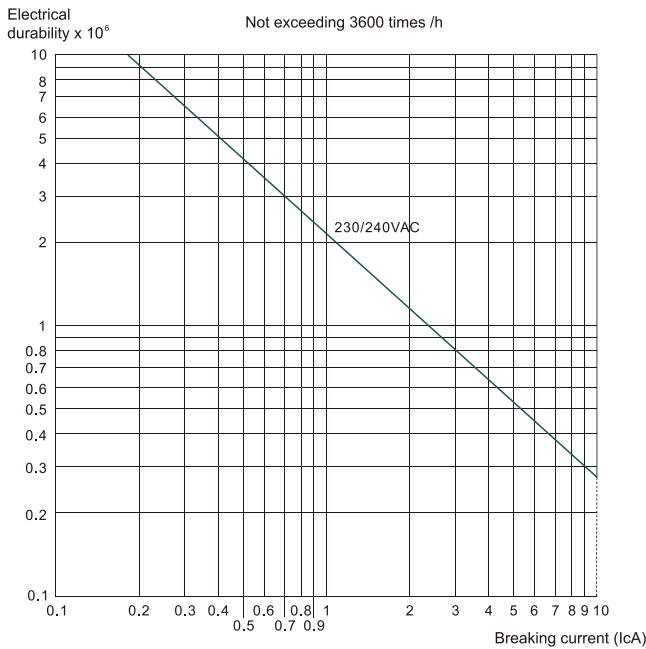
	Accessories	For contactor
	HCAP-1	HC6-06M HC6-09M HC6-12M
	HCAP-2	HC6-09 HC6-12 HC6-18
	HCAP-3	HC6-25 HC6-32 HC6-38
	HCAP-4	HC6-40 HC6-50 HC6-65
	HCAP-5	HC6-75 HC6-85 HC6-100

Wide voltage coil control module

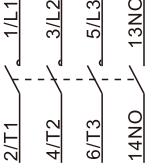
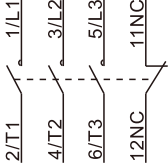
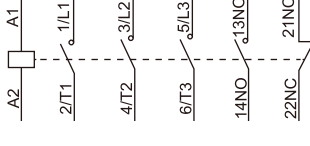
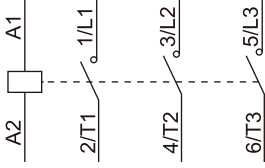
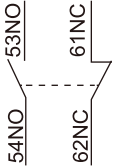
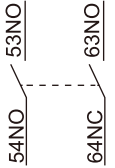
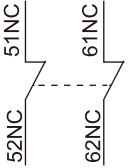
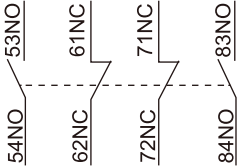
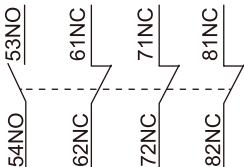
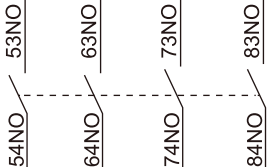
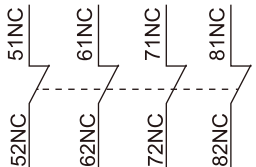
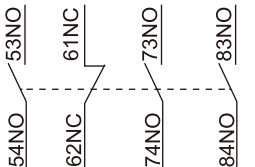
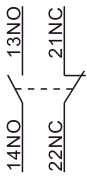
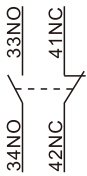
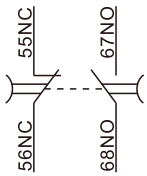
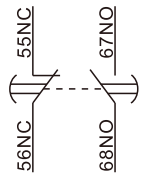
	Voltage range	Accessories type	For contactor	Contactor coil
	24-60VDC	HCAZ-1	HC6-09 HC6-12 HC6-18	24V 50Hz,50Hz/60Hz
	110V-250VDC	HCAZ-2	HC6-09 HC6-12 HC6-18	110V 50Hz,50Hz/60Hz
	24-60VDC	HCAZ-3	HC6-25 HC6-32 HC6-38	24V 50Hz,50Hz/60Hz
	110V-250VDC	HCAZ-4	HC6-25 HC6-32 HC6-38	110V 50Hz,50Hz/60Hz
	24-60VDC	HCAZ-5	HC6-40 HC6-50 HC6-65	24V 50Hz,50Hz/60Hz
	110V-250VDC	HCAZ-6	HC6-40 HC6-50 HC6-65	110V 50Hz,50Hz/60Hz
	24-60VDC	HCAZ-7	HC6-75 HC6-85 HC6-100	24V 50Hz,50Hz/60Hz
	110V-250VDC	HCAZ-8	HC6-75 HC6-85 HC6-100	110V 50Hz,50Hz/60Hz

Auxiliary contacts type			HCAU-2N	HCAU-4N	HCAU-2S	HCAU-2M	HCAU-4M	HCAI-5	HCAD...
Standard			IEC/EN 60947-5-1, GB/T 14048.5 UL 60947-4						
Product certification			UL, CSA, CCC, CB, CE						
Protective measures	IEC 60068		"TH"						
IP class			IP 20						
Ambient temperature around the equipment	Store		-60~+80°C (-76~+176°F)						
	Operation		-25~+60°C (-13~+140°F)						
	Allowable temperature for operation under U _c		-40~+70°C (-40~+158°F)						
Max operational altitude	No derating	m	2000						
Contact characteristics									
Number of contacts			2	4	2	2	4	2	2
Rated operational voltage	Max	Vac	690						
Rated insulation voltage	IEC 60947-5-1/ GB/T 14048.5	V	690						
	UL, CSA	V	600						
Conventional free air thermal current	Ambient temperature Z ≤60°C	A	10						
Rated operational current IEC 60947-5-1 GB/T 14048.1	AC-15								
	24V	A	6						
	120V	A	6						
	230/240V	A	4						
	380/415V	A	3						
	600V	A	1						
	DC-13								
	24V	A	6						
	125V	A	0.55						
	220V	A	0.31						
250V	A	0.27							
Operational frequency		Hz	25-400						
Min switching capacity	U min	V	17						
	I min	mA	5						
Short circuit protection	IEC 60947-5-1/ GB/T 14048.5	A	10						
Rated making capacity	IEC 60947-5-1, I rms	A	AC:140; DC:250						
Short time withstand current	Allowable duration	1 s	A	100					
		500 ms	A	120					
		100 ms	A	140					
Insulation resistance		MΩ	> 10						
Mechanical durability	million operations		30	30	30	30	30	5	5

Auxiliary contacts type			HCAU-2N	HCAU-4N	HCAU-2S	HCAU-2M	HCAU-4M	HCAI-5	HCAD...	
	1 piece	mm ²	1-2.5							
	2 pieces									
	1 piece	mm ²	1-2.5							
	2 pieces									
	1 piece	mm ²	1-2.5							
	2 pieces									
	I	mm							3.6	
	L									
Solid/ stranded		AWG	18-14							
Connection screw/bolt		mm	M3.5							
Tightening torque		N·m	1.2							



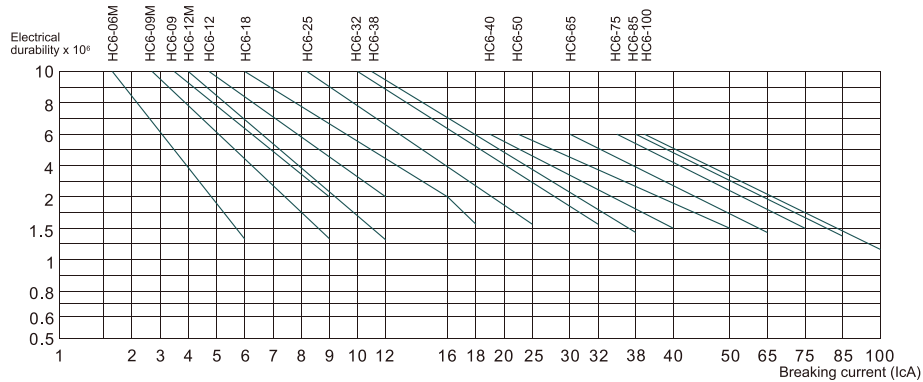
Wiring diagram

HC6-06~12M10	HC6-06~12M01	HC6-09~18	HC6-25~800
			
HCAU-2N11 HCAU-2M11	HCAU-2N20 HCAU-2M20	HCAU-2N02 HCAU-2M02	HCAU-4N22 HCAU-4M22
			
HCAU-4N13 HCAU-4M13	HCAU-4N40 HCAU-4M40	HCAU-4N04 HCAU-4M04	HCAU-4N31 HCAU-4M31
			
HCAU-2S	HCAI-5	HCAD-T...	HCAD-D...
			

Characteristic curves

HC6-06M – 100

AC-3 (Ue ≤ 415V)



The breaking current (Ic) of AC-3 is equal to the rated operational current (Ie) of the motor.

Normal AC induction motor

Electrical characteristics:

Make: Up to 6×rated motor current

Break: 1×rated motor current

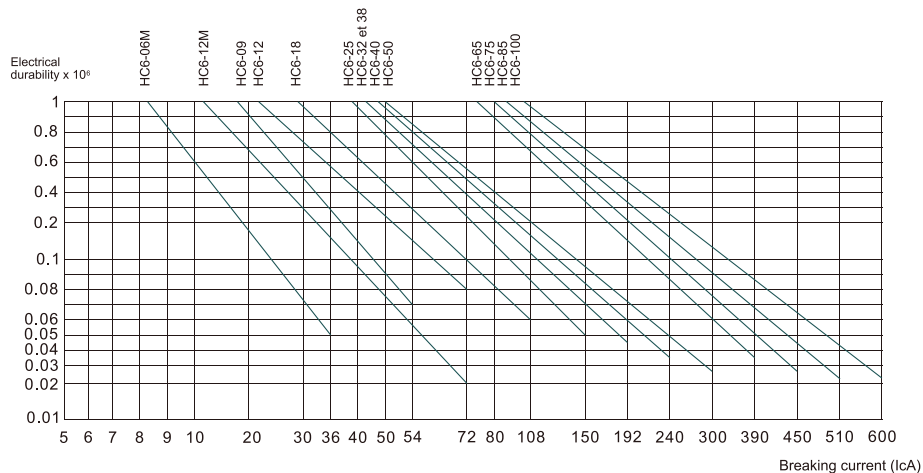
Utilization category

100% AC-3

Typical applications

- Compressors Lifts Mixers Hinged flaps Bucket-elevator
- Pumps Escalators Agitators Fan Conveyor belts Centrifuges
- General drives for manufacturing and processing machines

AC-4 (Ue ≤ 415V)



The breaking current (Ic) of AC-4 category is equal to 6 x Ie. (Ie = rated working current of motor).

Normal AC induction motor

Operating characteristics

Inching, plugging, reversing

Electrical characteristics

Make: Up to 6×rated motor current

Break: 6×rated motor current

Utilization category

100% AC-4

Typical applications

- Printing machines Wire-drawing Centrifuges
- Special drives for manufacturing and processing machines

Instructions for use in abnormal environment

Description of correction factor used in high altitude areas:

- The following table shows the correction factors for rated impulse withstand voltage and rated working current when the altitude is > 2000m and the rated working voltage remains unchanged.

Altitude m	2000	3000	4000
Derating factor of rated impulse withstand voltage	1	0.88	0.78
Derating factor of rated operational current	1	0.92	0.9

Instructions for use in abnormal temperature environment:

- +140°F~+167°F (+60°C~+75°C), the pull-in voltage range of AC contactor is (85% – 110%) Us, (70% – 120%) Us is the test result under normal temperature and +104°F (+40°C) cold state.

Ambient temperature °F (°C)	131 (55)	140 (60)	149 (65)	158 (70)
Derating factor	1	0.93	0.875	0.75

Description of volume reduction in corrosive environment:

- **Impact on metal parts:** chlorine Cl₂, nitrogen dioxide NO₂, hydrogen sulfide H₂S, sulfur dioxide SO₂.

Copper: the thickness of copper sulfide coating in chlorine environment will be twice that in normal environment, which is basically the same in the presence of nitrogen dioxide.

Silver: when the silver contact or silver coated contact is used in SO₂ and H₂S environment, the contact surface will be dark, so as to form silver sulfide coating, increase the contact temperature rise and cause contact damage. In humid environment, when Cl₂ and H₂S exist at the same time, the thickness of the coating will be increased by 7 times. If H₂S and NO₂ exist at the same time, the thickness of silver sulfide coating increases by 20 times.

- **It shall be considered during model selection**

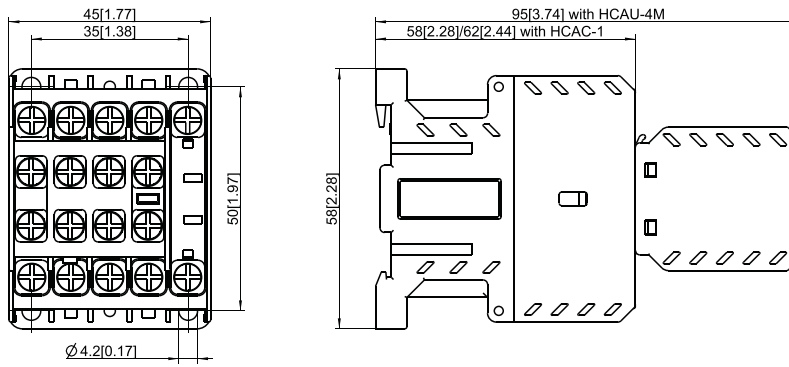
In oil refining, iron and steel, papermaking, artificial fiber (nylon) industries, or industries that generally use sulfur, the equipment used will appear vulcanization, which is also called "oxidation" in the industrial industry. Installing the equipment in the machine room can not ensure that it will not be oxidized. In order to ensure that the air pressure in the machine room is slightly higher than the atmospheric pressure, the air inlet is generally short, which does reduce the external pollution to a certain extent. However, after 5 to 6 years of operation, the equipment inevitably produces corrosion and oxidation. Therefore, in the working environment with corrosive gas, the equipment needs to be reduced. The reduction factor is the rated value multiplied by 0.6 (up to 0.8), which can reduce the rate of accelerated oxidation due to temperature rise.

- When poles are used in parallel, considering the distribution of long-term unstable current, the rated current of parallel poles needs to be corrected, as shown in the table below.

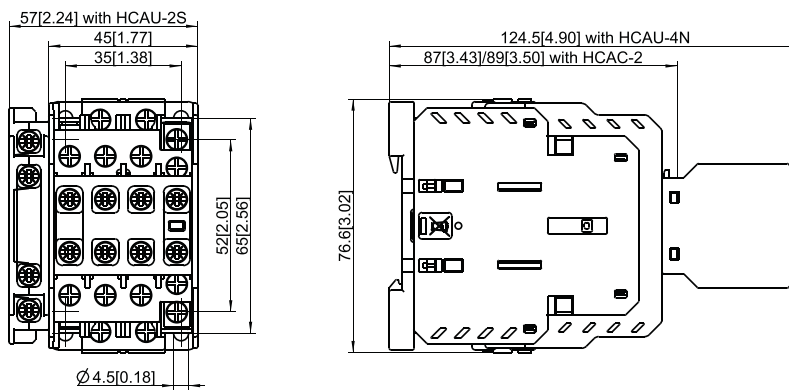
Parallel series	2	3	4
Derating factor	1.6	2.25	2.8

Outline and installation dimensions mm[inch]

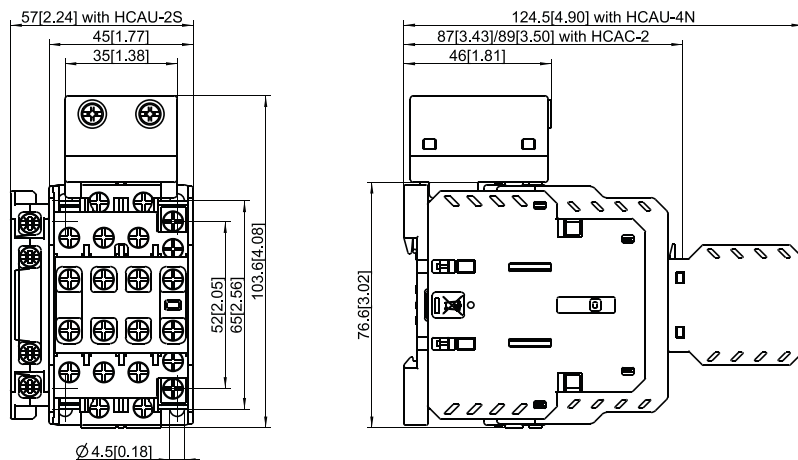
HC6-06M – 12M



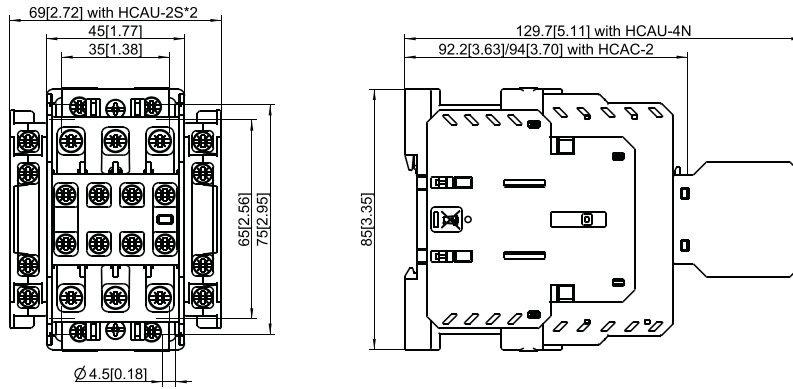
HC6-09~18(AC Coil)



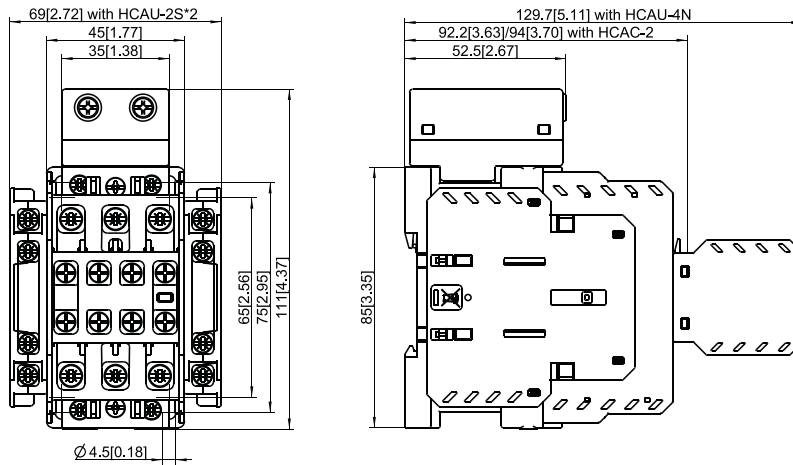
HC6-09~18(DC Coil)



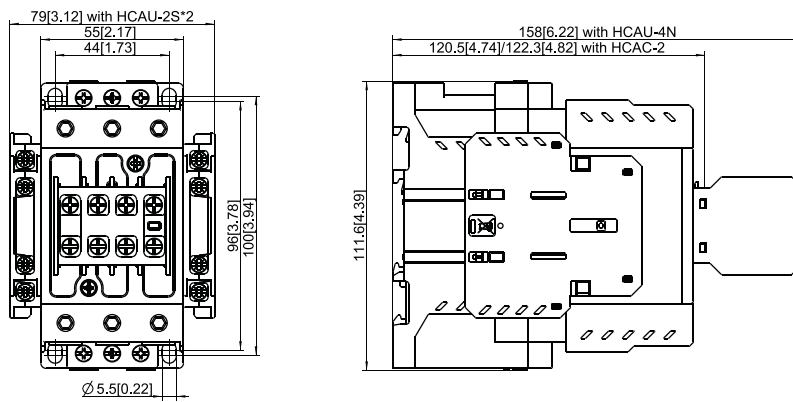
HC6-25~38(AC Coil)



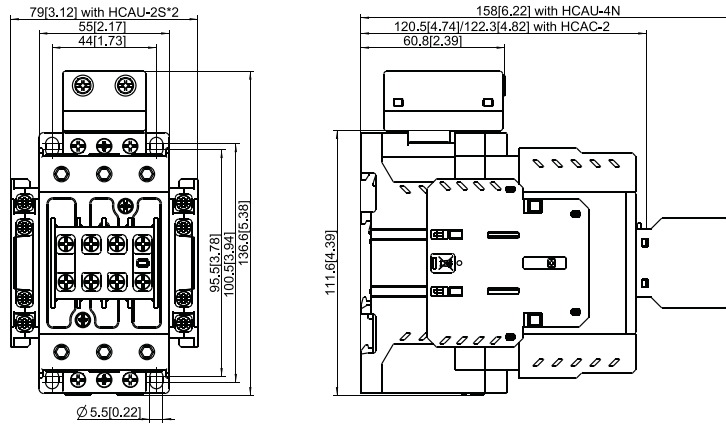
HC6-25~38(DC Coil)



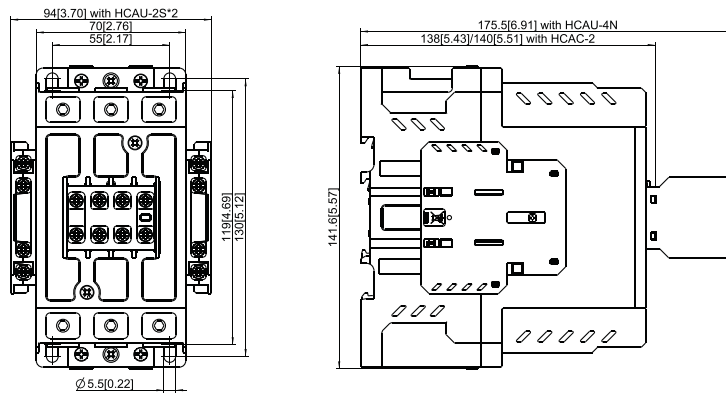
HC6-40~65(AC Coil)



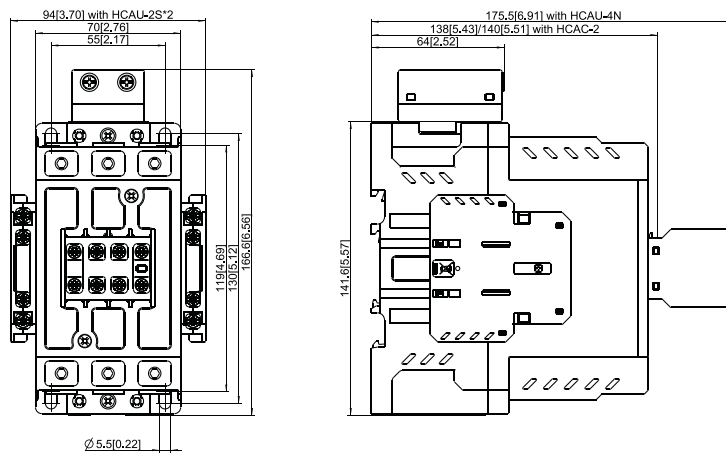
HC6-40~65(DC Coil)



HC6-75~100(AC Coil)

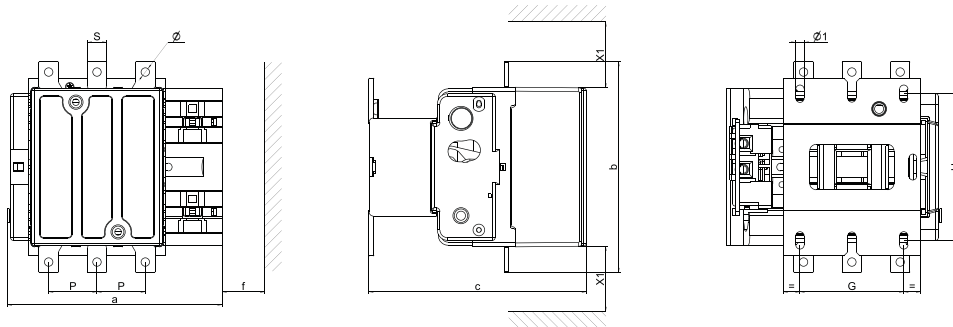


HC6-75~100(DC Coil)



Outline and installation dimensions mm[inch]

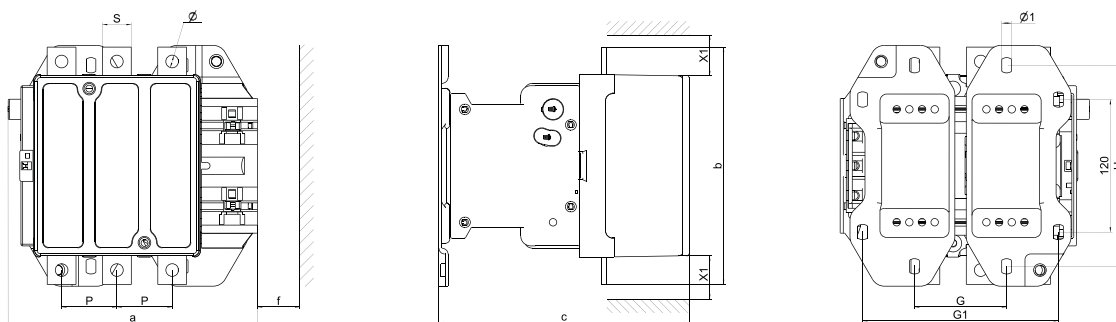
HC6-115, 150, 185, 225, 265, 330



HC6	a	P	S	φ	f	b	c	H	φ1	G1	X1	
											≤500V	>500V
115	163.5[6.44]	37[1.46]	15[0.59]	M6	131[5.16]	162[6.38]	171[6.73]	106-120[4.17-4.72]	6.5[0.26]	80[3.15]	10[0.39]	15[0.59]
150	163.5[6.44]	40[1.57]	20[0.79]	M8	131[5.16]	170[6.69]	171[6.73]	106-120[4.17-4.72]	6.5[0.26]	80[3.15]	10[0.39]	15[0.59]
185	168.5[6.63]	40[1.57]	20[0.79]	M8	130[5.12]	174[6.85]	181[7.13]	106-120[4.17-4.72]	6.5[0.26]	80[3.15]	10[0.39]	15[0.59]
225	168.8[6.65]	48[1.89]	25[0.79]	M10	130[5.12]	197[7.76]	181[7.13]	106-120[4.17-4.72]	6.5[0.26]	80[3.15]	10[0.39]	15[0.59]
265	201.5[7.93]	48[1.89]	25[0.79]	M10	147[5.79]	203[7.99]	213[8.39]	106-120[4.17-4.72]	6.5[0.26]	96[3.78]	10[0.39]	15[0.59]
330	213[8.39]	48[1.89]	25[0.79]	M10	147[5.79]	206[8.11]	219[8.62]	106-120[4.17-4.72]	6.5[0.26]	96[3.78]	10[0.39]	15[0.59]

f: Minimum distance to taking out coil; X1: minimum electrical clearance (arcing distance)

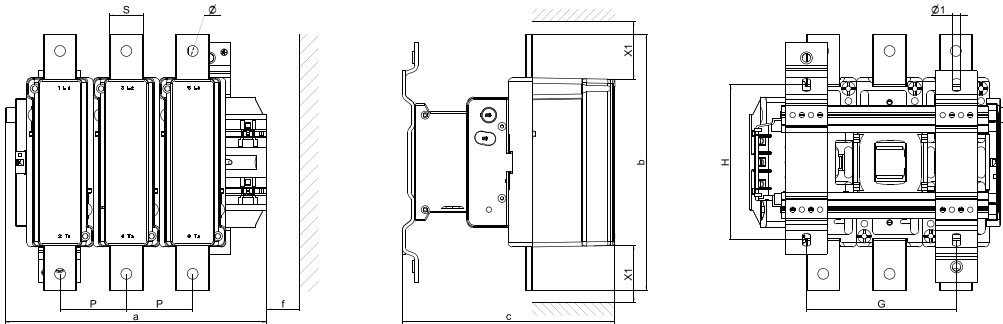
HC6-400, 500



HC6	a	P	S	φ	f	b	c	G	H	φ1	G1	X1	
												≤500V	>500V
400	213[8.39]	48[1.89]	25[0.98]	M10	146[5.75]	206[8.11]	219[8.62]	80[3.15]	180[7.09]	8.5[0.33]	170[6.69]	15[0.59]	20[0.79]
500	233[9.17]	55[2.17]	30[1.18]	M10	150[5.91]	238[9.37]	232[9.13]	80[3.15]	180[7.09]	8.5[0.33]	170[6.69]	15[0.59]	20[0.79]

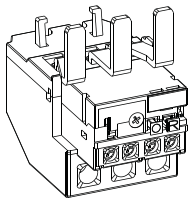
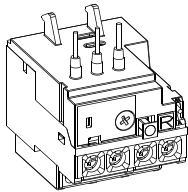
f: Minimum distance to taking out coil; X1: minimum electrical clearance (arcing distance)

HC6-630, 800



HC6	a	P	S	φ	f	b	c	G	H	φ1	X1	
											≤500V	>500V
630	309[12.17]	80[3.15]	40[1.57]	M12	201[7.91]	304[11.97]	255[10.04]	180[7.09]	180[7.09]	10.5[0.41]	20[0.79]	30[1.18]
800	309[12.17]	80[3.15]	40[1.57]	M12	201[7.91]	304[11.97]	255[10.04]	180[7.09]	180[7.09]	10.5[0.41]	20[0.79]	30[1.18]

f: Minimum distance to taking out coil; X1: minimum electrical clearance (arcing distance)



HCR6 Overload Relay

Structure Features

- Three phase bimetallic chip.
- With phase failure protection.
- Continuous adjustable device with setting current.
- With temperature compensation.
- With action indication.
- With testing organization.
- With stop button.
- With manual and automatic reset buttons.
- Separable normally open and normally closed contacts.
- Installation method: plug-in installation with contactor, independent installation.

Normal service conditions and mounting conditions

Item	Description
Installation Category	III
Pollution Degree	3
Standard	GB/T 14048.4/IEC 60947-4-1; GB/T 14048.5/IEC 60947-5-1 UL 60947-4-1
Certificates	UL/CE/CB/CCC
Enclosure protection class	IP20/IP00
Ambient Air Temperature	Normal of working temperature -13~+140°F (-25°C~+60°C), its average over a period of 24 h does not exceed +95°F (+35°C).
Atmospheric Conditions	The relative humidity of the air does not exceed 50% at a maximum temperature of +104°F (+40°C). Higher relative humidity may be permitted at lower temperatures, Such as 90% at +68°F (+20°C).
Mounting Conditions	The inclination of mounting surface and vertical plane is not more than±22.5°.

Model description

HC6 series overload relay

HCR6	-	12M	L
↑		↑	↑
Relay Model		Type	Special Function
		12M	Nil: Screw Type
		18	S: Independent installation (Only 38A- 100A)
		38	
		65	
		100	

e.g: HCR6-65L, Load Side Lug Type

Selection table of overload relay

Overload relay	Rated current A	Fuse A	For use with contactor model
		gG	
HCR6-12M	0.1-0.16	2	HC6-06M HC6-09M HC6-12M
	0.16-0.25	2	
	0.25-0.4	2	
	0.35-0.5	2	
	0.45-0.63	2	
	0.55-0.8	2	
	0.75-1	4	
	0.9-1.3	4	
	1.1-1.6	4	
	1.4-2	6	
	1.8-2.5	6	
	2.3-3.2	6	
	2.9-4	10	
	3.5-4.8	10	
	4.5-6.3	16	
	5.5-7.5	20	
7.2-10	20		
9-12.5	25		
HCR6-18	0.1-0.16	2	HC6-09 HC6-12 HC6-18
	0.16-0.25	2	
	0.25-0.4	2	
	0.35-0.5	2	
	0.45-0.63	2	
	0.55-0.8	2	
	0.75-1	4	
	0.9-1.3	4	
	1.1-1.6	4	
	1.4-2	6	
1.8-2.5	6		

Selection table of overload relay

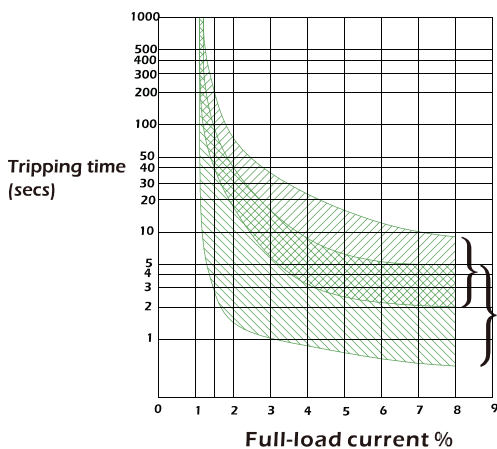
Overload relay	Rated current A	Fuse A	For use with contactor model
		gG	
HCR6-18	2.3-3.2	6	HC6-09 HC6-12 HC6-18
	2.9-4	10	
	3.5-4.8	10	
	4.5-6.3	16	
	5.5-7.5	20	
	7.2-10	20	
	9-12.5	25	
	11.3-16	35	
	15-20	50	
HCR6-38	0.1-0.16	2	HC6-25 HC6-32 HC6-38
	0.16-0.25	2	
	0.25-0.4	2	
	0.35-0.5	2	
	0.45-0.63	2	
	0.55-0.8	2	
	0.75-1	4	
	0.9-1.3	4	
	1.1-1.6	4	
	1.4-2	6	
	1.8-2.5	6	
	2.3-3.2	6	
	2.9-4	10	
	3.5-4.8	10	
	4.5-6.3	16	
	5.5-7.5	20	
	7.2-10	20	
	9-12.5	25	
	11.3-16	35	
	15-20	50	
	17.5-21.5	50	
21-25	50		
24.5-30	63		
29-36	63		
33-38	63		
HCR6-65	17-25	50	HC6-40 HC6-50 HC6-65
	24.5-36	63	
	35-47	100	
	48-60	100	
	58-75	125	
HCR6-100	17-25	50	HC6-75 HC6-85 HC6-100
	24.5-36	63	
	35-47	100	
	48-60	100	
	58-75	125	
	72-90	160	
77-95	160		

Selection table of overload relay (Tile pad type, with a base installed independently)

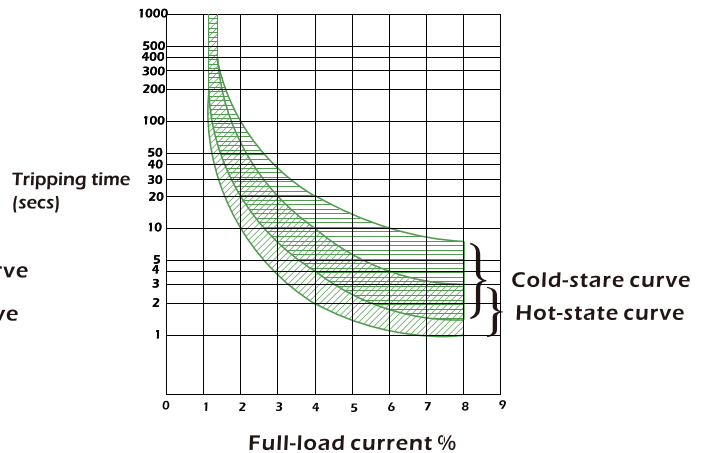
Overload relay	Rated current A	Fuse A	For use with contactor model
		gG	
HCR6-38S	0.1-0.16	2	HC6-25 HC6-32 HC6-38
	0.16-0.25	2	
	0.25-0.4	2	
	0.35-0.5	2	
	0.45-0.63	2	
	0.55-0.8	2	
	0.75-1	4	
	0.9-1.3	4	
	1.1-1.6	4	
	1.4-2	6	
	1.8-2.5	6	
	2.3-3.2	6	
	2.9-4	10	
	3.5-4.8	10	
	4.5-6.3	16	
	5.5-7.5	20	
	7.2-10	20	
	9-12.5	25	
	11.3-16	35	
	15-20	50	
	17.5-21.5	50	
	21-25	50	
	24.5-30	63	
29-36	63		
33-38	63		
HCR6-100S	17-25	50	HC6-75 HC6-85 HC6-100
	24.5-36	63	
	35-47	100	
	48-60	100	
	58-75	125	
	72-90	160	
	77-95	160	

Overload relay technical parameters

Item			HCR6-12M	HCR6-18	HCR6-38	HCR6-65	HCR6-100
Frame Size			12	18	38	65	100
Rated insulation voltage	UL	V	600	600	600	600	600
	IEC	V	690	690	690	690	690
Pole			3P				
Protection characteristics			1.Under-phase + Overload protection: A type 2. Overload protection: M type: 3P;				
Reset mode			Automatic, Manual				
Auxiliary contact composition			1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC
Auxiliary current	AC-15	120V	A	6			
		240V	A	3			
		380V	A	1.9			
		480V	A	1.5			
		500V	A	1.4			
		600V	A	1.2			
	DC-13	125V	A	0.55			
		250V	A	0.27			
	Ith	NC & NO	A	10			
Main circuit terminal form	Power side	Tip type		Connecting plate			
	Load side	Screw type/Lug type					
Maximum common conductor of load side terminal of main circuit			AWG 8 (8.4mm ²)		AWG 3 (38mm ²)		
Load side terminal width			< 9.5mm		< 22mm		



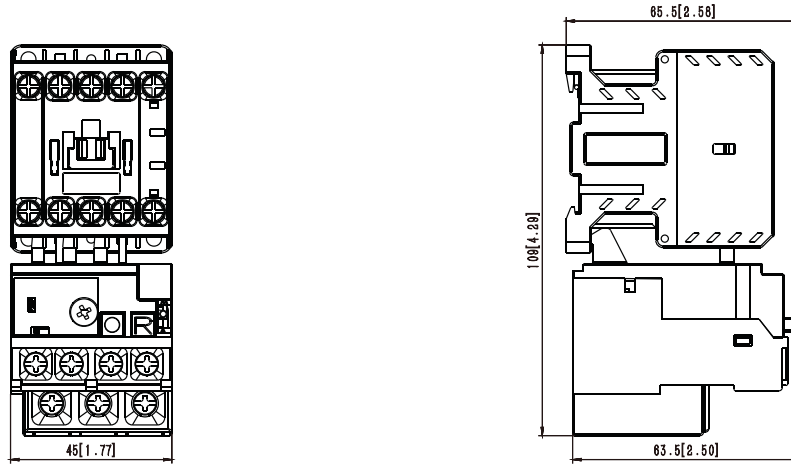
Cold-state curve
Hot-state curve



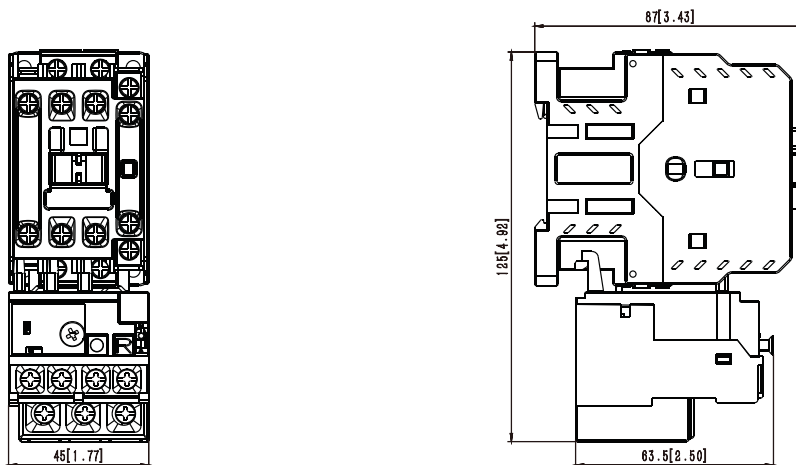
Cold-state curve
Hot-state curve

Outline and installation dimensions mm[inch]

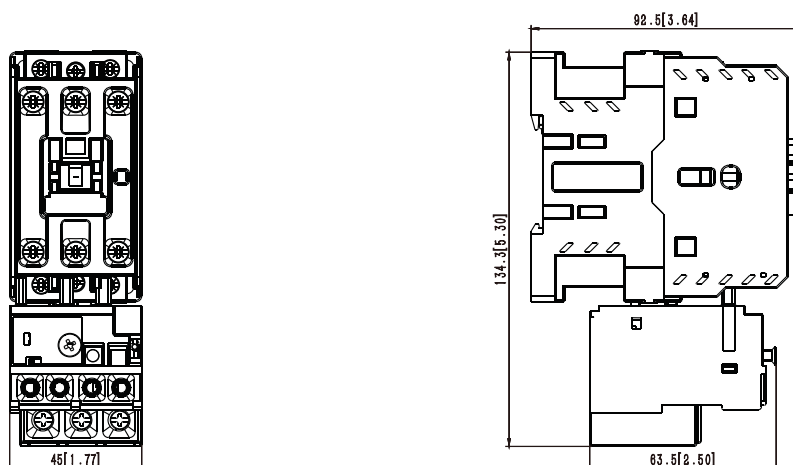
HCR6-12M



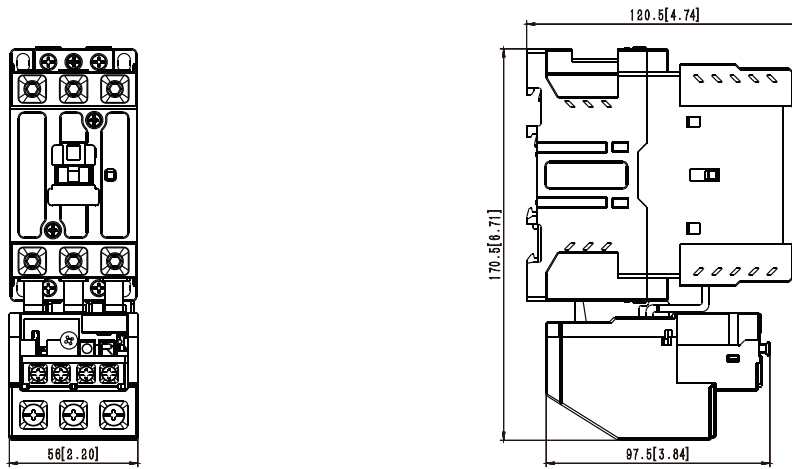
HCR6-18



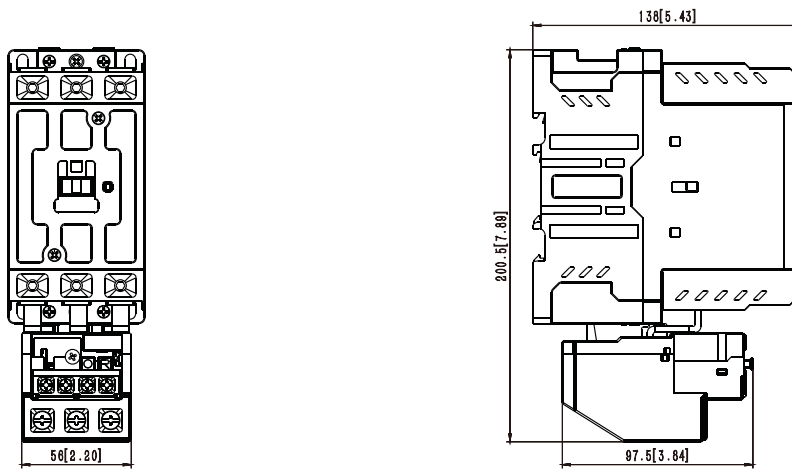
HCR6-38



HCR6-65



HCR6-100





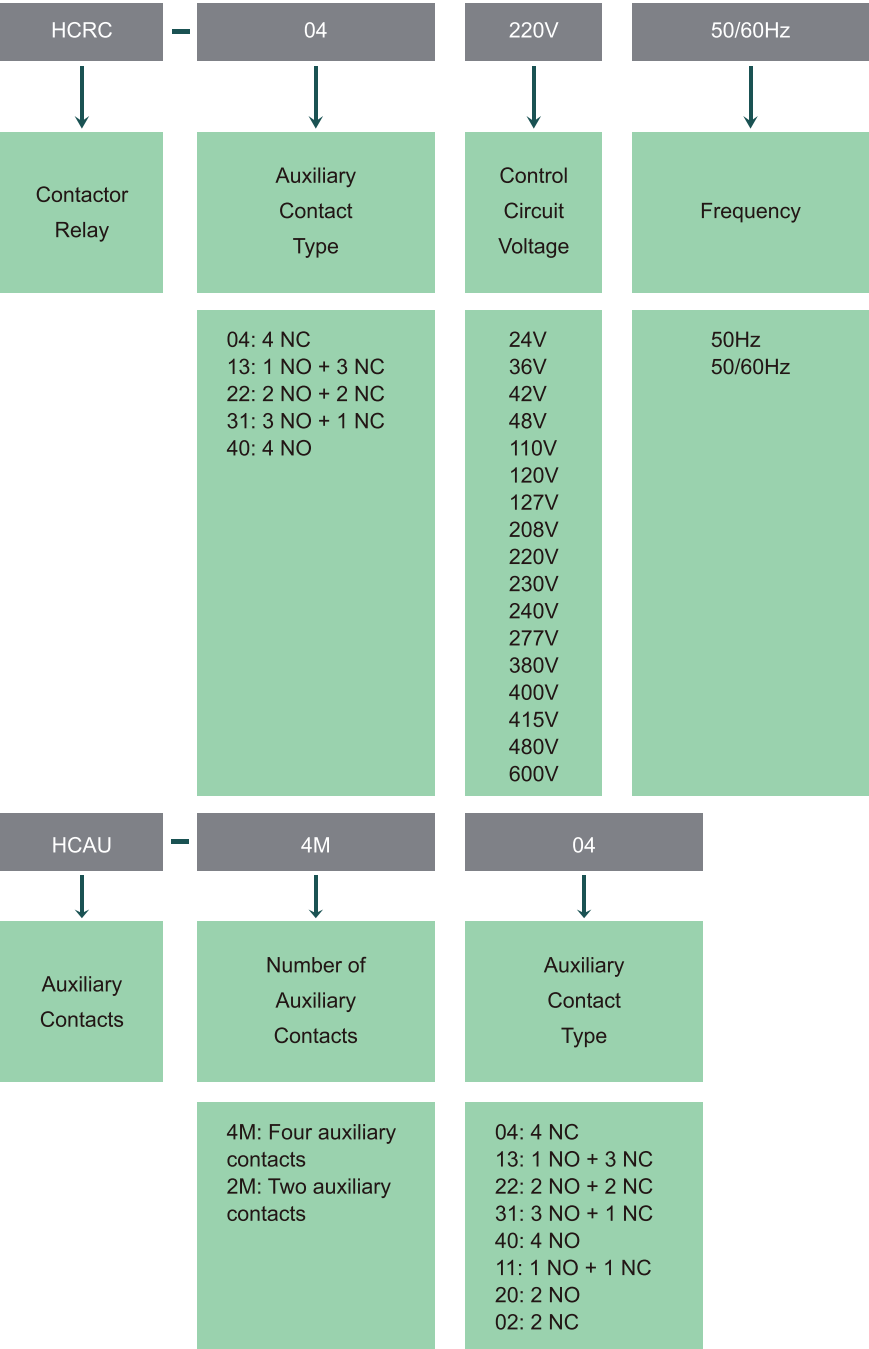
HCRC Contactor Relay

Application Range

HCRC contactor relay is mainly used in relay control, signal transmission, isolation and amplification circuits with AC 50Hz or 60Hz, rated working voltage up to 440V and DC rated voltage up to 250V.

Standard: GB/T 14048.5; IEC/EN 6094-5-1, UL 60947-4-1.

Model description



Contactor relay parameters and technical requirements

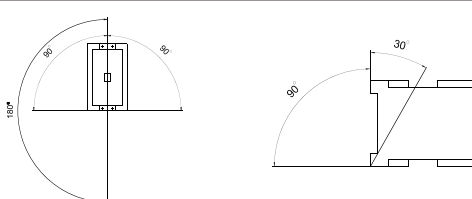
Main circuit









Item		Technical Data											
Rated operational voltage		V	690										
Rated insulation voltage	IEC 60947-1	V	690										
	UL, CSA	V	600										
Conventional free air thermal current	Ambient temperature ≤60°C	A	10										
Frequency of operating current		Hz	25 - 400										
Min. switching capacity	U min	V	17										
	I min	mA	5										
Short circuit protection		IEC 60947-5-1 gG Fuse: 10A											
Rated making capacity		IEC 60947-5-1, AC:140, DC:250											
Short time withstand current	Allowable duration	1 s	A	100									
		500 ms	A	120									
		100 ms	A	140									
Insulation resistance		MΩ	> 10										
Operating power of contact		IEC 60947-5-1 AC-15 DC-13											
		V	24	48	115	230	400	440	V	24	48	125	250
1 million operations		VA	60	120	280	560	960	1050	W	96	76	76	76
10 million operations		VA	4	8	20	40	70	80	W	14	12	12	-

Contactor relay

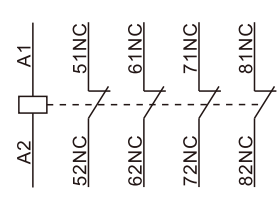
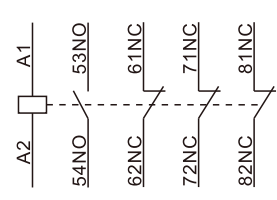
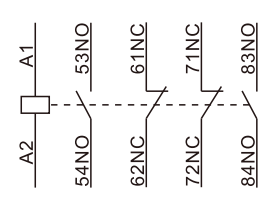
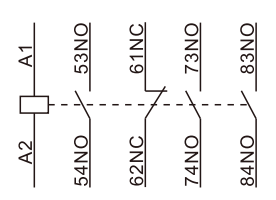
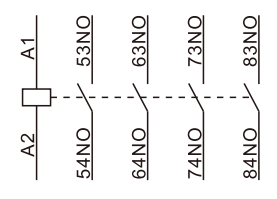
		HCRC											
Control circuit voltage		V	24, 36, 48, 110, 127, 220, 230, 240 380, 415 50Hz, 50/60Hz										
Voltage range		Pick-up		(70%-120%) Us									
		Drop-out		(20%-65%) Us									
Average power consumption	50Hz	Pick-up	VA	70									
		Sealing	VA	7									
	60Hz	Pick-up	VA	70									
		Sealing	VA	7.5									
Operating time		Closing delay		ms 12-22									
		Opening delay		ms 4-19									
Current heat loss		AC	W	1-3									

Structural features

Ambient temperature		-13~+140°F (-25~+60°C)											
Installation position													
Enclosure Protection Degree		IP20											
Impact resistance 1/2 sine wave = 11 ms	Open	g	8										
	Close	g	15										
Seismic performance 5-300 Hz	Open	g	2										
	Close	g	4										
Weight		g	181										

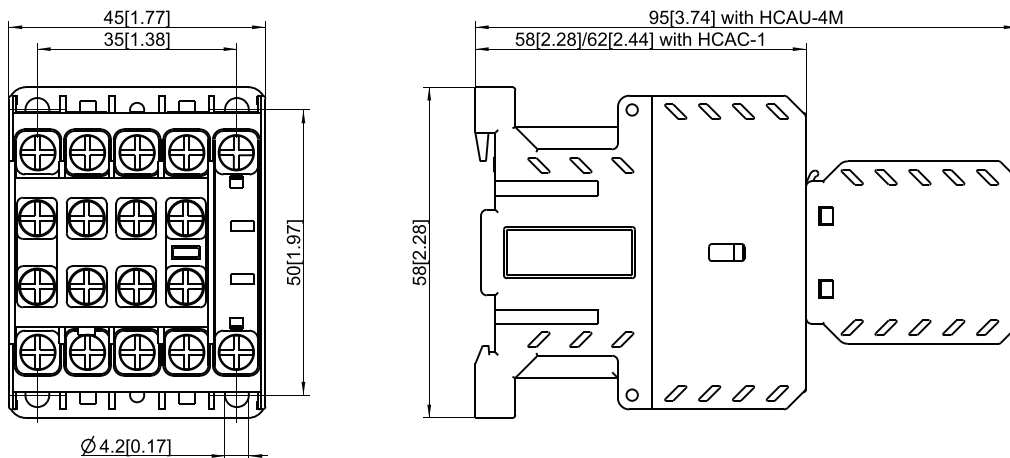
Connections-terminals				HCRC
Main circuit		1 piece	mm ²	1-2.5
		2 pieces		1-1.5
		1 piece	mm ²	1-2.5
		2 pieces		1-2.5
		1 piece	mm ²	1-2.5
		2 pieces		1-2.5
		I	mm	3.6
		L		7.5
	Solid/ Stranded		AWG	18-14
	Connection screw/bolt		mm ²	M3.5
Tightening torque		N·m	1.2	
Control circuit		1 piece	mm ²	1-2.5
		2 pieces		1-1.5
		1 piece	mm ²	1-2.5
		2 pieces		1-2.5
		1 piece	mm ²	1-2.5
		2 pieces		1-2.5
		I	mm	3.6
		L		7.5
	Solid/ stranded		AWG	18-14
	Connection screw/bolt		mm ²	M3.5
Tightening torque		N·m	1.2	

Wiring diagram

HCRC-04	HCRC-13	HCRC-22	HCRC-31
			
HCRC-40			
			

Outline and installation dimensions mm[inch]

HCRC-01/13/22/31/40



HIITIO®



ZHEJIANG HECHENG SMART ELECTRIC CO.,LTD.

NO.1125 Zhixing Road, Qiaonan District,Xiaoshan
Economic and Technological Development Zone,
Hangzhou, Zhejiang

T +86-132-1617-9977

E sales@hiitio.com

w www.hiitio.com