

# ZHEJIANG HECHENG

SMART  
ELECTRIC  
CO.,LTD.

## PRODUCT CATALOGUE



HC6 SERIES CONTACTOR  
HCR6 SERIES OVERLOAD RELAY

# Corporate Culture

**Vision:** Committed to becoming a world-class supplier of new energy electrical solutions

**Mission:** Adhere to the original intention and make competitive products.

**Values:** Customer-centric, proud of the struggler;  
adhere to the original intention, work together with one heart, sincerity and trustworthiness.



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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

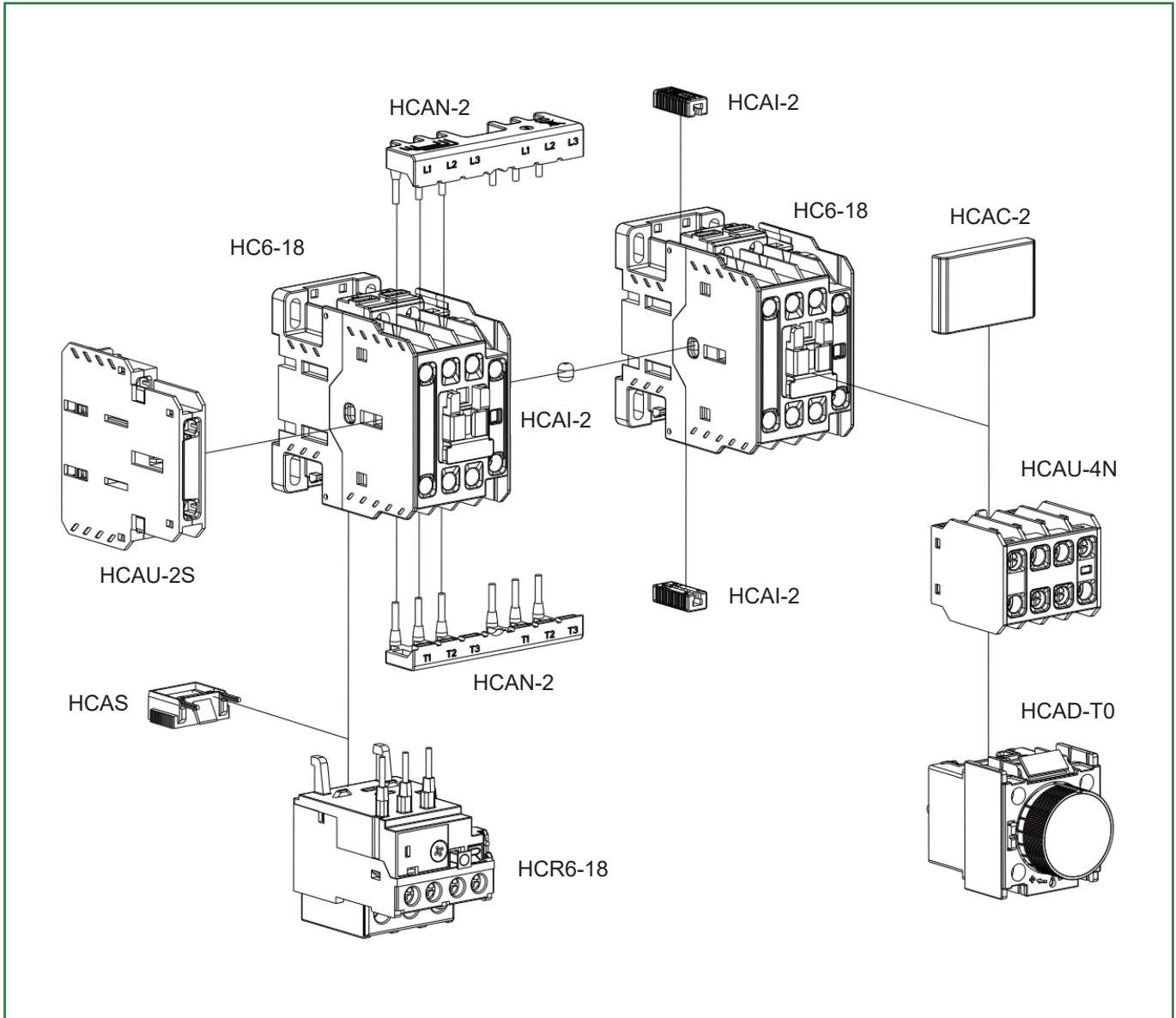
In line with the high emphasis on protecting the environment, the newly designed HC6 series contactors fully meet the national energy efficiency standards.

- 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: Contactor

HCAU-4N: Auxiliary contact (Top-Mounting)

HCAU-2S: Auxiliary contact (Side-Mounting)

HCR6: Thermal overload relay

HCAD: Time delay module

HCAI: Mechanical interlock

HCAS: Suppressor

HCAN: Reversing contactor wiring kit

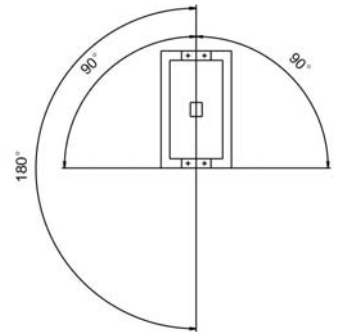
HCAC: Dust cover

## Product Features

Laser marking of product nameplate, clear font and QR code for traceability



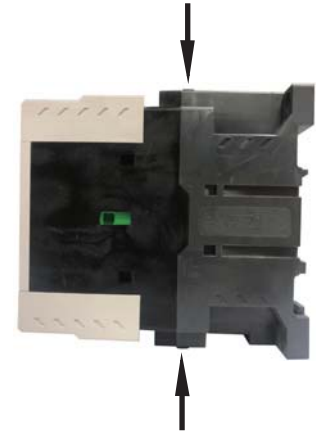
360 ° rotation installation



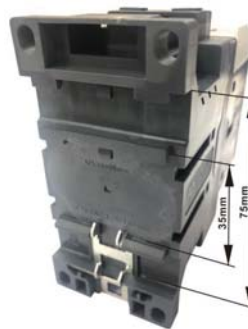
Tool free installation / removal of accessories



Coil position can be switched



Tool free installation  
Din-rail 35mm & 75 mm  
(65 ~ 100 contactor)



Tool free installation / removal  
Din-rail 35mm  
(12M ~ 38 contactor)



## Product Features

Mechanical & electrical interlocking is used for crossing shell frame (65 ~ 100 contactor)



Contact plate bending, increase product torque (12M ~ 18 contactor)



Double hole wiring of main circuit (65 ~ 100 contactor)



Zero clearance assembly of mechanical interlock kit (12M ~ 38 contactor)



Low power consumption, Level 2 energy consumption

Wide voltage pull in (24 ~ 48VDC), lower power consumption

Low Pick-up voltage (Below 70% Us, 50Hz)

Endurance  
AC3 1.2 million times  
AC4 35 thousand times

Surge embedded installation, saving space

Dust cover, effective dust prevention



## 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

# Model Description

## 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 (09-18A 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

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 350=350A 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

<b>HCAU</b>	<b>2N</b>	<b>11</b>	<b>A</b>
Auxiliary Contacts	Type	Auxiliary Contact Type	Suffix
	<p>2N,4N: Top-mounting auxiliary contacts (for 09 – 100 A contactor)</p> <p>2M,4M: Top-mounting auxiliary contacts (for 06 – 12 A Mini contactor)</p> <p>2S: Side-mounting auxiliary contacts (for 09 – 100 A contactor)</p>	<p>11: 1 NO + 1 NC</p> <p>20: 2 NO</p> <p>02: 2 NC</p> <p>22: 2 NO + 2 NC</p> <p>13: 1 NO + 3 NC</p> <p>31: 3 NO + 1 NC</p> <p>04: 4 NC</p> <p>40: 4 NO (HCAU-2S only 11)</p>	<p>A: Standard type, omitted (for HCAU-2S)</p>

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

<b>HCAS</b>	<b>1</b>	<b>M</b>	<b>HCAD</b>	<b>T</b>	<b>0</b>
Surge Suppressors	Type	Suffix	Time Delay Auxiliary	Type	Delay Range
	<p><b>1:</b> RC, Operational voltage 24V-48V</p> <p><b>2:</b> RC, Operational voltage 48V-127V</p> <p><b>3:</b> RC, Operational voltage 127V-240V</p> <p><b>4:</b> RC, Operational voltage 240V-400V</p> <p><b>5:</b> RC, Operational voltage 400V-600V</p> <p><b>6:</b> RV, Operational voltage 24V-48V</p> <p><b>7:</b> RV, Operational voltage 48V-127V</p> <p><b>8:</b> RV, Operational voltage 127V-240V</p> <p><b>9:</b> RV, Operational voltage 240V-400V</p> <p><b>10:</b> RV, Operational voltage 400V -600V</p>	<p><b>M:</b> For 06 – 12 A Mini contactor</p> <p><b>Nil:</b> For 09 – 100 A contactor</p>		<p><b>T:</b> Power-on delay</p> <p><b>D:</b> Power-off delay</p>	<p><b>0:</b> 0.1 – 3s</p> <p><b>2:</b> 0.1 – 30s</p> <p><b>4:</b> 10 – 180s</p>

## 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				
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	110	/	/	HC6-75
25	30	60	60	110	/	/	HC6-85
25	30	60	60	110	/	/	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				
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

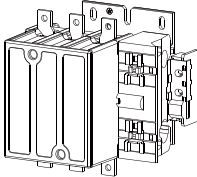
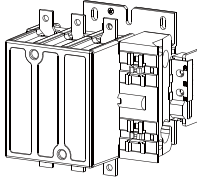
Contactor type			HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18
								
Conventional free air thermal current (I <sub>th</sub> ) ≤140°F(≤60°C)	A		20	20	20	25	25	32
<b>AC-1</b>								
Rated operational current(I <sub>e</sub> )	≤104°F (≤40 °C)	A	20	20	20	25	25	32
	≤140°F (≤60 °C)	A	20	20	20	25	25	32
Rated operational power(P <sub>e</sub> )	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
<b>AC-3</b>								
Rated operational current(I <sub>e</sub> )	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 <sub>e</sub> )	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
<b>AC-4</b>								
Rated operational Current(I <sub>e</sub> )	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 <sub>e</sub> )	380V/415V	kW	3.2	4	4	4	5.5	7.5
	660V/690V	kW	3	4	4	5.5	7	10
<b>AC-4 (Rated power and rated current for 200000 life cycles)</b>								
Rated operational Current(I <sub>e</sub> )	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 <sub>e</sub> )	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

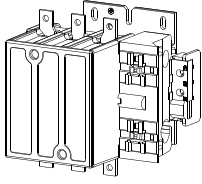
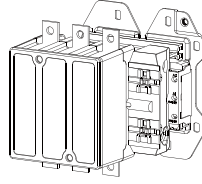
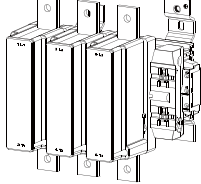
Contactor type			HC6-25	HC6-32	HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100
											
Conventional free air thermal current (I <sub>th</sub> ) ≤140°F(≤ 60°C)	A		40	50	50	60	70	80	100	125	125
<b>AC-1</b>											
Rated operational current(I <sub>e</sub> )	≤104°F (≤40 °C)	A	40	50	50	60	70	80	100	125	125
	≤140°F (≤60 °C)	A	40	50	50	60	70	80	100	125	125
Rated operational power(P <sub>e</sub> )	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
<b>AC-3</b>											
Rated operational current(I <sub>e</sub> )	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 <sub>e</sub> )	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
<b>AC-4</b>											
Rated operational Current(I <sub>e</sub> )	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 <sub>e</sub> )	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
<b>AC-4 (Rated power and rated current for 200000 life cycles)</b>											
Rated operational Current(I <sub>e</sub> )	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 <sub>e</sub> )	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



## Technical Parameters

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
<b>AC-1</b>						
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
<b>AC-3</b>						
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
<b>AC-4</b>						
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

## Technical Parameters

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

## Technical Parameters

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 <sup>4</sup>	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 <sup>4</sup>	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		

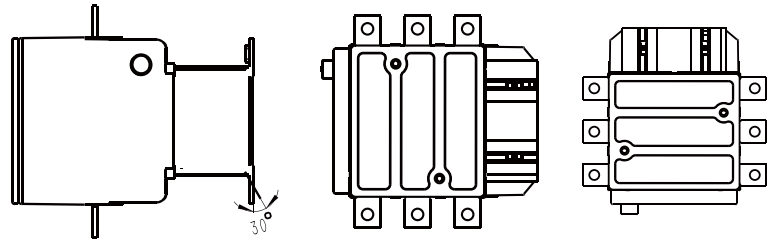
## Technical Parameters

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 <sup>4</sup>	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 <sup>4</sup>		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		

## Technical Parameters

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 <sup>4</sup>	AC-3	Ops	85	80	50	50	50	
Mechanical durability ×10 <sup>4</sup>		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

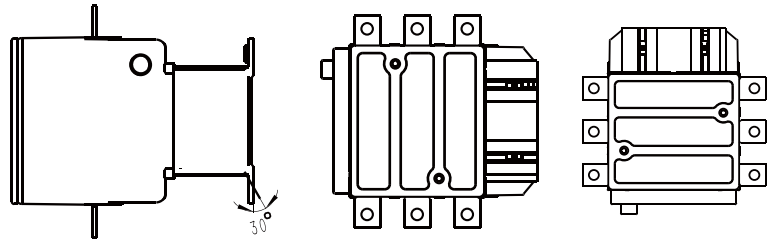
Connections - terminals			HC6-115F	HC6-150F	HC6-185F	HC6-225F	HC6-265F	
Main circuit	Cable	mm <sup>2</sup>	95	120	150	185	240	
	Tightening torque		N·m	10	18	18	35	35
Control circuit	Cable	Flexible mm <sup>2</sup>	1 piece	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5
			2 pieces	1 – 2.5	1 – 2.5	1 – 2.5	1 –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



## Technical Parameters

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 <sup>4</sup>	AC-3	Ops	50	30	30	20	15
Mechanical durability ×10 <sup>4</sup>		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			HC6-265F	HC6-330F	HC6-400F	HC6-500F	HC6-630F	HC6-800F
Main circuit	Cable	mm	240	240	30*52 pieces	40*52 pieces	60*52 pieces	60*52 pieces
	Tightening torque	N·m	35	35	35	35	58	58
Control circuit	Cable	Flexible mm	1 piece	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5
			2 pieces	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5	1 – 2.5
		Solid mm	1 piece	1 – 4	1 – 4	1 – 4	1 – 4	1 – 4
			2 pieces	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 $\leq 140^{\circ}\text{F}$ ( $\leq 60^{\circ}\text{C}$ )			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 $\leq 140^{\circ}\text{F}$ ( $\leq 60^{\circ}\text{C}$ )			A	100	125	125	200	250	275
50/60Hz Motor rated power	Single- phase	110-120V	HP	5	7.5	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	-	-	-	-

## Technical Parameters

Contactor type				HC6-25	HC6-32	HC6-38	HC6-40	HC6-50	HC6-65
General use current $\leq 140^{\circ}\text{F}$ ( $\leq 60^{\circ}\text{C}$ )			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 $\leq 140^{\circ}\text{F}$ ( $\leq 60^{\circ}\text{C}$ )			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

## Technical Parameters











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 14048.1	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	



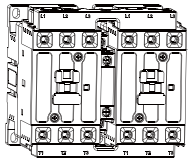
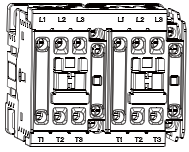
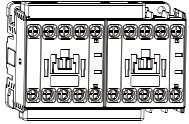
## Connections - terminals

Contactor Type			HC6-06M	HC6-09M	HC6-12M	HC6-09	HC6-12	HC6-18	HC6-25	HC6-32	
Main circuit		1 piece	mm <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	-	-	-	-	-	-	-	-
		I	mm <sup>2</sup>	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 <sup>2</sup>	-	-	-	-	-	-	-	-
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 <sup>2</sup>	1-2.5	1-2.5	1-2.5	1-4	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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

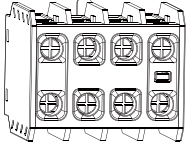
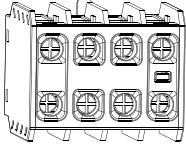
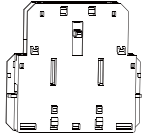
Contactor Type			HC6-38	HC6-40	HC6-50	HC6-65	HC6-75	HC6-85	HC6-100	
Main circuit		1 piece	mm <sup>2</sup>	1.5-10	1-35	1-35	1-35	10-50	10-50	10-50
		2 pieces		1.5-6	1/25	1/25	1/25	6-35	6-35	6-35
		1 piece	mm <sup>2</sup>	2.5-10	1-35	1-35	1-35	10-50	10-50	10-50
		2 pieces		2.5-10	1/25	1/25	1/25	6-35	6-35	6-35
		1 piece	mm <sup>2</sup>	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 <sup>2</sup>	-	9	9	9	10	10	10
		I	mm <sup>2</sup>	4.2	-	-	-	-	-	-
		L		12	-	-	-	-	-	-
		Max	mm <sup>2</sup>	-	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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

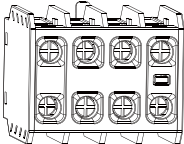
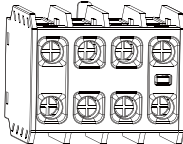
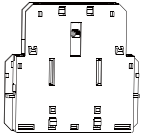


Standard power specifications for AC-3 50-60Hz three-phase motors $\theta \leq 140^\circ\text{F}$ ( $\theta \leq 60^\circ\text{C}$ )				Rated operational current of AC-3 415V	Auxiliary contact composition		Type
220V 240V	380V 415V	500V	660V 690V		NO	NC	
kW	kW	kW	kW	A			
1.5	2.2	3	3	6	1	1	HC6-06M/N
2.2	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

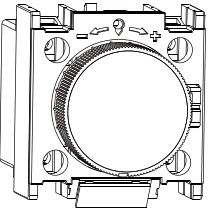
## Auxiliary contacts

	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

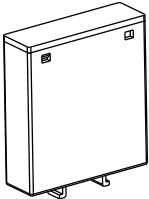
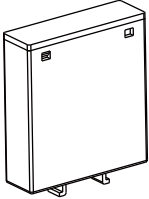
## Auxiliary contact and contactor adaptation table

			
	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	/

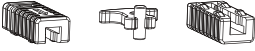

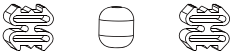


## Time delay module

	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	HCAD-T2
			10 – 180	HC6-500 HC6-630 HC6-800	HCAD-T4
		Power-off delay	0.1 – 3	HC6-100 HC6-115 HC6-150 HC6-185 HC6-225 HC6-265 HC6-330 HC6-400	HCAD-D0
			0.1 – 30	HC6-500 HC6-630 HC6-800	HCAD-D2
			10 – 180	HC6-500 HC6-630 HC6-800	HCAD-D4

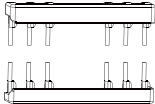
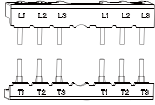
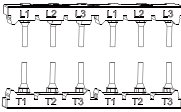
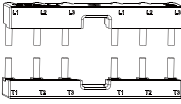
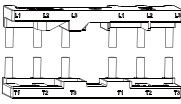
## Suppressor

	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
	RC	24-48V 48-127V 127-240V 240-400V 400-600V	HC6-09 HC6-12 HC6-18 HC6-25 HC6-32 HC6-38	HCAS-1 HCAS-2 HCAS-3 HCAS-4 HCAS-5
		RV	24-48V 48-127V 127-240V 240-400V 400-600V	HC6-40 HC6-50 HC6-65 HC6-75 HC6-85 HC6-100

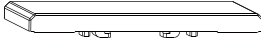
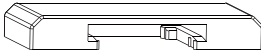
## Mechanical interlock

	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

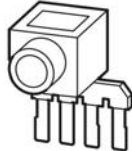
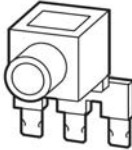
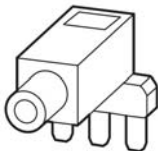
## Kits for reversing contactors

	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	

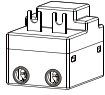
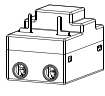
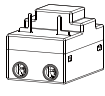
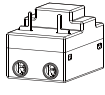
## Dust cover

	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

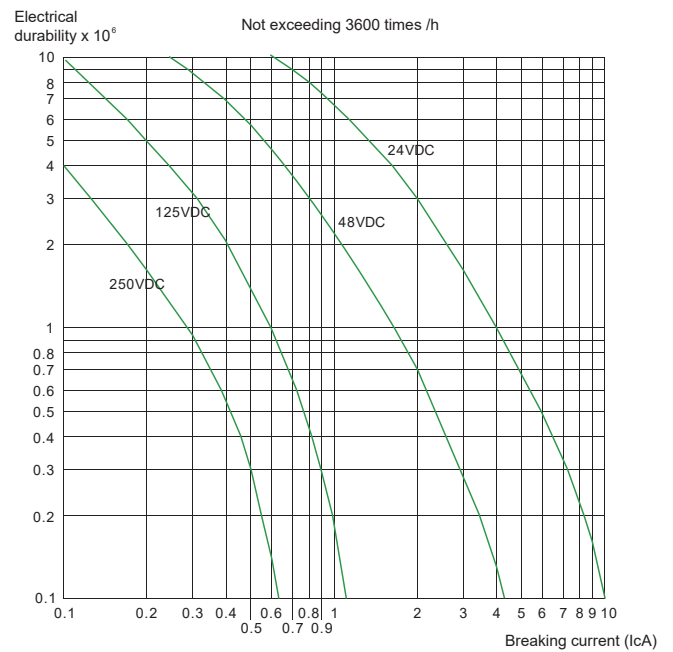
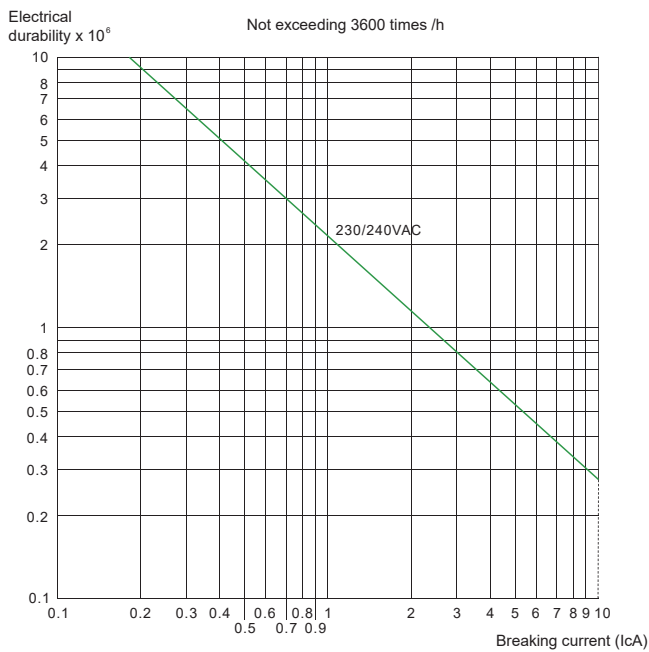


## Accessories Parameters

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 <sub>c</sub>		-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	V <sub>ac</sub>	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						
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						
		500 ms	A						
		100 ms	A						
Insulation resistance			MΩ						
			> 10						
Mechanical durability	million operations		30	30	30	30	30	5	5

# Accessories Parameters

Auxiliary contacts type			HCAU-2N	HCAU-4N	HCAU-2S	HCAU-2M	HCAU-4M	HCAI-5	HCAD...	
	1 piece	mm <sup>2</sup>							1-2.5	
	2 pieces								1-1.5	
	1 piece	mm <sup>2</sup>							1-2.5	
	2 pieces								1-2.5	
	1 piece	mm <sup>2</sup>							1-2.5	
	2 pieces								1-2.5	
	I	mm <sup>2</sup>							3.6	
	L								7.5	
Solid/ stranded		AWG							18-14	
Connection screw/bolt		mm							M3.5	
Tightening torque		N·m							1.2	



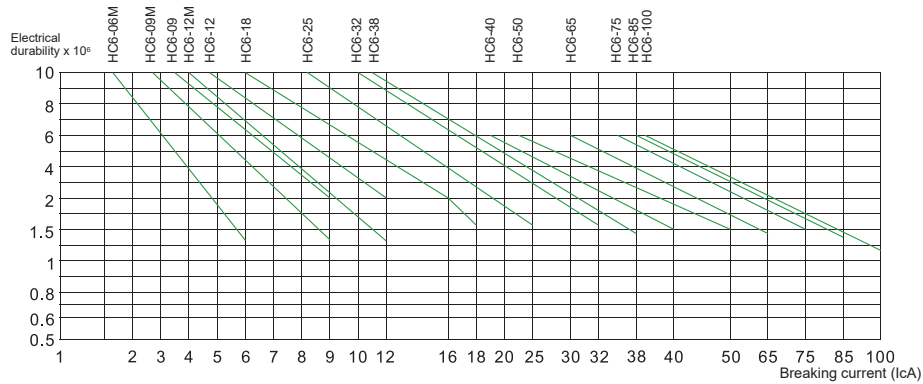
## Wiring diagram

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 ( $U_e \leq 415V$ )



The breaking current ( $I_c$ ) of AC-3 is equal to the rated operational current ( $I_e$ ) of the motor.

### Normal AC induction motor

Electrical characteristics:

Make: Up to  $6 \times$  rated motor current

Break:  $1 \times$  rated motor current

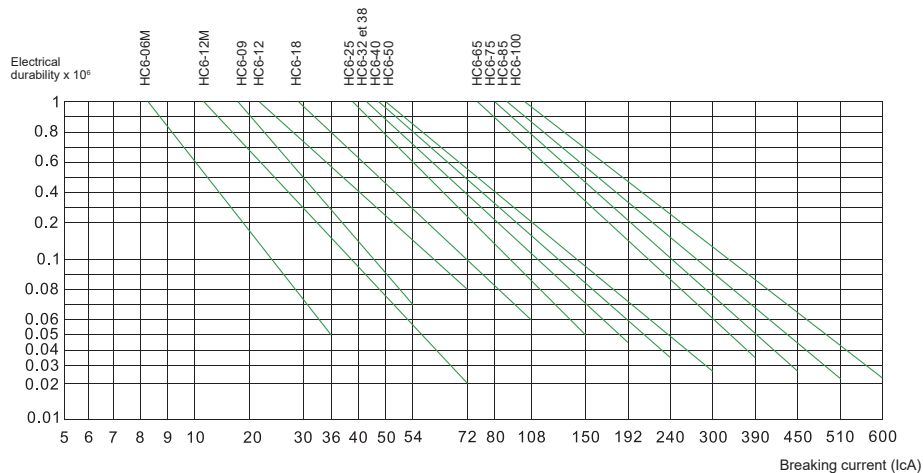
Utilization category

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 ( $U_e \leq 415V$ )



The breaking current ( $I_c$ ) of AC-4 category is equal to  $6 \times I_e$ . ( $I_e$  = rated working current of motor).

### Normal AC induction motor

Operating characteristics

Inching, plugging, reversing

Electrical characteristics

Make: Up to  $6 \times$  rated motor current

Break:  $6 \times$  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 Cl<sub>2</sub>, nitrogen dioxide NO<sub>2</sub>, hydrogen sulfide H<sub>2</sub>S, sulfur dioxide SO<sub>2</sub>.

**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 SO<sub>2</sub> and H<sub>2</sub>S 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 Cl<sub>2</sub> and H<sub>2</sub>S exist at the same time, the thickness of the coating will be increased by 7 times. If H<sub>2</sub>S and NO<sub>2</sub> exist at the same time, the thickness of silver sulfide coating increases by 20 times.

- It shall be considered during model selection**

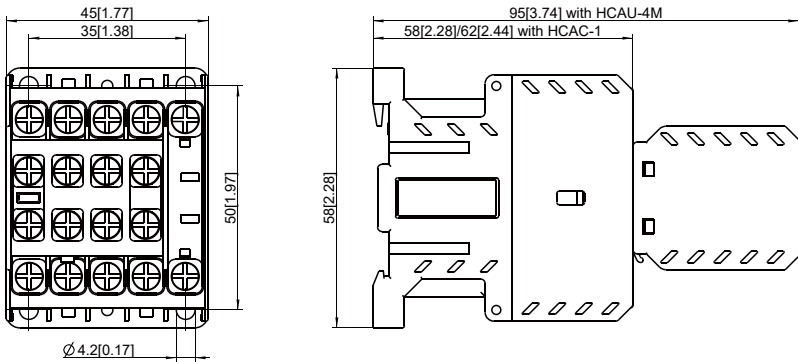
In oil refining, iron and steel, papermaking, artificial fiber (nylon) industries, or industries that generally use sulfur, the equipment used will appear vulcanization, which is also called "oxidation" in the industrial industry. Installing the equipment in the machine room can not ensure that it will 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.

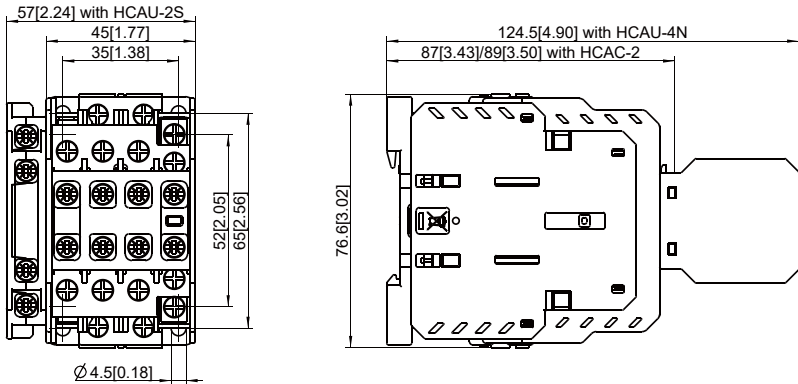
Parallel series	2	3	4
Derating factor	1.6	2.25	2.8

Outline and installation dimensions mm[inch]

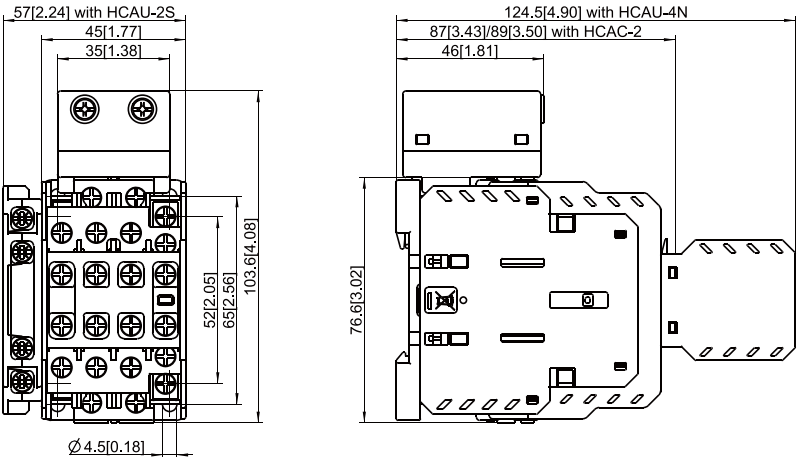
HC6-06M – 12M



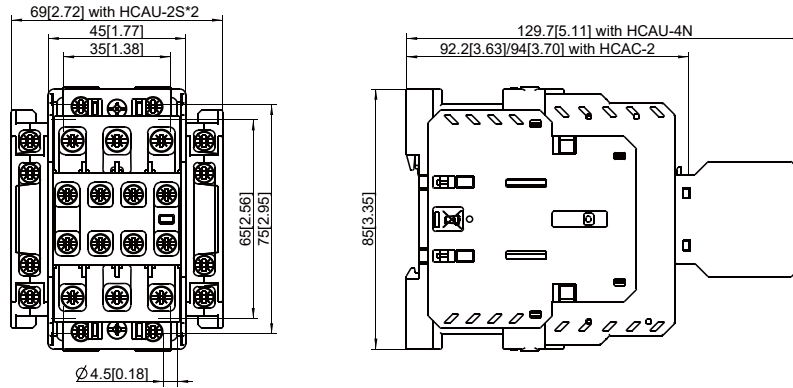
HC6-09~18(AC Coil)



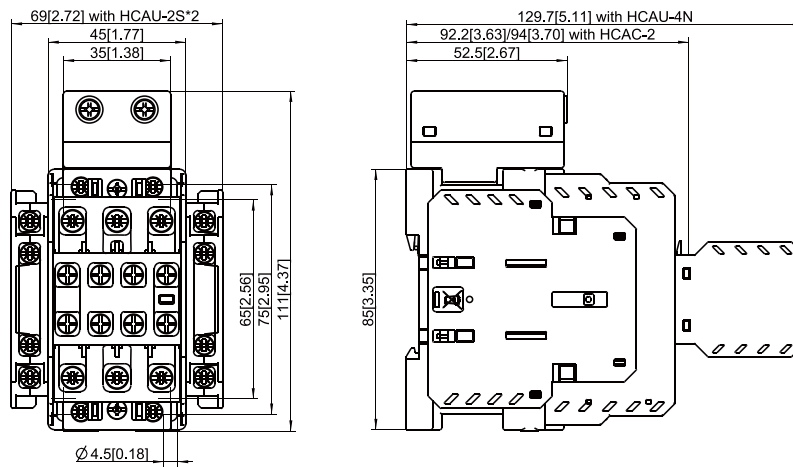
HC6-09~18(DC Coil)



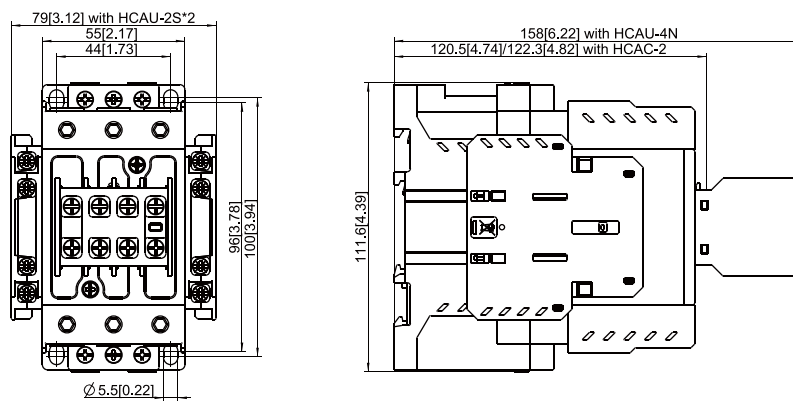
## HC6-25~38(AC Coil)



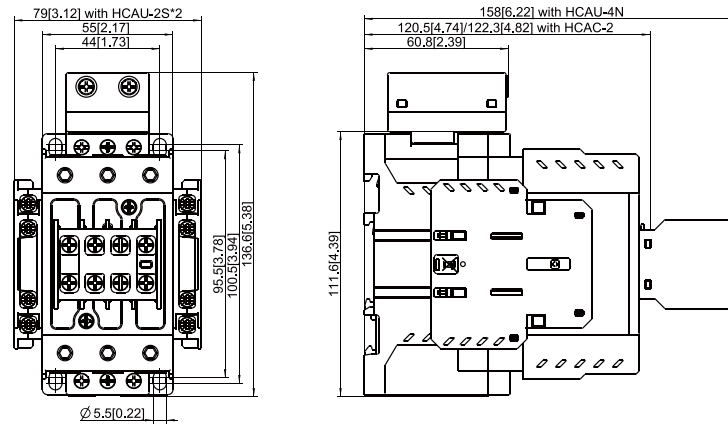
## HC6-25~38(DC Coil)



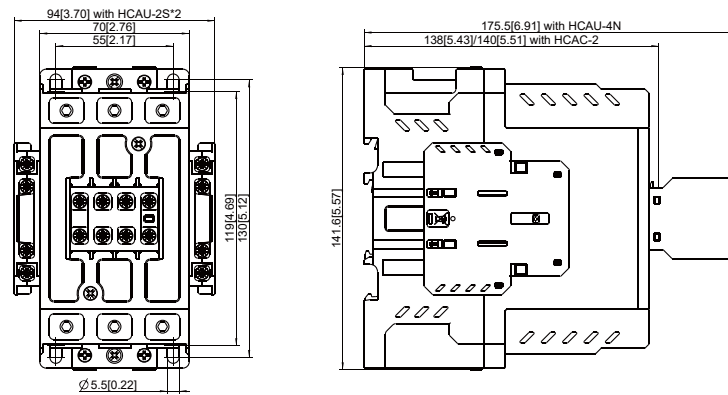
## HC6-40~65(AC Coil)



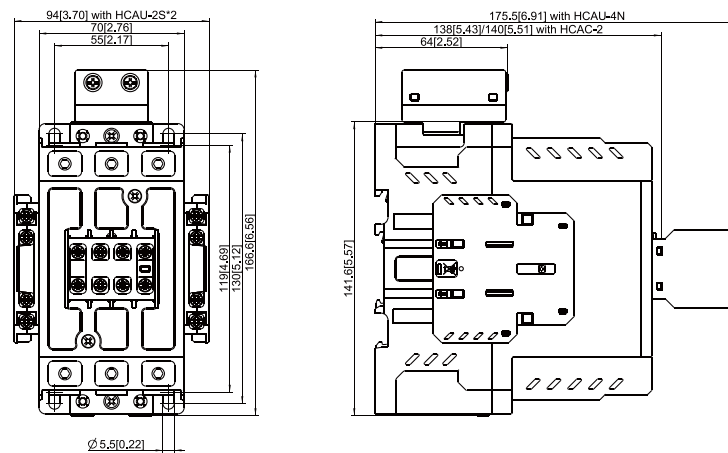
## HC6-40~65(DC Coil)



## HC6-75~100(AC Coil)



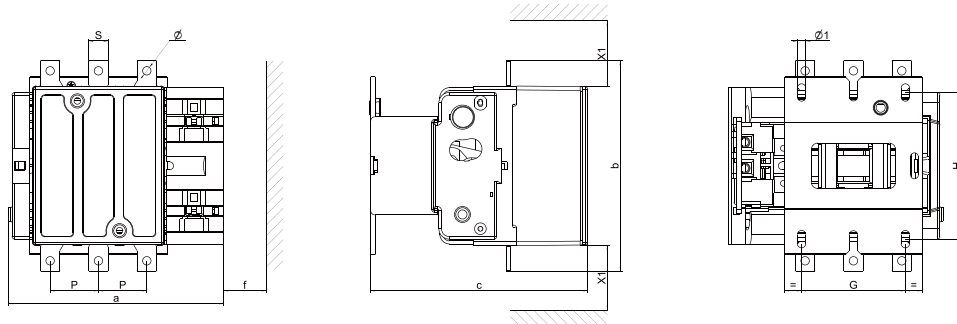
## HC6-75~100(DC Coil)





## Outline and installation dimensions mm[inch]

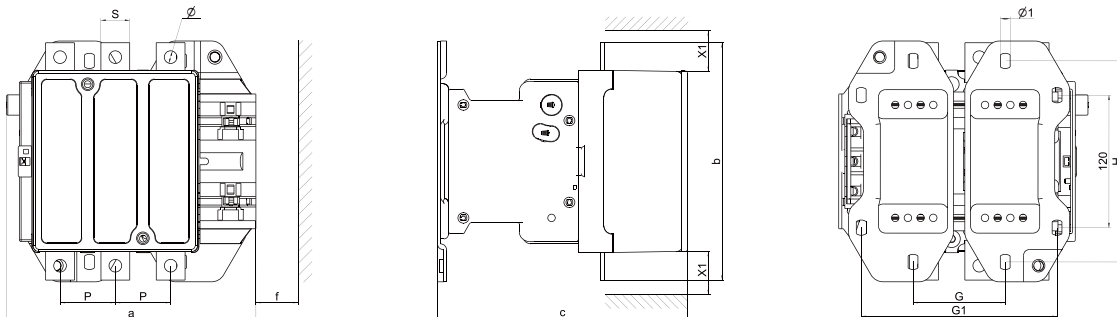
HC6-115F, 150F, 185F, 225F, 265F, 330F



HC6	a	P	S	φ	f	b	c	H	φ1	G1	X1	
											≤500V	>500V
115F	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]
150F	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]
185F	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]
225F	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]
265F	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]
330F	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)

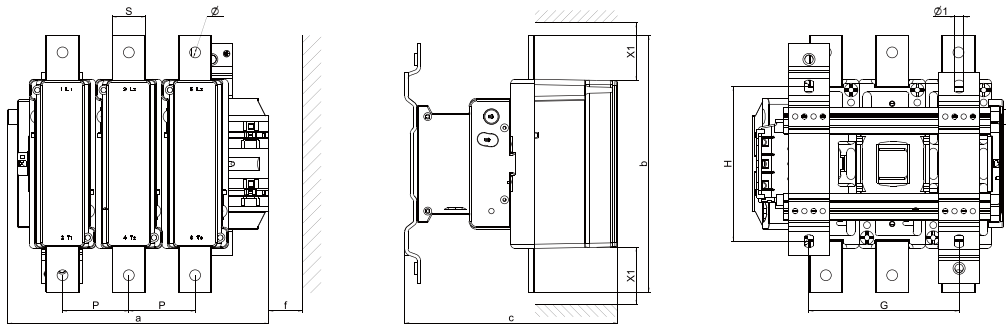
HC6-400F, 500F



HC6	a	P	S	φ	f	b	c	G	H	φ1	G1	X1	
												≤500V	>500V
400F	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]
500F	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]

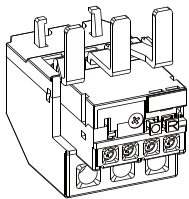
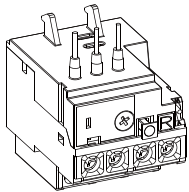
f: Minimum distance to taking out coil; X1: minimum electrical clearance (arcing distance)

HC6-630F, 800F



HC6	a	P	S	φ	f	b	c	G	H	φ1	X1	
											≤500V	>500V
630F	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]
800F	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°.

# HCR6 Overload Relay

## Model description

HC6 series overload relay



## 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		

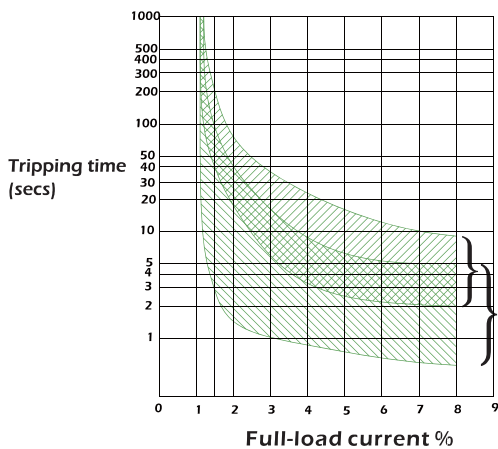
## Selection table of overload relay

Overload relay	Rated current A	Fuse A	For use with contactor model
		gG	
HCR6-18	1.4-2	6	HC6-09 HC6-12 HC6-18
	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	
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		
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	

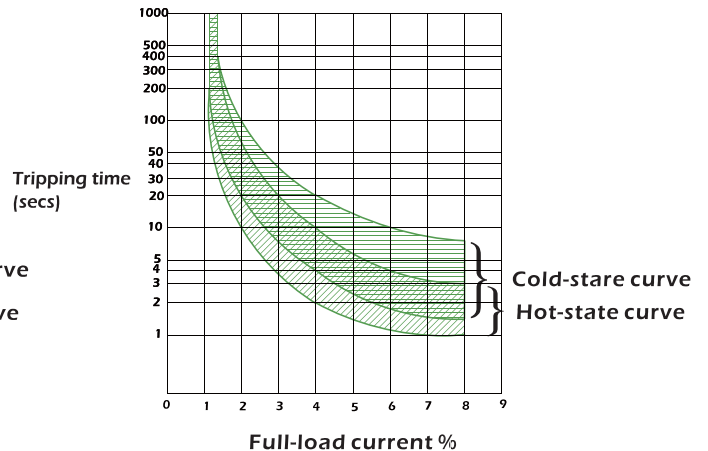
# HCR6 Overload Relay

## 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				
Maximum common conductor of load side terminal of main circuit			AWG 8 (8.4mm <sup>2</sup> )			AWG 3 (38mm <sup>2</sup> )	
Load side terminal width			< 9.5mm			< 22mm	



Cold-state curve  
Hot-state curve

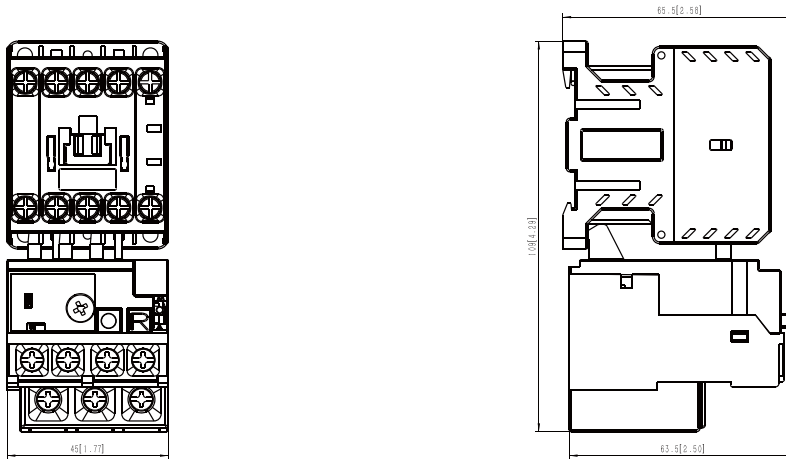


Cold-state curve  
Hot-state curve

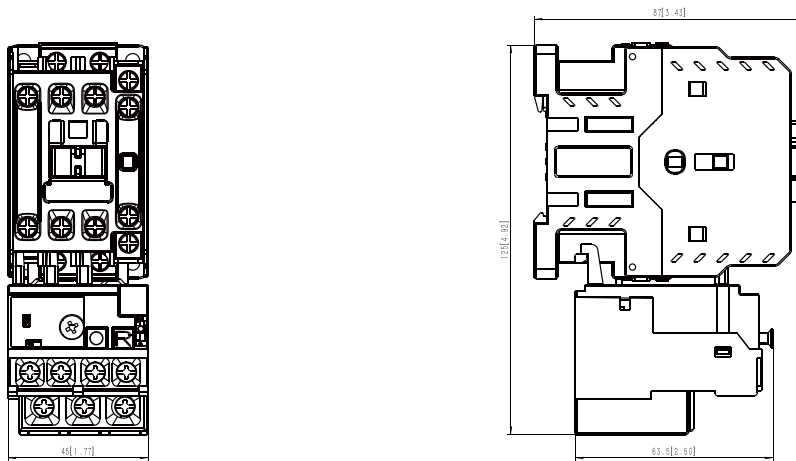
# HCR6 Overload Relay

## Outline and installation dimensions mm[inch]

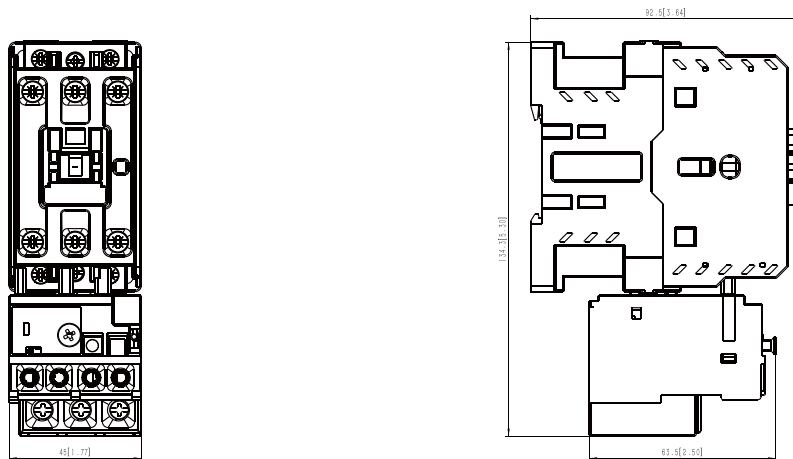
HCR6-12M



HCR6-18

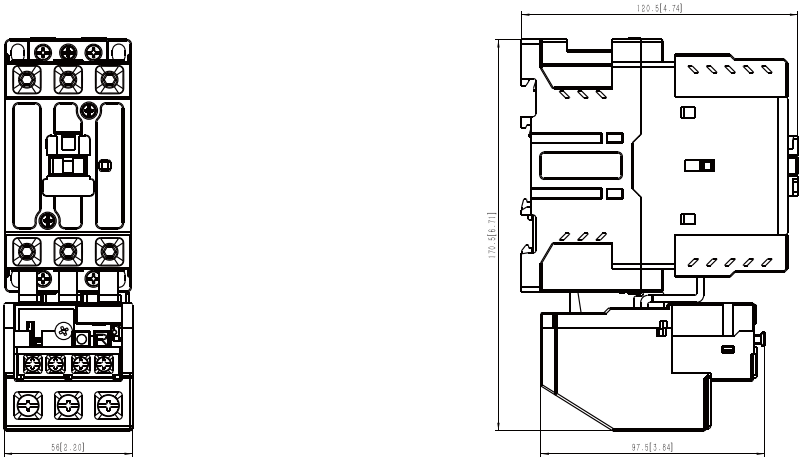


HCR6-38

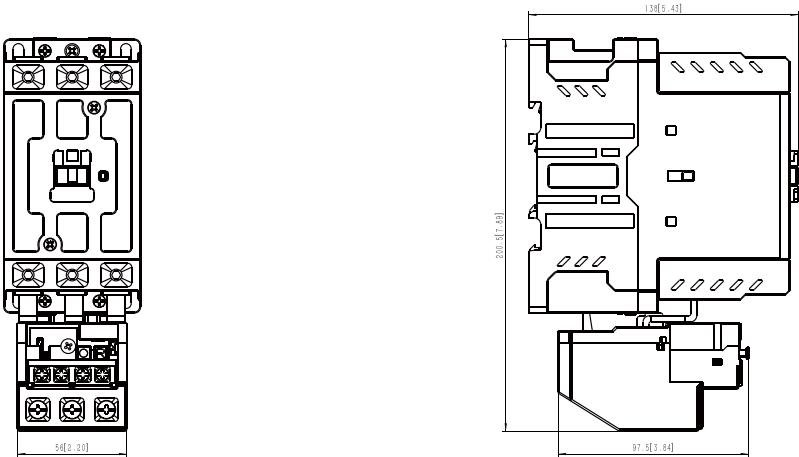


# HCR6 Overload Relay

HCR6-65



HCR6-100





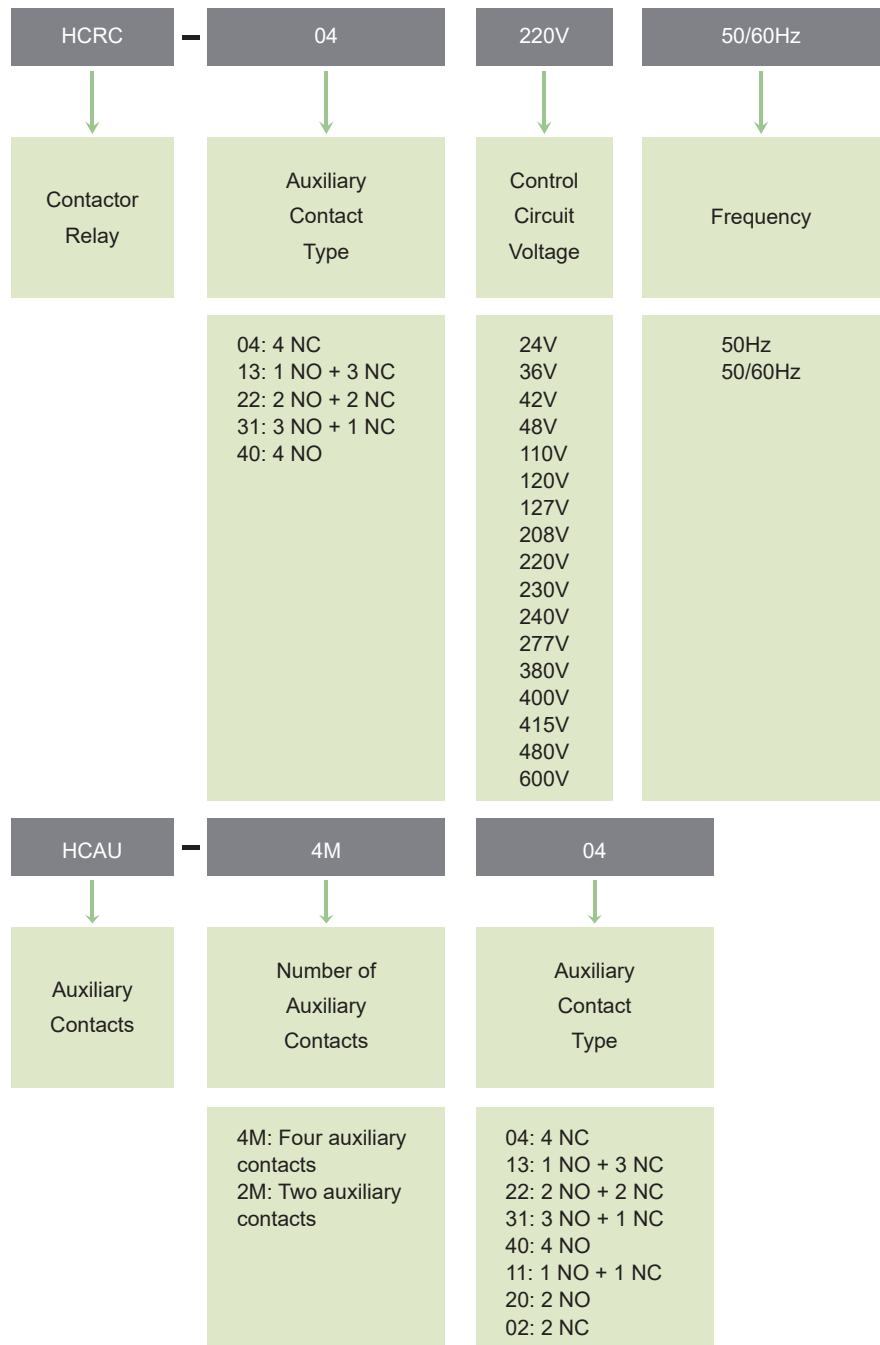
## HCRC Contactor Relay

### 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

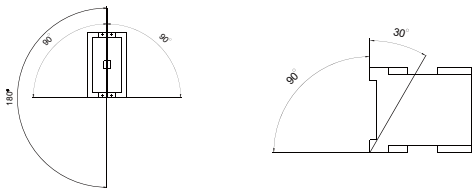
Item		Technical Data												
Rated operational voltage		V	690											
Rated insulation voltage	IEC 60947-1	V	690											
	UL, CSA	V	600											
Conventional free air thermal current	Ambient temperature $\leq 60^{\circ}\text{C}$	A	10											
Frequency of operating current		Hz	25 - 400											
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,	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		M $\Omega$	> 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

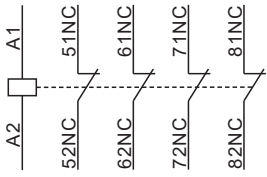
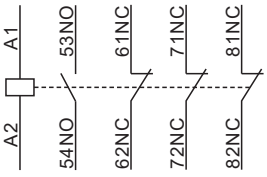
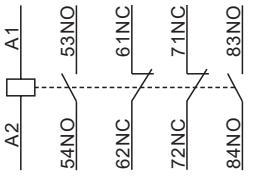
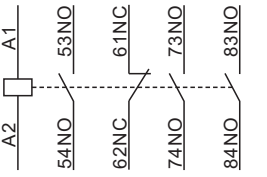
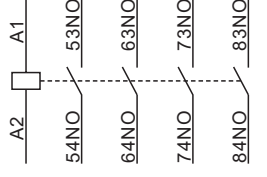
Ambient temperature		-13 – 140°F (-25 – 60°C)											
Installation position													
Enclosure Protection Degree		IP20											
Impact resistance 1/2 sine wave = 11 ms	Open	g	8										
	Close	g	15										
Seismic performance 5-300 Hz	Open	g	2										
	Close	g	4										
Weight		g	181										

# HCRC Contactor Relay

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

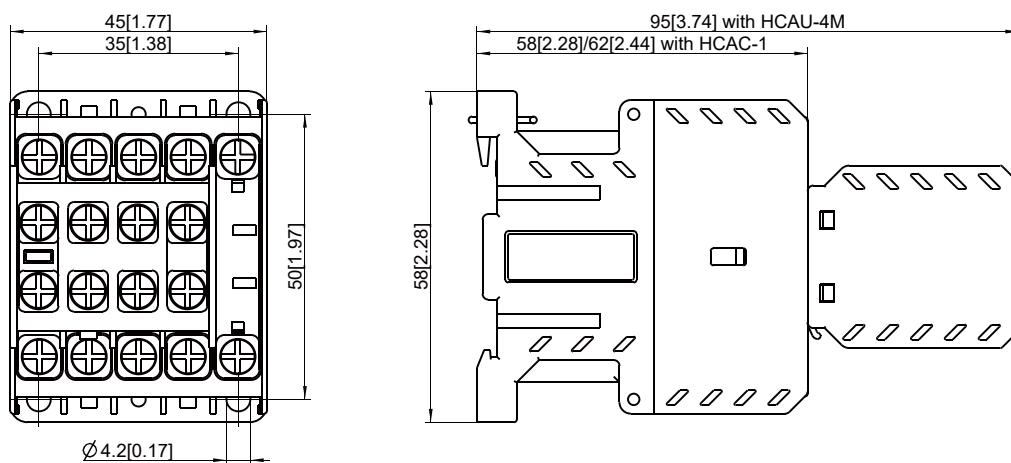
# HCRC Contactor Relay

## Wiring diagram

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

## Outline and installation dimensions mm[inch]

HCRC-01/13/22/31/40



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