Honeywell | Motor Drive & Control

Catalog

Honeywell Motor Control and Protection Solutions

Contents

Honeywell Motor Control and Protection Solution

HCS-09~95 3-pole AC Contactors (P8-P15)

- Long service life, two use categories AC-3 and AC-4 are available, with no need of derating
- With integrated auxiliary contacts, multiple accessories can be mounted
- QR code for qualified products, enables product traceability
- Comply with requirements of CCC and CE certification

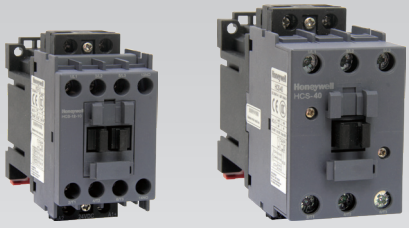
HCS-115~800 3-pole AC Contactors (P16-P21)

- For 115~170A, 2 HAS side-mounted auxiliary contact modules and 1 HAS front auxiliary contact module can be mounted, providing up to 8 auxiliary contacts
- For 225~800A, up to 2 front-mounted modules (front-attached auxiliary contact module or air time delay module)
- Comply with GB14048 and IEC60947 standards
- CCC certified

HCQ-09~95 4-pole AC Contactors (P22-P25)

- Multiple contact types available (4-pole, normally open type and 4 pole, 2 normally open and 2 normally closed type)
- Dust-free design: to achieve multiple dust-proof effect
- Modular design: auxiliary modules can be installed to both front and side
- IP20 protection avoiding finger touch
- Products in conformity with CCC and CE accreditation

HCS-09~40 3-pole DC Contactors (P32-P37)



- A wide range of control voltage available: 12VDC-250VDC
- Modular design: auxiliary modules can be added to both front and side
- Dust-free design: to achieve multiple dust-proof effect
- Each qualified product has a unique traceability code that shows technical parameters and production information
- Products in conformity with CCC and CE accreditation

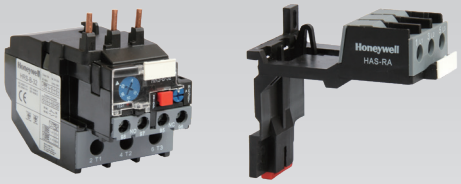
HCK Series Traversing Micro Contactor (P38-P43)

- The 3-pole type has 1NO/1NC auxiliary contact points. 4-pole products come in 4-pole, normally open type and 4-pole, 2 normally open and 2 normally closed type. Both 3- and 4-pole products can add auxiliary contact modules and other accessories
- Small and compact, saving space
- Each qualified product has a unique traceability code that shows technical parameters and production information
- Products in conformity with CCC and CE accreditation

HCMN Series Direct Micro Contactor (P44-P49)

- The 3-pole type has 1NO/1NC auxiliary contact points, and 4-pole contact points are available in 4 normally open and 2 normally open and 2 normally closed types. Can add auxiliary contact modules
- Small and compact, saving space
- Each qualified product has a unique traceability code that shows technical parameters and production information
- Products in conformity with CCC and CE accreditation

HRS Series Thermal Overload Relay (P50-P53)



- Circuit protection range from 0.1~95A
- Protection against overload, undervoltage and overvoltage
- Ambient temperature compensation of -5°C~40°C
- Can be assembled with contactor, and be independently installed with backpack accessory
- Comply with requirements ofCCC, CE certification and RoHS directive

HCR Series Contactor Relay (P54-P56)

- Compact and saving space
- The contact has a skewed tooth friction design, providing more reliability
- IP20 protection to avoid finger touch
- AC or DC control coils with a wide voltage range

HBS Series Motor Protection Circuit Breaker (P57-P62)

- Provide isolating function and protection against short circuits, overload, phase loss, and phase imbalance
- Integrated design, compact in size, with circuit protection range from 0.1~32A
- Ambient temperature compensation of -20°C~60°C
- High breaking capacity up to 100kA
- Comply with requirements ofCCC, CE certification and RoHS directive

HPS Series MCCB for Motors (P63-P75)

- Fivetypes of frames, with 2 breaking capacities for each, to meet various demands
- Optional accessories of auxiliary, alarm, undervoltage and shunt to add on
- 3-pole / 4-pole, motor protection and various other models to select from
- Comply with requirements of CCC and CE certification

HMS/HMP Series MCB for Motors (P76-P79)

- High breaking capacity, for HMS Series it is up to 6.5kA, HMP Series up to 12kA, and HMP-DC Series up to 10kA
- Fast closing function to efficiently protect the reliability of product closing
- Accessories of auxiliary, alarm, auxiliary&alarm, shunt, overvoltage, and undervoltage to meet different demands
- The accessories are fixed and installed to the main body of the circuit breaker in the factory, ensure the reliability of installation
- Product certification:CCC, CE

HMP-DC Series DC Circuit Breaker for Machine Use (P80-P83)

- High capability of disconnect. HMP-DC Series can reach 10kA
- Can promptly switch off to ensure the reliability of switching off
- Have auxiliary, alarming, auxiliary alarming, shunt trip, over-voltage and under-voltage accessories to meet different needs
- Accessories are fixed with the product when manufactured to ensure its reliability
- Production accreditation: CCC and CE

How to select the proper starter and protection products for the motor

Rated power of the motor → **Coordination types** → Honeywell recommended motor starter and Protection solution → Performance characteristics → Honeywell product model

Coordination Types

Two types of coordination

According to the standard of IEC60947-4-1, the definition of coordination type is based on the tests under different ampere ratings, which aims to test the performance of switchgear and controlgear under extreme conditions, and defines the two types of coordination according to the state of the components after the test.

Type-1 Coordination Table

- Definition
- The contactor and relay are permissible to be damaged under the following two conditions
  - Shall cause no danger to personal safety of the operator
  - Shall not damage any other component except for the relay and contactor
- Field of application
  - Requiring appropriate maintenance
  - Cost efficient switchgear and controlgear
  - The continuity of power supply is not of great significance or can be ensured by simply switch to motor drawer

Type-2 Coordination Table

Honeywell products are Type-2 coordinated products

- Definition
- Welded contactor/relay contacts are permissible, however can be easily separated
  - According to Type-2 coordination test, switchgear and controlgear are still suitable for further use
  - Shall not damage any other component except for the relay and contactor
- Field of application
  - The continuity of power supply is of great significance
  - Limited time for maintenance
  - It is a mandatory requirement specified by the specifications to use Type-2 coordination

Motor Starter and Protection Solution

"2-Component" Solution

Motor Protection Circuit Breaker (Thermo-magnetic Protection)
+
Contactor

"3-Component" Solution

Motor Protection Circuit Breaker (Magnetic Protection)
+
Contactor
+
Thermal Overload Relay

Correction Factor for High Altitude Localities				
Altitude (m)		2000	3000	4000
Correction factor	Rated operating current Ie	1	0.92	0.9
	Rated impulse withstand voltage Uimp	1	0.88	0.78

Correction Factor for Abnormal Working Ambient Temperature				
Ambient temperature (°C)	40	50	60	70
Correction factor	1	0.875	0.75	0.625

HCS 3-Pole AC/HCQ 4-Pole AC Contactor

HCS 3-Pole AC Contactor Reference Definition

HCS - □□ - (□□) - A □□□

Contactor code

Rated current:
09, 12, 18, 25, 32, 38, 40, 50, 65, 80, 95, 115, 150, 170
225, 265, 330, 400, 500, 630, 800

Types with integrated auxiliary contact:
09~38: 10: with a normally open auxiliary contact
01: with a normally closed auxiliary contact
40~95: without these two numbers (with a normally open and a normally closed auxiliary contact)
115~800: 00: without integrated auxiliary contact
(optional side-mounted or front-mounted auxiliary contact module are available)

Coil voltage:
24(2), 48(2), 110, 220, 380

50/60Hz(3) AC-coil

(1) See page 84 and 85 of the sample for all contactor models.
(2) This coil voltage is not applicable to 225-800 contactors.
(3) HCS-09~170 contactor has 50/60Hz coil, and HCS-225~800 contactor has 50Hz coil.

HCS 3-Pole AC Contactor Product Features

HCS-09~95

- AC-3/AC-4 hasthe same rated currents, can be used without derating
- Slide dustproof cover, easy to remove and dose not easily fall off, with excellent dustproof effect, and can prevent human error operations
- With integrated auxiliary contacts and helical friction design, providing superior reliability.Multiple optional accessories
- Modular design, multiple options of front-mounted and side-mounted accessories, and compatible with the major brands on market
- IP20B Protection Rating, avoiding finger contact

HCS-115~170

- Can assemble 2 HAS side-mounted auxiliary contact modules and 1 HAS front-mounted auxiliary contact module, providing up to 8 auxiliary contacts

HCS-225~800

- Can assemble up to 2 front-mounted modules (front-attached auxiliary contact module or air time delay module)

HCS 3-Pole AC/HCQ 4-Pole AC Contactor

HCQ 4-Pole AC Contactor Reference Definition

HCQ - □ □ - A □

Contactor code

Rated current:
09, 12, 25, 32, 40, 50*, 65, 80, 95*

Types with integrated auxiliary contact
X: 4-pole, normally open
Y: 4-pole, 2 normally open and 2 normally closed

Coil voltage:
24, 36, 110, 220, 380

A: 50Hz AC-coil

* This level of current can only be used for 4-pole normally open contacts.

HCQ 4-Pole AC Contactor Product Features

- Multiple types of contacts are available: 4-pole normally open type and 2-pole normally open type
- Dust-free design: to achieve multiple dust-proof effect
- Modular design: auxiliary contact modules and mechanical interlock modules can be installed on the side, and auxiliary contact modules or air delay modules can be installed on the front
- IP20 Protection Rating, avoiding finger contact

Reference Definition

Auxiliary contact module

HAS - □□

Auxiliary module code

Number of auxiliary contact (s)

11: 1NO + 1NC	13: 1NO + 3NC
02: 2NC	31: 3NO + 1NC
20: 2NO	40: 4NO
22: 2NO + 2NC	04: 4NC

Side-attached auxiliary module

HAS - L□□ - S

Auxiliary module code

Side-mounted auxiliary contact *

Model

Number of auxiliary contact (s)
20: 2NO
11: 1NO + 1NC
02: 2NC

Air time delay module

HAS - □ □□ - S

Auxiliary module code

Time-delay approach
N: On-delay operation
F: Off-delay operation

Model

Time delay range
3: 0.1s~3s
30: 0.1s~30s
180: 10s~180s

Surge suppression module

HAS - MDRC - □ - S

Auxiliary module code

Built-in components
R+C

Model

Voltage
0: AC24V~48V
1: AC93V~121V
2: AC187V~242V
3: AC323V~418V

Mechanical interlock module

HAS - ML□

Auxiliary module code

Mechanical interlock

Rated operating current range
A: 9~38A
B: 40~65A*

*: Standard side-attached auxiliary module and mechanical interlock module will not be provided for HCS Contactor 80A and 95A , if there is any demand, please consult the relevant technician of Honeywell Control Component by calling 400 876 6608.

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-09	HCS-12	HCS-18	HCS-25

Basic parameters						
Rated operating current Ie	AC-3/AC-4 (Ue≤400V)	A	9	12	18	25
Rated operating voltage Ue		V	220/380/660	220/380/660	220/380/660	220/380/660
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	25	25	32	40
Rated operating power Pe AC-3 Category	220V	kW	2.2	3	4	5.5
	380V	kW	4	5.5	7.5	11
	660V	kW	5.5	7.5	9	15
Auxiliary contact			With 1 normally open or 1 normally closed instantaneous auxiliary contact			
Accessory			Can add on 1 HAS side-attached auxiliary contact module, HAS mechanical interlock module, 1 HAS fraont auxiliary contact module or 1 HAS air time delay module			
Applicable manual - overload relay		A	0.1-10	0.1-13	0.1-18	0.1-24
Operating environment						
Rated insulation voltage Ui	Comply with IEC60947/ GB14048 standard	V	690	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB14048 standard	kV	6	6	6	6
Standards			IEC 60947-1，IEC 60947-4-1，GB/T 14048.1，GB/T 14048.4			
Product certificate			CCC	CCC	CCC	CCC
Protection rating	Power line connection		IP20B	IP20B	IP20B	IP20B
	Coil connection		IP20B	IP20B	IP20B	IP20B
Ambient temperature	Storage	°C	-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80
	Operating (no need to reduce the capacity)	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Maximum allowable	°C	-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70
Maximum	Without derating	m	2000	2000	2000	2000
Without derating	Without derating		A±5° angle against normally vertical installation			
Flame retardant	Comply with UL94	°C	Housing and base V0 rating			

*: Standard side-attached auxiliary module and mechanical interlock module will not be provided for HCS Contactor 80A and 95A , if there is any demand, please consult related technician of Honeywell Control Component by calling 400 876 6608.

HCS-32	HCS-38	HCS-40	HCS-50	HCS-65	HCS-80	HCS-95
						
32	38	40	50	65	80	95
220/380/660	220/380/660	220/380/660	220/380/660	220/380/660	220/380/660	220/380/660
50	50	60	80	80	110	110
7.5	9	11	15	18.5	22	25
15	18.5	18.5	22	30	37	45
18.5	18.5	30	33	37	45	45
With 1 normally open or 1 normally closed instantaneous auxiliary contact	With 1 normally open or 1 normally closed instantaneous auxiliary contact	With 1 normally open and 1 normally closed instantaneous auxiliary contact				
Can add on 1 HAS side-attached auxiliary contact module, HAS mechanical interlock module, 1 HAS fraont auxiliary contact module or 1 HAS air time delay module					*	*
0.1-32	0.1-38	17-40	17-50	17-65	17-80	17-104
690	690	690	690	690	690	690
6	6	8	8	8	8	8
IEC 60947-1，IEC 60947-4-1，GB/T 14048.1，GB/T 14048.4						
CCC	CCC	CCC	CCC	CCC	CCC	CCC
IP20B	IP20B	IP20B	IP20B	IP20B	-	-
IP20B	IP20B	IP20	IP20	IP20	IP20	IP20
-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80
-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70
2000	2000	2000	2000	2000	2000	2000
A±5° angle against normally vertical installation						
Housing and base V0 rating						

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-09	HCS-12	HCS-18	HCS-25
						
Main circuit connection						
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	1.5 ~ 10
	2 pieces of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	2.5 ~ 10
Flexible cords with connection	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 6	1 ~ 10
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 4	1.5 ~ 6
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	2.5 ~ 10
	2 pieces of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	2.5 ~ 10
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
	Inner hexagon		/	/	/	/
Tightening torque		N·m	1.7	1.7	1.7	2.5
Control circuit connection						
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 pieces of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
Flexible cords with connection	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 pieces of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
Tightening torque		N·m	1.7	1.7	1.7	1.7

HCS-32	HCS-38	HCS-40	HCS-50	HCS-65	HCS-80	HCS-95
						
1.5 ~ 10	1.5 ~ 10	2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
2.5 ~ 10	2.5 ~ 10	2.5 ~ 16	2.5 ~ 16	2.5 ~ 16	4 ~ 25	4 ~ 25
1 ~ 10	1 ~ 10	2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
1.5 ~ 6	1.5 ~ 6	2.5 ~ 10	2.5 ~ 10	2.5 ~ 10	4 ~ 16	4 ~ 16
2.5 ~ 10	2.5 ~ 10	2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
2.5 ~ 10	2.5 ~ 10	2.5 ~ 16	2.5 ~ 16	2.5 ~ 16	4 ~ 25	4 ~ 25
PH2	PH2	/	/	/	/	/
Ø6	Ø6	Ø8	Ø8	Ø8	Ø8	Ø8
/	/	/	/	/	4	4
2.5	2.5	5	5	5	9	9
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 4	1 ~ 4	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
PH2	PH2	PH2	PH2	PH2	PH2	PH2
Ø6	Ø6	Ø6	Ø6	Ø6	Ø6	Ø6
1.7	1.7	1.2	1.2	1.2	1.2	1.2

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-09	HCS-12	HCS-18	HCS-25
						
Main contact characteristics						
Rated operating current Ie	AC-3/AC-4 (Ue≤400V)	A	9	12	18	25
Rated operating voltage Ue		V	220/380/660	220/380/660	220/380/660	220/380/660
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	25	25	32	40
Operating current frequency		Hz	50 or 60	50 or 60	50 or 60	50 or 60
Rated making capacity (400V)	Comply with IEC60947-4-1/ GB/T14048.4 standard; overvoltage categoryIII, pollution degree 3		10 x Ie (AC-3 category); 12 x Ie (AC-4 category)			
Rated breaking capacity (400V)	Comply with IEC60947-4-1/ GB/T14048.4 standard; overvoltage categoryIII, pollution degree 3		8 x Ie (AC-3 category) ; 10 x Ie (AC-4 category)			
Short-time withstand current	10s	A	72	96	144	200
Fuse protection	Without thermal overload relay, Type1		16	20	25	32
	With gG fuse, Type2		16	20	25	32
Electrical life (380V)	AC-3	10K times	200	200	150	150
	AC-4	10K times	5	5	5	4
AC Control Circuit Characteristics						
Rated control Us	50/60Hz	V	24、48、110、220、380			
Control voltage limit	50Hz Closed		0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C
	50Hz Release		0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C
Average power consumption (20°C, Us)	50Hz Starting (cosø=0.75)	VA	50 ~ 70	50 ~ 70	50 ~ 70	80 ~ 110
	550Hz Retention (cosø=0.3)	VA	6 ~ 8.8	6 ~ 8.8	6 ~ 8.8	11 ~ 14
Heat loss	50Hz	W	3 ~ 4	3 ~ 4	3 ~ 4	3 ~ 4
Actuation time	Closing	ms	12 ~ 25	12 ~ 25	12 ~ 25	12 ~ 25
	Opening	ms	5 ~ 20	5 ~ 20	5 ~ 20	5 ~ 20
Mechanical life	50Hz	10K times	1500	1500	1500	1000
Maximum operating frequency (≤ 55°C)	Operations per hour		3600	3600	3600	3600

HCS-32	HCS-38	HCS-40	HCS-50	HCS-65	HCS-80	HCS-95
						
32	38	40	50	65	80	95
220/380/660	220/380/660	220/380/660	220/380/660	220/380/660	220/380/660	220/380/660
50	50	60	80	80	110	110
50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60	50 or 60
10 x Ie (AC-3 category); 12 x Ie (AC-4 category)						
8 x Ie (AC-3 category) ; 10 x Ie (AC-4 category)						
256	256	320	400	504	640	760
50	50	63	63	80	100	125
50	50	63	63	80	100	125
150	150	150	150	150	150	120
3	3	3	2.5	2.5	2	1.5
24、48、110、220、380						
0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C	0.75 ~ 1.1Us 60°C
0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C
80 ~ 110	80 ~ 110	160 ~ 210	160 ~ 210	160 ~ 210	160 ~ 210	160 ~ 210
11 ~ 14	11 ~ 14	20 ~ 25	20 ~ 25	20 ~ 25	20 ~ 35	20 ~ 35
3 ~ 4	3 ~ 4	6 ~ 10	6 ~ 10	6 ~ 10	6 ~ 10	6 ~ 10
12 ~ 25	12 ~ 25	20 ~ 26	20 ~ 26	20 ~ 26	20 ~ 26	20 ~ 26
5 ~ 20	5 ~ 20	6 ~ 15	6 ~ 15	6 ~ 15	6 ~ 15	6 ~ 15
1000	1000	600	600	600	400	400
3600	3600	3600	3600	3600	3600	3600

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-09	HCS-12	HCS-18	HCS-25
						
Characteristics of contactor with auxiliary contact						
The number of auxiliary contacts	Comply with IEC60947-5-1/ GB/T14048.5 standard		1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed
Rated operating current Ie	AC-15/DC-13 category	A	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15
Rated operating voltage Ue		V	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	10	10	10	10
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard	V	690	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard	kV	6	6	6	6
Fuse protection	gG fuse	A	10	10	10	10
Rated making capacity Irms	Comply with IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250
Short-time withstand current	500ms	A	120	120	120	120
Insulation resistance		MΩ	>10	>10	>10	>10

HCS-32	HCS-38	HCS-40	HCS-50	HCS-65	HCS-80	HCS-95
						
1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed	1 normally open or 1 normally closed
AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15	AC-15: 0.95 / DC-13:0.15
AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220	AC: 380 / DC: 220
10	10	10	10	10	10	10
690	690	690	690	690	690	690
6	6	6	6	6	6	6
10	10	10	10	10	10	10
AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250	AC: 140 / DC: 250
120	120	120	120	120	120	120
>10	>10	>10	>10	>10	>10	>10

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-115	HCS-150	HCS-170
					
Basic parameters					
Rated operating current Ie	AC-3 (Ue≤400V)	A	115	150	170
Rated operating voltage Ue		V	220/380/660	220/380/660	220/380/660
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	200	200	200
Rated operating power Pe AC-3 Category	220V	kW	30	45	50
	380V	kW	55	75	90
	660V	kW	80	100	110
Auxiliary contact			Without auxiliary contact	Without auxiliary contact	Without auxiliary contact
Accessory			Can add on up to 2 HAS side-mounted auxiliary contact module and 1 HAS front-mounted auxiliary contact module		
Operating environment					
Rated insulation voltage Ui	Comply with IEC60947/GB14048 standard	V	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB14048 standard	kV	8	8	8
Standards			IEC60947-1, IEC60947-4-1, GB14048.1, GB14048.4		
Product certificate			CCC	CCC	CCC
Protection rating	Power line connection		IP20	IP20	IP20
	Coil connection		IP20	IP20	IP20
Ambient temperature	Storage	°C	-60 ~ +80	-60 ~ +80	-60 ~ +80
	Operating (no need to reduce the capacity)	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Maximum allowable values under Us	°C	-40 ~ +70	-40 ~ +70	-40 ~ +70
Maximum operating altitude	Without derating	m	2000	2000	2000
Maximum operating altitude	Without derating		A±5° angle against normally vertical installation		
Main circuit connection					
Flexible cords without connection terminal	1 piece of wire	mm²	10 ~ 120	10 ~ 120	10 ~ 120
	2 pieces of wire	mm²	10 ~ 50	10 ~ 50	10 ~ 50
Flexible cords with connection terminal	1 piece of wire	mm²	10 ~ 120	10 ~ 120	10 ~ 120
	2 pieces of wire	mm²	10 ~ 50	10 ~ 50	10 ~ 50
Hard wire without connection terminal	1 piece of wire	mm²	10 ~ 120	10 ~ 120	10 ~ 120
	2 pieces of wire	mm²	10 ~ 50	10 ~ 50	10 ~ 50
Screwdriver	Inner hexagon (HCS-115~170) Wrench (HCS-225~800)		4	4	4
Tightening torque		N·m	12	12	12

3-Pole AC Contactor Model			HCS-115	HCS-150	HCS-170
					
Control circuit connection					
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6
Tightening torque		N·m	0.8	0.8	0.8
Main contact characteristics					
Rated operating current Ie	AC-3 (Ue≤400V)	A	115	150	170
Rated operating voltage Ue		V	220/380/660	220/380/660	220/380/660
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	200	200	200
Operating current frequency		Hz	50 or 60	50 or 60	50 or 60
Rated making capacity (400V)	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		10 x Ie (AC-3 category)	10 x Ie (AC-3 category)	10 x Ie (AC-3 category)
Rated breaking capacity (400V)	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		8 x Ie (AC-3 category)	8 x Ie (AC-3 category)	8 x Ie (AC-3 category)
Short-time withstand current	10s	A	920	1200	1200
Fuse protection	Without thermal overload relay, type1		200	250	250
	With gG fuse, Type2		125	160	180
Electrical life (380V)	AC-3	10K times	60	60	60
AC control circuit characteristics					
Rated control voltage Us	50Hz	V	24, 48, 110, 220, 380	24, 48, 110, 220, 380	24, 48, 110, 220, 380
Control voltage limit	50Hz Closed		0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C
	50Hz Release		0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C
Average power consumption (20°C, Us)	50Hz Starting	VA	300 (cosø=0.8)	300 (cosø=0.8)	300 (cosø=0.8)
	50Hz Retention	VA	< 51.3 (cosø=0.3)	< 51.3 (cosø=0.3)	< 51.3 (cosø=0.3)
Heat loss	50Hz	W	3 ~ 8	3 ~ 8	3 ~ 8
Actuation time	Closing	ms	< 50	< 50	< 50
	Opening	ms	< 75	< 75	< 75
Mechanical life	50Hz	10K times	600	600	600
Maximum operating frequency (≤ 55°C)	Operations per hour		3600 (with no load), 600 (at rated load)		

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-225	HCS-265	HCS-330
					
Basic parameters					
Rated operating current Ie	AC-3 (Ue≤400V)	A	225	265	330
Rated operating voltage Ue		V	380	380	380
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	280	360	360
Rated operating power Pe AC-3 Category	380V	kW	100	132	160
Auxiliary contact			Without auxiliary contact	Without auxiliary contact	Without auxiliary contact
Accessory			Can add on up to 2 front-mounted modules (front auxiliary contact module or air time delay module		
Operating environment					
Rated insulation voltage Ui	Comply with IEC60947/ GB14048 standard	V	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB14048 standard	kV	8	8	8
Standards			IEC60947-1, IEC60947-4-1, GB14048.1, GB14048.4		
Product certificate			CCC	CCC	CCC
Ambient temperature	Storage	°C	-60 ~ +80	-60 ~ +80	-60 ~ +80
	Operating (no need to reduce the capacity)	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Maximum allowable values under Us	°C	-40 ~ +70	-40 ~ +70	-40 ~ +70
Maximum operating altitude	Without derating	m	2000	2000	2000
Operating position	Without derating		A±5° angle against normally vertical installation		
Main circuit connection					
Flexible cords without connection terminal	1 piece of wire	mm²	185	240	240
	2 pieces of wire	mm²	/	/	/
Flexible cords with connection terminal	1 piece of wire	mm²	185	240	240
	2 pieces of wire	mm²	/	/	/
Hard wire without connection terminal	1 piece of wire	mm²	185	240	240
	2 pieces of wire	mm²	/	/	/
Screwdriver	Inner hexagon (HCS-115~170) Wrench (HCS-225~800)		16	16	16
Tightening torque		N·m	35	35	35

HCS-400	HCS-500	HCS-630	HCS-800
400	500	630	800
380	380	380	380
580	580	850	850
200	250	335	400
Without auxiliary contact	Without auxiliary contact	Without auxiliary contact	Without auxiliary contact
690	690	690	690
8	8	8	8
CCC	CCC	CCC	CCC
-60 ~ +80	-60 ~ +80	-60 ~ +80	-60 ~ +80
-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
-40 ~ +70	-40 ~ +70	-40 ~ +70	-40 ~ +70
2000	2000	2000	2000
/	/	/	/
185	185	/	/
/	/	/	/
185	185	/	/
/	/	/	/
185	185	/	/
16	16	18	18
35	35	58	58

HCS 3-Pole AC Contactor

3-Pole AC Contactor Model			HCS-225	HCS-265	HCS-330
					
Control circuit connection					
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6
Tightening torque		N·m	0.8	0.8	0.8
Main contact characteristics					
Rated operating current Ie	AC-3 (Ue≤400V)	A	225	265	330
Rated operating voltage Ue		V	380	380	380
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	280	360	360
Operating current frequency		Hz	50	50	50
Rated making capacity (400V)	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		10 x Ie (AC-3 category)	10 x Ie (AC-3 category)	10 x Ie (AC-3 category)
Rated breaking capacity (400V)	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		8 x Ie (AC-3 category)	8 x Ie (AC-3 category)	8 x Ie (AC-3 category)
Short-time withstand current	10s	A	1800	2200	2650
	With gG fuse, Type2		315	500	500
Electrical life (380V)	AC-3	10K times	50	50	50
AC Control Circuit Characteristics					
Rated control voltage Us	50Hz	V	110, 220, 380	110, 220, 380	110, 220, 380
Control voltage limit	50Hz Closed		0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C
	50Hz Release		0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C
Average power consumption (20°C, Us)	50Hz Starting	VA	900 (cosø=0.4)	1250 (cosø=0.3)	700 (cosø=0.9)
	50Hz Retention	VA	80 (cosø=0.4)	135 (cosø=0.4)	8 (cosø=0.9)
Actuation time	Closing	ms	40 ~ 65	40 ~ 65	40 ~ 75
	Opening	ms	100 ~ 170	100 ~ 170	100 ~ 170
Mechanical life		10K times	300	300	300
Maximum operating frequency (≤ 55°C)	Operations per hour		900	900	900

HCS-400	HCS-500	HCS-630	HCS-800
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
PH2	PH2	PH2	PH2
Ø6	Ø6	Ø6	Ø6
0.8	0.8	0.8	0.8
400	500	630	800
380	380	380	380
580	580	850	850
50	50	50	50
10 x Ie (AC-3 category)	10 x Ie (AC-3 category)	10 x Ie (AC-3 category)	10 x Ie (AC-3 category)
8 x Ie (AC-3 category)	8 x Ie (AC-3 category)	8 x Ie (AC-3 category)	8 x Ie (AC-3 category)
3600	4200	5050	6250
630	630	800	800
30	20	20	10
110, 220, 380	110, 220, 380	110, 220, 380	110, 220, 380
0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C	0.85 ~ 1.1Us 60°C
0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C	0.3 ~ 0.6Us 60°C
1050 (cosø=0.9)	1400 (cosø=0.9)	1700 (cosø=0.9)	1700 (cosø=0.9)
12 (cosø=0.9)	20 (cosø=0.9)	20 (cosø=0.9)	20 (cosø=0.9)
40 ~ 75	40 ~ 80	40 ~ 80	60 ~ 80
100 ~ 170	100 ~ 200	130 ~ 230	150 ~ 180
300	300	300	300
900	900	900	900

HCQ 4-Pole AC Contactor

HCQ 4-Pole AC Contactor Model			HCQ-09...	HCQ-12...	HCQ-25...	HCQ-32...
						
Basic parameters						
Rated operating current Ie	AC-3 (Ue=380V)		9	12	25	32
	AC-1		20	25	40	50
Rated operating voltage Ue		V	380	380	380	380
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	20	25	40	50
Rated operating power Pe AC-3 Category (Only For HCQ-...X Series)	220V	kW	2.2	3	5.5	7.5
	380V	kW	4	5.5	11	15
Accessory			Can add on 1 HAS side-attached auxiliary contact module, HAS mechanical interlock module, 1 HAS frontattached auxiliary contact module or 1 HAS air time delay module			
Operating environment						
Rated insulation voltage Ui	Comply with IEC60947/ GB14048 standard	V	690	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB14048 standard	kV	8	8	8	8
Standards			IEC60947-1, IEC60947-4-1, GB/T14048.1, GB/T14048.4			
Product certificate			CCC	CCC	CCC	CCC
Protection rating	Power line connection		IP20	IP20	IP20	IP20
	Coil connection		IP20	IP20	IP20	IP20
Ambient temperature	Storage	°C	-35 ~ +70	-35 ~ +70	-35 ~ +70	-35 ~ +70
	Operating	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Maximum allowable values under Us	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Maximum operating altitude	Without derating	m	2000	2000	2000	2000
Operating position	Without derating		A±5° angle against normally vertical installation			
Flame retardant	Comply with UL94	°C	Housing and base V0 rating			
Main circuit connection						
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	1.5 ~ 6
	2 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	1.5 ~ 6
Flexible cords with connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 6	1 ~ 6
	2 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 4	1 ~ 4
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 10	1.5 ~ 10
	2 piece of wire	mm²	1 ~ 4	1 ~ 4	1.5 ~ 6	1.5 ~ 6
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
	Inner hexagon		/	/	/	/
Tightening torque		N·m	1.7	1.7	2.5	2.5

HCQ-40...	HCQ-50...	HCQ-65...	HCQ-80...	HCQ-95...
				
40	50	65	80	95
60	/	80	100	/
380	380	380	380	380
60	80	80	100	100
11	15	18.5	22	25
18.5	22	30	37	45
Can add on 1 HAS side-attached auxiliary contact module, HAS mechanical interlock module, 1 HAS frontattached auxiliary contact module or 1 HAS air time delay module				
690	690	690	690	690
8	8	8	8	8
IEC60947-1, IEC60947-4-1, GB/T14048.1, GB/T14048.4				
CCC	CCC	CCC	CCC	CCC
IP20	IP20	IP20	IP20	IP20
IP20	IP20	IP20	IP20	IP20
-35 ~ +70	-35 ~ +70	-35 ~ +70	-35 ~ +70	-35 ~ +70
-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
2000	2000	2000	2000	2000
A±5° angle against normally vertical installation				
Housing and base V0 rating				
2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
2.5 ~ 16	2.5 ~ 16	2.5 ~ 16	4 ~ 25	4 ~ 25
2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
2.5 ~ 10	2.5 ~ 10	2.5 ~ 10	4 ~ 16	4 ~ 16
2.5 ~ 25	2.5 ~ 25	2.5 ~ 25	4 ~ 50	4 ~ 50
2.5 ~ 10	2.5 ~ 10	2.5 ~ 10	4 ~ 25	4 ~ 25
PH2	PH2	PH2	PH2	PH2
Ø8	Ø8	Ø8	Ø8	Ø8
/	/	/	4	4
5	5	5	9	9

HCQ 4-Pole AC Contactor

HCQ 4-Pole AC Contactor Model			HCQ-09...	HCQ-12...	HCQ-25...	HCQ-32...
						
Main circuit connection						
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
Flexible cords with connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 piece of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
	2 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
Tightening torque		N·m	1.7	1.7	1.7	1.7
Main contact characteristics						
Rated operating current Ie	AC-3 (Ue=380V)		9	12	25	32
	AC-1		20	25	40	50
Rated operating voltage Ue		V	380	380	380	380
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	20	25	40	50
Operating current frequency		Hz	50	50	50	50
Tightening torque	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		10xIe	10xIe	10xIe	10xIe
Rated breaking capacity	Comply with IEC60947-4-1/ GB14048.4 standard overvoltage category III, pollution degree: 3		8xIe	8xIe	8xIe	8xIe
Short-time withstand current	10s	A	72	96	200	248
Fuse protection	With gG fuse, Type 2		10	10	25	63
Electrical life (380V)	AC-3 (For HCQ-...X Series)	10Ktimes	140	140	120	100
	AC-1 (For HCQ-...Y Series)	10Ktimes	15	30	35	35
AC Control Circuit Characteristics						
Rated control Us	50Hz	V	24, 36, 110, 220, 380			
Control voltage limit	50Hz Closed		85% ~ 110%	85% ~ 110%	85% ~ 110%	85% ~ 110%
	50Hz Release		20% ~ 70%	20% ~ 70%	20% ~ 70%	20% ~ 70%
Average power consumption (20oC, Us)	50Hz Starting (cosØ=0.8)	VA	70	70	110	110
	50Hz Retentio (cosØ=0.3)	VA	< 9	< 9	< 14	< 14
Actuation time	Closing	ms	12~22	12~22	12~22	12~22
	Opening	ms	4~19	4~19	4~19	4~19
Mechanical life	50Hz	10Ktimes	1000	1000	1000	800
Maximum operating frequency (≤55°C)	Operations per hour		1800	1800	1800	1800

HCQ-40...	HCQ-50...	HCQ-65...	HCQ-80...	HCQ-95...
				
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4
PH2	PH2	PH2	PH2	PH2
Ø6	Ø6	Ø6	Ø6	Ø6
1.7	1.7	1.7	1.7	1.7
40	50	65	80	95
60	/	80	100	/
380	380	380	380	380
60	80	80	100	100
50	50	50	50	50
10xIe	10xIe	10xIe	10xIe	10xIe
8xIe	8xIe	8xIe	8xIe	8xIe
320	400	520	640	760
80	100	125	160	160
90	90	90	90	90
35	35	35	35	35
24, 36, 110, 220, 380				
85% ~ 110%	85% ~ 110%	85% ~ 110%	85% ~ 110%	85% ~ 110%
20% ~ 70%	20% ~ 70%	20% ~ 70%	20% ~ 70%	20% ~ 70%
200	200	200	200	200
< 36.6	< 36.6	< 36.6	< 36.6	< 36.6
20-26	20-26	20-26	20-35	20-35
8~12	8~12	8~12	6~20	6~20
500	500	500	300	300
1200	1200	1200	1200	1200

HCS 3-Pole AC/HCQ 4-Pole AC Contactor Auxiliary module

			HAS Side Auxiliary Contact Module	HAS Front Auxiliary Contact Module	HAS Air Time Delay Module
					
Operating environment					
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard	V	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard	kV	6	8	8
Standards			IEC60947-5-1, GB/T14048.5	IEC60947-5-1, GB/T14048.5	IEC60947-5-1, GB/T14048.5
Product certificate			CCC	CCC	CCC
Protection rating			IP20	IP20	IP20
Ambient temperature	Storage	°C	-35 ~ +70	-60 ~ +80	-60 ~ +80
	Operation (with no need to reduce the capacity)	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Maximum allowable values under Us	°C	-5 ~ +40	-40 ~ +70	-40 ~ +70
Maximum operating altitude	Without derating	m	2000	2000	2000
Characteristics					
Rated operating voltage Ue	Maximum	V	660	600	380
Rated operating current Ie	AC-15 Category		380V/0.95A	A600 240V/3A	380V/0.95A
	DC-13 Category		220V/0.15A	Q600 250V/0.27A	220V/0.15A
Conventional thermal current Ith	θ≤60°C	A	10	10	10
Fuse protection	gG Fuse	A	10	10	10
Rated making capacity Irms	Complywith IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140 DC: 250	AC: 140 DC: 250	AC: 140 DC: 250
Short-time withstand current	500ms	A	120	120	120
Insulation resistance		MΩ	> 10	> 10	> 10

HAS-MDRC Coil Surge Suppression Module

Efficiently protect the coil from high frequency interference.
The peak of the breaking voltage can reduce from 7~10 times of Usto 1.5 times of Us and less,
Increased breaking time: the breaking time is 1.2~2 times of that with no module mounted.

Model	Built-in components	Voltage
HAS-MDRC-0-S	R+C	AC24V ~ 48V
HAS-MDRC-1-S	R+C	AC93V ~ 121V
HAS-MDRC-2-S	R+C	AC187V ~ 242V
HAS-MDRC-3-S	R+C	AC323V ~ 418V

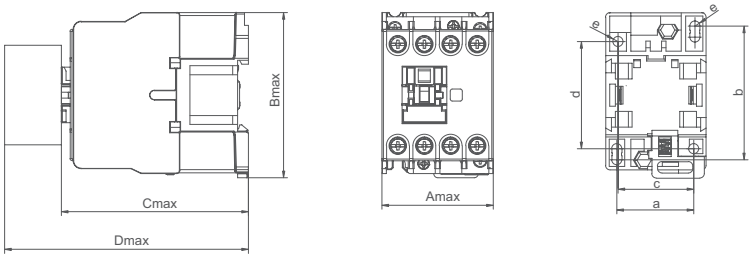
HAS-ML... Mechanical Interlock Module

Interlocking through mechanical components, which enable asynchronous operations of two adjacent products.

Model	Rated operating current
HAS-MLA	9 ~ 38A
HAS-MLB	40 ~ 65A

HCS 3-Pole AC Contactor Outlines and Mounting Dimensional Drawing

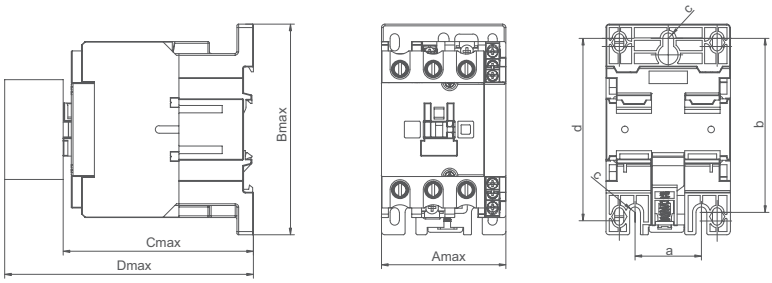
HCS-09~38



Model	Amax	Bmax	Cmax	Dmax*	a	b1/b2	c	d	e
HCS-09~12	47	76	86	120	35	50/60	34	48	Ø 4.5
HCS-18	47	76	91	125	35	50/60	34	48	Ø 4.5
HCS-25	58	86	98	131	40	50/60	40	48	Ø 4.5
HCS-32~38	58	86	102	135	40	50/60	40	48	Ø 4.5

* With HAS auxiliary contact module mounted.

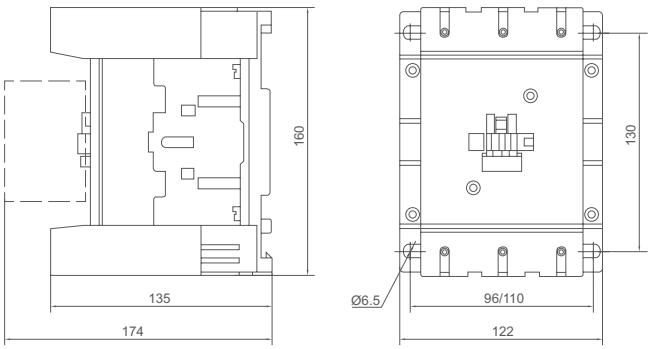
HCS-40~95



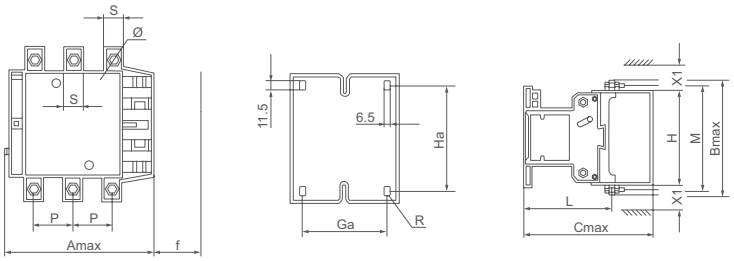
Model	Amax	Bmax	Cmax	Dmax*	a	b	c
HCS-40~65	77	127	119	157.5	40	100/110	Ø 6.5
HCS-80~95	86	127	127	165.5	40	100/110	Ø 6.5

* With HAS auxiliary contact module mounted.

HCS-115~170

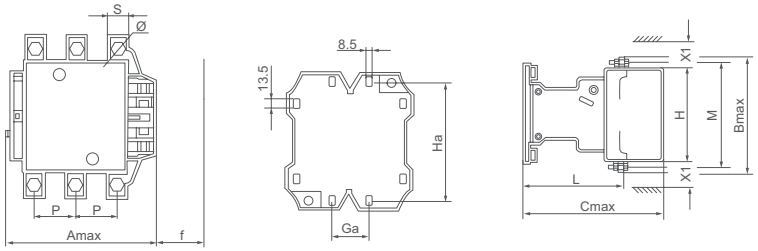


HCS-225~330



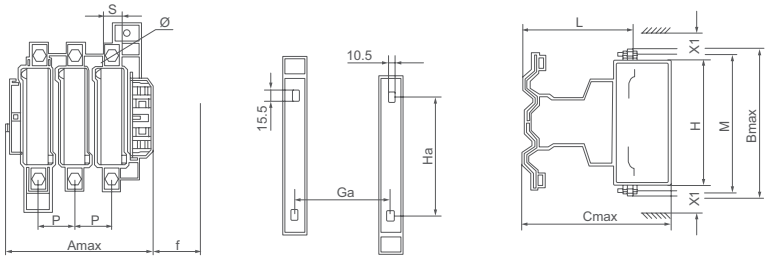
Model	Amax	Bmax	Cmax	P	S	Ø	f	M	H	L	X1 (220~500V)	X1 (660~1000V)	Ga	Ha
HCS-225	170	197	182	48	25	M10	131	172	127	114	10	15	80	113/123
HCS-265	203	200	212	48	25	M10	147	179	145	141	10	15	96	113/123
HCS-330	215	208	218	48	25	M10	147	182	158	146	10	15	96	113/123

HCS-400~500



Model	Amax	Bmax	Cmax	P	S	Ø	f	M	H	L	X1 (220~500V)	X1 (660~1000V)	Ga	Ha
HCS-400	215	208	218	48	25	M10	147	182	158	146	15	20	81	170/180
HCS-500	234	241	231	55	30	M10	150	211	171	146	15	20	81	170/180

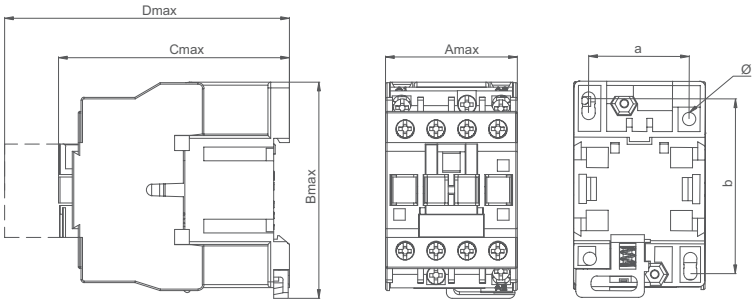
HCS-630~800



Model	Amax	Bmax	Cmax	P	S	Ø	f	M	H	L	X1 (220~500V)	X1 (660~1000V)	Ga	Ha
HCS-630~800	308	307	255	80	40	M12	181	259	202	155	20	30	182	181/191

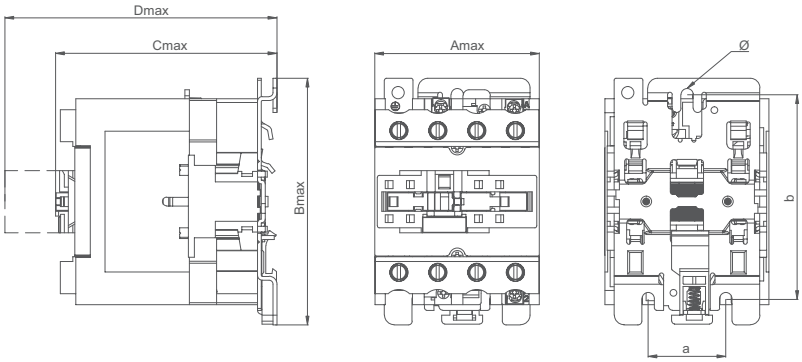
HCQ 4-Pole AC Contactor Outlines and Mounting Dimensional Drawing

HCQ-09~32



Model	Amax	Bmax	Cmax	Dmax	a	b	Ø
HCQ-09~12	47	76	86	124.5	35	50/60	4.5
HCQ-25	58	86	98	136.5	40	50/60	4.5
HCQ-32	58	86	102	140.5	40	50/60	4.5

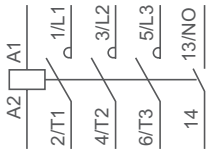
HCQ-40~95

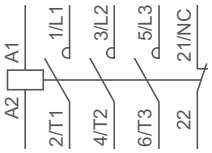


Model	Amax	Bmax	Cmax	Dmax	a	b	Ø
HCQ-40~65X	86	128	116	154.5	40	100/110	6.5
HCQ-40~65Y	86	128	127	154.5	40	100/110	6.5
HCQ-80~95X	98	128	124	162.5	40	100/110	6.5
HCQ-80~95Y	98	128	136	162.5	40	100/110	6.5

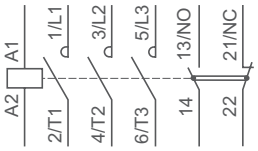
HCS 3-Pole AC/HCQ 4-Pole AC Contactor Wiring Diagram

HCS-09~38

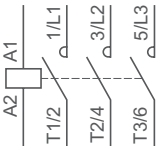




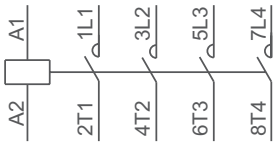
HCS-40~95



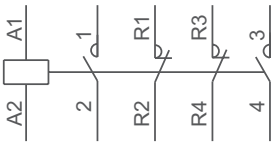
HCS-115~800



HCQ-...X

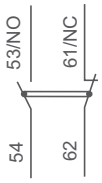


HCQ-...Y

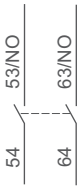


HAS Auxiliary Contact Module

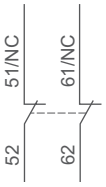
HAS-11



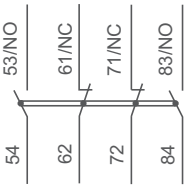
HAS-20



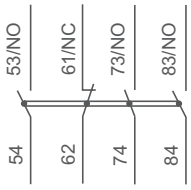
HAS-02



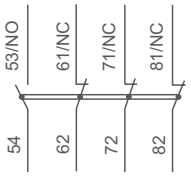
HAS-22



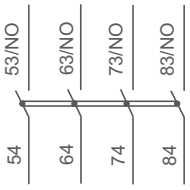
HAS-31



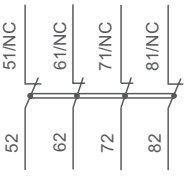
HAS-13



HAS-40

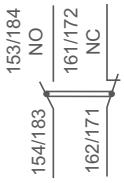


HAS-04

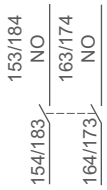


HAS-L...-S Side Auxiliary Contact Module

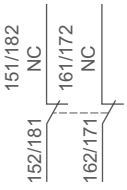
HAS-L11-S



HAS-L20-S



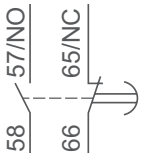
HAS-L02-S



HAS...S Air Time Delay Module

On-delay operation HAS-N●●●-S

off-delay operation HAS-F●●●-S



HCS 3-Pole DC Contactor

HCS 3-Pole DC Contactor Reference Definition

HCS - □□ - □□ - D □□

Contactor code

Rated current:
09, 12, 18, 25, 32, 40

Types with integrated auxiliary contact:
09~25: 10: with a normally open auxiliary contact
01: with a normally closed auxiliary contact
32~40: default: without auxiliary contact

Coil voltage:
12, 24, 36, 48, 60, 72,
110, 125, 220, 250

Coil Type:
D: DC-coil

HAS - □□ - DC

Auxiliary module code

Number of auxiliary contact (s)
11: 1NO+1NC 13: 1NO+3NC
02: 2NC 31: 3NO+1NC
20: 2NO 40: 4NO
22: 2NO+2NC 04: 4NC

Contactor Series NO.

HAS - L □□ - DC

Auxiliary module code

Side-mounted auxiliary contact *

Contactor Series NO.

Number of auxiliary contact (s)
10: 1NO
01: 1NC
11: 1NO+1NC
20: 2NO
02: 2NC

HAS - ML A - DC

Auxiliary module code

Mechanical interloc

Contactor Series NO.

Rated operating current range
A: 9~40A

3-Pole DC Contactor Model			HCS-09...	HCS-12...	HCS-18...	HCS-25...	HCS-32...	HCS-40...
								
Rated operating current Ie	AC-3 (Ue=400V)		9	12	18	25	32	40
Rated operating current Ie		V	400	400	400	400	400	400
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	32	32	32	32	65	65
Rated operating power Pe AC-3 Category	220V	kW	2.2	3	4	5.5	7.5	11
	400V	kW	4	5.5	7.5	11	15	18.5
Accessory			Can add on 1 HAS side-attached auxiliary contact module, 1 HAS front-attached auxiliary contact module					
Operating environment								
Rated insulation voltage Ui	Comply with IEC60947/GB14048 standard	V	690					
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB14048 standard	kV	6					
Standards			IEC60947-1, IEC60947-4-1, GB/T14048.1, GB/T14048.4					
Product certificate			CCC					
Protection rating	Power line connection		IP20					
	Coil connection		IP20					
Ambient temperature	Storage	°C	-35 ~ +70					
	Operating	°C	-5 ~ +40					
	Maximum allowable	°C	-5 ~ +40					
Maximum	Without derating	m	2000					
Operating position	Without derating		A±5° angle against normally vertical installation					
Flame retardant	Comply with UL94	°C	Housing and base V0 rating					
Main circuit connection								
Flexible cords without connection terminal	1 piece of wire	mm²	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	2.5 ~ 16	2.5 ~ 16
	2 pieces of wire	mm²	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	2.5 ~ 16	2.5 ~ 16
Flexible cords with connection	1 piece of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	2.5 ~ 16	2.5 ~ 16
	2 pieces of wire	mm²	1 ~ 4	1 ~ 4	1 ~ 4	1 ~ 4	2.5 ~ 16	2.5 ~ 16
Hard wire without connection terminal	1 piece of wire	mm²	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	2.5 ~ 10	2.5 ~ 10
	2 pieces of wire	mm²	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	1.5 ~ 6	2.5 ~ 10	2.5 ~ 10
Screwdriver	Phillips		PH2					
	Flat head		Ø6				Ø8	
Tightening torque		N·m	1.7				2.5	
Control circuit connection								
Flexible cords without connection terminal	1 piece of wire	mm²	1 ~ 2.5					
	2 pieces of wire	mm²	1 ~ 2.5					
Flexible cords with connection	1 piece of wire	mm²	1 ~ 2.5					
	2 pieces of wire	mm²	1 ~ 2.5					
Hard wire without connection terminal	1 piece of wire	mm²	1 ~ 2.5					
	2 pieces of wire	mm²	1 ~ 2.5					
Screwdriver	Phillips		PH2					
	Flat head		Ø6					
Tightening torque		N·m	1.2					

HCS 3-Pole DC Contactor

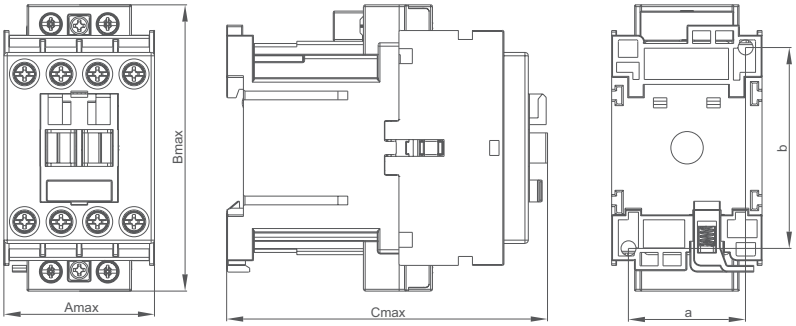
3-Pole DC Contactor Model			HCS-09...	HCS-12...	HCS-18...	HCS-25...	HCS-32...	HCS-40...
								
Main contact characteristics								
Rated operating current Ie	AC-3 (Ue=380V)		9	12	18	25	32	40
Rated operating voltage Ue		V	400					
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	32				65	
Operating current frequency		Hz	50/60Hz					
Rated making capacity			Comply with IEC60947-4-1/GB14048.4 standard, overvoltage category III, pollution degree: 3					
Rated breaking capacity			Comply with IEC60947-4-1/GB14048.4 standard, overvoltage category III, pollution degree: 3					
Short-time withstand current	10s	A	72	96	144	200	248	320
Fuse protection	With gG fuse	Type2	40	40	40	40	80	80
Electrical life (400V)	AC-3	10K times	140	140	120	100	140	100
DC control circuit characteristics								
Rated control voltage Us		V	12, 24, 36, 48, 60, 72, 110, 125, 220, 250					
Control voltage limit	Closed		85% ~ 110%					
	Release		10% ~ 75%					
Average power consumption (20°C, Us)	Starting	W	7.1					
	Retention	W	5.4					
Actuation time	Closing	ms	≤70					
	Opening	ms	≤50					
Mechanical life		10K times	1000					
Maximum operating frequency (≤55°C)	Operations per hour		3600					
Characteristics of contactor with auxiliary contact								
The number of auxiliary contacts	Comply with IEC60947-5-1/ GB/T14048.5 standard		1 normally open or 1 normally closed				/	
Rated operating current Ie	AC-15/DC-13 category	A	AC-15: 5.5A/230V; DC-13: 0.3A/250V				/	
Rated operating voltage Ue		V	AC: 220V/380V; DC: 220V				/	
Conventional thermal current Ith	θ≤60°C	A	10				/	
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard	V	690				/	
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard	kV	6				/	
Fuse protection	gG fuse	A	10				/	
Rated making capacity Irms	Comply with IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140； DC: 250				/	
Short-time withstand current	500ms	A	120				/	
Insulation resistance		MΩ	> 10				/	

HCS 3-Pole DC Contactor Auxiliary module

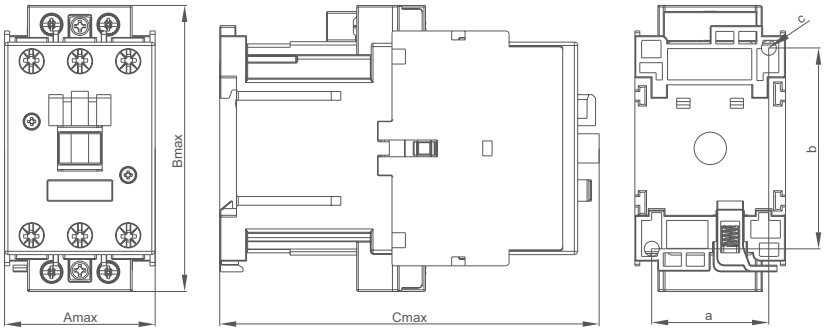
			HAS-L...-DC Side Auxiliary Contact Module	HAS-...-DC Front Auxiliary Contact Module
				
Operating environment				
Rated insulation voltage Ui	Comply with IEC60947/GB14048 standard	V	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB14048 standard	kV	6	6
Standards			IEC 60947-5-1, GB/T 14048.5	IEC 60947-5-1, GB/T 14048.5
Product certificate			CE	CE
Protection rating			IP20	IP20
Ambient temperature	Storage	°C	-35 ~ +70	-60 ~ +80
	Operating (no need to reduce the capacity)	°C	-5 ~ +40	-5 ~ +40
	Maximum allowable values under Us	°C	-5 ~ +40	-40 ~ +70
Maximum	Without derating	m	2000	2000
Characteristics				
Rated operating voltage Ue	Maximum	V	600	600
Rated operating current Ie	AC-15 Category		A600 240V/3A	A600 240V/3A
	DC-13 Category		Q600 250V/0.27A	Q600 250V/0.27A
Conventional thermal current Ith	θ≤60°C	A	10	10
Fuse protection	gG Fuse	A	10	10
Rated making capacity Irms	Complywith IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140 DC: 250	AC: 140 DC: 250
Short-time withstand current	500ms	A	120	120
Insulation resistance		MΩ	> 10	> 10

HCS 3-Pole DC Contactor Outlines and Mounting Dimensional Drawing

HCS-09~25



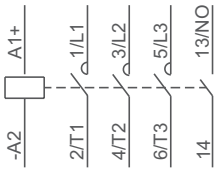
HCS-32~40

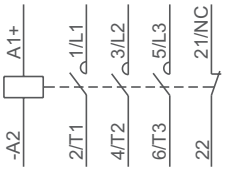


Model	Amax	Bmax	Cmax	a	b	c
HCS-09~25	45.5	86	97	35	60	4.5
HCS-32~40	45.5	86	114.5	35	60	4.5

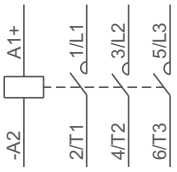
HCS 3-Pole DC Contactor Wiring Diagram

HCS-09~25



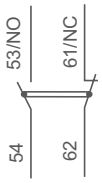


HCS-32~40

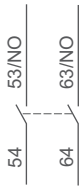


HAS-DC Auxiliary Contact Module

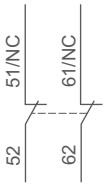
HAS-11-DC



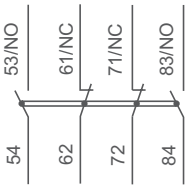
HAS-20-DC



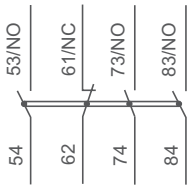
HAS-02-DC



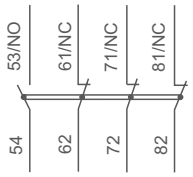
HAS-22-DC



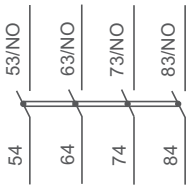
HAS-31-DC



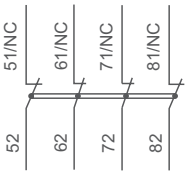
HAS-13-DC



HAS-40-DC

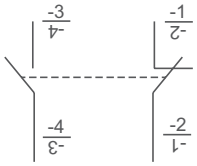


HAS-04-DC

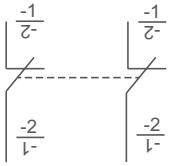


HAS-L····-DC Side Auxiliary Contact Module

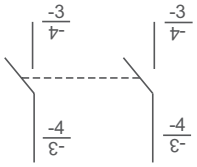
HAS-L11-DC



HAS-L02-DC



HAS-L20-DC



HCK Series Traversing Micro Contactor

Naming Conventior

HCK - □□ □ - □□ - □□

Series number

Rated current:
05, 09, 12

Types with integrated auxiliary contact:
X: 4-pole, normally open
Y: 4-pole, 2 normally open and 2 normally closed
Default: 3-pole,normally open

Coil voltage:
24, 110, 230

Coil Type:
A: 50/60Hz AC Coil
D: DC Coil

Number of auxiliary contact (s):
10: with 1NO auxiliary contact
01: with 1NC auxiliary contact
Default: without auxiliary contact

* 24V can only be used for DC coil,230V can only be used for AC coil.

Attachment Naming

Auxiliary contact module

HAK - □□

Auxiliary module code

Number of auxiliary contact (s)
11: 1NO + 1NC
02: 2NC
20: 2NO
22: 2NO + 2NC
13: 1NO+3NC
31: 3NO+1NC
40: 4NO
04: 4NC

Surge suppression module

HAK - MDRC - □

Auxiliary module code

Built-in components
R+C

Voltage
0: AC24V~48V
1: AC110~280V
2: AC380~480V

Mechanical Interlock Module

HAK - ML □

Auxiliary module code

Mechanical interlock

Rated operating current range
A: 5~12A

HCK Series Product Features

- Compact and saving space
- Three types of current (5A, 9A, and 12A) are available
- Many contact configurations, 3 or 4 poles. The 3-pole type has 1NO or 1NC auxiliary contacts, and for 4-pole type, there are 4 pole, normally open contacts and 4 pole, 2 normally open and 2 normally closed contacts available
- Modular design: auxiliary contact modules, surge eliminators, and mechanical interlock modules can be installed on the front
- IP2 protection avoiding finger touch

HCK Series Traversing Micro Contactor Model			HCK-05···	HCK-09···	HCK-12···
					
Basic parameters					
Rated operating current Ie	AC-1 (Ue=400V)	A	20	20	20
	AC-3 (Ue=400V)	A	5	9	12
Rated operating voltage Ue	AC-1 (Ue=400V)	V	400	400	400
Conventional thermal current Ith	AC-3 (Ue=400V)	A	20	20	20
Rated operating power Pe AC-3 Category (For 3-Pole HCK-...Series&4-Pole HCK-...X Series)	AC-3 (Ue=220V)	kW	1.5	3	3
	AC-3 (Ue=400V)	kW	2.2	4	5.5
Accessory			Can add on 1 HAK auxiliary contact module, 1 HAK Surge suppression module, 1 HAK Mechanical interlock module		
Operating environment					
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard	V	690		
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard	kV	6		
Standards	Comply with IEC60947/ GB/T14048 standard		IEC60947-1, IEC60947-4-1, GB/T14048.1, GB/T14048.4		
Product certificate	Comply with IEC60947/ GB/T14048 standard		CCC		
Protection rating	Comply with IEC60947/ GB/T14048 standard		IP20		
	Comply with IEC60947/ GB/T14048 standard		IP20		
Ambient temperature	Comply with IEC60947/ GB/T14048 standard	ºC	-35 ~ +70		
	Comply with IEC60947/ GB/T14048 standard	ºC	-5 ~ +40		
	Comply with IEC60947/ GB/T14048 standard	ºC	-5 ~ +40		
Maximum operating altitude	Comply with IEC60947/ GB/T14048 standard	m	2000		
Operating position	Comply with IEC60947/ GB/T14048 standard		A±5° angle against normally vertical installation		
Flame retardant	Comply with IEC60947/ GB/T14048 standard	ºC	Housing and base V0 rating		

HCK Series Traversing Micro Contactor

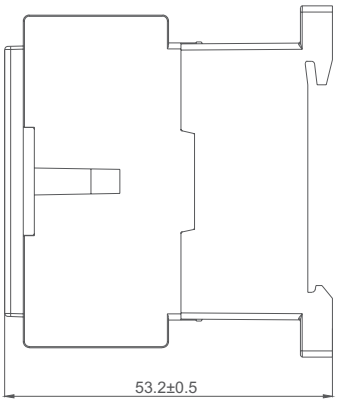
HCK Series Traversing Micro Contactor Model			HCK-05···	HCK-09···	HCK-12···
					
Main circuit connection					
Flexible cords without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6
Tightening torque		N·m	1.2	1.2	1.2
Control circuit connection					
Flexible cords without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6
Tightening torque		N·m	1.2	1.2	1.2
Main contact characteristics					
Rated operating current Ie	AC-1 (Ue=400V)	A	20	20	20
	AC-3 (Ue=380V)	A	5	9	12
Rated operating voltage Ue		V	400	400	400
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	20	20	20
Operating current frequency		Hz	50/60Hz	50/60Hz	50/60Hz
Rated making capacity	Comply with IEC60947-4-1/ GB/T14048.4 standard overvoltage category III, pollution degree: 3		10xIe	10xIe	10xIe
Rated breaking capacity	Comply with IEC60947-4-1/ GB/T14048.4 standard overvoltage category III, pollution degree: 3		8xIe	8xIe	8xIe
Short-time withstand current	10s	A	40	72	96
Fuse protection	gG fuse Type 2		20	20	20
Electrical life (400V)	AC-3 (For 3-Pole HCK-...Series & 4-Pole HCK-...X Series)	10K times	80	80	80
	AC-1 (For 4-Pole HCK-...Y Series)	10K times	6.5	18	30

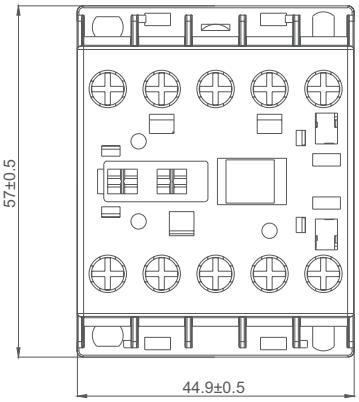
HCK Series Traversing Micro Contactor Model				HCK-05···	HCK-09···	HCK-12···
						
Control circuit characteristics						
Rated control voltage Us	50/60Hz		VAC	110, 230	110, 230	110, 230
			VDC	24, 110	24, 110	24, 110
Control voltage limit	50Hz Closed	(AC)		80%~110%	80%~110%	80%~110%
	50Hz Release	(AC)		20%~75%	20%~75%	20%~75%
	Closed	(DC)		80%~110%	80%~110%	80%~110%
	Release	(DC)		10%~75%	10%~75%	10%~75%
Average power consumption (20°C, Us)	Starting	(AC)	W	25	25	25
		(DC)	W	5.2	5.2	5.2
	Retention	(AC)	W	10.5	10.5	10.5
		(DC)	W	5.2	5.2	5.2
Actuation time	Closing		ms	≤35	≤35	≤35
	Opening		ms	≤20	≤20	≤20
Mechanical life			10K times	1000	1000	1000
Maximum operating frequency (≤55°C)	Operations per hour			3600	3600	3600
Characteristics of contactor with auxiliary contact						
The number of auxiliary contacts	Comply with IEC60947-5-1/ GB/ T14048.5 standard			3 Pole:1 normally open or 1 normally closed 4 Pole: 0	3 Pole:1 normally open or 1 normally closed 4 Pole: 0	3 Pole:1 normally open or 1 normally closed 4 Pole: 0
Rated operating current Ie	AC-15/DC-13 category		A	AC-15: 380V 0.95A DC-13: 220V 0.27A	AC-15: 380V 0.95A DC-13: 220V 0.27A	AC-15: 380V 0.95A DC-13: 220V 0.27A
Rated operating voltage Ue			V	AC: 220V/380V DC: 220V	AC: 220V/380V DC: 220V	AC: 220V/380V DC: 220V
Conventional thermal current Ith	θ≤60°C		A	10	10	10
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard		V	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard		kV	6	6	6
Fuse protection	gG fuse		A	10	10	10
Rated making capacity Irms	Comply with IEC60947-5-1/ GB/ T14048.5 standard		A	AC:140/DC:250	AC:140/DC:250	AC:140/DC:250
Short-time withstand current	500ms		A	90	90	90
Insulation resistance			MΩ	> 10	> 10	> 10

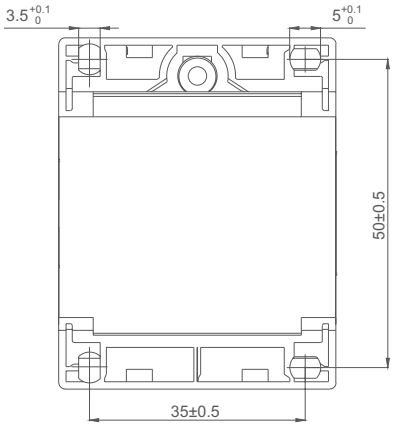
HCK Series Traversing Micro Contactor

				HAK Front Auxiliary Contact Module
				
Operating environment				
Rated insulation voltage Ui	Comply with IEC60947/GB/T14048 standard	V	690	
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB/T14048 standard	kV	6	
Standards			IEC 60947-5-1, GB/T 14048.5	
Product certificate			CE	
Protection rating			IP20	
Ambient temperature	Storage	°C	-35 ~ +70	
	Operation (with no need to reduce the capacity)	°C	-5 ~ +40	
	Maximum allowable values under Us	°C	-5 ~ +40	
Maximum operating altitude	with noneed to reduce the capacity	m	2000	
Characteristics				
Rated operating voltage Ue	Maximum	V	600	
Rated operating current Ie	AC-15 Category		380V/0.95A	
	DC-13 Category		220V/0.15A	
Conventional thermal current Ith	θ≤60°C	A	10	
Fuse protection	gG Fuse	A	10	
Rated making capacity Irms	Complywith IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140 DC: 250	
Short-time withstand current	500ms	A	120	
Insulation resistance		MΩ	>10	

Product overall dimensions

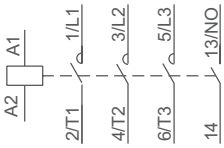




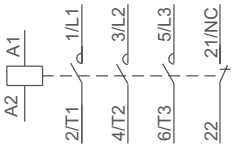


Wiring Diagram

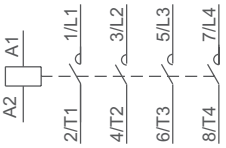
AC HCK-····-10



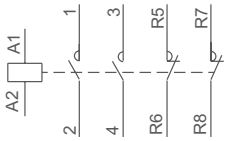
AC HCK-····-01



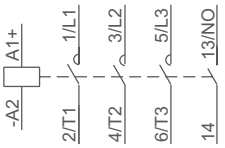
AC HCK-····X



AC HCK-····Y



DC HCK-····-10



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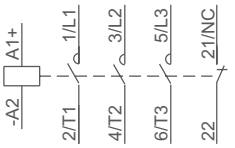
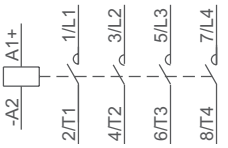
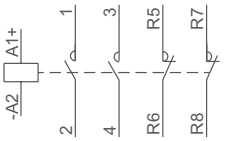


DC HCK-····X

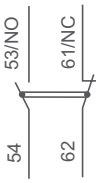


DC HCK-····Y

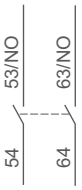


HAK auxiliary contact Module

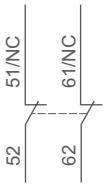
HAK-11



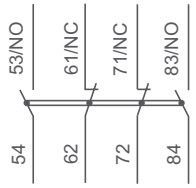
HAK-20



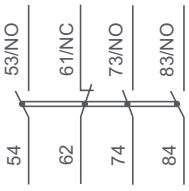
HAK-02



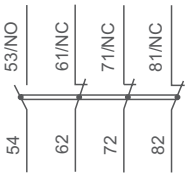
HAK-22



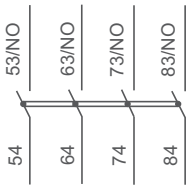
HAK-31



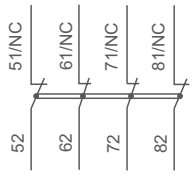
HAK-13



HAK-40



HAK-04



HCMN Series Direct Micro Contactor

Reference Definition

HCMN - □□ □ - □□ - □□

Contactor code

Rated current:
06, 09, 12, 16

Types with integrated auxiliary contact:
X: 4NO
Y: 2NO+2NC
Default: 3 Pole normally open

AC coil Voltage: 24, 36, 48, 110, 127, 220, 380, 400, 415
DC coil Voltage: 12, 24, 36, 48, 110, 125, 220, 240

Coil Type:
A: 50/60Hz AC Coil
D: DC Coil

Number of auxiliary contact (s):
10: with 1NO auxiliary contact
01: with 1NC auxiliary contact
Default: without auxiliary contact

Attachment Naming

Front Auxiliary Contact Module

HAMN - □□

Series number

Number of auxiliary contact (s)

11: 1NO + 1NC	13: 1NO+3NC
02: 2NC	31: 3NO+1NC
20: 2NO	40: 4NO
22: 2NO + 2NC	04: 4NC

HCMN Series Product Features

- Small and compact, saving space
- Four types of current are available, which are 6A, 9A, 12A, and 16A
- Contact options: 3 or 4 poles. The 3-pole type has 1NO or 1NC auxiliary contacts, and for 4-pole type, there are 4 pole, normally open contacts and 4 pole, 2 normally open and 2 normally closed contacts available
- Modular design: auxiliary contact modules can be installed on the front
- IP20 protection avoiding finger touch

HCMN Series Direct Micro Contactor Model			HCMN-06···	HCMN-09···	HCMN-12···	HCMN-16···
						
Basic parameters						
Rated operating current Ie	AC-1 (Ue=400V)	A	20	20	20	20
	AC-3 (Ue=220V)	A	6	9	12	16
	AC-3 (Ue=380V)	A	6	9	12	16
	AC-3 (Ue=660V)	A	3.8	4.9	4.9	4.9
Rated operating voltage Ue		V	220/380/660	220/380/660	220/380/660	220/380/660
Conventional thermal current Ith	AC-1	A	20	20	20	20
Rated operating power Pe AC-3 Category (For 3-Pole HCMN-...Series & 4-Pole HCMN-...X Series)	AC-3 (Ue=220V)	kW	1.5	2.2	3	4
	AC-3 (Ue=380V)	kW	2.2	4	5.5	7.5
	AC-3 (Ue=660V)	kW	3	4	4	4
Accessory			Can add on up to 1 HAMN front-mounted module			
Operating environment						
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard	V	690	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard	kV	6	6	6	6
Standards	Comply with IEC60947/ GB/T14048 standard		IEC60947-1, IEC60947-4-1, GB/T14048.1, GB/T14048.4			
Product certificate	Comply with IEC60947/ GB/T14048 standard		CCC	CCC	CCC	CCC
Protection rating	Comply with IEC60947/ GB/T14048 standard		IP20	IP20	IP20	IP20
	Comply with IEC60947/ GB/T14048 standard		IP20	IP20	IP20	IP20
Ambient temperature	Comply with IEC60947/ GB/T14048 standard	°C	-35 ~ +70	-35 ~ +70	-35 ~ +70	-35 ~ +70
	Comply with IEC60947/ GB/T14048 standard	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
	Comply with IEC60947/ GB/T14048 standard	°C	-5 ~ +40	-5 ~ +40	-5 ~ +40	-5 ~ +40
Maximum operating altitude	Comply with IEC60947/ GB/T14048 standard	m	2000	2000	2000	2000
Operating position	Comply with IEC60947/ GB/T14048 standard		A±5° angle against normally vertical installation			
Flame retardant	Comply with IEC60947/ GB/T14048 standard	°C	Housing and base V0 rating			

HCMN Series Direct Micro Contactor

HCMN Series Direct Micro Contactor Model			HCMN-06···	HCMN-09···	HCMN-12···	HCMN-16···
						
Main circuit connection						
Flexible cords without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
Tightening torque		N·m	1.5	1.5	1.5	1.5
Control circuit connection						
Flexible cords without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Flexible cords with connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Hard wire without connection terminal	1 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
	2 pieces of wire	mm²	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5	1 ~ 2.5
Screwdriver	Phillips		PH2	PH2	PH2	PH2
	Flat head		Ø6	Ø6	Ø6	Ø6
Tightening torque		N·m	1.5	1.5	1.5	1.5
Main contact characteristics						
Rated operating current Ie	AC-1 (Ue=400V)	A	20	20	20	20
	AC-3 (Ue=380V)	A	6	9	12	16
Rated operating voltage Ue		V	400	400	400	400
Conventional thermal current Ith	AC-1 (θ≤60°C)	A	20	20	20	20
Operating current frequency		Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Rated making capacity	Comply with IEC60947-4-1/ GB/T14048.4 standard overvoltage category III, pollution degree: 3		10xIe	10xIe	10xIe	10xIe
Rated breaking capacity	Comply with IEC60947-4-1/ GB/T14048.4 standard overvoltage category III, pollution degree: 3		8xIe	8xIe	8xIe	8xIe
Short-time withstand current	10s	A	80	80	100	100
Fuse protection	gG fuse Type 2		16	20	20	25
Electrical life (400V)	AC-3 (For 3-Pole HCMN-...Series & 4-Pole HCMN-...X Series)	10K times	80	80	80	80
	AC-1 (For 4-Pole HCMN-...Y Series)	10K times	6.5	18	30	30

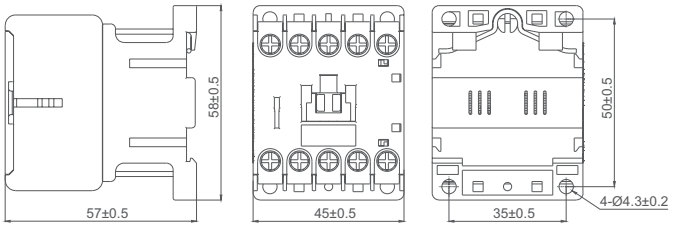
HCMN Series Direct Micro Contactor Model				HCMN-06···	HCMN-09···	HCMN-12···	HCMN-16···
							
Control circuit characteristics							
Rated control voltage Us	50/60Hz		VAC	24、36、48、110、127、220、380、400、415			
			VDC	12、24、36、48、110、125、220、240			
Control voltage limit	50Hz Closed	(AC)		80%~110%	80%~110%	80%~110%	80%~110%
	50Hz Release	(AC)		20%~75%	20%~75%	20%~75%	20%~75%
	Closed	(DC)		80%~110%	80%~110%	80%~110%	80%~110%
	Release	(DC)		10%~75%	10%~75%	10%~75%	10%~75%
Average power consumption (20°C, Us)	Starting	(AC)	W	40	40	40	40
		(DC)	W	3	3	3	3
	Retention	(AC)	W	7	7	7	7
		(DC)	W	3	3	3	3
Actuation time	Closing		ms	≤35	≤35	≤35	≤35
	Opening		ms	≤20	≤20	≤20	≤20
Mechanical life			10K times	1000	1000	1000	1000
Maximum operating frequency (≤55°C)	Operations per hour			1800	1800	1800	1800
Characteristics of contactor with auxiliary contact							
The number of auxiliary contacts	Comply with IEC60947-5-1/ GB/ T14048.5 standard			3 Pole:1 normally open or 1 normally closed 4 Pole: 0			
Rated operating current Ie	AC-15/DC-13 category		A	AC-15: 220V 1.6A; 380V 0.95A DC-13: 220V 0.15A			
Rated operating voltage Ue			V	AC: 220V/380V DC: 220V			
Conventional thermal current Ith	θ≤60°C		A	10	10	10	10
Rated insulation voltage Ui	Comply with IEC60947/ GB/T14048 standard		V	690	690	690	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/ GB/T14048 standard		kV	6	6	6	6
Fuse protection	gG fuse		A	10	10	10	10
Rated making capacity Irms	Comply with IEC60947-5-1/ GB/ T14048.5 standard		A	110	110	110	110
Short-time withstand current	500ms		A	90	90	90	90
Insulation resistance			MΩ	> 10	> 10	> 10	> 10

HCMN Series Direct Micro Contactor

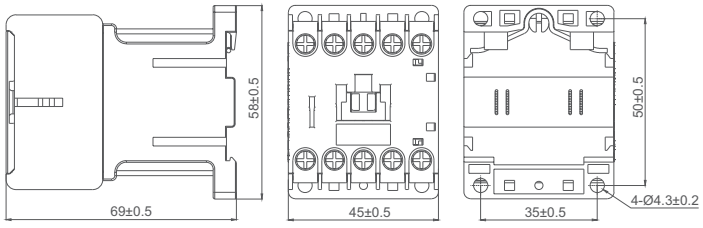
			HAMN Front Auxiliary Contact Module
			
Operating environment			
Rated insulation voltage Ui	Comply with IEC60947/GB/T14048 standard	V	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB/T14048 standard	kV	6
Standards			IEC 60947-5-1, GB/T 14048.5
Product certificate			CE, CCC
Protection rating			IP20
Ambient temperature	Storage	°C	-35 ~ +70
	Operation (with no need to reduce the capacity)	°C	-5 ~ +40
	Maximum allowable values under Us	°C	-5 ~ +40
Maximum operating altitude	with noneed to reduce the capacity	m	2000
Characteristics			
Rated operating voltage Ue	Maximum	V	690
Rated operating current Ie	AC-15 Category		380V/0.95A
	DC-13 Category		220V/0.15A
Conventional thermal current Ith	θ≤60°C	A	10
Fuse protection	gG Fuse	A	10
Rated making capacity Irms	Complywith IEC60947-5-1/ GB/T14048.5 standard	A	AC: 140 DC: 250
Short-time withstand current	500ms	A	120
Insulation resistance		MΩ	> 10

Product overall dimensions

HCMN AC

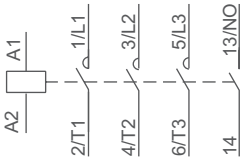


HCMN DC

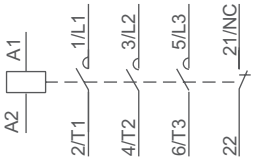


Wiring Diagram

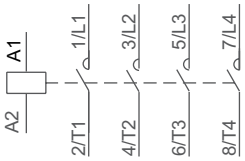
AC HAMN-····-10



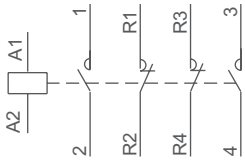
AC HAMN-····-01



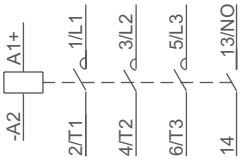
AC HAMN-····X



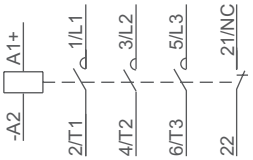
AC HAMN-····Y



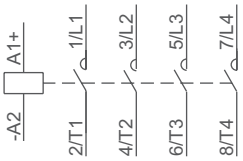
DC HAMN-····-10



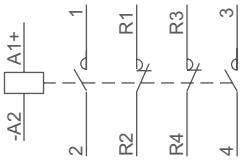
DC HAMN-····-01



DC HAMN-····X

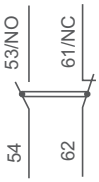


DC HAMN-····Y

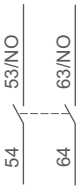


HAMN auxiliary contact module

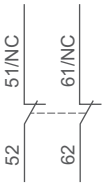
HAMN-11



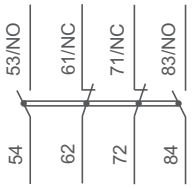
HAMN-20



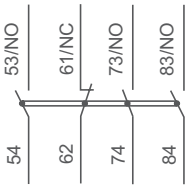
HAMN-02



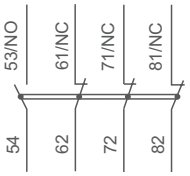
HAMN-22



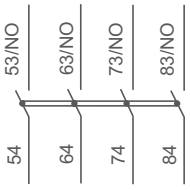
HAMN-31



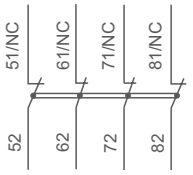
HAMN-13



HAMN-40



HAMN-04



HRS Series Thermal Overload Relay

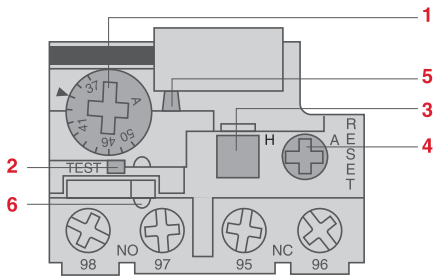
Introduction

- Overload fault accounting for up to 44% of total motor faults, therefore thermal overload relay has been widely used, with high reliability and cost efficiency
- HRS Series Thermal Overload Relay is designed to protect long duration operating or intermittent long duration operating AC motor with 50Hz/60Hz AC, operating voltage of 690V and below, current of 95A and below against overload, under phase and phase failure

Characteristics

- The overload protection is achieved by monitoring the current of each phase, and under phase and phase loss protection are achieved by differential push plate
- Provide ambient temperature compensation of -5℃ ~40℃ Protect rated current range from 0.1A~95A
- Two installation methods are available, which are independent (with HAS-R* backpack) and combination (with HCS contactor)
- Can be reset manually or automatically by choice
- Great versatility, can be replaced with main models on market
- Comply with requirements of CCC, CE certification and RoHS directive

Description



1 Adjustment cam: used to set the rated current to protect
2 Test button: used to check the control circuit, and it can also stimulate relay release to test the operation of NOand NC contacts
3 Stop button: can trigger the operation of NC contact, and has no effect on NO contact
4 Reset button: can set the reset mode of the product after tripping
5 Tripping mechanical indication: red mechanical indication after tripping
6 Lock catch hook: attachable lock used to lock the settings

Naming Conventior

HRS - A - 1D6

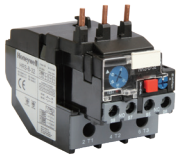
Series number:
HRS: Thermal overload relay

Size and frame:
A: Fit for HCS-09~32 Contacor
B: Fit for HCS-32 Contactor
C: Fit for HCS-40~95 Contacor

Maximum protection current:

D16: 0.1-0.16A	13: 9-13A
D25: 0.16-0.25A	18: 12-18A
D40: 0.25-0.40A	25: 17-25A
D63: 0.4-0.63A	32: 23-32A
1: 0.63-1A	38: 28-38A
1D6: 1-1.6A	40: 30-40A
2D5: 1.6-2.5A	50: 37-50A
4: 2.5-4A	65: 48-65A
6: 4-6A	70: 55-70A
8: 5.5-8A	80: 63-80A
10: 7-10A	95: 80-95A

Operating environment			
Standards			GB14048.4, GB14048.5, IEC60947-4-1, IEC60947-5-1
Product certification			CCC, CE, RoHS
Protection rating			IP20
Operating altitude			Not exceeding 2000m high
Ambient temperature	Storage	°C	-60~+70
	Normal operation (With no need to reduce capacity)	°C	-5~+40
	Maximum allowed(with reduced capacity)	°C	-40~+70
Operating position	Taking vertical position as the reference		Any position
Other protection measures	Moisture		Avoid extremely humid environment, rain and snow
	Vibration		Avoid violently shaking, shocking and vibrating
	Medium		Avoid explosive and corrosive medium, and conductive gas and dust

Frame			HRS-A	HRS-B	HRS-C
					
Main circuit characteristics					
Trip grade	Comply with GB14048/ IEC60947 standard		10A	10A	10A
Rated insulation voltage Ui	Comply with GB14048/ IEC60947 standard	V	690	690	690
Rated impulse withstand voltage Uimp	Comply with GB14048/ IEC60947 standard	kV	8	8	8
Protection current setting rage	See details in the product selection table	A	0.1~25	23~38	23~95
Terminal connection	Single core or stranded wire	mm^2	1~4	6~10	6~35
	Tightening torque	N.m	1.7	2.5	9
	Terminal screw		M4	M4	M10
Auxiliary contact characteristics					
Conventional thermal current Ith	Comply with GB14048/ IEC60947 standard	A	5	5	5
Rated insulation voltage Ui	Comply with GB14048/ IEC60947 standard	V	380	380	380
Rated impulse withstand voltage Uimp	Comply with GB14048/ IEC60947 standard	kV	6	6	6
Rated operating current Ie	AC-15 Category Ue: 220V	A	2.73	2.73	2.73
	AC-15 Category Ue: 380V	A	1.58	1.58	1.58
Terminal connection	Single core or stranded wire	mm^2	1~2.5	1~2.5	1~2.5
	Tightening torque	N.m	1.2	1.2	1.2
	Terminal screw		M3.5	M3.5	M3.5

HRS Series Thermal Overload Relay

Protection characteristics

Tripping characteristics when the phases are balanced

No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	1.05	Does not trip within 2 hours	Cold state	20°C
2	1.2	Trip within 2 hours	Hot state	
3	1.5	Trip within 2 minutes	Hot state	
4	7.5	Trip within 2-10 seconds	Cold state	

Tripping characteristics in case of under phase and phase loss

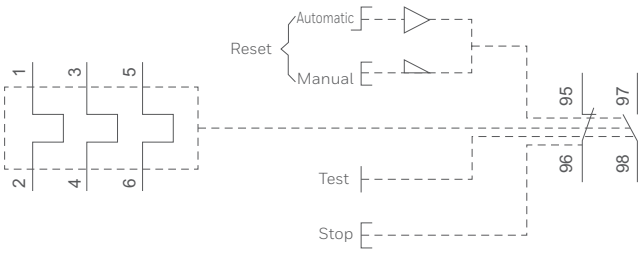
No.	Multiple of the rated current		Tripping time	Initial condition	Ambient temperature
	Any two phases	The 3rd phase			
1	1.0	0.9	Does not trip within 2 hours	Cold state	20°C
2	1.15	0	Trip within 2 hours	Hot state	

Tripping characteristics with temperature compensation

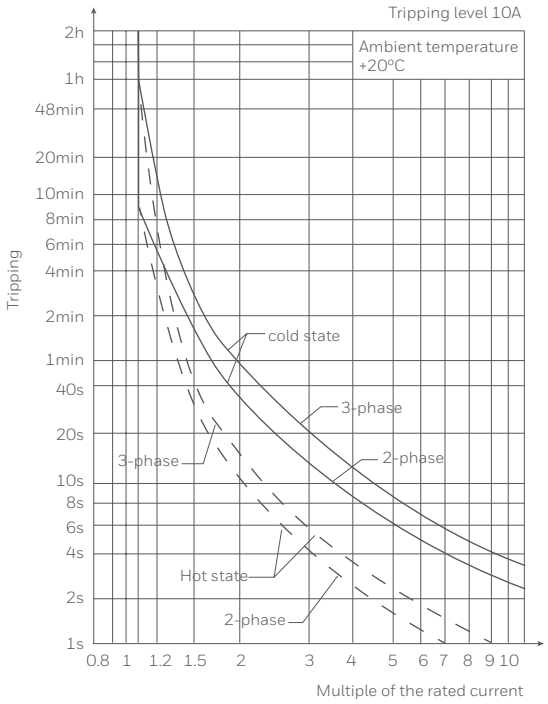
No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	1.0	Does not trip within 2 hours	Cold state	40°C
2	1.2	Trip within 2 hours	Hot state	
3	1.5	Trip within 2 minutes	Hot state	

No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	1.0	Does not trip within 2 hours	Cold state	-5°C
2	1.3	Trip within 2 hours	Hot state	
3	1.5	Trip within 2 minutes	Hot state	

Circuit diagram



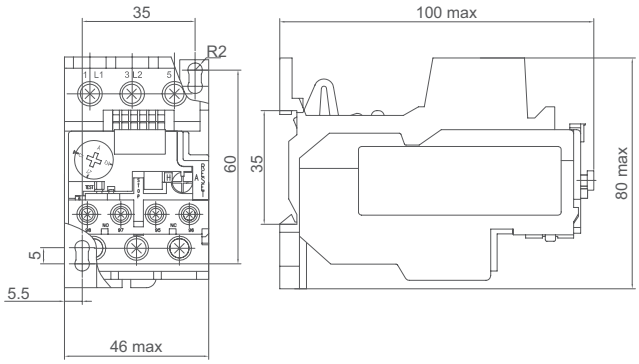
Tripping characteristics curve



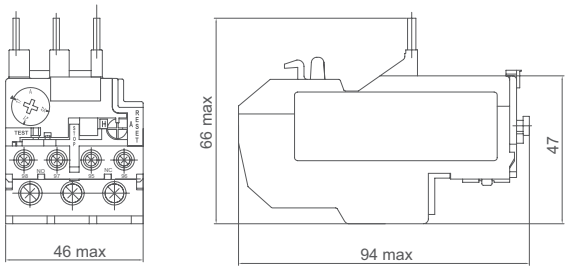
Time-current characteristic curve

Product overall dimensions

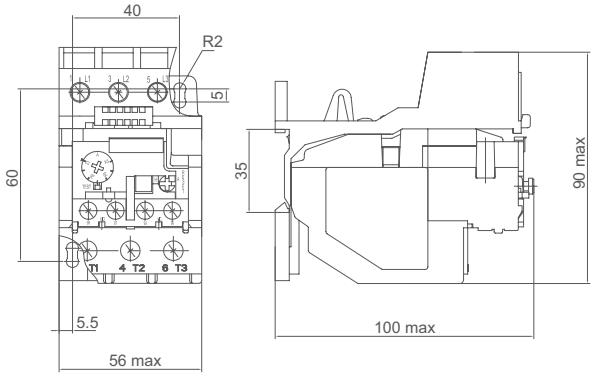
HRS-A Independent Installation (with backpack HAS-RA)



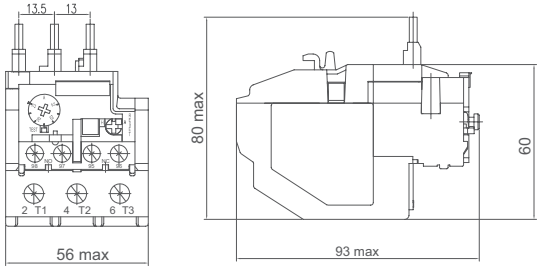
HRS-A Combined Installation (in combination with correspondingHCS Contactor)



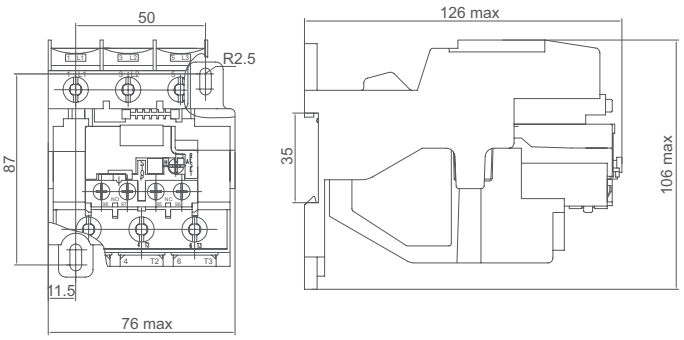
HRS-B Independent Installation (with backpack HAS-RB)



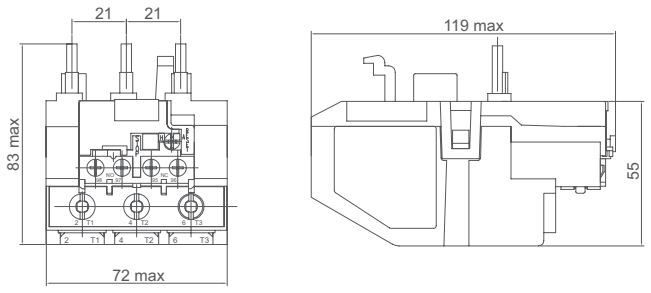
HRS-B Combined Installation (in combination with correspondingHCS Contactor)



HRS-C Independent Installation(together with backpack HAS-RC)



HRS-C Combined Installation (in combination with correspondingHCS Contactor)



HCR Series Contactor Relay

Introduction

Characteristics

- Small and compact, saving space
- Unique design: contacts feature bevel wheel friction and are more reliable
- Diverse control functions: AC or DC control coil with a wide range of voltage from 24V to 380V
- IP20 protection avoiding finger touch

Naming Conventior

HCR - 22 - A 24

Series NO.
HCR: Contactor Relay

Number of auxiliary contact (s):
40: 4NO
31 : 3NO+1NC
22: 2NO+2NC
13: 1NO+3NC
04: 4NC

Coil Voltage:
24: 24V
36: 36V*
48: 48V*
110: 110V
220: 220V
380: 380V*

Coil Type:
A: 50/60Hz AC Coil
D: DC Coil

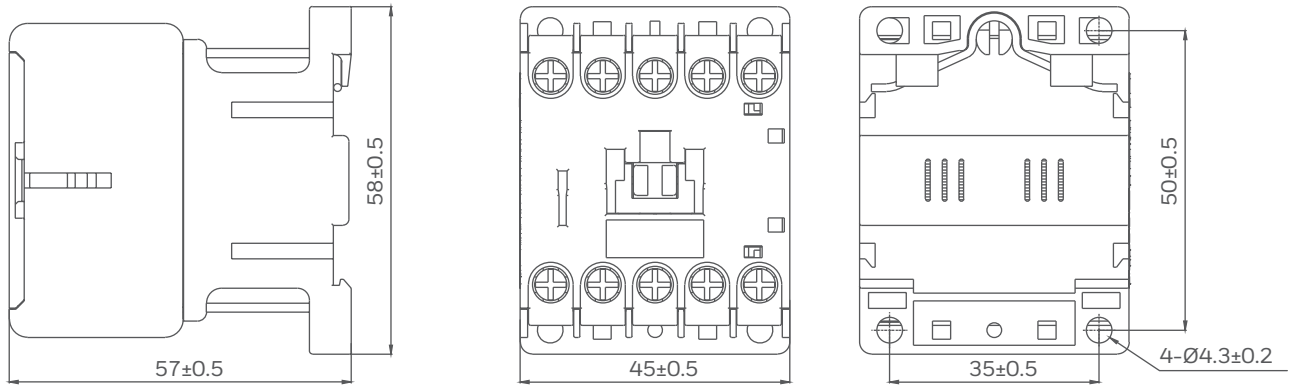
*: This coil voltage can only be used for AC applications.
**: The front auxiliary contact module is common to the HAMN series.

Operating environment				
Rated insulation voltage Ui	Comply with IEC60947-5-1、GB/T14048 sstandard		V	690
Rated impulse withstand voltage Uimp	Comply with IEC60947/GB/T14048 standard		kV	6
Standards				IEC60947-1, IEC60947-5, GB/T14048.1, GB/T14048.5
Product certificate				CCC, CE
Protection rating				IP20
Ambient temperature	Storage		°C	-25 ~ +55
	Operation		°C	-5 ~ +40
	Maximum allowable values under Us		°C	-5 ~ +40
Maximum operating altitude	with noneed to reduce the capacity		m	2000
Operating position				A±22.5° angle against normally vertical installation
Main circuit connection				
Flexible cords without connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Flexible cords with connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Screwdriver	Phillips			PH2
	Flat head			Ø6
Tightening torque			N·m	1.5
Control circuit connection				
Flexible cords without connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Flexible cords with connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Hard wire without connection terminal	1 piece of wire		mm²	1 ~ 2.5
	2 piece of wire		mm²	1 ~ 2.5
Screwdriver	Phillips			PH2
	Flat head			Ø6
Tightening torque			N·m	1.5
Contact characteristics				
Number of contacts				4
Rated operating voltage Ue			V	AC: 380V/DC: 220V
Conventional thermal current Ith	Working Ambient Temperature≤40°C		A	10
Fuse protection	gG fuse		A	10
Rated making capacity Irms	Comply with IEC60947-5-1, GB/T14048.5 standards		A	AC: 140/DC: 250
Short-time withstand current	500ms		A	120
Insulation resistance			MΩ	> 10
Operating current frequency			Hz	50/60
Control Circuit Characteristics				
Rated control voltage Us	50/60Hz		VAC	24, 36, 48, 110, 220, 380
			VDC	24, 110, 220
Control voltage limit	50Hz Closed	(AC)		80%~110%
	50Hz Release	(DC)		20%~75%
	Closed	(DC)		80%~110%
	Release	(DC)		10%~75%
Average power consumption (20° C, Us)	Starting	(AC)	W	40
		(DC)	W	3
	Retention	(AC)	W	7
		(DC)	W	3
Actuation time	Closing		ms	≤35
	Opening		ms	≤20
Mechanical life			10K times	1000
Maximum operating frequency	Operations per hour			1800

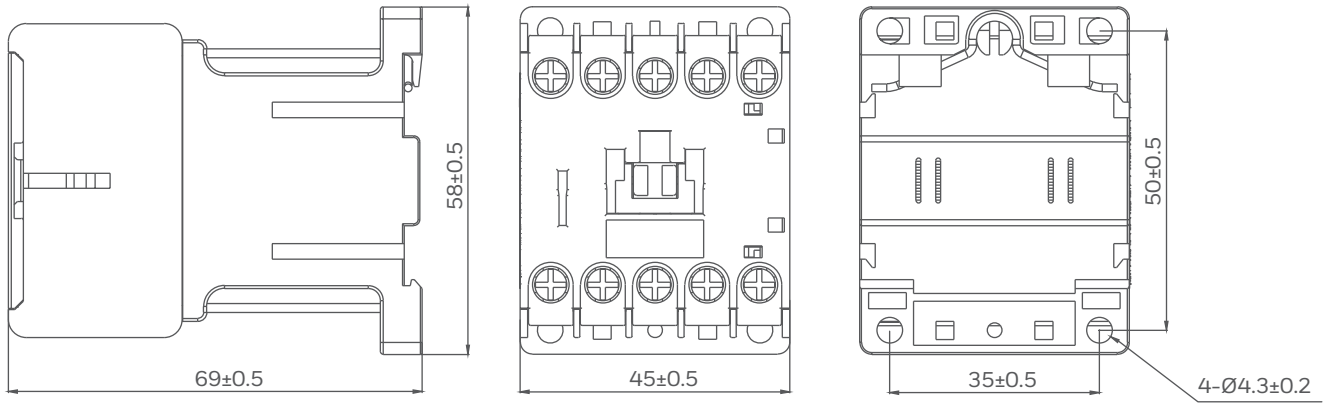
HCR Series Contactor Relay

Product overall dimensions

HCR Series AC Contactor

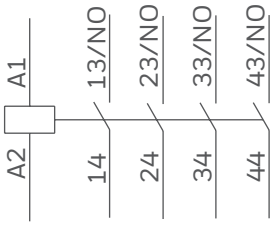


HCR Series DC Contactor

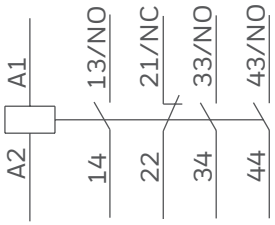


Wiring diagram

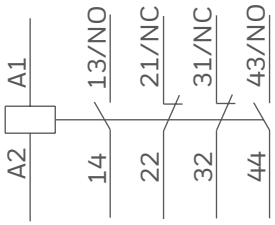
HCR-40



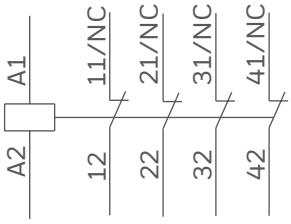
HCR-31



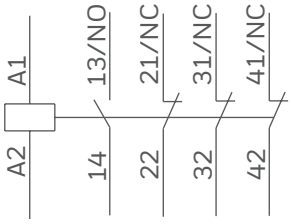
HCR-22



HCR-04



HCR-13



HBS Series Motor Protection Circuit Breaker

Product Characteristics

- Provide isolating function and protection against short circuit and overload, and the phase loss and phase imbalance protection is realized through the unique corresponding differential push plate
- Integrated design that is space saving, with protection current range from 0.1~32A for AC-3 Category
- The breaking capacity is up to 100kA
- Provide ambient temperature compensation of -5ºC ~ 40ºC Long electrical and mechanical life, which is 5~10 times of that of the common small circuit breakers
- Optional accessories for auxiliary contacts, fault indication, undervoltage protection and shunt trip.
- IP65 rating installation box, provides double insulation and superior effect of dust and water proof
- Comply with requirements of CCC, CE certification and RoHS Directive, environment friendly

Naming Conventior

HBS-A -2D5

Honeywell Basic Model of Motor Protection Circuit Breaker

Rated current: (D refers tothe position of the decimal point)

D16: 0.1 ~ 0.16A	D25: 0.16 ~ 0.25A
D40: 0.25 ~ 0.4A	D63: 0.4 ~ 0.63A
1: 0.63 ~ 1A	1D6: 1 ~ 1.6A
2D5: 1.6 ~ 2.5A	4: 2.5 ~ 4A
6D3: 4 ~ 6.3A	10: 6.3 ~ 10A
16: 10 ~ 16A	20: 14.5 ~ 20A
25: 18 ~ 25A	32: 23 ~ 32A

Accessory

HBS- AN 01

Accessory code:
AE: front-mounted auxiliary or front-mounted trip alarm
AN: Right side-attached auxiliary
AD: Right side-attached trip alarm
AM: Right side-attached short circuit alarm
UX: Left side-attached undervoltage
UC: Left side-attached undervoltage preparation for closing
SN: Left side-attached shunt
BX1: Installation box
KN: lockable knob

See the attachment for detailed parameters of the accessories

HBS Series Motor Protection Circuit Breaker

Operating environment	
Standards	GB14048.2, GB14048.4, IEC60947-2 , IEC60947-4-1
Product certification	CCC, CE, RoHS
Protection rating	IP20 (body), IP65 (with installation box)
Operating temperature	-5~40°C (without derating) *
Air humidity	≤90%
Flame retardant performance	Current-carrying components 960°C
Operating altitude	≤2000m
Applicable to isolation	Yes

* When used in environment under -5°C or above 40°C, please consult Honeywell Control Components.

Parameters	
Short circuit trip threshold	Average 13In (2 phase or 3 phase), average 15In (single phase)
Rated insulation voltage Ui	690V
Rated impulse withstand voltage Uimp	8kV
Use categories	A, AC-3
Rated operating voltage Ue	690V
Rated operating frequency	50/60Hz
Power consumption on each pole	About 3W
Mechanical life	100K times
Electrical life	100K times
Pollution grade	III
Installation category	III
Maximum operating frequency	25 times /hr
Rated load	Uninterrupted duty, intermittent duty

Wiring capacity	Minimum	Maximum
Hard wire (mm^2)	2 pieces x 1	2 pieces x 6
Flexible cords with connection terminal (mm^2)	2 pieces x 1.5	2 pieces x 6
Flexible cords with connection terminal (mm^2)	2 pieces x 1	2 pieces x 4
Maximum tightening torque (N.m)	1.7	1.7

Model	HBS-A -D16	HBS-A -D25	HBS-A -D40	HBS-A -D63	HBS-A -1	HBS-A -1D6	HBS-A -2D5	HBS-A -4	HBS-A -6D3	HBS-A -10	HBS-A -16	HBS-A -20	HBS-A -25	HBS-A -32
Rated current Ie	0.16A	0.25A	0.4A	0.63A	1A	1.6A	2.5A	4A	6.3A	10A	16A	20A	25A	32A
Adjustable range of the protection current (A)	0.1-0.16	0.16-0.25	0.25-0.4	0.4-0.63	0.63-1	1-1.6	1.6-2.5	2.5-4	4-6.3	6.3-10	10-16	14.5-20	18-25	23-32
Breaking capacity Icu=Ics (kA)														
230VAC	100	100	100	100	100	100	100	100	100	100	20	20	20	20
400VAC	100	100	100	100	100	100	100	100	100	15	15	15	15	15
480VAC	100	100	100	100	100	50	50	50	50	4	4	4	4	4
690VAC	100	100	100	100	100	6	6	6	2	2	2	2	2	2
Rated power of 3-phase motor (kW)														
230V/240VAC	-	-	-	0.09	0.12	0.25	0.37	0.75	1.5	2.2	4	5.5	6.3	7.5
400VAC	0.02	0.06	0.09	0.12	0.25	0.37	0.75	1.1	2.2	3	5.5	7.5	11	15
415VAC	0.02	0.06	0.09	0.18	0.25	0.55	0.75	1.5	2.2	4	7.5	10	11	15
440VAC	-	-	-	0.18	0.37	0.55	1.1	1.5	3	4	7.5	10	11	15
500VAC	-	-	-	0.18	0.37	0.75	1.1	2.2	3	5.5	10	11	15	20
690VAC	-	-	-	0.25	0.55	1.1	1.5	3	4	7.5	13	15	18.5	22

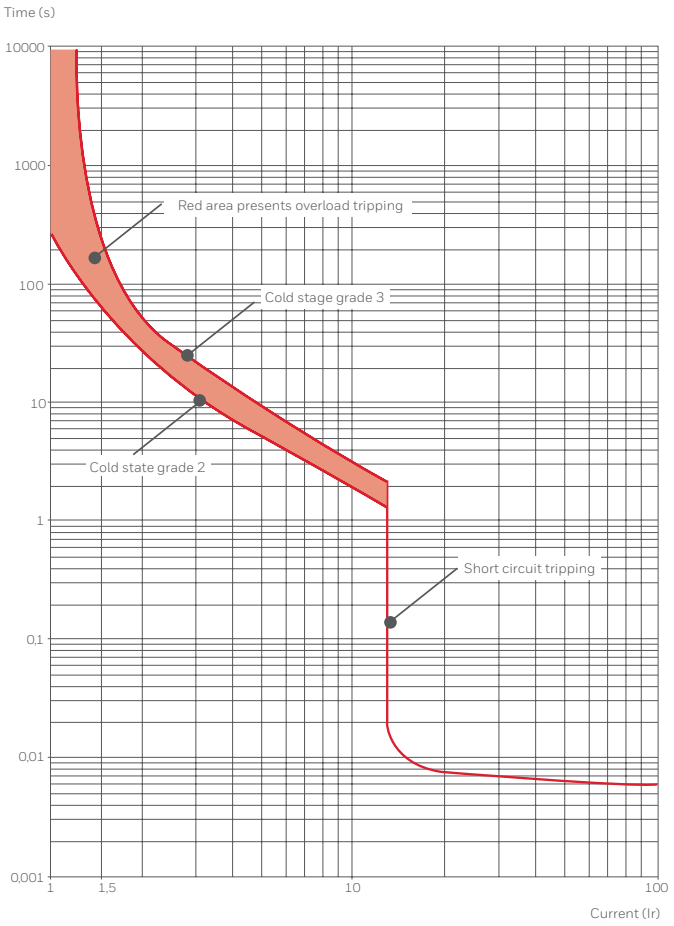
Operating characteristics under balanced load				
S/N	Multiple of the rated current	Actuation time	Initial state	Ambient temperature
1	1.05	≥2h	Cold state	20°C
2	1.2	< 2h	Hot state	
3	1.5	< 2min	Hot state	
4	7.2	2~10s	Cold state	

Operating characteristics under imbalanced load					
S/N	Multiple of the rated current		Actuation time	Initial state	Ambient temperature
	Any two phases	The 3rd phase			
1	1	0.9	≥2h	Cold state	20°C
2	1.15	0	< 2h	Hot state	

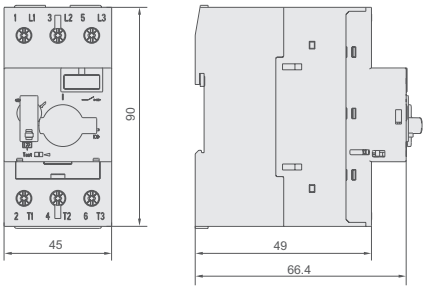
Temperature compensation characteristics				
S/N	Multiple of the rated current	Actuation time	Initial state	Ambient temperature
1	1	≥2h	Cold state	+40°C ±2°C
2	1.2	< 2h	Hot state	+40°C ±2°C
3	1.05	≥2h	Cold state	-5°C ±2°C
4	1.3	< 2h	Hot state	-5°C ±2°C

Thermomagnetic tripping curve

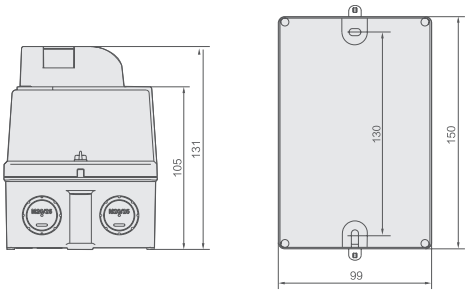
Average time required for the set multiple operations of the current under 20°C



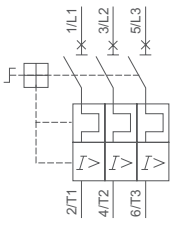
Dimensional drawing



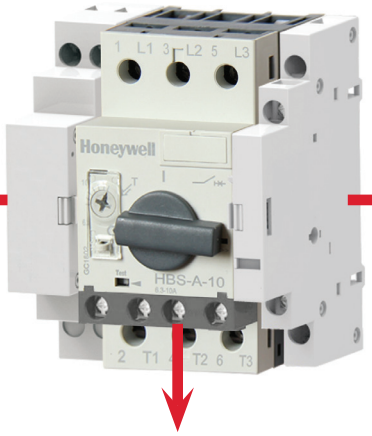
Dimensional drawing with installation box



Circuit diagram



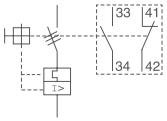
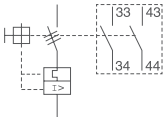
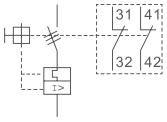
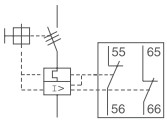
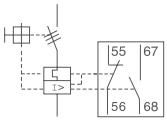
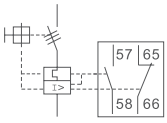
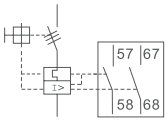
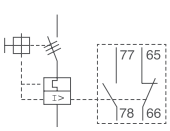
HBS Series Motor Protection Circuit Breaker

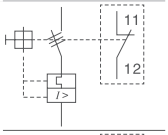
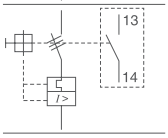
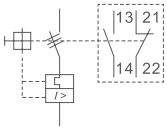
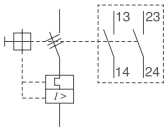
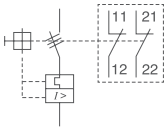
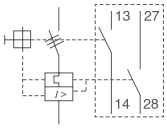
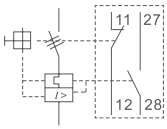


Left side-mounted accessory module
HBS-US
HBS-UX
HBS-SN

Right side-mounted accessory module
HBS-AN
HBS-AD
HBS-AM

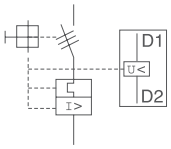
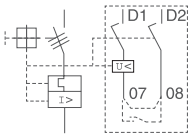
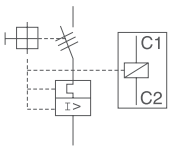
Front-mounted accessory module HBS-AE

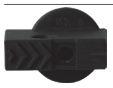
Right side-mounted accessory module					Handle position (I contact closed O contact open)			Circuit diagram
Outlines	Name	Description	Model	Terminal number	OFF	ON	TRIP	
	Side-attached auxiliary contact	› Indicating the On Off state of the circuitbreaker › Width: 9mm › Up to 2 pieces can be attached	HBS-AN11	33-34	O	I	O	
				41-42	I	O	I	
			HBS-AN20	33-34	O	I	O	
				43-44	O	I	O	
			HBS-AN02	31-32	I	O	I	
				41-42	I	O	I	
	Side-attached trip indicator	› Indicating the short circuit or overload trip state of the circuit breaker › Width: 9mm Only 1 piece can be attached The first contact indicates short circuit or overload trip state › The second contact indicates short circuit trip state	HBS-AD0101	55-56	I	I	O	
				65-66	I	I	O (Short circuit trip) I (Overload trip)	
			HBS-AD0110	55-56	I	I	O	
				67-68	O	O	I (Short circuit trip) O (Overload trip)	
			HBS-AD1001	57-58	O	O	I	
				65-66	I	I	O (Short circuit trip) I (Overload trip)	
			HBS-AD1010	57-58	O	O	I	
				67-68	O	O	I (Short circuit trip) O (Overload trip)	
	Side short circuit indicator	› Indicating the short circuit and tripping state of the circuit breaker › Width 9mm, one piece only can be installed	HBS-AM11	77-78	O	O	I (Short circuit trip) O (Overload trip)	
				65-66	I	I	O (Short circuit trip) I (Overload trip)	

Right side-mounted accessory module					Handle position (I contact closed O contact open)			Circuit diagram
Outlines	Name	Description	Model	Terminal number	OFF	ON	TRIP	
	Front attached auxiliary contact	› Indicating the On Off sate of the circuit breaker › No extra space is required, only 1 piece can be attached	HBS-AE01	11-12	I	O	I	
			HBS-AE10	13-14	O	I	O	
			HBS-AE11	13-14	O	I	O	
				21-22	I	O	I	
			HBS-AE20	13-14	O	I	O	
				23-24	O	I	O	
			HBS-AE02	11-12	I	O	I	
				21-22	I	O	I	
	Front attached auxiliary contact	› Indicating the On and Off state and trip state of the circuit breaker › No extra space is required, only 1 piece can be attached	HBS-AE1010	13-14	O	I	O	
				27-28	O	O	I	
			HBS-AE1001	11-12	I	O	I	
				27-28	O	O	I	

HBS Series Motor Protection Circuit Breaker

Left side-mounted accessory module

Outlines	Name	Description	Model	Rated parameters	Circuit diagram
	Side-attached undervoltage trip module	› When the supply voltage is reduced to 35%~70%, it make he circuit breaker trip › Width: 18mm	HBS-UX04	24V,60Hz	
			HBS-UX03	24V,50Hz	
			HBS-UX12	120V,60Hz	
			HBS-UX13	110V,50Hz	
			HBS-UX19	208V,60Hz	
			HBS-UX21	220V~230V,50Hz	
			HBS-UX26	240V~260V,60Hz	
			HBS-UX25	277V,60Hz	
			HBS-UX30	380V~400V,50Hz	
			HBS-UX33	480V,60Hz/415V,50Hz	
			HBS-UX36	575V,60Hz/500V,50Hz	
			HBS-UX37	600V,60Hz	
	Side hanging pre connection undervoltage tripping module	› Side-attached pre-connected undervoltage trip module › When supply voltage is reduce to 35%~70% , make the circuit breaker trip, width: 18mm the undervoltage module will close in advance of the circuit breaker to provide protection › 07-08 contact: can be short connected directly, or connected to an auxiliary contact for control	HBS-UC04	24V,60Hz	
			HBS-UC03	24V,50Hz	
			HBS-UC12	120V,60Hz	
			HBS-UC13	110V,50Hz	
			HBS-UC19	208V,60Hz	
			HBS-UC21	220V~230V,50Hz	
			HBS-UC26	240V~260V,60Hz	
			HBS-UC25	277V,60Hz	
			HBS-UC30	380V~400V,50Hz	
			HBS-UC33	480V,60Hz/415V,50Hz	
			HBS-UC36	575V,60Hz/500V,50Hz	
			HBS-UC37	600V,60Hz	
	Side-attached shunt trip module	› Realize remote control of circuit breaker › Width: 18mm	HBS-SN04	24V,60Hz	
			HBS-SN03	24V,50Hz	
			HBS-SN12	120V,60Hz	
			HBS-SN13	110V,50Hz	
			HBS-SN19	208V,60Hz	
			HBS-SN21	220V~230V,50Hz	
			HBS-SN26	240V~260V,60Hz	
			HBS-SN25	277V,60Hz	
			HBS-SN30	380V~400V,50Hz	
			HBS-SN33	480V,60Hz/415V,50Hz	
			HBS-SN36	575V,60Hz/500V,50Hz	
			HBS-SN37	600V,60Hz	
			HBS-SN54	24VDC	

Outlines	Name	Description	Model
	Installation box	› When in position "OFF", a padlock can be attached to lock the switch › Only one accessory module each on the right and left › With M20 and M25 knockouts › Protection rating: IP65	HBS-BX1
	Attachable padlock knob	› Replace the original knob of the circuit breaker, and when in position "OFF", a padlock can be attached to lock the switch	HBS-KN

HPS Series Molded Case Circuit Breaker for Motors

Reference Definition

HPS - 160 N - R 3 3 00 M A BK - 25

Molded case series number:
HPS: Molded case circuit breaker

Frame size:
125, 160, 250, 400, 800

Short circuit breaking capacity:
E: Economical (not applicable to 800 frame)
N: Normalized(not applicable to 125 frame)
H: High-end (not applicable to 125 frame)

Operating mode:
Default: operate directly with the handle
R: operate by rotating the handle
D: integrated handle operation (only applicable to 125 and 160 frames)

Number of poles:
3: 3-pole
4: 4-pole

Protection mode:
2: indicates only short circuit protection
3: indicates overload and short circuit protection

Rated current:
10A~800A (See details in the shell sample)

Wiring method:
Default: fixed front connection
BK: fixed rear connection
CF: plug-in front connection
CB: plug-in rear connection

Classification of polarity of 4-pole product
A: N phase is not mounted with overcurrent release, and N phase is Always connected, and will not make and break along with the other three poles
Default: N phase is not mounted with overcurrent release, and N phase
Will make and break along with the other three poles (N phase will make before break)
C: N phase is mounted with overcurrent release, and N phase will
Make and break along with the other three poles (N phase will make before break)(not applicable to 125 frame)
D: N phase is mounted with overcurrent release, and N phase is Always connected, and will not make and break along with the other three poles (not applicable to 125 frame)

Default: Power distribution protection (10 times setting) M: Motor protection (12 times setting)

Optional matching accessory:
00: No accessory (See details in the optional matching accessory table)

Product Characteristics

- Five frames, three different breaking capacity, to meet various demands
- Optional accessories for auxiliary contact, alarm, undervoltage protection, and shunt; flip-up installation, with no need to open the whole house, easy to operate
- Different operating modes, protection types and wiring methods to choose from
- The plastics of which the case is made is environmentally safe
- Protect certification: CCC, CE

HPS Series Molded Case Circuit Breaker for Motors

HPS Series Molded Case Circuit Breaker for Motor		HPS-125	HPS-160	
				
Operating environment				
Standards		GB14048.2, IEC60947-2	GB14048.2, IEC60947-2	
Product certification		CCC, CE	CCC, CE	
Operating altitude		≤2000m	≤2000m	
Installation environment		The external magnetic field of the installation site shall not exceed 5 times of the geomagnetic field in any direction	The external magnetic field of the installation site shall not exceed 5 times of the geomagnetic field in any direction	
Installation category		Main circuit installation category III, installation category II for auxiliary circuit and control circuit	Main circuit installation category III, installation category II for auxiliary circuit and control circuit	
Pollution grade		III	III	
Operating temperature	°C	-5~+40	-5~+40	
Storage temperature	°C	-10~+65	-10~+65	
Air relative humidity		≤90%	≤90%	
Electrical characteristics				
Rated current Ie	A	10,16,20,25,32,40, 50,63,80,100,125	20,25,32,40,50,63,80,100,125,160	
Rated frequency	Hz	50	50	
Rated operating voltage	V	400	400	
Rated insulation voltage Ui	V	1000	1000	
Rated impulse withstand voltage Uimp	kV	8	8	
Use categories		A	A	
Applicable to isolation		Yes	Yes	
Mechanical life	times	20000	20000	
Electrical life	times	8000	8000	
Arching distance	mm	≤50	≤50	
Breaking capacity				
Number of poles		3,4	3,4	
Breaking level		E	E	N
Ultimate short circuit breaking capacity Icu (380V/400V)	kA	35	40	50
Operating short circuit breaking capacity Ics (380V/400V)	kA	25	28	50
Ultimate short circuit breaking capacity Icu (660V/690V)	kA	-	-	-
Operating short circuit breaking capacity Ics (660V/690V)	kA	-	-	-
Operating short circuit breaking capacityIcs				
Thermal protection (applicable to overload protection)		Optional	Optional	
Magnetic protection (Applicable to short circuit protection)		Required	Required	
Installation wiring				
Upside-down wiring		Does not support upside-down wiring	Support upside-down wiring	
Installation type		Fixed/ Plug-in Optional	Fixed/ Plug-in Optional	
Wiring type		Front connection / Rear connection Optional	Front connection / Rear connection Optional	
Connection position		Horizontal, vertical, and lying flat	Horizontal, vertical, and lying flat	

	HPS-250	HPS-400	HPS-800
			
	GB14048.2, IEC60947-2	GB14048.2, IEC60947-2	GB14048.2, IEC60947-2
	CCC, CE	CCC, CE	CCC, CE
	≤2000m	≤2000m	≤2000m
	The external magnetic field of the installation site shall not exceed 6 times of the geomagnetic field in any direction	The external magnetic field of the installation site shall not exceed 6 times of the geomagnetic field in any direction	The external magnetic field of the installation site shall not exceed 6 times of the geomagnetic field in any direction
	Main circuit installation category III, installation category II for auxiliary circuit and control circuit	Main circuit installation category III, installation category II for auxiliary circuit and control circuit	Main circuit installation category III, installation category II for auxiliary circuit and control circuit
	III	III	III
	-5~+40	-5~+40	-5~+40
	-10~+65	-10~+65	-10~+65
	≤90%	≤90%	≤90%
	160,180,200,225,250	250,315,350,400	400,500,630,700,800
	50	50	50
	400	400	400
	1000	1000	1000
	8	8	8
	A	A	A
	Yes	Yes	Yes
	20000	20000	20000
	8000	8000	8000
	≤50	≤50	≤50
	3,4	3,4	3,4
	E / N	E / N	N / H
	40 / 50	40 / 50	50 / 70
	28 / 50	28 / 50	50 / 50
	- / -	- / -	- / 15
	- / -	- / -	- / 10
	Optional	Optional	Optional
	Required	Required	Required
	Support upside-down wiring	Support upside-down wiring	Support upside-down wiring
	Fixed/ Plug-in Optional	Fixed/ Plug-in Optional	Fixed/ Plug-in Optional
	Front connection / Rear connection Optional	Front connection / Rear connection Optional	Front connection / Rear connection Optional
	Horizontal, vertical, and lying flat	Horizontal, vertical, and lying flat	Horizontal, vertical, and lying flat

HPS Series Molded Case Circuit Breaker for Motors

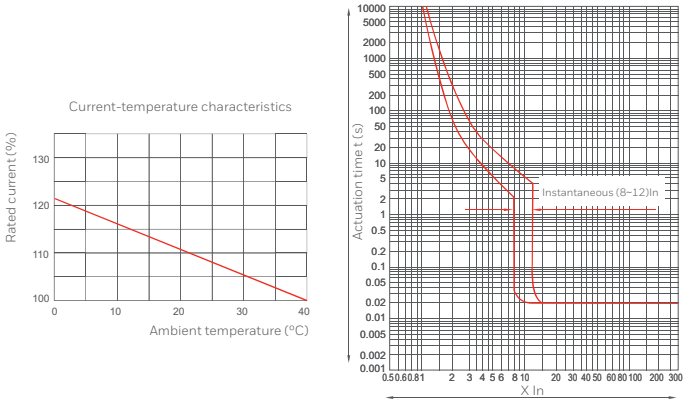
Protection characteristics							
Operating characteristics of overload long time delay protection							
Power distribution protection inverse time operating characteristics							
Test current name	Multiple of the rated current	Conventional time			Initial current	Note	
		In≤63A	63A < In≤200A	200A < In			
Conventional not tripping current	1.05	≥ 1h	≥ 2h		Cold state		
Conventional tripping current	1.3	< 1h	< 2h		Hot state		
Recovery characteristic current	3	Recovery time			Cold state	Applicable to thermomagnetic release	
		5S	8S	12S			

Operating characteristics of motor protection				
Test current name	ltiple of the rated current	Conventional time		Initial current
		In≤100A	100A < In≤400A	
Conventional not tripping current	1	≥ 2h	≥ 2h	Cold state
Conventional tripping current	1.2	< 2h	< 2h	Hot state
	1.5	≤ 2min	≤ 2min	Hot state
	7.2	4s < T ≤ 10s	6s < T ≤ 20s	Cold state

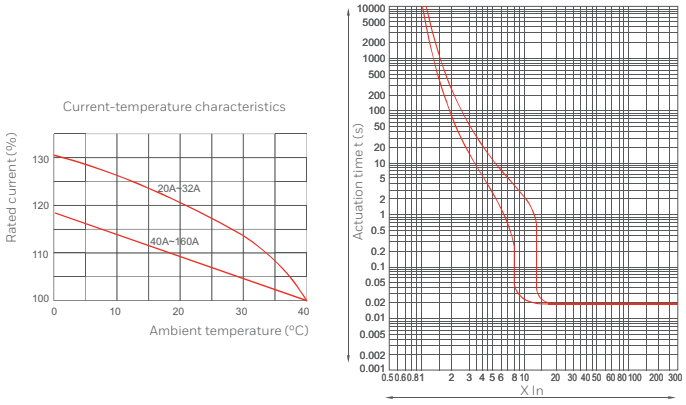
Protection operating characteristics and temperature compensation curve							
40°C~70°C							
Model	+40°C	+45°C	+50°C	+55°C	+60°C	+65°C	+70°C
HPS-125	1In	0.95	0.9	0.85	0.8	0.7	0.62
HPS-160	1In	0.94	0.9	0.85	0.8	0.73	0.7
HPS-250	1In	0.95	0.91	0.87	0.81	0.72	0.69
HPS-400	1In	0.94	0.87	0.81	0.73	0.67	0.6
HPS-800	1In	0.98	0.97	0.94	0.92	0.9	0.88

Tripping characteristics curve

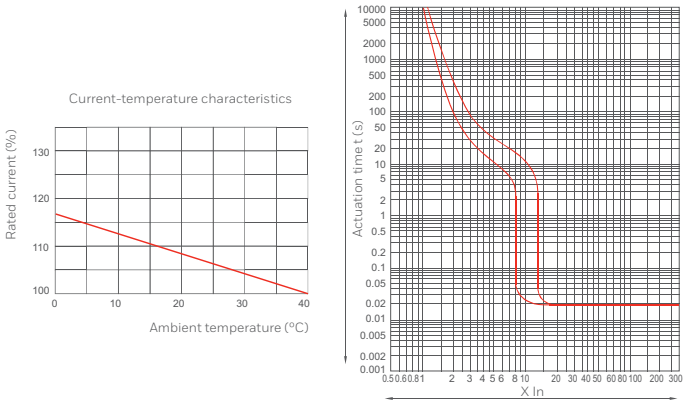
125 frame characteristic curve



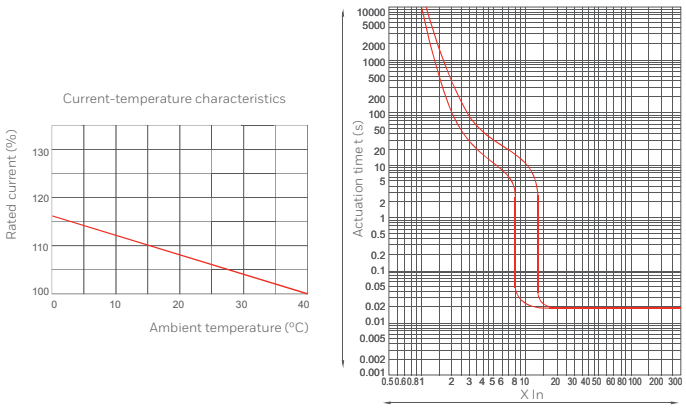
160 frame characteristic curve



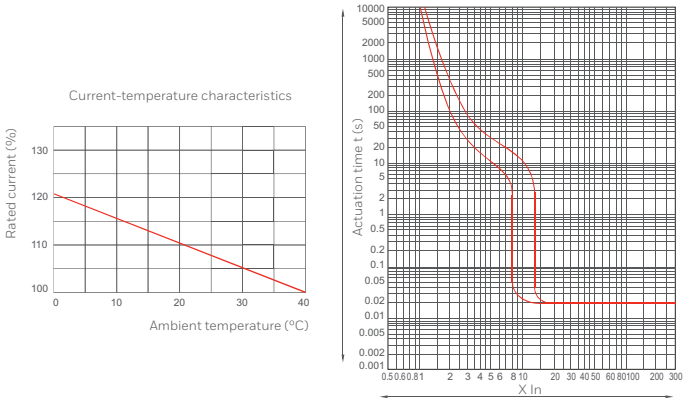
250 frame characteristic curve



400 frame characteristic curve



800 frame characteristic curve

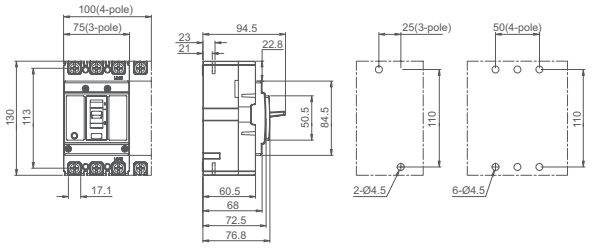


HPS Series Molded Case Circuit Breaker for Motors

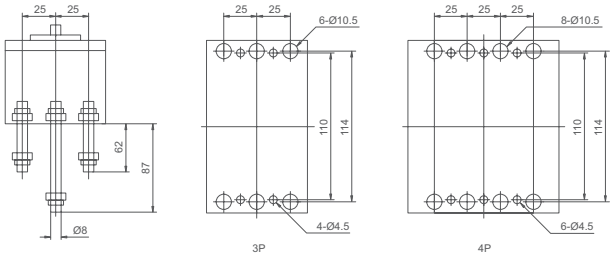
Overall dimensions

125 frame

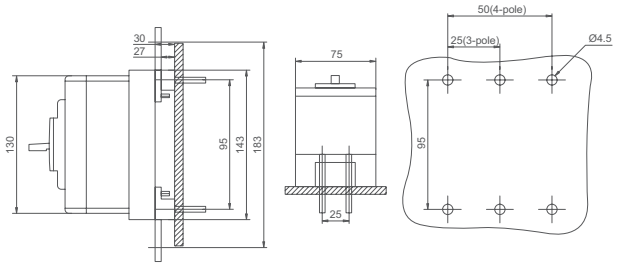
Fixed front connection (3-pole, 4-pole) mounting plate opening size



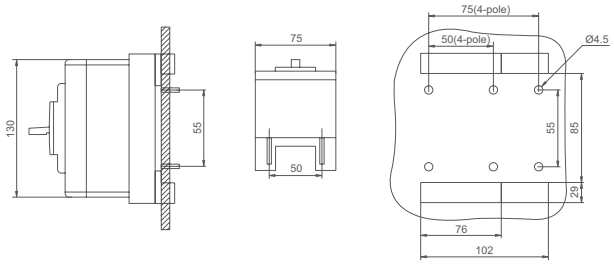
Fixed rear connection (3-pole, 4-pole) mounting plate opening size



Plug-in front connection (3-pole, 4-pole) mounting plate opening size

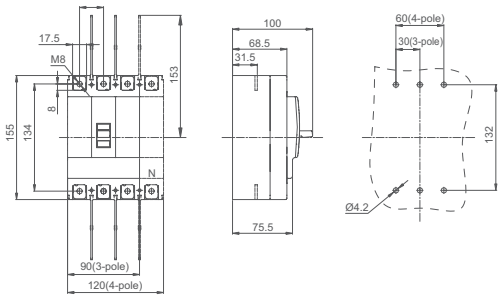


Plug-in rear connection (3-pole, 4-pole) mounting plate opening size

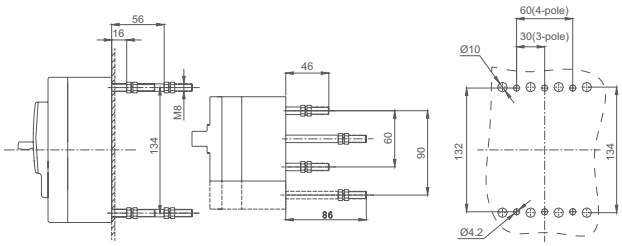


160 frame

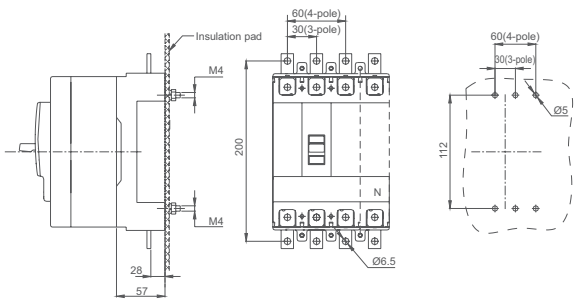
Fixed front connection (3-pole, 4-pole) mounting plate opening size



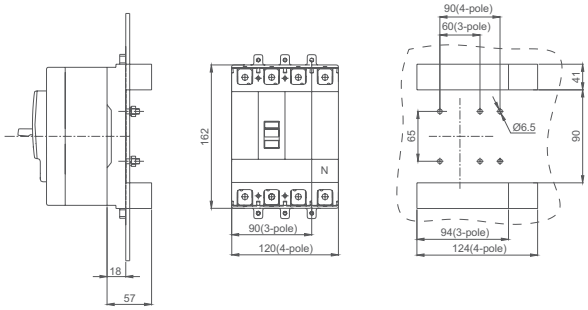
Fixed rear connection (3-pole, 4-pole) mounting plate opening size



Plug-in front connection (3-pole, 4-pole) mounting plate opening size



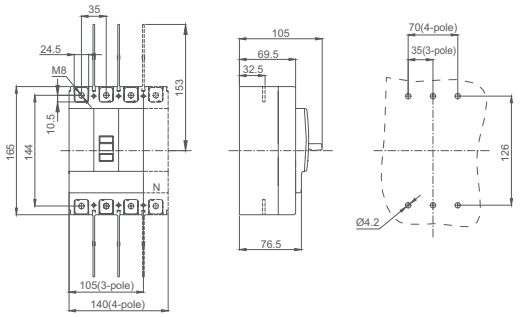
Plug-in rear connection (3-pole, 4-pole) mounting plate opening size



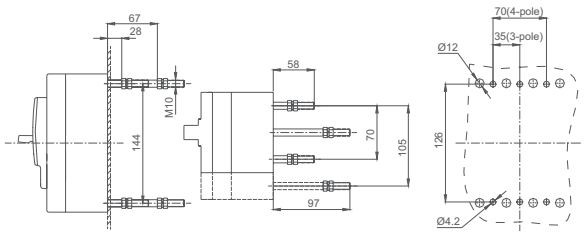
Overall dimensions

250 frame

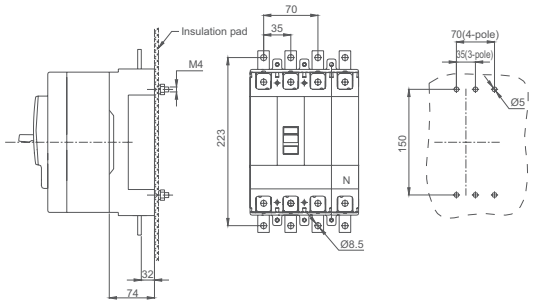
Fixed front connection (3-pole, 4-pole) mounting plate opening size



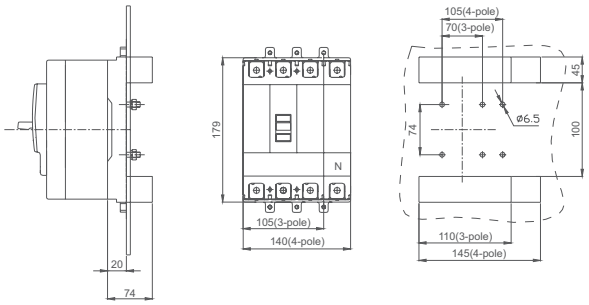
Fixed rear connection (3-pole, 4-pole) mounting plate opening size



Plug-in front connection (3-pole, 4-pole) mounting plate opening size

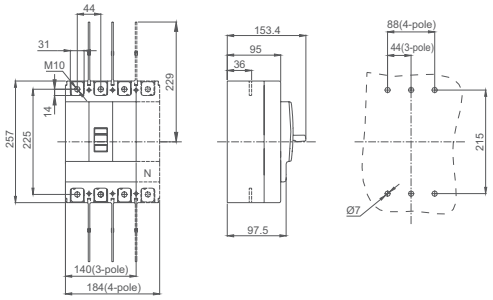


Plug-in rear connection (3-pole, 4-pole) mounting plate opening size

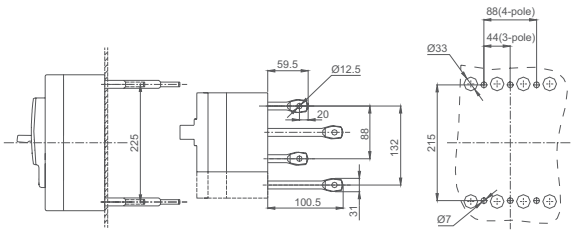


400 frame

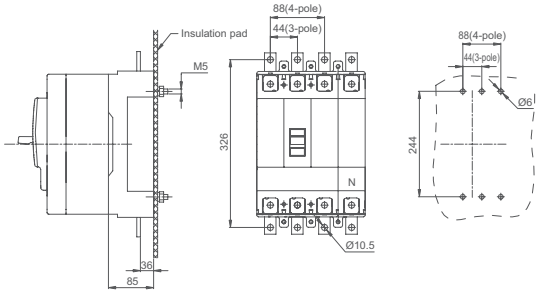
Fixed front connection (3-pole, 4-pole) mounting plate opening size



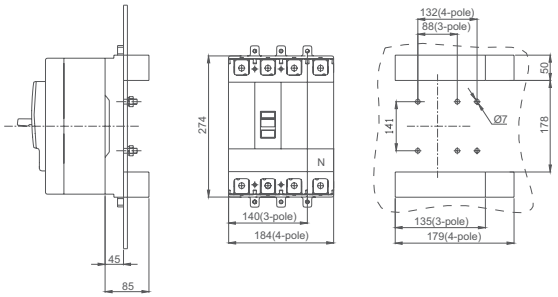
Fixed rear connection (3-pole, 4-pole) mounting plate opening size



Plug-in front connection (3-pole, 4-pole) mounting plate opening size



Plug-in rear connection (3-pole, 4-pole) mounting plate opening size

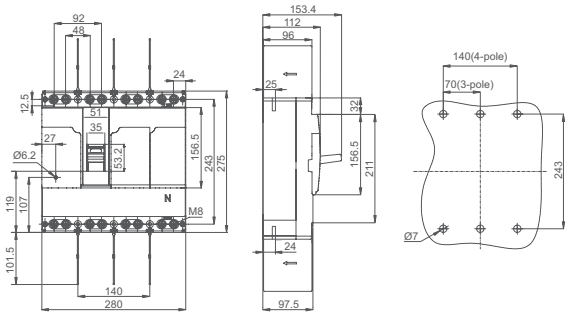


HPS Series Molded Case Circuit Breaker for Motors

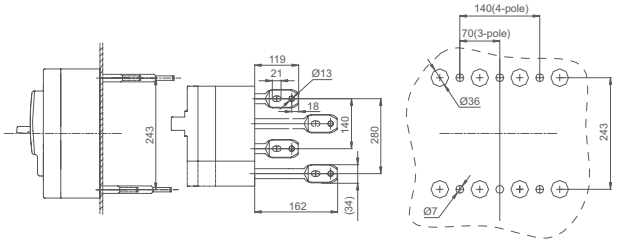
Overall dimensions

800 frame

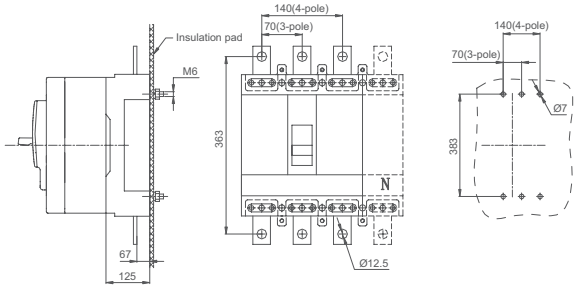
Fixed front connection (3-pole, 4-pole) mounting plate opening size



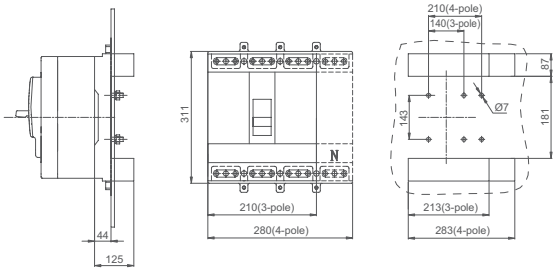
Fixed rear connection (3-pole, 4-pole) mounting plate opening size



Plug-in front connection (3-pole, 4-pole) mounting plate opening size



Plug-in rear connection (3-pole, 4-pole) mounting plate opening size

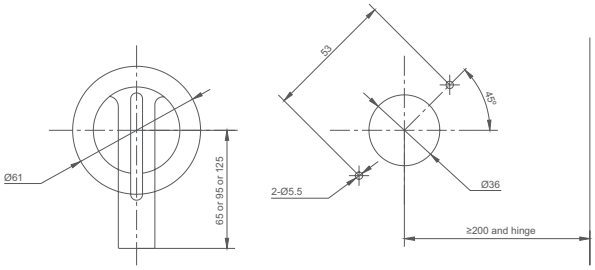


Accessories for HPS Series Molded Case Circuit Breaker for Motors

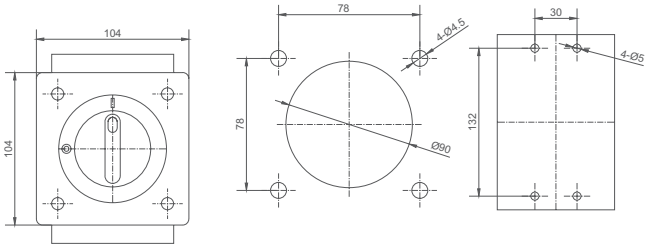
Overall dimensions

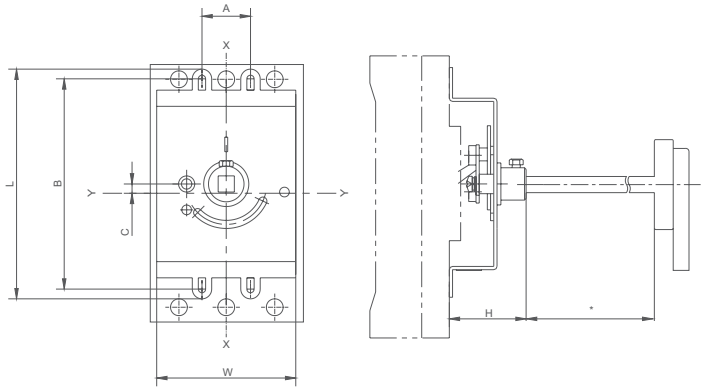
Schematic drawing of manual operation mechanism

Schematic drawing of operation mechanism with rotation handle



Schematic drawing of operation mechanism with one piece handle





Model	A	B	L	W	H	C
HPS-125	25	110	126	78	57	0
HPS-160	30	132	144	86	58	0
HPS-250	35	145	156	100	61	0
HPS-400	44	215	234	140	82	0
HPS-800	198	244	260	209	92	10

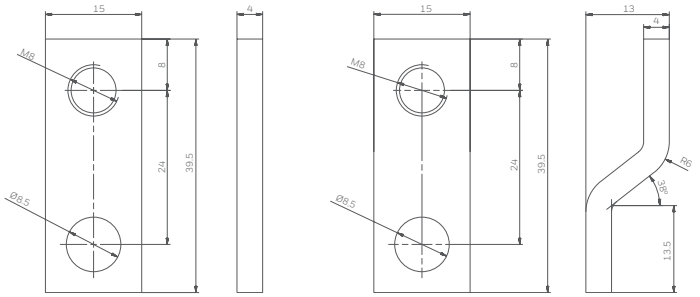
*: the total length of the extended lever of Molded house rotation handle is defaulted to be 150mm, if other dimensions are in demand, please consult Honeywell technical support by calling 400 876 6608.

Accessories for HPS Series Molded Case Circuit Breaker for Motors

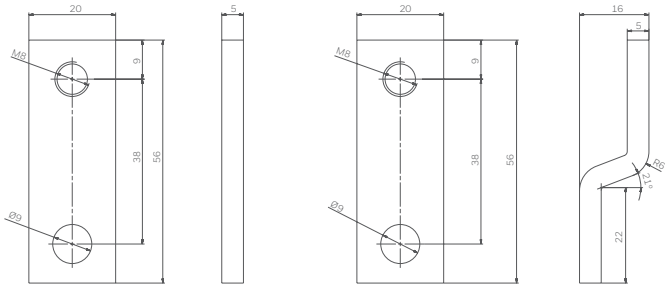
Overall dimensions

Dimensional drawing of plastic case terminal block

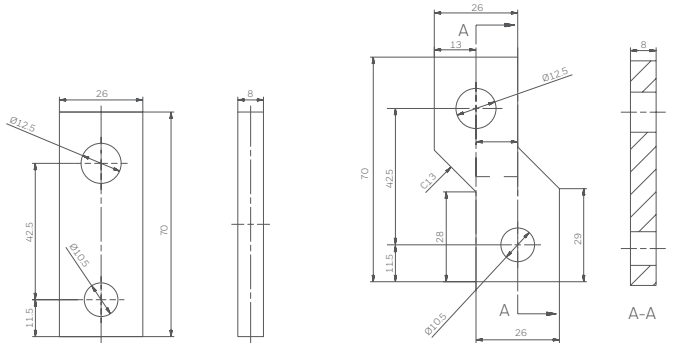
HPS-125 and HPS-160 dimensional drawing of front terminal blocks



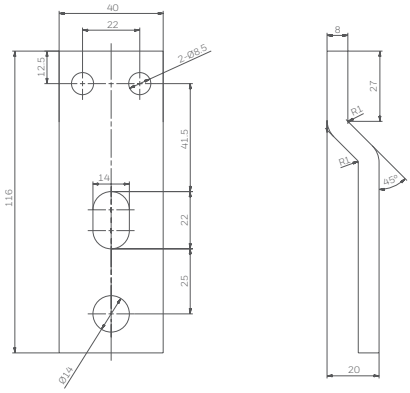
HPS-250 dimensional drawing of front terminal blocks



HPS-400 dimensional drawing of front terminal blocks



HPS-800 dimensional drawing of front terminal blocks

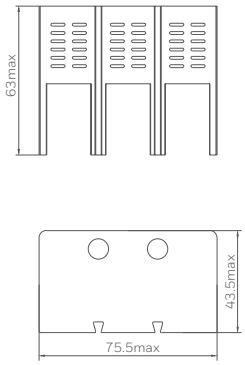


Terminal block model	Applicable shell frame	Applicable pole number	Explain
HPS-160-B1	HPS-125/HPS-160	3	This module has 3 upper and 3 lower terminal blocks
HPS-160-B2	HPS-125/HPS-160	4	This module has 3 upper and 4 lower terminal blocks
HPS-250-B1	HPS-250	3	This module has 3 upper and 3 lower terminal blocks
HPS-250-B2	HPS-250	4	This module has 3 upper and 4 lower terminal blocks
HPS-400-B1	HPS-400	3	This module has 3 upper and 3 lower terminal blocks
HPS-400-B2	HPS-400	4	This module has 3 upper and 4 lower terminal blocks
HPS-800-B1	HPS-800	3	This module has 3 upper and 3 lower terminal blocks
HPS-800-B2	HPS-800	4	This module has 3 upper and 4 lower terminal blocks

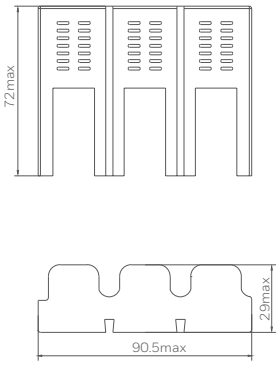
Overall dimensions

Dimensional drawing of plastic case terminal block

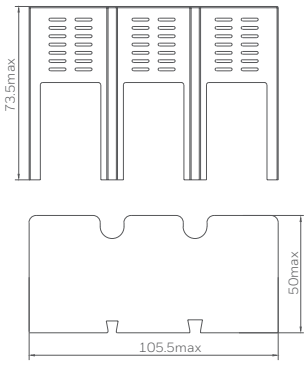
HPS-125-3CV Overall dimensions



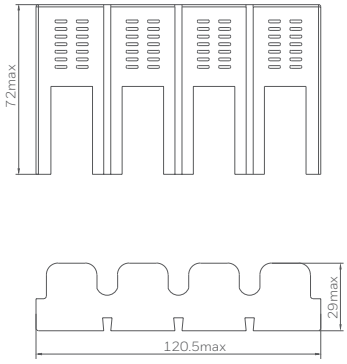
HPS-160-3CV Overall dimensions



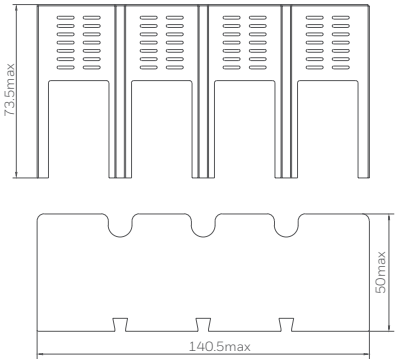
HPS-250-3CV Overall dimensions



HPS-160-4CV Overall dimensions

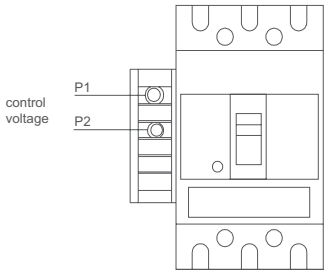
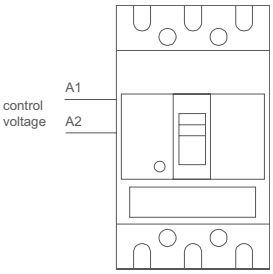
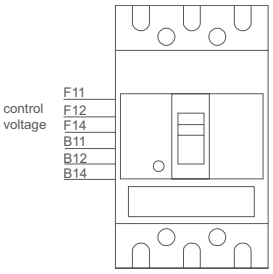


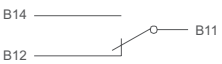
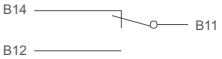
HPS-250-4CV Overall dimensions

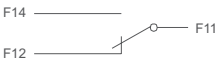
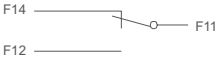


Terminal block model	Applicable shell frame	Applicable pole number
HPS-125-3CV	HPS-125	3
HPS-160-3CV	HPS-160	3
HPS-160-4CV	HPS-160	4
HPS-250-3CV	HPS-250	3
HPS-250-4CV	HPS-250	4

Accessories for HPS Series Molded Case Circuit Breaker for Motors

Accessories for HPS Series Molded Case Circuit Breaker for Motor			
Accessory module name	Undercurrent release module	Shunt trip module	Auxiliary alarm contact module
Rated operating voltage	AC220V/50Hz or AC220~380V/50Hz	AC380V/50Hz or DC24V or DC110V	AC380V/0.3A DC220V/0.15A
Product features	When the control voltage is reduced to 70%~35% of the rated operating voltage, the circuit breaker trips. When the control voltage is less than or equal to 35%. Of the rated operating voltage, the circuit breaker is prevented to close.	When the control voltage is 70%~110%, it can make the circuit breaker trip reliably.	The auxiliary module is 1NO/NC change-over contact, and its electrical life is 8000 times. The alarm module is 1NO/NC switch contact, and its electrical life is 800 times. The auxiliary module is 2NO/NC changeover contact, and its electrical is8000 times, and the alarm module's electrical life is 800 times.
Installation position	Outside the left side	In the left groove	In the left or right or 4-pole additional groove
Wiring diagram			

Alarm contact wiring diagram	
Alarm contact wiring diagram	
Position of the circuit breaker when it is "Trip-free" (alarm)	

Auxiliary contact wiring diagram	
Position of the circuit breaker, when it is "break" and "trip-free"	
Position of the circuit breaker, when it is "make"	

Accessory code selection table							
Accessory model code	Accessory type	3-pole	4-pole	Installation position			
				Left groove	Right groove	4-Pole additional groove	Outside the left side
00	No accessory	√	√	None	None	None	None
20	1 Auxiliary	√	√	Auxiliary	None	None	None
08	1 Alarm	√	√	Alarm	None	None	None
60	2 Auxiliary	√	√	Auxiliary	Auxiliary	None	None
09	2 Alarm	√	√	Alarm	Alarm	None	None
28	1 Auxiliary 1 Alarm	√	√	Auxiliary	Alarm	None	None
29	1 Auxiliary 2 Alarm	√	√	Alarm	Auxiliary Alarm	None	None
68	2 Auxiliary 1 Alarm	√	√	Auxiliary	Auxiliary Alarm	None	None
69	2 Auxiliary 2 Alarm	√	√	Auxiliary Alarm	Auxiliary Alarm	None	None
10	Shunt	√	√	Shunt: AC220-380V(1)	None	None	None
				None	Shunt: AC220V-380V(2)		
11		√	√	Shunt: DC24V	None	None	None
12		√	√	Shunt: DC110V	None	None	None
30	Undervoltage:	√	√	None	None	None	Undervoltage: AC220V
31		√	√	None	None	None	Undervoltage: AC380V
40	Shunt 1 Auxiliary	√	√	Shunt: AC220-380V(1)	Auxiliary (1)	None	None
				Auxiliary (2)	Shunt: AC220V-380V(2)		
41		√	√	Shunt: DC24V	Auxiliary	None	None
42		√	√	Shunt: DC110V	Auxiliary	None	None
18	Shunt 1 Alarm	√	√	Shunt: AC220-380V(1)	Alarm (1)	None	None
				Alarm (2)	Shunt: AC220V-380V(2)		
16		√	√	Shunt: DC24V	Alarm	None	None
17		√	√	Shunt: DC110V	Alarm	None	None
80	Shunt 2 Auxiliary		√	分 Shunt: AC220~380V	Auxiliary	Auxiliary	None
81			√	Shunt: DC24V	Auxiliary	Auxiliary	None
82			√	Shunt: DC110V	Auxiliary	Auxiliary	None
19	Shunt 2 Alarm		√	Shunt: AC220~380V	Alarm	Alarm	None
14			√	Shunt: DC24V	Alarm	Alarm	None
15			√	Shunt: DC110V	Alarm	Alarm	None
48	Shunt 1 Auxiliary 1 Alarm	√	√	Shunt: AC220~380V	Auxiliary Alarm	None	None
46		√	√	Shunt: DC24V	Auxiliary Alarm	None	None
47		√	√	Shunt: DC110V	Auxiliary Alarm	None	None
49	Shunt 1 Auxiliary 2 Alarm		√	Shunt: AC220~380V	Auxiliary Alarm	Alarm	None
50			√	Shunt: DC24V	Auxiliary Alarm	Alarm	None
51			√	Shunt: DC110V	Auxiliary Alarm	Alarm	None
88	Shunt 2 Auxiliary 1 Alarm		√	Shunt: AC220~380V	Auxiliary Alarm	Auxiliary	None
86			√	Shunt: DC24V	Auxiliary Alarm	Auxiliary	None
87			√	Shunt: DC110V	Auxiliary Alarm	Auxiliary	None
89	Shunt 2 Auxiliary 2 Alarm		√	Shunt: AC220~380V	Auxiliary Alarm	Auxiliary Alarm	None
93			√	Shunt: DC24V	Auxiliary Alarm	Auxiliary Alarm	None
94			√	Shunt: DC110V	Auxiliary Alarm	Auxiliary Alarm	None
70	Undervoltage 1 Auxiliary	√	√	None	Auxiliary	None	None
71		√	√	None	Auxiliary	None	Undervoltage: AC380V
38	Undervoltage 1 Alarm	√	√	None	Alarm	None	Undervoltage: AC220V
43		√	√	None	Alarm	None	Undervoltage: AC380V
90	Undervoltage 2 Auxiliary		√	None	Auxiliary	Auxiliary	Undervoltage: AC220V
91			√	None	Auxiliary	Auxiliary	Undervoltage: AC380V
39	Undervoltage 2 Alarm		√	None	Alarm	Alarm	Undervoltage: AC220V
44			√	None	Alarm	Alarm	Undervoltage: AC380V
78	Undervoltage 1 Auxiliary 1 Alarm	√	√	None	Auxiliary Alarm	None	Undervoltage: AC220V
77		√	√	None	Auxiliary Alarm	None	Undervoltage: AC380V
79	Undervoltage 1 Auxiliary 2 Alarm		√	None	Auxiliary Alarm	Alarm	Undervoltage: AC220V
83			√	None	Auxiliary Alarm	Alarm	Undervoltage: AC380V
98	Undervoltage 2 Auxiliary 1 Alarm		√	None	Auxiliary Alarm	Auxiliary	Undervoltage: AC220V
96			√	None	Auxiliary Alarm	Auxiliary	Undervoltage: AC380V
99	Undervoltage 2 Auxiliary 2 Alarm		√	None	Auxiliary Alarm	Auxiliary Alarm	Undervoltage: AC220V
97			√	None	Auxiliary Alarm	Auxiliary Alarm	Undervoltage: AC380V

Note: For any special demand, please consult Honeywell Technical Support calling 400 876 6608.
(1) Applicable to 160, 250, 400, 800 frames.
(2) Applicable to 125 frame.
(3) 125 frame only have accessory 08, 10, 20, 40, 18, 28 to select

HMS/HMP Series Miniature Circuit Breaker for Motors

Reference Definition

HMS - 4 C 63 /OF/MN

- Miniature Circuit Breaker Model: HMS : 6000A Breaking capacity
- Number of poles: 1, 2, 3, 4
- Tripping curve: C, D
- Rated current: C Curve: 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63; D Curve: 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63
- Accessory: if any, multiple accessories can be mounted, which shall assembled in adding order See the specific models below

HMP - 4 C 63 /OF/SD

- Miniature Circuit Breaker Model: HMP: 10000A Breaking capacity
- Number of poles: 1, 2, 3, 4
- Tripping curve: C, D
- Rated current: C Curve: 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125; D Curve: 1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125
- Accessory: if any, multiple accessories can be mounted, which shall assembled in adding order See the specific models below

HMS - OF

- Miniature Circuit Breaker Model: HMS is common to all accessories (Omit this after a splash)
- Accessory type:
  - OF: Auxiliary contract module
  - SD: Alarm module
  - OF+SD: Auxiliary module + alarm module (auxiliary alarm)
  - MV: overvoltage protection module
  - MN: undervoltage protection module
  - MXA: AC shunt module 110-415V
  - MXD1: DC shunt module 48-60V
  - MXD2: DC shunt module 12-24V

HMS/HMP Protect Features

- High breaking capacity, for HMS Series it is up to 6.5kA, HMP Series up to 12kA
- Fast closing function, efficiently product the reliability of product closing
- Adopt scientific current limitation, up to current limit level III
- With advanced mechanism design, control the duration from the short circuit to main circuit breaking within 4ms
- Comprehensive accessories, for auxiliary, shunt, and undervoltage protection, to meet various demands
- The accessories are fixed and installed to the main body of the circuit breaker in the factory, ensure the reliability of installation

Protection characteristics

Time delay tripping characteristics

No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	1.13	Does not trip within 1 hours	Cold state	30°C
2	1.45	Trip within 1 hours	Hot state	

Instantaneous tripping characteristics of C-curve

No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	5	Does not trip within 0.1s	Cold state	30°C
2	10	Trip within 0.1s	Hot state	

Instantaneous tripping characteristics of D-curve

No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	10	Does not trip within 0.1s	Cold state	30°C
2	20	Trip within 0.1s	Hot state	

			HMS	HMP
				
Operating environment				
Standards			GB10963.1, IEC60898-1	GB10963.1, IEC60898-1
Product certification			CCC, CE	CCC, CE
Protection rating			IP20	IP20
Operating altitude			≤ 2000m*	≤ 2000m*
Installation environment			Site where there is no violent vibration or impact	Site where there is no violent vibration or impact
Parameters				
Rated short circuit breaking capacity Icn		A	6000	10000
Operating short circuit breaking capacity Ics		A	6000	7500
Rated frequency	Comply with GB10963.1/ IEC60898-1 standard	Hz	50/60	50/60
Rated operating voltage	Comply with GB10963.1/ IEC60898-1 standard	V	AC 240/415V (1P), 415V (2P, 3P, 4P)	AC 240/415V (1P), 415V (2P, 3P, 4P)
Rated insulation voltage Ui	Comply with GB10963.1/ IEC60898-2 standard	V	600	600
Rated impulse withstand voltage Uimp	Comply with GB10963.1/ IEC60898-3 standard	kV	4	4
Rated current Ie		A	1, 2, 3, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125
Mechanical life		times	20000	20000
Electrical life		times	10000	10000 (≤ 63A); 4000 (80~125A)
Protection rating			IP20	IP20
Installation method			Comply with GB/T 19334-2003 TH35-7.5 Steel Guide Rail Installation	Comply with GB/T 19334-2003 TH35-7.5 Steel Guide Rail Installation
Installation category			III	III
Pollution grade			II	II
Working temperature		°C	-25~+70**	-25~+70**
Operating temperature		°C	-25~+70	-25~+70
Air relative humidity			≤95%	≤95%
Wiring type	Wire connection	mm^2	1~25	1~25 (≤ 63A); 1.5~35 (80~125A)
	Busbar connection	mm^2	0.8~2	0.8~2 (≤ 63A)
	Tightening torque	N.m	2.5	2.5 (≤ 63A); 3.5 (80~125A)
	Terminal screw		M5	M5 (≤ 63A); M7 (80~125A)
Switching wire inlet			Support	Support

*: At an altitude of 3000m, use at a reduced capacity of 0.96Ie. At an altitude of 4000m, reduce the capacity to 0.93Ie for use.
**: For operation in ambient temperature under -5°C or above +40°C , please consult related technician of Honeywell Control Competent by calling 400 633 6089.

HMS/HMP Series Miniature Circuit Breaker for Motors

Introduction

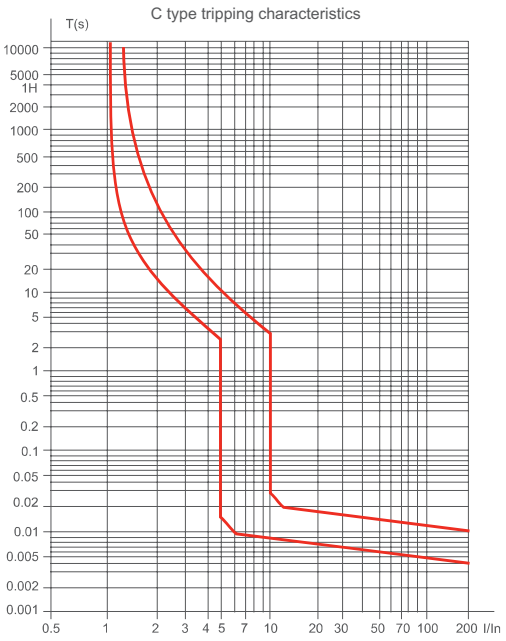
Multiple accessories can be assembled to the left side of the product. The accessories have already been assembled and fixed when leaving the factor, which ensure sound assemble and connection of the product.

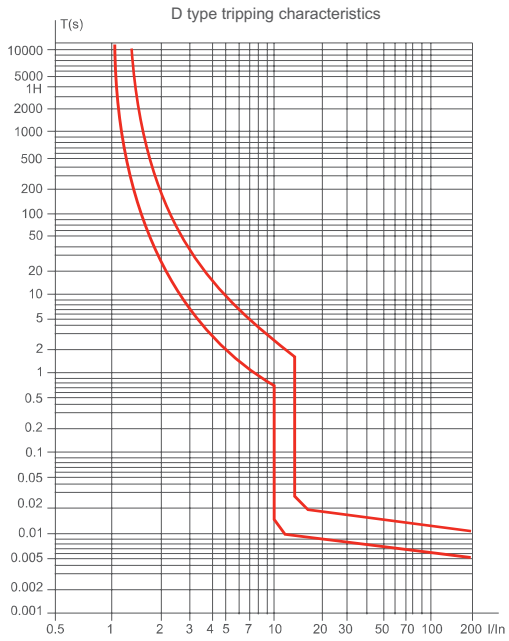
Product Characteristics

Accessory model name	HMS-OF Auxiliary contact module HMS-SD Alarm module HMS-OF+SD Auxiliary module + alarm module	HMS-MXA AC shunt module HMS-MXD1 DC shunt module HMS-MXD2 DC shunt module	HMS-MN Undervoltage Module HMS-MV Overvoltage Module
			
Features			
	HMS-OF indicates the "break" or "make" state of the circuit breaker HMS-SD sounds alarm in case of circuit breaker fault HMS-OF+SD can arbitrarily switch between OF+OF and OF+SD contacts via one selector switch	Triggers tripping of the circuit breaker contacted with it after receiving the signal	HMS-MN: When supply voltage is reduced (35 %~ 70 % Ue) , it will make the circuit breaker trip; the circuit breaker can be manuallyclosedtil the supply voltage recovers to above 85 % Ue. HMS-MV When the voltage increases(e.g. The neural wire breaks), it will trigger tripping of the circuit breaker connected to it.Rated operating tripping overvoltage: 280V±5%
Technical parameters			
Rated voltage Ue	AC 230V 50/60Hz	HMS-MXA: AC 110V~415V 50/60Hz HMS-MXD1: DC 48V~60V HMS-MXD2: DC 12V~24V	HMS-MN: AC 230V HMS-MV: AC 280V
Mechanical indication window	Yes, with testing button	Yes	Yes
Width	9mm	18mm	18mm
Rated insulation voltage Ui	AC 230V	HMS-MXA: AC 690V HMS-MXD1: DC 250V HMS-MXD2: DC 250V	HMS-MN: AC 230V HMS-MV: AC 280V
Tripping voltage	/	70%~110% Ue	HMS-MN: 35%~70% Ue HMS-MV: Ue±5%Ue
Use category	AC-15: AC 230V/0.7A	/	/
	DC-12: DC 110V/0.5A	/	/
Thermal current Ith	2.5A	/	/
Number of contacts	HMS-OF: 2CO	/	/
	HMS-SD: 1CO	/	/
	HMS-OF+SD: OF: 2CO/SD: 1CO	/	/
Minimum operating voltagea	24V	/	/
Minimum operating current	50mA	/	/
Mechanical life	20000 times	20000 times	20000 times
Electrical life	6000 times	6000 times	6000 times
Protection rating	IP20	IP20	IP20
Installation category	II	II	II
Pollution degree	II	II	II
Operating temperature	-30~+70°C	-30~+70°C	-30~+70°C
Air relative humidity	≤95%	≤95%	≤95%
Installation method	Mounted to the left side of the product	Mounted to the left side of the product	Mounted to the left side of the product
Screw torque	1.0N.m	3.5N.m	3.5N.m

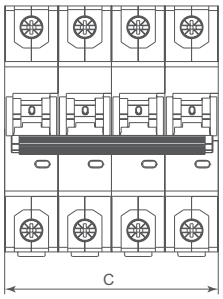
Note: For operation in ambient temperature under -5°C or above +40°C , please consult related technician of Honeywell Control Competent by calling 400 633 6089.

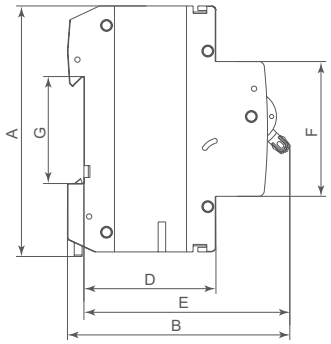
Tripping characteristics curve





HMS/HMP (≤63A product model) Overall dimensions (mm)

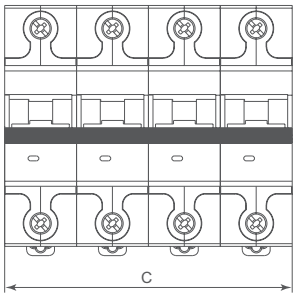


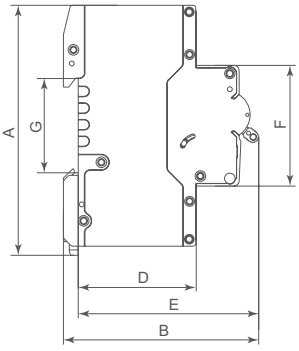


Code of the number of poles	A	B	C	D	E	F	G
1P	83.5±0.8	78±0.8	18±0.8	44±0.8	72.4±0.8	45±0.8	35.5±0.8
2P		78.4±0.8	36±0.8		73±0.8		
3P			54±0.8				
4P			72±0.8				

Unit: mm

HMP (80~125A product model) Overall dimensions (mm)





Code of the number of poles	A	B	C	D	E	F	G
1P	83.2±0.8	75.7±0.8	26.8±0.8	44±0.8	72.2±0.8	45±0.8	35±0.8
2P			53.6±0.8				
3P			80.4±0.8				
4P			107.2±0.8				

Unit: mm

HMP-DC Series DC Circuit Breaker for Machine Use

Reference Definition

HMP - 1 C 63 - DC

- Series NO.: HMP : 10000A Breaking capacity
- Number of poles: 1, 2
- Tripping curve : B, C, D
- Rated current: 1, 2, 3, 4, 5, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50, 63
- DC circuit breaker series

HMP - □ - DC

- Series NO.:
- Accessory:
  - OF: Auxiliary contract module
  - SD: Alarm module
  - OF+SD: Auxiliary module + alarm module (auxiliary alarm)
  - MXAD1: shunt module: AC110~415V 50/60Hz; DC110~130V
  - MXAD2: shunt module: AC/DC48V 50/60V
  - MXAD3: shunt module: AC/DC12~24V 50/60V
  - MXAD1+OF: shunt module+Auxiliary module: AC110~415V 50/60Hz; DC110~130V
  - MXAD2+OF: shunt module+Auxiliary module: AC/DC48V 50/60Hz
  - MXAD3+OF: shunt module+Auxiliary module: AC/DC12~24V 50/60Hz
  - MN: undervoltage protection module
  - MV: overvoltage protection module
  - MNS: Time delay undervoltage module
- DC circuit breaker series

HMP-...-DC Protect Features

- High breaking capacity, for HMP-...-DC Series it is up to 10kA, with fast closing function,fast closing function to efficiently protect the reliability of product closing
- Accessories of auxiliary, alarm, shunt, overvoltage, and undervoltage to meet high safety demands
- The accessories are fixed and installed to the main body of the circuit breaker in the factory, ensure the reliability of installation
- Product comply with requirements of CCC and CE certification

Protection characteristics

Time delay tripping characteristics				
No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	1.05	Does not trip within 1 hours	Cold state	30°C
2	1.3	Trip within 1 hours	Hot state	
Instantaneous tripping characteristics of B-curve				
No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	5.5In -20%	> 0.2s	Cold state	30°C
2	5.5In +20%	< 0.2s	Cold state	
Instantaneous tripping characteristics of C-curve				
No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	8.5In -20%	> 0.2s	Cold state	30°C
2	8.5In +20%	< 0.2s	Hot state	
Instantaneous tripping characteristics of D-curve				
No.	Multiple of the rated current	Tripping time	Initial condition	Ambient temperature
1	12In -20%	> 0.2s	Cold state	30°C
2	12In +20%	< 0.2s	Hot state	

			HMP-...-DC
			
Operating environment			
Standards			GB/T14048.2, IEC60947-2
Product certification			CCC, CE
Protection rating			IP20
Operating altitude			≤ 2000m
Installation environment			Site where there is no violent vibration or impact
Parameters			
Rated short circuit breaking capacity Icn		A	10000
Operating short circuit breaking capacity Ics		A	7500
Rated operating voltage	Comply with GB/T14048.2, IEC60947-2 standard	V	DC250 (1P), DC500 (2P)
Rated insulation voltage Ui	Comply with GB/T14048.2, IEC60947-2 standard	V	DC500 (1P), DC600 (2P)
Rated impulse withstand voltage Uimp	Comply with GB/T14048.2, IEC60947-2 standard	kV	6
Rated current Ie		A	B model, C model, D model: 1,2,3,4,5,6,8,10,13,16,20,25,32,40, 50,63
Mechanical life		times	20000
Electrical life		times	6000
Protection rating			IP20
Installation method			Comply with GB/T 19334-2003, TH35-7.5 Steel Guide Rail Installation
nstallation category			II
Pollution grade			III
Operating temperature		ºC	-5 ~ +40
Storage temperature		ºC	-25 ~ +70
Air relative humidity			≤95%
Wiring type	Wire connection	mm^2	1 ~ 25
	Busbar connection	mm^2	2
	Tightening torque	N.m	2.5
	Terminal screw		M5
Switching wire inlet			Support

HMP-DC Series DC Circuit Breaker for Machine Use

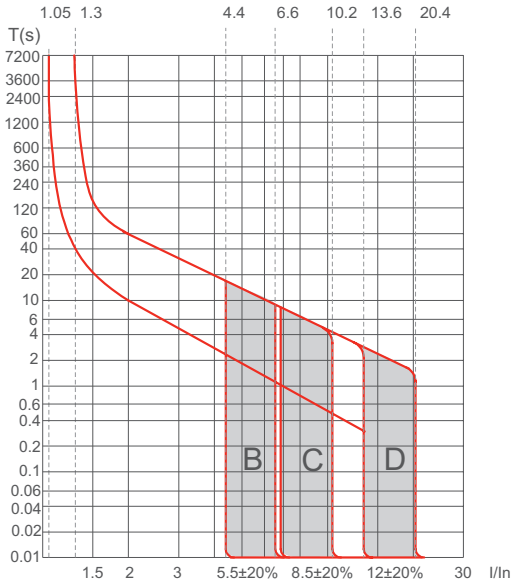
Introduction

Many accessories can be installed on the left side of the product.
Accessories can be put together flexibly.

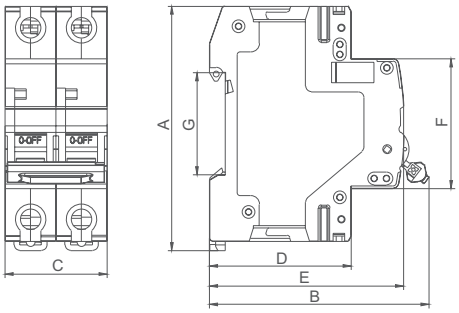
Product Characteristics

Accessory type name	HMP-OF-DC auxiliary contact module HMP-SD-DC alarming module HMP-OF+SD-DC auxiliary contact+alarming module	HMP-MXAD1-DC AC shunt trip module HMP-MXAD2-DC AC shunt trip module HMP-MXAD3-DC AC shunt trip module	HMP-MXAD1+OF-DC AC shunt trip module+auxiliary HMP-MXAD2+OF-DC AC shunt trip module+auxiliary HMP-MXAD3+OF-DC AC shunt trip module+auxiliary	HMP-MN-DC under-voltage module HMP-MV-DC over-voltage module HMP-MNS-DC under-voltage delay
Function				
	HMP-OF-DC indicating opening or closing of the circuit breaker HMP-SD-DC sends alarm signals when the circuit breaker breaks down. HMP-OF+SD-DC can switch between OF+OF and OF+SD through a button.	Upon receiving signals, the circuit breaker trips.	Upon receiving signals, the circuit breaker trips. Indicating the opening or closing of the circuit breaker.	HMP-MN-DC when the voltage of power lowers (35%-70% Ue), the circuit breaker trips. When the voltage rises to over 85% Ue, the circuit breaker can be closed manually. HMP-MV-DC when the voltage rises (such as neutral line breaking), the circuit breaker will trip. Rated tripping overvoltage: 280V±5%. HMP-MNS-DC when the voltage of the power lowers (35%-70% Ue), the circuit breaker trips. When the voltage rises to over 85% Ue, the circuit breaker can be closed manually. There is a 0.2-second delay to avoid tripping due to temporary voltage reduction.
Technical parameters				
Rated Voltage Ue	AC 240~415V 50/60Hz DC 24~130V	HMP-MXAD1-DC: AC110~415V 50/60Hz DC110~130V	HMP-MXAD1+OF-DC: AC110~415V 50/60Hz DC110~130V	HMP-MN-DC: AC 220~240V 50/60Hz
		HMP-MXAD2-DC : AC/DC48V 50/60Hz	HMP-MXAD2+OF-DC: AC/DC48V 50/60Hz	HMP-MV-DC: AC 230V 50/60Hz
		HMP-MXAD3-DC : AC/DC12~24V 50/60Hz	HMP-MXAD3+OF-DC: AC/DC12~24V 50/60Hz	HMP-MNS-DC: AC 220~240V 50/60Hz
Technical indicating window	Yes, with test buttons	Yes	Yes	Yes
Width	9mm	18mm	18mm	18mm
Tripping voltage	/	70%~110% Ue	70%~110% Ue	HMP-MN-DC: 35%~70% Ue HMP-MV-DC: 280V±5%
Working current	24VDC min 10mA, max 6A 48VDC 2A 60VDC 1.5A 130VDC 1A 240VAC 6A 415VAC 3A	/	24VDC min 10mA, max 6A 48VDC 2A ≤ 130VDC 1A ≤ 130VDC 1A 240VAC 6A 415VAC 3A	/
Contactor number	HMP-OF-DC: 1NO/1NC HMP-SD-DC: 1NO/1NC HMP-OF+SD-DC: 1NO/1NC+1NO/1NC	/	/	/
Protection rating	IP20	IP20	IP20	IP20
Installation category	II	II	II	II
Pollution level	II	II	II	II
Working environmen	-25°C ~ +50°C	-25°C ~ +50°C	-25°C ~ +50°C	-25°C ~ +50°C
Storage temperature	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
Air relative moisture	≤95%	≤95%	≤95%	≤95%
Installation place	Mounted to the left side of the product	Mounted to the left side of the product	Mounted to the left side of the product	Mounted to the left side of the product
Screw torque	1.0N.m	3.5N.m	3.5N.m	3.5N.m

Ripping characteristics curve



HMP-...-DC Overall dimensions (mm)



Code of the number	A	B	C	D	E	F	G
1P	82.6±0.5	75±0.5	$18^{0}_{-0.4}$	43.7±0.5	67.5±0.5	45±0.5	35±0.5
2P			$36^{0}_{-0.7}$				

Unit: mm

Product Selection Table

Honeywell HCS 3-Pole AC Contactor

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCS-09-10-A24	9	1	-	24V
	HCS-09-10-A48		1	-	48V
	HCS-09-10-A110		1	-	110V
	HCS-09-10-A220		1	-	220V
	HCS-09-10-A380		1	-	380V
	HCS-09-01-A24		-	1	24V
	HCS-09-01-A48		-	1	48V
	HCS-09-01-A110		-	1	110V
	HCS-09-01-A220		-	1	220V
	HCS-09-01-A380		-	1	380V
	HCS-12-10-A24	12	1	-	24V
	HCS-12-10-A48		1	-	48V
	HCS-12-10-A110		1	-	110V
	HCS-12-10-A220		1	-	220V
	HCS-12-10-A380		1	-	380V
	HCS-12-01-A24		-	1	24V
	HCS-12-01-A48		-	1	48V
	HCS-12-01-A110		-	1	110V
	HCS-12-01-A220		-	1	220V
	HCS-12-01-A380		-	1	380V
	HCS-18-10-A24	18	1	-	24V
	HCS-18-10-A48		1	-	48V
	HCS-18-10-A110		1	-	110V
	HCS-18-10-A220		1	-	220V
	HCS-18-10-A380		1	-	380V
	HCS-18-01-A24		-	1	24V
	HCS-18-01-A48		-	1	48V
	HCS-18-01-A110		-	1	110V
	HCS-18-01-A220		-	1	220V
	HCS-18-01-A380		-	1	380V
	HCS-25-10-A24	25	1	-	24V
	HCS-25-10-A48		1	-	48V
	HCS-25-10-A110		1	-	110V
	HCS-25-10-A220		1	-	220V
	HCS-25-10-A380		1	-	380V
	HCS-25-01-A24		-	1	24V
	HCS-25-01-A48		-	1	48V
	HCS-25-01-A110		-	1	110V
	HCS-25-01-A220		-	1	220V
	HCS-25-01-A380		-	1	380V

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCS-32-10-A24	32	1	-	24V
	HCS-32-10-A48		1	-	48V
	HCS-32-10-A110		1	-	110V
	HCS-32-10-A220		1	-	220V
	HCS-32-10-A380		1	-	380V
	HCS-32-01-A24		-	1	24V
	HCS-32-01-A48		-	1	48V
	HCS-32-01-A110		-	1	110V
	HCS-32-01-A220		-	1	220V
	HCS-32-01-A380		-	1	380V
	HCS-38-10-A24	38	1	-	24V
	HCS-38-10-A48		1	-	48V
	HCS-38-10-A110		1	-	110V
	HCS-38-10-A220		1	-	220V
	HCS-38-10-A380		1	-	380V
	HCS-38-01-A24		-	1	24V
	HCS-38-01-A48		-	1	48V
	HCS-38-01-A110		-	1	110V
	HCS-38-01-A220		-	1	220V
	HCS-38-01-A380		-	1	380V
	HCS-40-A24	40	1	1	24V
	HCS-40-A48		1	1	48V
	HCS-40-A110		1	1	110V
	HCS-40-A220		1	1	220V
	HCS-40-A380		1	1	380V
	HCS-50-A24	50	1	1	24V
	HCS-50-A48		1	1	48V
	HCS-50-A110		1	1	110V
	HCS-50-A220		1	1	220V
	HCS-50-A380		1	1	380V
	HCS-65-A24	65	1	1	24V
	HCS-65-A48		1	1	48V
	HCS-65-A110		1	1	110V
	HCS-65-A220		1	1	220V
	HCS-65-A380		1	1	380V
	HCS-80-A24	80	1	1	24V
	HCS-80-A48		1	1	48V
	HCS-80-A110		1	1	110V
	HCS-80-A220		1	1	220V
	HCS-80-A380		1	1	380V

Honeywell HCS 3-Pole AC Contactor

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCS-95-A24	95	1	1	24V
	HCS-95-A48		1	1	48V
	HCS-95-A110		1	1	110V
	HCS-95-A220		1	1	220V
	HCS-95-A380		1	1	380V
	HCS-115-00-A24	115	-	-	24V
	HCS-115-00-A48		-	-	48V
	HCS-115-00-A110		-	-	110V
	HCS-115-00-A220		-	-	220V
	HCS-115-00-A380		-	-	380V
	HCS-150-00-A24	150	-	-	24V
	HCS-150-00-A48		-	-	48V
	HCS-150-00-A110		-	-	110V
	HCS-150-00-A220		-	-	220V
	HCS-150-00-A380		-	-	380V
	HCS-170-00-A24	170	-	-	24V
	HCS-170-00-A48		-	-	48V
	HCS-170-00-A110		-	-	110V
	HCS-170-00-A220		-	-	220V
	HCS-170-00-A380		-	-	380V
	HCS-225-00-A110	225	-	-	110V
	HCS-225-00-A220		-	-	220V
	HCS-225-00-A380				380V
	-		-	-	-
	-		-	-	-
	HCS-265-00-A110	265	-	-	110V
	HCS-265-00-A220		-	-	220V
	HCS-265-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCS-330-00-A110	330	-	-	110V
	HCS-330-00-A220		-	-	220V
	HCS-330-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-
	HCS-400-00-A110	400	-	-	110V
	HCS-400-00-A220		-	-	220V
	HCS-400-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-
	HCS-500-00-A110	500	-	-	110V
	HCS-500-00-A220		-	-	220V
	HCS-500-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-
	HCS-630-00-A110	630	-	-	110V
	HCS-630-00-A220		-	-	220V
	HCS-630-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-
	HCS-800-00-A110	800	-	-	110V
	HCS-800-00-A220		-	-	220V
	HCS-800-00-A380		-	-	380V
	-		-	-	-
	-		-	-	-

Product Selection Table

Honeywell HCQ 4-Pole AC Contactor

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCQ-09X-A24	9	4	-	24V
	HCQ-09X-A36		4	-	36V
	HCQ-09X-A110		4	-	110V
	HCQ-09X-A220		4	-	220V
	HCQ-09X-A380		4	-	380V
	HCQ-09Y-A24		2	2	24V
	HCQ-09Y-A36		2	2	36V
	HCQ-09Y-A110		2	2	110V
	HCQ-09Y-A220		2	2	220V
	HCQ-09Y-A380		2	2	380V
	HCQ-12X-A24	12	4	-	24V
	HCQ-12X-A36		4	-	36V
	HCQ-12X-A110		4	-	110V
	HCQ-12X-A220		4	-	220V
	HCQ-12X-A380		4	-	380V
	HCQ-12Y-A24		2	2	24V
	HCQ-12Y-A36		2	2	36V
	HCQ-12Y-A110		2	2	110V
	HCQ-12Y-A220		2	2	220V
	HCQ-12Y-A380		2	2	380V
	HCQ-25X-A24	25	4	-	24V
	HCQ-25X-A36		4	-	36V
	HCQ-25X-A110		4	-	110V
	HCQ-25X-A220		4	-	220V
	HCQ-25X-A380		4	-	380V
	HCQ-25Y-A24		2	2	24V
	HCQ-25Y-A36		2	2	36V
	HCQ-25Y-A110		2	2	110V
	HCQ-25Y-A220		2	2	220V
	HCQ-25Y-A380		2	2	380V
	HCQ-32X-A24	32	4	-	24V
	HCQ-32X-A36		4	-	36V
	HCQ-32X-A110		4	-	110V
	HCQ-32X-A220		4	-	220V
	HCQ-32X-A380		4	-	380V
	HCQ-32Y-A24		2	2	24V
	HCQ-32Y-A36		2	2	36V
	HCQ-32Y-A110		2	2	110V
	HCQ-32Y-A220		2	2	220V
	HCQ-32Y-A380		2	2	380V

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	AC
	HCQ-40X-A24	40	4	-	24V
	HCQ-40X-A36		4	-	36V
	HCQ-40X-A110		4	-	110V
	HCQ-40X-A220		4	-	220V
	HCQ-40X-A380		4	-	380V
	HCQ-40Y-A24		2	2	24V
	HCQ-40Y-A36		2	2	36V
	HCQ-40Y-A110		2	2	110V
	HCQ-40Y-A220		2	2	220V
	HCQ-40Y-A380		2	2	380V
	HCQ-50X-A24	50	4	-	24V
	HCQ-50X-A36		4	-	36V
	HCQ-50X-A110		4	-	110V
	HCQ-50X-A220		4	-	220V
	HCQ-50X-A380		4	-	380V
	HCQ-65X-A24	65	4	-	24V
	HCQ-65X-A36		4	-	36V
	HCQ-65X-A110		4	-	110V
	HCQ-65X-A220		4	-	220V
	HCQ-65X-A380		4	-	380V
	HCQ-65Y-A24		2	2	24V
	HCQ-65Y-A36		2	2	36V
	HCQ-65Y-A110		2	2	110V
	HCQ-65Y-A220		2	2	220V
	HCQ-65Y-A380		2	2	380V
	HCQ-80X-A24	80	4	-	24V
	HCQ-80X-A36		4	-	36V
	HCQ-80X-A110		4	-	110V
	HCQ-80X-A220		4	-	220V
	HCQ-80X-A380		4	-	380V
	HCQ-80Y-A24		2	2	24V
	HCQ-80Y-A36		2	2	36V
	HCQ-80Y-A110		2	2	110V
	HCQ-80Y-A220		2	2	220V
	HCQ-80Y-A380		2	2	380V
	HCQ-95X-A24	95	4	-	24V
	HCQ-95X-A36		4	-	36V
	HCQ-95X-A110		4	-	110V
	HCQ-95X-A220		4	-	220V
	HCQ-95X-A380		4	-	380V

HAS Front Auxiliary Contact Module

Appearance	Order Number	Contact type	
		NO	NC
	HAS-11	1	1
	HAS-02	-	2
	HAS-20	2	-
	HAS-22	2	2
	HAS-13	1	3
	HAS-31	3	1
	HAS-04	-	4
	HAS-40	4	-

HAS-...-S Side Auxiliary Contact Module

Appearance	Order Number	Contact type	
		NO	NC
	HAS-L11-S	1	1
	HAS-L02-S	0	2
	HAS-L20-S	2	0

HAS-...-S Air Time Delay Module

Appearance	Order Number	Time-delay	Time delay range
	HAS-N3-S	On-delay operation	0.1s-3s
	HAS-N30-S	On-delay operation	0.1s-30s
	HAS-N180-S	On-delay operation	10s-180s
	HAS-F3-S	Off-delay operation	0.1s-3s
	HAS-F30-S	Off-delay operation	0.1s-30s
	HAS-F180-S	Off-delay operation	10s-180s

HAS-MDRC...S Coil Surge Suppression Module

Appearance	Order Number	Built-in	Voltage
	HAS-MDRC-0-S	R+C	AC24V-48V
	HAS-MDRC-1-S	R+C	AC93V-121V
	HAS-MDRC-2-S	R+C	AC187V-242V
	HAS-MDRC-3-S	R+C	AC323V-418V

HAS-ML.. Mechanical Interlock Module

Appearance	Order Number	Rated operating current
	HAS-MLA	9-38A
	HAS-MLB	40-65A

Product Selection Table

Honeywell HCS 3-Pole DC Contactor											
Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage	Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	DC			(A)	NO	NC	DC
	HCS-09-10-D12	9	1	-	12V		HCS-18-10-D12	18	1	-	12V
	HCS-09-10-D24		1	-	24V		HCS-18-10-D24		1	-	24V
	HCS-09-10-D36		1	-	36V		HCS-18-10-D36		1	-	36V
	HCS-09-10-D48		1	-	48V		HCS-18-10-D48		1	-	48V
	HCS-09-10-D60		1	-	60V		HCS-18-10-D60		1	-	60V
	HCS-09-10-D72		1	-	72V		HCS-18-10-D72		1	-	72V
	HCS-09-10-D110		1	-	110V		HCS-18-10-D110		1	-	110V
	HCS-09-10-D125		1	-	125V		HCS-18-10-D125		1	-	125V
	HCS-09-10-D220		1	-	220V		HCS-18-10-D220		1	-	220V
	HCS-09-10-D250		1	-	250V		HCS-18-10-D250		1	-	250V
	HCS-09-01-D12		-	1	12V		HCS-18-01-D12		-	1	12V
	HCS-09-01-D24		-	1	24V		HCS-18-01-D24		-	1	24V
	HCS-09-01-D36		-	1	36V		HCS-18-01-D36		-	1	36V
	HCS-09-01-D48		-	1	48V		HCS-18-01-D48		-	1	48V
	HCS-09-01-D60		-	1	60V		HCS-18-01-D60		-	1	60V
	HCS-09-01-D72		-	1	72V		HCS-18-01-D72		-	1	72V
	HCS-09-01-D110		-	1	110V		HCS-18-01-D110		-	1	110V
	HCS-09-01-D125		-	1	125V		HCS-18-01-D125		-	1	125V
	HCS-09-01-D220		-	1	220V		HCS-18-01-D220		-	1	220V
	HCS-09-01-D250		-	1	250V		HCS-18-01-D250		-	1	250V
	HCS-12-10-D12	12	1	-	12V		HCS-25-10-D12	25	1	-	12V
	HCS-12-10-D24		1	-	24V		HCS-25-10-D24		1	-	24V
	HCS-12-10-D36		1	-	36V		HCS-25-10-D36		1	-	36V
	HCS-12-10-D48		1	-	48V		HCS-25-10-D48		1	-	48V
	HCS-12-10-D60		1	-	60V		HCS-25-10-D60		1	-	60V
	HCS-12-10-D72		1	-	72V		HCS-25-10-D72		1	-	72V
	HCS-12-10-D110		1	-	110V		HCS-25-10-D110		1	-	110V
	HCS-12-10-D125		1	-	125V		HCS-25-10-D125		1	-	125V
	HCS-12-10-D220		1	-	220V		HCS-25-10-D220		1	-	220V
	HCS-12-10-D250		1	-	250V		HCS-25-10-D250		1	-	250V
	HCS-12-01-D12		-	1	12V		HCS-25-01-D12		-	1	12V
	HCS-12-01-D24		-	1	24V		HCS-25-01-D24		-	1	24V
	HCS-12-01-D36		-	1	36V		HCS-25-01-D36		-	1	36V
	HCS-12-01-D48		-	1	48V		HCS-25-01-D48		-	1	48V
	HCS-12-01-D60		-	1	60V		HCS-25-01-D60		-	1	60V
	HCS-12-01-D72		-	1	72V		HCS-25-01-D72		-	1	72V
	HCS-12-01-D110		-	1	110V		HCS-25-01-D110		-	1	110V
	HCS-12-01-D125		-	1	125V		HCS-25-01-D125		-	1	125V
	HCS-12-01-D220		-	1	220V		HCS-25-01-D220		-	1	220V
	HCS-12-01-D250		-	1	250V		HCS-25-01-D250		-	1	250V

Honeywell HCS 3-Pole DC Contactor

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	DC
	HCS-32-D12	32	-	-	12V
	HCS-32-D24		-	-	24V
	HCS-32-D36		-	-	36V
	HCS-32-D48		-	-	48V
	HCS-32-D60		-	-	60V
	HCS-32-D72		-	-	72V
	HCS-32-D110		-	-	110V
	HCS-32-D125		-	-	125V
	HCS-32-D220		-	-	220V
	HCS-32-D250		-	-	250V

Appearance	Order Number	Rated Current	Types with auxiliary contact		Control coil voltage
		(A)	NO	NC	DC
	HCS-40-D12	40	-	-	12V
	HCS-40-D24		-	-	24V
	HCS-40-D36		-	-	36V
	HCS-40-D48		-	-	48V
	HCS-40-D60		-	-	60V
	HCS-40-D72		-	-	72V
	HCS-40-D110		-	-	110V
	HCS-40-D125		-	-	125V
	HCS-40-D220		-	-	220V
	HCS-40-D250		-	-	250V

HCS Series 3-Pole DC Contactor Front Auxiliary Contact Module

Appearance	Order Number	Contact type	
		NO	NC
	HAS-11-DC	1	1
	HAS-02-DC	-	2
	HAS-20-DC	2	-
	HAS-22-DC	2	2
	HAS-13-DC	1	3
	HAS-31-DC	3	1
	HAS-04-DC	-	4
	HAS-40-DC	4	-

HCS Series 3-Pole DC Contactor Side Auxiliary Contact Module

Appearance	Order Number	Contact type	
		NO	NC
	HAS-L10-DC	1	-
	HAS-L01-DC	-	1
	HAS-L11-DC	1	1
	HAS-L02-DC	-	2
	HAS-L20-DC	2	-

HCS Series 3-Pole DC Contactor Mechanical Interlock Module

Appearance	Order Number	Rated operating current
	HAS-MLA-DC	9~40A

Product Selection Table

HCK Series Traversing Micro Contactor

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage AC
3-Pole AC Contactor						
	HCK-05-10-A110	5	3	1	-	110V
	HCK-05-10-A230		3	1	-	230V
	HCK-05-01-A110		3	-	1	110V
	HCK-05-01-A230		3	-	1	230V
	HCK-09-10-A110	9	3	1	-	110V
	HCK-09-10-A230		3	1	-	230V
	HCK-09-01-A110		3	-	1	110V
	HCK-09-01-A230		3	-	1	230V
	HCK-12-10-A110	12	3	1	-	110V
	HCK-12-10-A230		3	1	-	230V
	HCK-12-01-A110		3	-	1	110V
	HCK-12-01-A230		3	-	1	230V
4-Pole AC Contactor						
	HCK-05X-A110	5	4	-	-	110V
	HCK-05X-A230		4	-	-	230V
	HCK-05Y-A110		4	-	-	110V
	HCK-05Y-A230		4	-	-	230V
	HCK-09X-A110	9	4	-	-	110V
	HCK-09X-A230		4	-	-	230V
	HCK-09Y-A110		4	-	-	110V
	HCK-09Y-A230		4	-	-	230V
	HCK-12X-A110	12	4	-	-	110V
	HCK-12X-A230		4	-	-	230V
	HCK-12Y-A110		4	-	-	110V
	HCK-12Y-A230		4	-	-	230V

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage DC
3-Pole AC Contactor						
	HCK-05-10-D24	5	3	1	-	24V
	HCK-05-10-D110		3	1	-	110V
	HCK-05-01-D24		3	-	1	24V
	HCK-05-01-D110		3	-	1	110V
	HCK-09-10-D24	9	3	1	-	24V
	HCK-09-10-D110		3	1	-	110V
	HCK-09-01-D24		3	-	1	24V
	HCK-09-01-D110		3	-	1	110V
	HCK-12-10-D24	12	3	1	-	24V
	HCK-12-10-D110		3	1	-	110V
	HCK-12-01-D24		3	-	1	24V
	HCK-12-01-D110		3	-	1	110V
4-Pole AC Contactor						
	HCK-05X-D24	5	4	-	-	24V
	HCK-05X-D110		4	-	-	110V
	HCK-05Y-D24		4	-	-	24V
	HCK-05Y-D110		4	-	-	110V
	HCK-09X-D24	9	4	-	-	24V
	HCK-09X-D110		4	-	-	110V
	HCK-09Y-D24		4	-	-	24V
	HCK-09Y-D110		4	-	-	110V
	HCK-12X-D24	12	4	-	-	24V
	HCK-12X-D110		4	-	-	110V
	HCK-12Y-D24		4	-	-	24V
	HCK-12Y-D110		4	-	-	110V

HCK Series Traversing Micro Contactor Front Auxiliary Contact Module

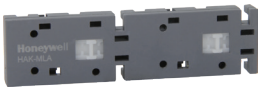
Appearance	Order Number	Contact type NO	Contact type NC
	HAK-11	1	1
	HAK-02	-	2
	HAK-20	2	-
	HAK-22	2	2
	HAK-13	1	3
	HAK-31	3	1
	HAK-40	4	-
	HAK-04	-	4

HCK Series Traversing Micro Contactor Surge suppression module

Appearance	Order Number	Built-in	Voltage
	HAK-MDRC-0	R+C	24~48VAC
	HAK-MDRC-1	R+C	110~280VAC
	HAK-MDRC-2	R+C	380~480VAC

HCK Series Traversing Micro Contactor Mechanical Interlock Module

Appearance	Order Number	Rated operating current
	HAK-MLA	5~12A



HCMN Series Direct Micro Contactor

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage AC
3-Pole AC Contactor						
	HCMN-06-10-A24	6	3	1	-	24V
	HCMN-06-10-A36		3	1	-	36V
	HCMN-06-10-A48		3	1	-	48V
	HCMN-06-10-A110		3	1	-	110V
	HCMN-06-10-A127		3	1	-	127V
	HCMN-06-10-A220		3	1	-	220V
	HCMN-06-10-A380		3	1	-	380V
	HCMN-06-10-A400		3	1	-	400V
	HCMN-06-10-A415		3	1	-	415V
	HCMN-06-01-A24		3	-	1	24V
	HCMN-06-01-A36		3	-	1	36V
	HCMN-06-01-A48		3	-	1	48V
	HCMN-06-01-A101		3	-	1	110V
	HCMN-06-01-A127		3	-	1	127V
	HCMN-06-01-A220		3	-	1	220V
	HCMN-06-01-A380		3	-	1	380V
	HCMN-06-01-A400		3	-	1	400V
	HCMN-06-01-A415		3	-	1	415V
	HCMN-09-10-A24	9	3	1	-	24V
	HCMN-09-10-A36		3	1	-	36V
	HCMN-09-10-A48		3	1	-	48V
	HCMN-09-10-A110		3	1	-	110V
	HCMN-09-10-A127		3	1	-	127V
	HCMN-09-10-A220		3	1	-	220V
	HCMN-09-10-A380		3	1	-	380V
	HCMN-09-10-A400		3	1	-	400V
	HCMN-09-10-A415		3	1	-	415V
	HCMN-09-01-A24		3	-	1	24V
	HCMN-09-01-A36		3	-	1	36V
	HCMN-09-01-A48		3	-	1	48V
	HCMN-09-01-A101		3	-	1	110V
	HCMN-09-01-A127		3	-	1	127V
	HCMN-09-01-A220		3	-	1	220V
	HCMN-09-01-A380		3	-	1	380V
	HCMN-09-01-A400		3	-	1	400V
	HCMN-09-01-A415		3	-	1	415V

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage AC
3-Pole AC Contactor						
	HCMN-12-10-A24	12	3	1	-	24V
	HCMN-12-10-A36		3	1	-	36V
	HCMN-12-10-A48		3	1	-	48V
	HCMN-12-10-A110		3	1	-	110V
	HCMN-12-10-A127		3	1	-	127V
	HCMN-12-10-A220		3	1	-	220V
	HCMN-12-10-A380		3	1	-	380V
	HCMN-12-10-A400		3	1	-	400V
	HCMN-12-10-A415		3	1	-	415V
	HCMN-12-01-A24		3	-	1	24V
	HCMN-12-01-A36		3	-	1	36V
	HCMN-12-01-A48		3	-	1	48V
	HCMN-12-01-A101		3	-	1	110V
	HCMN-12-01-A127		3	-	1	127V
	HCMN-12-01-A220		3	-	1	220V
	HCMN-12-01-A380		3	-	1	380V
	HCMN-12-01-A400		3	-	1	400V
	HCMN-12-01-A415		3	-	1	415V
	HCMN-16-10-A24	16	3	1	-	24V
	HCMN-16-10-A36		3	1	-	36V
	HCMN-16-10-A48		3	1	-	48V
	HCMN-16-10-A110		3	1	-	110V
	HCMN-16-10-A167		3	1	-	127V
	HCMN-16-10-A220		3	1	-	220V
	HCMN-16-10-A380		3	1	-	380V
	HCMN-16-10-A400		3	1	-	400V
	HCMN-16-10-A415		3	1	-	415V
	HCMN-16-01-A24		3	-	1	24V
	HCMN-16-01-A36		3	-	1	36V
	HCMN-16-01-A48		3	-	1	48V
	HCMN-16-01-A101		3	-	1	110V
	HCMN-16-01-A167		3	-	1	127V
	HCMN-16-01-A220		3	-	1	220V
	HCMN-16-01-A380		3	-	1	380V
	HCMN-16-01-A400		3	-	1	400V
	HCMN-16-01-A415		3	-	1	415V

Product Selection Table

HCMN Series Direct Micro Contactor

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage AC
4-Pole AC Contactor						
	HCMN-06X-A24	6	4	-	-	24V
	HCMN-06X-A36		4	-	-	36V
	HCMN-06X-A48		4	-	-	48V
	HCMN-06X-A110		4	-	-	110V
	HCMN-06X-A127		4	-	-	127V
	HCMN-06X-A220		4	-	-	220V
	HCMN-06X-A380		4	-	-	380V
	HCMN-06X-A400		4	-	-	400V
	HCMN-06X-A415		4	-	-	415V
	HCMN-06Y-A24		4	-	-	24V
	HCMN-06Y-A36		4	-	-	36V
	HCMN-06Y-A48		4	-	-	48V
	HCMN-06Y-A110		4	-	-	110V
	HCMN-06Y-A127		4	-	-	127V
	HCMN-06Y-A220		4	-	-	220V
	HCMN-06Y-A380		4	-	-	380V
	HCMN-06Y-A400		4	-	-	400V
	HCMN-06Y-A415		4	-	-	415V
	HCMN-09X-A24	9	4	-	-	24V
	HCMN-09X-A36		4	-	-	36V
	HCMN-09X-A48		4	-	-	48V
	HCMN-09X-A110		4	-	-	110V
	HCMN-09X-A127		4	-	-	127V
	HCMN-09X-A220		4	-	-	220V
	HCMN-09X-A380		4	-	-	380V
	HCMN-09X-A400		4	-	-	400V
	HCMN-09X-A415		4	-	-	415V
	HCMN-09Y-A24		4	-	-	24V
	HCMN-09Y-A36		4	-	-	36V
	HCMN-09Y-A48		4	-	-	48V
	HCMN-09Y-A110		4	-	-	110V
	HCMN-09Y-A127		4	-	-	127V
	HCMN-09Y-A220		4	-	-	220V
	HCMN-09Y-A380		4	-	-	380V
	HCMN-09Y-A400		4	-	-	400V
	HCMN-09Y-A415		4	-	-	415V

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage AC
4-Pole AC Contactor						
	HCMN-12X-A24	12	4	-	-	24V
	HCMN-12X-A36		4	-	-	36V
	HCMN-12X-A48		4	-	-	48V
	HCMN-12X-A110		4	-	-	110V
	HCMN-12X-A127		4	-	-	127V
	HCMN-12X-A220		4	-	-	220V
	HCMN-12X-A380		4	-	-	380V
	HCMN-12X-A400		4	-	-	400V
	HCMN-12X-A415		4	-	-	415V
	HCMN-12Y-A24		4	-	-	24V
	HCMN-12Y-A36		4	-	-	36V
	HCMN-12Y-A48		4	-	-	48V
	HCMN-12Y-A110		4	-	-	110V
	HCMN-12Y-A127		4	-	-	127V
	HCMN-12Y-A220		4	-	-	220V
	HCMN-12Y-A380		4	-	-	380V
	HCMN-12Y-A400		4	-	-	400V
	HCMN-12Y-A415		4	-	-	415V
	HCMN-16X-A24	16	4	-	-	24V
	HCMN-16X-A36		4	-	-	36V
	HCMN-16X-A48		4	-	-	48V
	HCMN-16X-A110		4	-	-	110V
	HCMN-16X-A167		4	-	-	127V
	HCMN-16X-A220		4	-	-	220V
	HCMN-16X-A380		4	-	-	380V
	HCMN-16X-A400		4	-	-	400V
	HCMN-16X-A415		4	-	-	415V
	HCMN-16Y-A24		4	-	-	24V
	HCMN-16Y-A36		4	-	-	36V
	HCMN-16Y-A48		4	-	-	48V
	HCMN-16Y-A110		4	-	-	110V
	HCMN-16Y-A167		4	-	-	127V
	HCMN-16Y-A220		4	-	-	220V
	HCMN-16Y-A380		4	-	-	380V
	HCMN-16Y-A400		4	-	-	400V
	HCMN-16Y-A415		4	-	-	415V

HCMN Series Direct Micro Contactor

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage DC
3-Pole DC Contactor						
	HCMN-06-10-D12	6	3	1	-	12V
	HCMN-06-10-D24		3	1	-	24V
	HCMN-06-10-D36		3	1	-	36V
	HCMN-06-10-D48		3	1	-	48V
	HCMN-06-10-D110		3	1	-	110V
	HCMN-06-10-D125		3	1	-	125V
	HCMN-06-10-D220		3	1	-	220V
	HCMN-06-10-D240		3	1	-	240V
	HCMN-06-01-D12		3	-	1	12V
	HCMN-06-01-D24		3	-	1	24V
	HCMN-06-01-D36		3	-	1	36V
	HCMN-06-01-D48		3	-	1	48V
	HCMN-06-01-D110		3	-	1	110V
	HCMN-06-01-D125		3	-	1	125V
	HCMN-06-01-D220		3	-	1	220V
	HCMN-06-01-D240		3	-	1	240V
	HCMN-09-10-D12	9	3	1	-	12V
	HCMN-09-10-D24		3	1	-	24V
	HCMN-09-10-D36		3	1	-	36V
	HCMN-09-10-D48		3	1	-	48V
	HCMN-09-10-D110		3	1	-	110V
	HCMN-09-10-D125		3	1	-	125V
	HCMN-09-10-D220		3	1	-	220V
	HCMN-09-10-D240		3	1	-	240V
	HCMN-09-01-D12		3	-	1	12V
	HCMN-09-01-D24		3	-	1	24V
	HCMN-09-01-D36		3	-	1	36V
	HCMN-09-01-D48		3	-	1	48V
	HCMN-09-01-D110		3	-	1	110V
	HCMN-09-01-D125		3	-	1	125V
	HCMN-09-01-D220		3	-	1	220V
	HCMN-09-01-D240		3	-	1	240V

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage DC
3-Pole DC Contactor						
	HCMN-12-10-D12	12	3	1	-	12V
	HCMN-12-10-D24		3	1	-	24V
	HCMN-12-10-D36		3	1	-	36V
	HCMN-12-10-D48		3	1	-	48V
	HCMN-12-10-D110		3	1	-	110V
	HCMN-12-10-D125		3	1	-	125V
	HCMN-12-10-D220		3	1	-	220V
	HCMN-12-10-D240		3	1	-	240V
	HCMN-12-01-D12		3	-	1	12V
	HCMN-12-01-D24		3	-	1	24V
	HCMN-12-01-D36		3	-	1	36V
	HCMN-12-01-D48		3	-	1	48V
	HCMN-12-01-D110		3	-	1	110V
	HCMN-12-01-D125		3	-	1	125V
	HCMN-12-01-D220		3	-	1	220V
	HCMN-12-01-D240		3	-	1	240V
	HCMN-16-10-D16	16	3	1	-	12V
	HCMN-16-10-D24		3	1	-	24V
	HCMN-16-10-D36		3	1	-	36V
	HCMN-16-10-D48		3	1	-	48V
	HCMN-16-10-D110		3	1	-	110V
	HCMN-16-10-D165		3	1	-	125V
	HCMN-16-10-D220		3	1	-	220V
	HCMN-16-10-D240		3	1	-	240V
	HCMN-16-01-D16		3	-	1	12V
	HCMN-16-01-D24		3	-	1	24V
	HCMN-16-01-D36		3	-	1	36V
	HCMN-16-01-D48		3	-	1	48V
	HCMN-16-01-D110		3	-	1	110V
	HCMN-16-01-D165		3	-	1	125V
	HCMN-16-01-D220		3	-	1	220V
	HCMN-16-01-D240		3	-	1	240V

Product Selection Table

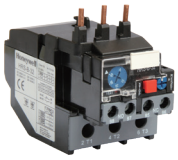
HCMN Series Direct Micro Contactor

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage DC
4-Pole DC Contactor						
	HCMN-06X-D12	6	4	-	-	12V
	HCMN-06X-D24		4	-	-	24V
	HCMN-06X-D36		4	-	-	36V
	HCMN-06X-D48		4	-	-	48V
	HCMN-06X-D110		4	-	-	110V
	HCMN-06X-D125		4	-	-	125V
	HCMN-06X-D220		4	-	-	220V
	HCMN-06X-D240		4	-	-	240V
	HCMN-06Y-D12		4	-	-	12V
	HCMN-06Y-D24		4	-	-	24V
	HCMN-06Y-D36		4	-	-	36V
	HCMN-06Y-D48		4	-	-	48V
	HCMN-06Y-D110		4	-	-	110V
	HCMN-06Y-D125		4	-	-	125V
	HCMN-06Y-D220		4	-	-	220V
	HCMN-06Y-D240		4	-	-	240V
	HCMN-09X-D12	9	4	-	-	12V
	HCMN-09X-D24		4	-	-	24V
	HCMN-09X-D36		4	-	-	36V
	HCMN-09X-D48		4	-	-	48V
	HCMN-09X-D110		4	-	-	110V
	HCMN-09X-D125		4	-	-	125V
	HCMN-09X-D220		4	-	-	220V
	HCMN-09X-D240		4	-	-	240V
	HCMN-09Y-D12		4	-	-	12V
	HCMN-09Y-D24		4	-	-	24V
	HCMN-09Y-D36		4	-	-	36V
	HCMN-09Y-D48		4	-	-	48V
	HCMN-09Y-D110		4	-	-	110V
	HCMN-09Y-D125		4	-	-	125V
	HCMN-09Y-D220		4	-	-	220V
	HCMN-09Y-D240		4	-	-	240V

Appearance	Order Number	Rated Current (A)	Number of poles	Types with auxiliary contact NO	Types with auxiliary contact NC	Control coil voltage DC
4-Pole DC Contactor						
	HCMN-12X-D12	12	4	-	-	12V
	HCMN-12X-D24		4	-	-	24V
	HCMN-12X-D36		4	-	-	36V
	HCMN-12X-D48		4	-	-	48V
	HCMN-12X-D110		4	-	-	110V
	HCMN-12X-D125		4	-	-	125V
	HCMN-12X-D220		4	-	-	220V
	HCMN-12X-D240		4	-	-	240V
	HCMN-12Y-D12		4	-	-	12V
	HCMN-12Y-D24		4	-	-	24V
	HCMN-12Y-D36		4	-	-	36V
	HCMN-12Y-D48		4	-	-	48V
	HCMN-12Y-D110		4	-	-	110V
	HCMN-12Y-D125		4	-	-	125V
	HCMN-12Y-D220		4	-	-	220V
	HCMN-12Y-D240		4	-	-	240V
	HCMN-16X-D16	16	4	-	-	12V
	HCMN-16X-D24		4	-	-	24V
	HCMN-16X-D36		4	-	-	36V
	HCMN-16X-D48		4	-	-	48V
	HCMN-16X-D110		4	-	-	110V
	HCMN-16X-D165		4	-	-	125V
	HCMN-16X-D220		4	-	-	220V
	HCMN-16X-D240		4	-	-	240V
	HCMN-16Y-D16		4	-	-	12V
	HCMN-16Y-D24		4	-	-	24V
	HCMN-16Y-D36		4	-	-	36V
	HCMN-16Y-D48		4	-	-	48V
	HCMN-16Y-D110		4	-	-	110V
	HCMN-16Y-D165		4	-	-	125V
	HCMN-16Y-D220		4	-	-	220V
	HCMN-16Y-D240		4	-	-	240V

HCMN Series Direct Micro Contactor Front Auxiliary Contact Module			
Appearance	Order Number	Contact type	
		NO	NC
	HAMN-11	1	1
	HAMN-02	-	2
	HAMN-20	2	-
	HAMN-22	2	2
	HAMN-13	1	3
	HAMN-31	3	1
	HAMN-40	4	-
	HAMN-04	-	4

Product Selection Table

HRS Series Thermal Overload Relay						
Appearance	Order Number	Current adjustment range (A)	Fit for RT16 fuse specification (A)		Backpack model when installed independently	Contactor model to be assembled with
			aM	gG		
HRS-A 	HRS-A-D16	0.1-0.16	0.5	2	HAS-RA 	HCS-09 HCS-12 HCS-18 HCS-25 HCS-32 HCS-38
	HRS-A-D25	0.16-0.25	0.5	2		
	HRS-A-D40	0.25-0.4	1	2		
	HRS-A-D63	0.4-0.63	1	2		
	HRS-A-1	0.63-1	2	4		
	HRS-A-1D6	1-1.6	2	4		
	HRS-A-2D5	1.6-2.5	4	6		
	HRS-A-4	2.5-4	6	10		
	HRS-A-6	4-6	8	16		
	HRS-A-8	5.5-8	12	20		
	HRS-A-10	7-10	12	20		
	HRS-A-13	9-13	16	25		
	HRS-A-18	12-18	20	32		
	HRS-A-25	17-25	25	50		
HRS-B 	HRS-B-32	23-32	40	63	HAS-RB 	HCS-32 HCS-38
	HRS-B-38	28-38	40	80		
HRS-C 	HRS-C-32	23-32	40	63	HAS-RC 	HCS-40 HCS-50 HCS-65 HCS-80 HCS-95
	HRS-C-40	30-40	40	80		
	HRS-C-50	37-50	63	100		
	HRS-C-65	48-65	80	125		
	HRS-C-70	55-70	80	160		
	HRS-C-80	63-80	80	160		
	HRS-C-95	80-95	100	160		

HBS Series Motor Production Circuit Breaker		
Appearance	Order Number	Rated current (A)
	HBS-A-D16	0.1-0.16
	HBS-A-D25	0.16-0.25
	HBS-A-D40	0.25-0.4
	HBS-A-D63	0.4-0.63
	HBS-A-1	0.63-1
	HBS-A-1D6	1-1.6
	HBS-A-2D5	1.6-2.5
	HBS-A-4	2.5-4
	HBS-A-6D3	4-6.3
	HBS-A-10	6.3-10
	HBS-A-16	10-16
	HBS-A-20	14.5-20
	HBS-A-25	18-25
	HBS-A-32	23-32

Product Selection Table

HCR Series Contactor Relay					
Appearance	Contact type		Control coil voltage	Order Number	
	NO	NC		AC coil	DC coil
	4	-	24V	HCR-40-A24	HCR-40-D24
	4	-	36V	HCR-40-A36	-
	4	-	48V	HCR-40-A48	-
	4	-	110V	HCR-40-A110	HCR-40-D110
	4	-	220V	HCR-40-A220	HCR-40-D220
	4	-	380V	HCR-40-A380	-
	3	1	24V	HCR-31-A24	HCR-31-D24
	3	1	36V	HCR-31-A36	-
	3	1	48V	HCR-31-A48	-
	3	1	110V	HCR-31-A110	HCR-31-D110
	3	1	220V	HCR-31-A220	HCR-31-D220
	3	1	380V	HCR-31-A380	-
	2	2	24V	HCR-22-A24	HCR-22-D24
	2	2	36V	HCR-22-A36	-
	2	2	48V	HCR-22-A48	-
	2	2	110V	HCR-22-A110	HCR-22-D110
	2	2	220V	HCR-22-A220	HCR-22-D220
	2	2	380V	HCR-22-A380	-
	1	3	24V	HCR-13-A24	HCR-13-D24
	1	3	36V	HCR-13-A36	-
	1	3	48V	HCR-13-A48	-
	1	3	110V	HCR-13-A110	HCR-13-D110
	1	3	220V	HCR-13-A220	HCR-13-D220
	1	3	380V	HCR-13-A380	-
	-	4	24V	HCR-04-A24	HCR-04-D24
	-	4	36V	HCR-04-A36	-
	-	4	48V	HCR-04-A48	-
	-	4	110V	HCR-04-A110	HCR-04-D110
	-	4	220V	HCR-04-A220	HCR-04-D220
	-	4	380V	HCR-04-A380	-

HPS Series Molded Case Circuit Breaker for Motors						
Appearance	Frame current (A)	Breaking capacity	Number of poles	Rated current	Order Number	
					Protection mode	
					Only short circuit protection	Overload + short circuit protection
	125	Economical: 35kA	3	10	HPS-125E-3200-10	HPS-125E-3300-10
	125	Economical: 35kA	3	16	HPS-125E-3200-16	HPS-125E-3300-16
	125	Economical: 35kA	3	20	HPS-125E-3200-20	HPS-125E-3300-20
	125	Economical: 35kA	3	25	HPS-125E-3200-25	HPS-125E-3300-25
	125	Economical: 35kA	3	32	HPS-125E-3200-32	HPS-125E-3300-32
	125	Economical: 35kA	3	40	HPS-125E-3200-40	HPS-125E-3300-40
	125	Economical: 35kA	3	50	HPS-125E-3200-50	HPS-125E-3300-50
	125	Economical: 35kA	3	63	HPS-125E-3200-63	HPS-125E-3300-63
	125	Economical: 35kA	3	80	HPS-125E-3200-80	HPS-125E-3300-80
	125	Economical: 35kA	3	100	HPS-125E-3200-100	HPS-125E-3300-100
	125	Economical: 35kA	3	125	HPS-125E-3200-125	HPS-125E-3300-125
	160	Economical: 40kA	3	20	HPS-160E-3200-20	HPS-160E-3300-20
	160	Economical: 40kA	3	25	HPS-160E-3200-25	HPS-160E-3300-25
	160	Economical: 40kA	3	32	HPS-160E-3200-32	HPS-160E-3300-32
	160	Economical: 40kA	3	40	HPS-160E-3200-40	HPS-160E-3300-40
	160	Economical: 40kA	3	50	HPS-160E-3200-50	HPS-160E-3300-50
	160	Economical: 40kA	3	63	HPS-160E-3200-63	HPS-160E-3300-63
	160	Economical: 40kA	3	80	HPS-160E-3200-80	HPS-160E-3300-80
	160	Economical: 40kA	3	100	HPS-160E-3200-100	HPS-160E-3300-100
	160	Economical: 40kA	3	125	HPS-160E-3200-125	HPS-160E-3300-125
	160	Economical: 40kA	3	160	HPS-160E-3200-160	HPS-160E-3300-160
	250	Economical: 40kA	3	160	HPS-250E-3200-160	HPS-250E-3300-160
	250	Economical: 40kA	3	180	HPS-250E-3200-180	HPS-250E-3300-180
	250	Economical: 40kA	3	200	HPS-250E-3200-200	HPS-250E-3300-200
	250	Economical: 40kA	3	225	HPS-250E-3200-225	HPS-250E-3300-225
	250	Economical: 40kA	3	250	HPS-250E-3200-250	HPS-250E-3300-250
	400	Economical: 40kA	3	250	HPS-400E-3200-250	HPS-400E-3300-250
	400	Economical: 40kA	3	315	HPS-400E-3200-315	HPS-400E-3300-315
	400	Economical: 40kA	3	350	HPS-400E-3200-350	HPS-400E-3300-350
	400	Economical: 40kA	3	400	HPS-400E-3200-400	HPS-400E-3300-400

Product Selection Table

HPS Series Molded Case Circuit Breaker for Motors						
Appearance	Frame current (A)	Breaking capacity	Number of poles	Rated current	Order Number	
					Protection mode	
					Only short circuit protection	Overload + short circuit protection
	160	Standard: 50kA	3	20	HPS-160N-3200-20	HPS-160N-3300-20
	160	Standard: 50kA	3	25	HPS-160N-3200-25	HPS-160N-3300-25
	160	Standard: 50kA	3	32	HPS-160N-3200-32	HPS-160N-3300-32
	160	Standard: 50kA	3	40	HPS-160N-3200-40	HPS-160N-3300-40
	160	Standard: 50kA	3	50	HPS-160N-3200-50	HPS-160N-3300-50
	160	Standard: 50kA	3	63	HPS-160N-3200-63	HPS-160N-3300-63
	160	Standard: 50kA	3	80	HPS-160N-3200-80	HPS-160N-3300-80
	160	Standard: 50kA	3	100	HPS-160N-3200-100	HPS-160N-3300-100
	160	Standard: 50kA	3	125	HPS-160N-3200-125	HPS-160N-3300-125
	160	Standard: 50kA	3	160	HPS-160N-3200-160	HPS-160N-3300-160
	250	Standard: 50kA	3	160	HPS-250N-3200-160	HPS-250N-3300-160
	250	Standard: 50kA	3	180	HPS-250N-3200-180	HPS-250N-3300-180
	250	Standard: 50kA	3	200	HPS-250N-3200-200	HPS-250N-3300-200
	250	Standard: 50kA	3	225	HPS-250N-3200-225	HPS-250N-3300-225
	250	Standard: 50kA	3	250	HPS-250N-3200-250	HPS-250N-3300-250
	400	Standard: 50kA	3	250	HPS-400N-3200-250	HPS-400N-3300-250
	400	Standard: 50kA	3	315	HPS-400N-3200-315	HPS-400N-3300-315
	400	Standard: 50kA	3	350	HPS-400N-3200-350	HPS-400N-3300-350
	400	Standard: 50kA	3	400	HPS-400N-3200-400	HPS-400N-3300-400
	800	Standard: 50kA	3	400	HPS-800N-3200-400	HPS-800N-3300-400
	800	Standard: 50kA	3	500	HPS-800N-3200-500	HPS-800N-3300-500
	800	Standard: 50kA	3	630	HPS-800N-3200-630	HPS-800N-3300-630
	800	Standard: 50kA	3	700	HPS-800N-3200-700	HPS-800N-3300-700
	800	Standard: 50kA	3	800	HPS-800N-3200-800	HPS-800N-3300-800
	800	High-end: 70kA	3	400	HPS-800H-3200-400	HPS-800H-3300-400
	800	High-end: 70kA	3	500	HPS-800H-3200-500	HPS-800H-3300-500
	800	High-end: 70kA	3	630	HPS-800H-3200-630	HPS-800H-3300-630
	800	High-end: 70kA	3	700	HPS-800H-3200-700	HPS-800H-3300-700
	800	High-end: 70kA	3	800	HPS-800H-3200-800	HPS-800H-3300-800

HMS Series Miniature Circuit Breaker for Motors

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	1	C	1	HMS-1C1
			2	HMS-1C2
			3	HMS-1C3
			4	HMS-1C4
			6	HMS-1C6
			10	HMS-1C10
			16	HMS-1C16
			20	HMS-1C20
			25	HMS-1C25
			32	HMS-1C32
			40	HMS-1C40
			50	HMS-1C50
			63	HMS-1C63
	2	C	1	HMS-2C1
			2	HMS-2C2
			3	HMS-2C3
			4	HMS-2C4
			6	HMS-2C6
			10	HMS-2C10
			16	HMS-2C16
			20	HMS-2C20
			25	HMS-2C25
			32	HMS-2C32
			40	HMS-2C40
			50	HMS-2C50
			63	HMS-2C63
	3	C	1	HMS-3C1
			2	HMS-3C2
			3	HMS-3C3
			4	HMS-3C4
			6	HMS-3C6
			10	HMS-3C10
			16	HMS-3C16
			20	HMS-3C20
			25	HMS-3C25
			32	HMS-3C32
			40	HMS-3C40
			50	HMS-3C50
			63	HMS-3C63
	4	C	1	HMS-4C1
			2	HMS-4C2
			3	HMS-4C3
			4	HMS-4C4
			6	HMS-4C6
			10	HMS-4C10
			16	HMS-4C16
			20	HMS-4C20
			25	HMS-4C25
			32	HMS-4C32
			40	HMS-4C40
			50	HMS-4C50
			63	HMS-4C63

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	1	D	1	HMS-1D1
			2	HMS-1D2
			3	HMS-1D3
			4	HMS-1D4
			6	HMS-1D6
			10	HMS-1D10
			16	HMS-1D16
			20	HMS-1D20
			25	HMS-1D25
			32	HMS-1D32
			40	HMS-1D40
			50	HMS-1D50
			63	HMS-1D63
	2	D	1	HMS-2D1
			2	HMS-2D2
			3	HMS-2D3
			4	HMS-2D4
			6	HMS-2D6
			10	HMS-2D10
			16	HMS-2D16
			20	HMS-2D20
			25	HMS-2D25
			32	HMS-2D32
			40	HMS-2D40
			50	HMS-2D50
			63	HMS-2D63
	3	D	1	HMS-3D1
			2	HMS-3D2
			3	HMS-3D3
			4	HMS-3D4
			6	HMS-3D6
			10	HMS-3D10
			16	HMS-3D16
			20	HMS-3D20
			25	HMS-3D25
			32	HMS-3D32
			40	HMS-3D40
			50	HMS-3D50
			63	HMS-3D63
	4	D	1	HMS-4D1
			2	HMS-4D2
			3	HMS-4D3
			4	HMS-4D4
			6	HMS-4D6
			10	HMS-4D10
			16	HMS-4D16
			20	HMS-4D20
			25	HMS-4D25
			32	HMS-4D32
			40	HMS-4D40
			50	HMS-4D50
			63	HMS-4D63

Product Selection Table

HMP Series Miniature Circuit Breaker for Motors

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	1	C	1	HMP-1C1
			2	HMP-1C2
			3	HMP-1C3
			4	HMP-1C4
			6	HMP-1C6
			10	HMP-1C10
			16	HMP-1C16
			20	HMP-1C20
			25	HMP-1C25
			32	HMP-1C32
			40	HMP-1C40
			50	HMP-1C50
			63	HMP-1C63
			80	HMP-1C80
			100	HMP-1C100
			125	HMP-1C125
	3	C	1	HMP-3C1
			2	HMP-3C2
			3	HMP-3C3
			4	HMP-3C4
			6	HMP-3C6
			10	HMP-3C10
			16	HMP-3C16
			20	HMP-3C20
			25	HMP-3C25
			32	HMP-3C32
			40	HMP-3C40
			50	HMP-3C50
			63	HMP-3C63
			80	HMP-3C80
			100	HMP-3C100
			125	HMP-3C125

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	2	C	1	HMP-2C1
			2	HMP-2C2
			3	HMP-2C3
			4	HMP-2C4
			6	HMP-2C6
			10	HMP-2C10
			16	HMP-2C16
			20	HMP-2C20
			25	HMP-2C25
			32	HMP-2C32
			40	HMP-2C40
			50	HMP-2C50
			63	HMP-2C63
			80	HMP-2C80
			100	HMP-2C100
			125	HMP-2C125
	4	C	1	HMP-4C1
			2	HMP-4C2
			3	HMP-4C3
			4	HMP-4C4
			6	HMP-4C6
			10	HMP-4C10
			16	HMP-4C16
			20	HMP-4C20
			25	HMP-4C25
			32	HMP-4C32
			40	HMP-4C40
			50	HMP-4C50
			63	HMP-4C63
			80	HMP-4C80
			100	HMP-4C100
			125	HMP-4C125

HMP Series Miniature Circuit Breaker for Motors

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	1	D	1	HMP-1D1
			2	HMP-1D2
			3	HMP-1D3
			4	HMP-1D4
			6	HMP-1D6
			10	HMP-1D10
			16	HMP-1D16
			20	HMP-1D20
			25	HMP-1D25
			32	HMP-1D32
			40	HMP-1D40
			50	HMP-1D50
			63	HMP-1D63
			80	HMP-1D80
			100	HMP-1D100
			125	HMP-1D125
	3	D	1	HMP-3D1
			2	HMP-3D2
			3	HMP-3D3
			4	HMP-3D4
			6	HMP-3D6
			10	HMP-3D10
			16	HMP-3D16
			20	HMP-3D20
			25	HMP-3D25
			32	HMP-3D32
			40	HMP-3D40
			50	HMP-3D50
			63	HMP-3D63
			80	HMP-3D80
			100	HMP-3D100
			125	HMP-3D125

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	2	D	1	HMP-2D1
			2	HMP-2D2
			3	HMP-2D3
			4	HMP-2D4
			6	HMP-2D6
			10	HMP-2D10
			16	HMP-2D16
			20	HMP-2D20
			25	HMP-2D25
			32	HMP-2D32
			40	HMP-2D40
			50	HMP-2D50
			63	HMP-2D63
			80	HMP-2D80
			100	HMP-2D100
			125	HMP-2D125
	4	D	1	HMP-4D1
			2	HMP-4D2
			3	HMP-4D3
			4	HMP-4D4
			6	HMP-4D6
			10	HMP-4D10
			16	HMP-4D16
			20	HMP-4D20
			25	HMP-4D25
			32	HMP-4D32
			40	HMP-4D40
			50	HMP-4D50
			63	HMP-4D63
			80	HMP-4D80
			100	HMP-4D100
			125	HMP-4D125

Accessories of HMS/HMP Series Miniature Circuit Breaker for Motors

Appearance	Accessory type	Order Number
 HMS-OF	Auxiliary contact module	HMS-OF
	Alarm module	HMS-SD
	Auxiliary contact + alarm module (auxiliary alarm)	HMS-OF+SD
	Overvoltage protection module	HMS-MV
	Undervoltage protection module	HMS-MN
 HMS-MXA	AC shunt module 110-415V	HMS-MXA
	DC shunt module 48-60V	HMS-MXD1
	DC shunt module 12-24V	HMS-MXD2

Product Selection Table

HMP-DC Series DC Miniature Circuit Breaker for Motors

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	1 	B	1	HMP-1B1-DC
			2	HMP-1B2-DC
			3	HMP-1B3-DC
			4	HMP-1B4-DC
			5	HMP-1B5-DC
			6	HMP-1B6-DC
			8	HMP-1B8-DC
			10	HMP-1B10-DC
			13	HMP-1B13-DC
			16	HMP-1B16-DC
			20	HMP-1B20-DC
			25	HMP-1B25-DC
			32	HMP-1B32-DC
			40	HMP-1B40-DC
			50	HMP-1B50-DC
			63	HMP-1B63-DC
	1 	C	1	HMP-1C1-DC
			2	HMP-1C2-DC
			3	HMP-1C3-DC
			4	HMP-1C4-DC
			5	HMP-1C5-DC
			6	HMP-1C6-DC
			8	HMP-1C8-DC
			10	HMP-1C10-DC
			13	HMP-1C13-DC
			16	HMP-1C16-DC
			20	HMP-1C20-DC
			25	HMP-1C25-DC
			32	HMP-1C32-DC
			40	HMP-1C40-DC
			50	HMP-1C50-DC
			63	HMP-1C63-DC
	1 	D	1	HMP-1D1-DC
			2	HMP-1D2-DC
			3	HMP-1D3-DC
			4	HMP-1D4-DC
			5	HMP-1D5-DC
			6	HMP-1D6-DC
			8	HMP-1D8-DC
			10	HMP-1D10-DC
			13	HMP-1D13-DC
			16	HMP-1D16-DC
			20	HMP-1D20-DC
			25	HMP-1D25-DC
			32	HMP-1D32-DC
			40	HMP-1D40-DC
			50	HMP-1D50-DC
			63	HMP-1D63-DC

Appearance	Number of poles	Tripping curve	Rated current (A)	Order Number
	2 	B	1	HMP-2B1-DC
			2	HMP-2B2-DC
			3	HMP-2B3-DC
			4	HMP-2B4-DC
			5	HMP-2B5-DC
			6	HMP-2B6-DC
			8	HMP-2B8-DC
			10	HMP-2B10-DC
			13	HMP-2B13-DC
			16	HMP-2B16-DC
			20	HMP-2B20-DC
			25	HMP-2B25-DC
			32	HMP-2B32-DC
			40	HMP-2B40-DC
			50	HMP-2B50-DC
			63	HMP-2B63-DC
	2 	C	1	HMP-2C1-DC
			2	HMP-2C2-DC
			3	HMP-2C3-DC
			4	HMP-2C4-DC
			5	HMP-2C5-DC
			6	HMP-2C6-DC
			8	HMP-2C8-DC
			10	HMP-2C10-DC
			13	HMP-2C13-DC
			16	HMP-2C16-DC
			20	HMP-2C20-DC
			25	HMP-2C25-DC
			32	HMP-2C32-DC
			40	HMP-2C40-DC
			50	HMP-2C50-DC
			63	HMP-2C63-DC
	2 	D	1	HMP-2D1-DC
			2	HMP-2D2-DC
			3	HMP-2D3-DC
			4	HMP-2D4-DC
			5	HMP-2D5-DC
			6	HMP-2D6-DC
			8	HMP-2D8-DC
			10	HMP-2D10-DC
			13	HMP-2D13-DC
			16	HMP-2D16-DC
			20	HMP-2D20-DC
			25	HMP-2D25-DC
			32	HMP-2D32-DC
			40	HMP-2D40-DC
			50	HMP-2D50-DC
			63	HMP-2D63-DC

Accessories of HMP-DC Series Miniature Circuit Breaker for Motors

Appearance	Accessory type	Order Number
 HMP-OF-DC  HMP-OF+SD-DC	Auxiliary module	HMP-OF-DC
	Alarm module	HMP-SD-DC
	Auxiliary module + alarm module (auxiliary alarm)	HMP-OF+SD-DC
	Shunt module: AC110~415V 50/60Hz; DC110~130V	HMP-MXAD1-DC
	Shunt module: AC/DC48V 50/60V	HMP-MXAD2-DC
	Shunt module: AC/DC12~24V 50/60V	HMP-MXAD3-DC
	Shunt module + Auxiliary module: AC110~415V 50/60Hz; DC110~130V	HMP-MXAD1+OF-DC
	Shunt module + Auxiliary module: AC/DC48V 50/60Hz	HMP-MXAD2+OF-DC
	Shunt module + Auxiliary module: AC/DC12~24V 50/60Hz	HMP-MXAD3+OF-DC
	Undervoltage protection module	HMP-MN-DC
	Overvoltage protection module	HMP-MV-DC
	Time delay undervoltage module	HMP-MNS-DC

Honeywell reserves the right to make technical revision or changes to this manual.

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This product is distributed by GTS Electric (Shanghai) Co., Ltd.

GTS_CA_MCP_EN | V01 | Apr/2023

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