HONGFA GROUP

宏发股份
HONGFA GROUP

Motor Control and Protection Components

UEC1-09...95 AC Contactors

INTRODUCTION

Hongfa, (Shanghai Stock Exchange: 600885), founded in 1984, has been adhering to the enterprise spirit of “persevere for progress, strive for excellence”, and has built a complete industry system with complete categories and supporting facilities. At present, Hongfa has more than 30 subsidiaries and has established three districts of R & D and production bases. Its products cover various categories, such as medium and low voltage products, relays, high and low voltage switchgear, capacitors, precision parts and automation equipment.

Xiamen Hongfa Electrical Safety & Controls Co., Ltd. is a wholly-owned subsidiary of Hongfa, which specializes in R & D, design and manufacture medium and low voltage products. Its distribution apparatus, terminal apparatus, control apparatus and other products are widely used in real estate, electric power, new energy, industry, HVAC, transportation, information and other fields.

In the United States, Europe, Southeast Asia and other regions, Hongfa has established localized marketing and service networks with global market operation and technical service. Relying on professional and rigorous technical support, fast response and all-round service, safe and reliable product quality and high cost performance, Hongfa has reached business cooperation relationship with many global top 500 enterprises and other well-known enterprises, such as Enel, GE, Honeywell, Carrier, Trane, Johnson Controls, Danfoss, State Grid, China Southern Power Grid, CRRC, China Mobile, China Unicom, etc.

Sunban Industrial Park

Donglin Industrial Park

Haicang Industrial Park

Zhongjiang Industrial Park

Zhangzhou Industrial Park

Zhoushan Industrial Park

Xi'an Factory

In terms of technology R & D and manufacturing, taking the national enterprise technology center as the platform, Hongfa has set up postdoctoral research workstation, academician and expert workstation. Now it has developed into a leading scientific research and production base in the industry. From product development, mold manufacturing, parts manufacturing, automated product assembly and online testing, Hongfa has successfully built an integrated whole industry chain of medium and low voltage products. In terms of product testing, Hongfa testing center has passed the certification of VDE, UL, CNAS and other international organizations, and has complete testing and analysis equipment for low-voltage products, such as 50kA ultimate short circuit test, 8kA electrical life test, 80kA characteristic test, mechanical simulation and testing system, electro-magnetic simulation and testing system.

Hongfa always adheres to the policy of "focused on the market, winning through quality", and has a completed quality assurance system. Its products have passed UL / CUL, VDE, CQC, CCC and other international safety certification. In the process of quality management, Hongfa actively implements the advanced quality concept, constantly improves the quality management system, continuously promotes the product process quality control and testing, strengthens the supply chain management, and is committed to providing each customer with high-quality products and creating greater value.

Advanced technology and strict quality control have created Hongfa's brand strength. Hongfa is willing to work hand in hand with global customers to share the convenience and well-being brought by science and technology.

CONTENT

UEC1-09…95 AC Contactors

Content List

UEC1series

UEC1-09…95 AC Contactors

Production overview

Scope of Application

The UEC1-09…95 AC contactors range up to a rated current of 95A under the utilization category AC-3 and can be driven by both 50Hz and 60Hz. They can be combined with a thermal overload protection.

Product Features

- Designed under several patents.
- Optimized structure to be compatible with other industrial control contactors.
- Material with excellent ability to withstand abnormal heat conditions.
- Optimized arc extinguishing system for extended product life.
- Diversity of auxiliary blocks, which can be combined freely.
- Reliable performance even in harsh environment.

Design Features

- Magnetic circuit of high efficiency and an effective arc extinguishing structure minimize the contact wear and give strong performance even under heavy load conditions.
- Critical insulation parts use thermosetting material, thus effectively avoiding short circuit in overload situations.
- Each contactor of the UEC1 series can hold up to 4 built-in auxiliary contacts, with any NO/NC combination possible.
- Consistent design approach, expressing the Hongfa brand.
- Modular accessories, such as auxiliary contacts and thermal protection relays, can be mounted to individual needs.
- All UEC1 models can be mounted by screw or on 35mm DIN rail; models from 40A can also be mounted on 75mm DIN rail.

Typical Applications

Machinery, manufacturing control, elevator, metallurgy, chemical industry, power management, air conditioning compressor, water pump, conveyor belt, lighting control, heater, and electric vehicles.

Approval Certificate

	CCC	GB/T 14048.4，GB/T 14048.5
	CB	IEC 60947-4-1，IEC 60947-5-1
	CE	EN 60947-4-1，EN 60947-5-1
	UKCA	BS EN IEC 60947-4-1，BS EN 60947-5-1
	VDE	EN 60947-4-1（VDE 0660 Teil 102） EN 60947-5-1（VDE 0660 Teil 200）
	UL (cULus LISTED)	UL 60947-4-1，UL 60947-5-1 CSA C22.2 No. 60947-4-1, CSA C22.2 No. 60947-5-1

Product Technical Characteristics

Ordering Information

UEC	1	-	25	D	11	M7

Contactor series

Design series number

Rated operational current at rated operational voltage 400V under AC-3 category

09: 9A	**25:** 25A	**40:** 40A	**80:** 80A
12: 12A	**32:** 32A	**50:** 50A	**95:** 95A
18: 18A	**38:** 38A	**65:** 65A	

Product structure

D: D type

DS: DS type, Auxiliary contacts are used in low capacity load, heavy dust and other harsh environment.

Number of built-in auxiliary NO contacts/NC contacts

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

a) 10 or 01 can be customized for the contactor 9...38A.

b) Only “11”,”20”, or “02” can be available for built-in auxiliary contacts provided by DS type and low consumption.

Coil control voltage

1) AC supply - 50/60Hz (9A…95A)

Voltage (V)	24	36	42	48	110	115	127	220	230	240	380	400	415
Code	**B7**	**CC7**	**D7**	**E7**	**F7**	**FE7**	**FC7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**

2) DC supply (9A…38A)

Voltage (V)	12	24	36	48	60	72	110	125	220	250
Code	**JD**	**BD**	**CD**	**ED**	**ND**	**SD**	**FD**	**GD**	**MD**	**UD**

3) DC supply - low consumption (9A…38A)

Voltage (V)	**12**	**24**	**48**	**110**	**220**	**250**
Code	**JL**	**BL**	**EL**	**FL**	**ML**	**UL**

4) AC/DC supply - 50/60Hz DC (40A…95A)

Voltage (V)	24-60	100-250
Code	**BNE**	**KUE**

* Other coil versions on request

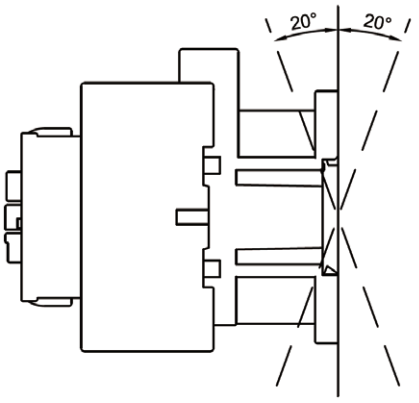
Special product code

No code (Blank): Standard type

-098:Dustproof contator(the DS type already includes a dustproof configuration, no need to select -098 code)

Product Technical Characteristics

Technical Data

Parameters \ Model			UEC1-09…18	UEC1-25…38	UEC1-40…65	UEC1-80…95
Operating environment						
Rated insulation voltage U_i		**V**	690			
Rated impulse withstand voltage U_{imp}		**kV**	6			8
Conforming to standards			GB/T 14048.4, GB/T 14048.5, IEC 60947-4-1, IEC 60947-5-1, EN 60947-4-1,EN 60947-5-1, BS EN 60947-4-1， BS EN 60947-5-1, UL 60947-4-1, UL 60947-5-1, CSA C22.2 No. 60947-4-1, CSA C22.2 No. 60947-5-1			
Certifications			CCC，CB，CE，UKCA，VDE，UL (cULus LISTED)			
Degree of protection (front only)			Protection against direct finger contact: IP20			
Ambient air temperature	**Storage**	**°C**	-60…+80			
	Operation	**°C**	-40…+60（+60…+70，for operation at 1.0Us～1.1Us）			
Max. operating altitude（No derating）		**m**	3000			
Pollution degree			3			
Mounting category			Ⅲ			
Mounting type			Screw 35mm DIN rail		Screw 35mm/75mm DIN rail	
Flame resistance			Current-carrying part: 850°C			
Operating position			Vertical mounting (±20°) 			

Product Technical Characteristics

Technical Data

Parameters \ Model					UEC1-09	UEC1-12	UEC1-18	
								
Power circuit, 3-pole contactors								
IEC	AC-3	Rated operational current I_e	400V/≤60℃	A	9	12	18	
		Rated operational power	220V/230V	kW	2.2	3	4	
			380V/400V	kW	4	5.5	7.5	
			660V/690V	kW	5.5	7.5	10	
	AC-1	Rated operational current I_e (≤690V)	≤60℃	A	25	25	32	
			≤70℃	A	17	17	22	
	Conventional thermal current I_{th}			A	25	25	32	
UL CSA	1-phase motor rating		110–120 V	hp	1	1	1	
			200–208 V	hp	1	2	2	
			220–240 V	hp	1	2	3	
	3-phase motor rating		200–208 V	hp	2	3	5	
			220–240 V	hp	3	3	5	
			440–480 V	hp	5	7-1/2	10	
			550–600 V	hp	7-1/2	10	15	
	AC general use rating AC resistance rating		600 V	A	25	25	32	
Built-in auxiliary contacts standard type								
Max. electrical operating frequency AC-3/400V				cycles/h	1000	1000	1000	
Mechanical durability				10^6 cycles	10			
Max. mechanical operating frequency (1)				cycles/h	3600			

Note: (1) The max. mechanical operating frequency of AC/DC coil is 1800 cycles per hour. For 24-60V 50/60Hz supply coil voltage, the total length of wire must be shorter than 6 meters.

Product Technical Characteristics

Technical Data

								
	UEC1-25	**UEC1-32**	**UEC1-38**	**UEC1-40**	**UEC1-50**	**UEC1-65**	**UEC1-80**	**UEC1-95**
	25	32	38	40	50	65	80	95
	5.5	7.5	9	11	15	18.5	22	25
	11	15	18.5	18.5	22	30	37	45
	15	18.5	18.5	30	33	37	45	45
	40	50	50	60	80	80	125	125
	28	35	35	42	56	56	81	81
	40	50	50	60	80	80	125	125
	2	2	3	3	3	5	7-1/2	10
	3	5	5	5	7-1/2	10	15	15
	3	5	5	7-1/2	10	10	15	20
	7-1/2	10	10	10	15	20	25	30
	7-1/2	10	10	15	15	20	30	30
	15	20	25	30	40	50	60	75
	20	25	25	40	50	50	75	75
	40	50	50	60	70	80	105	115
	1NO+1NC							
	750	750	600	600	600	600	600	600
	10			5			5	
	3600			3600			3600	

Product Technical Characteristics

Technical Data

Parameters \ Model			UEC1-09D…18D	UEC1-25D…38D	UEC1-40D…65D	UEC1-80D…95D
Coil control circuit, AC supply						
Rated control voltage U_s 50Hz/60Hz		V	24…415			
Control voltage range (+60℃)	**Operating voltage**		0.8U_s...1.1U_s 50Hz 0.85U_s...1.1U_s 60Hz			
	Drop-out voltage		0.2U_s...0.75U_s			
Max. power consumption at 25°C (for reference)	**Inrush**	VA	75	75	170	200
	Sealed	VA	9.5	9.5	20	21
Operating time Between coil energization and	**main NO contact closing**	ms	12…22	12…22	12…26	12…26
	auxiliary NO closing	ms	15…26	15…26	15…26	15…26
	auxiliary NC opening	ms	4…19	4…19	4…19	4…19
Operating time Between coil de-energization and	**main NO contact opening**	ms	4…19	4…19	4…19	6…20
	auxiliary NO opening	ms	4…19	4…19	4…19	4…19
	auxiliary NC closing	ms	12…32	12…32	12…32	12…32
Coil control circuit, DC supply(1)						
Rated control voltage U_s		V	12…250		—	—
Control voltage range（+60℃）	**Operating voltage**		0.8U_s...1.1U_s		—	—
	Drop-out voltage		0.1U_s...0.6U_s		—	—
Max. power consumption at 25°C (for reference)	**Inrush**	W	7		—	—
	Sealed	W	7		—	—
Operating time Between coil energization and	**main NO contact closing**	ms	52…72		—	—
	auxiliary NO closing	ms	52…72		—	—
	auxiliary NC opening	ms	44…68		—	—
Operating time Between coil de-energization and	**main NO contact opening**	ms	10…20		—	—
	auxiliary NO opening	ms	10…20		—	—
	auxiliary NC closing	ms	10…30		—	—
Coil control circuit, DC supply low consumption(1)						
Rated control voltage U_s		V	12…250		-	-
Control voltage range (+60°C)	**Operating voltage**		0.8U_s...1.25U_s		-	—
	Drop-out voltage		0.1U_s...0.3U_s		-	—
Max. power consumption at 25°C (for reference)	**Inrush**	W	3.5		-	—
	Sealed	W	3.5		-	—
Operating time Between coil energization and	**main NO contact closing**	ms	52…72		-	—
	auxiliary NO closing	ms	52…72		-	-
	auxiliary NC opening	ms	44…68		-	-
Operating time Between coil de-energization and	**main NO contact opening**	ms	10…20		-	-
	auxiliary NO opening	ms	10…20		-	-
	auxiliary NC closing	ms	10…30		-	-

Product Technical Characteristics

Technical Data

Parameters		Model	UEC1-09D…18D	UEC1-25D…38D	UEC1-40D…65D	UEC1-80D…95D
Coil control circuit, AC supply or DC supply						
Rated control voltage U_s		V AC/DC	—	—	24-60V AC/DC 100-250V AC/DC	
Control voltage range（+60℃）	Operating voltage		—	—	$0.85U_{smin}$…$1.1U_{smax}$	
	Drop-out voltage		—	—	$0.1U_{smax}$…$0.75U_{smin}$	
Max. power consumption at 25°C (for reference)	Inrush	W	—	—	150V·A/150W	
	Sealed	W	—	—	5V·A/5W	
Operating time Between coil energization and	main NO contact	ms	—	—	40…60	
	auxiliary NO closing	ms	—	—	40…60	
	auxiliary NC opening	ms	—	—	32…55	
Operating time Between coil de-energization and	main NO contact	ms	—	—	18…60	
	auxiliary NO opening	ms	—	—	18…60	
	auxiliary NC closing	ms	—	—	22…65	

Built-in auxiliary contacts								
Max. rated operational voltage U_e		V	690					
Max. insulation voltage U_i		V	690					
Min. switching capacity	D Type		24V, 0.1A					
	DS Type		17V, 5mA					
A600 AC-15	Conventional enclosed thermal current	A	10					
	Rated operational voltage U_e	V	120	240	380	480	500	600
	Rated operational current	A	6	3	1.9	1.5	1.4	1.2
	Make apparent power VA rating	VA	7200					
	Break apparent power VA rating	VA	720					
Q600 DC-13	Conventional enclosed thermal current	A	2.5					
	Rated operational voltage U_e	V	125	250	—	400	500	600
	Rated operational current	A	0.55	0.27	—	0.15	0.13	0.1
	Make apparent power VA rating	VA	69					
	Break apparent power VA rating	VA	69					

Note: (1) The control circuit with DC coil can't be directly connected in parallel with freewheeling diodes, which slows the product release, thereby affecting the electrical life of the product under specific working conditions. If a freewheeling diode is to be used, it is necessary to contact the manufacturer for evaluation.

Product Technical Characteristics

Wiring Connection Capability

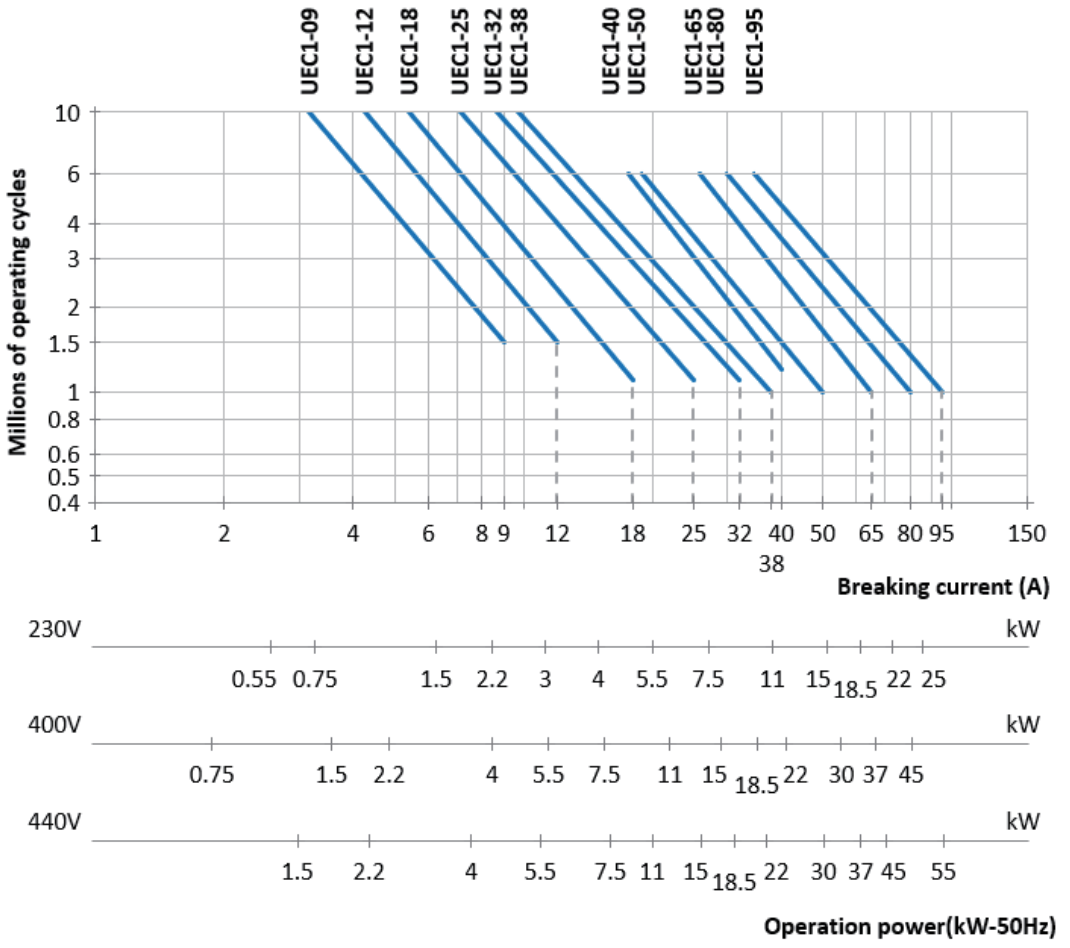
Parameters \ Model			UEC1-09…18	UEC1-25…38	UEC1-40…65	UEC1-80…95
Power circuit connections						
Solid cable without cable end	1 conductor	mm²	1…6	1.5…10	2.5…35	4…50
	2 conductors	mm²	1…6	2.5…10	2.5…25	4…25
Flexible cable without cable end	1 conductor	mm²	1…6	2.5…10	2.5…35	4…50
	2 conductors	mm²	1…6	2.5…10	2.5…16	4…25
Flexible cable with cable end	1 conductor	mm²	1…6	1.5…10	2.5…25	4…50
	2 conductors	mm²	1…4	1.5…6	2.5…16	4…16
Lugs	L ≤	mm	9.6	12	—	—
	I >	mm	3.7	4.2	—	—
Connection capacity acc. to UL/CSA	1 conductor	AWG	18…10	16…8	14…2	12…1
	2 conductors	AWG	18…10	14…8	14…6	12…4
Screwdriver	Phillips screwdriver		N°2	N°2	—	—
	Φ Slotted screwdriver		Φ 6	Φ 6	—	—
Hexagonal key			—	—	4	4
Tightening torque		Nm	1.5	2.5	5	9
		lb.in	13	22	45	80
Coil circuit connections and Built-in auxiliary circuit connections						
Solid cable without cable end	1 conductor	mm²	1…4			
	2 conductors	mm²	1…4			
Flexible cable without cable end	1 conductor	mm²	1…4			
	2 conductors	mm²	1…4			
Flexible cable with cable end	1 conductor	mm²	1…4			
	2 conductors	mm²	1…2.5			
Lugs	L ≤	mm	8.1			
	I >	mm	3.7			
Connection capacity acc. to UL/CSA	1 conductor	AWG	18…12			
	2 conductors	AWG	18…12			
Screwdriver	Phillips screwdriver		N°2			
	Φ Slotted screwdriver		Φ 6			
Tightening torque		Nm	1.2			
		lb.in	11			

Product Technical Characteristics

Electrical Durability

Selection table according to electrical durability

The breaking current (I_c) of AC-3 utilization catalogue is equal to the rated operational current of motor. The characte -ristic curve in the figure below shows the durability of the main contact when the contactor is used for making and br- eaking three-phase (AC-3 U_e≤440V) inductive load.

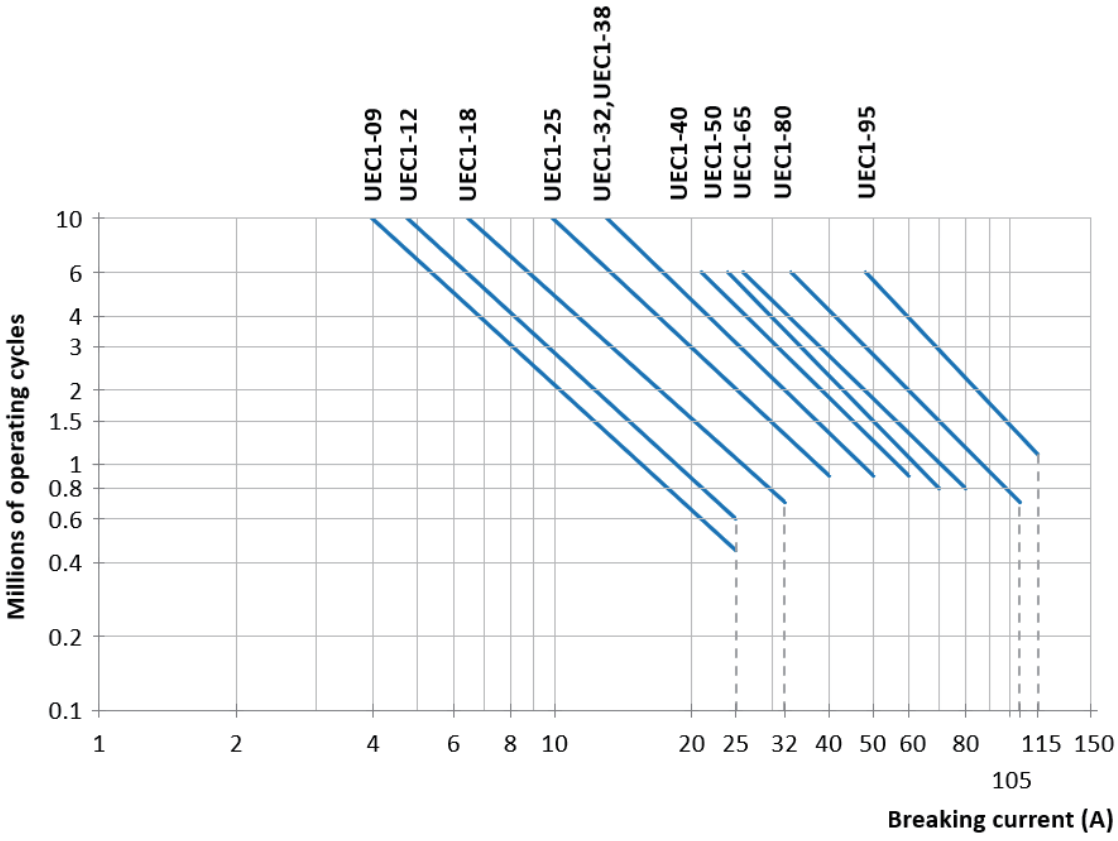


Example:
Asynchronous motor: P = 5.5kW, U_e = 400 V, I_e = 11 A, I_c = I_e = 11 A
Or asynchronous motor: P =5.5kW, U_e = 415 V, I_e = 11A, I_c = I_e = 11A
Need electrical durability of 2 million cycles.
Above selective curve shows that the contactor part number is UEC1-18.

Electrical Durability

Selection table according to electrical durability

The breaking current (Ic) of AC-1 utilization catalogue is equal to the rated current of load. The characteristic curve in the figure below shows the durability of the main contact when the contactor is used for making and breaking three-phase (AC-1 Ue≤440V) resistive load.



Example:
U_e =220 V, I_e = 50 A, I_c = I_e = 50 A
Need electrical durability of 1.5 million cycles.
Above selective curve shows that the contactor part number is UEC1-50.

Accessories

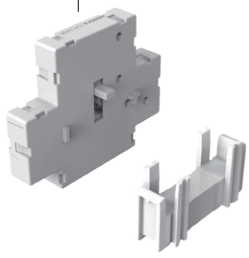
CA1R top mounting
Auxiliary contact block
(4 poles)

CA1U suppressor module

Safety cover

CA1S side mounting
Auxiliary contact block

CA1R top mounting
Auxiliary contact block
(2 poles)



CA1M mechanical
interlock block

Product	Model	Scope of application
Safety cover [1]	—	UEC1-09…95
Top mounting Auxiliary Contact Block [2] （2P/4P）	CA1R	UEC1-09…95 AC Coil UEC1-09…38 DC Coil[3] UEC1-40…95 AC/DC Coil
Side mounting Auxiliary Contact Block	CA1S	UEC1-09…95 AC Coil UEC1-40…95 AC/DC Coil
Coil Suppressor Module	CA1U	UEC1-09…95 AC Coil UEC1-09…38 DC Coil
Mechanical Interlock Block	CA1M	UEC1-09…95

Note: [1] Safety cover is not sold separately, please contact the manufacturer for details.
[2] The max. total number of add-on NO and NC auxiliary contact is 4 besides the build-in auxiliary contact; if more add-on auxiliary contacts are required, please contact us for evaluation.
[3] For low consumption, the max. towal number of add-on NO and Ncauxiliary contact is 2 besides the build-in auxiliary contact.

Accessories

Ordering Information

（1）Auxiliary Contact Block

CA	1	R	22

Contactor accessory

Design series number

Mounting type

R: Top mounting

S: Side mounting

Number of auxiliary NO contacts/NC contacts

1) CA1R (2P) and CA1S:

11: 1NO+1NC **20:** 2NO **02:** 2NC

2) CA1R(4P):

22: 2NO+2NC **40:** 4NO **31:** 3NO+1NC **13:** 1NO+3NC **04:** 4NC

（2）Mechanical Interlock Block

CA	1	M	38

Contactor accessory

Design series number

Module type

M: Mechanical interlock without integral electrical interlocking

Suitable for contactor current range

38: Suitable for 9A…38A

65: Suitable for 40A…95A

Accessories

Ordering Information

（3）Coil Suppressor Module

CA	1	U	RC	2	G	AC

Contactor accessory

Design series number

Module type

U: Suppressor module

Protection type

RC: RC circuits (Resistor-Capacitor)
V: Varistors (Peak limiting)

Installation type

2: Fix with screw

Suitable for coil voltage range

E: 24-48V **G:** 50-127V **U:** 110-250V **N:** 380-440V

Coil voltage type

AC: AC supply (Just for RC circuits)
AD: AC or DC supply (Just for Varistors)

Accessories

Technical Data for Auxiliary Contact Block

Parameters \ Model			CA1R, CA1S					
Standards			GB/T 14048.5，IEC 60947-5-1，BS EN 60947-5-1，EN 60947-5-1（VDE 0660 Teil 200），UL 60947-5-1（CSA C22.2 No. 60947-5-1）					
Certifications			CCC, CB, CE, UKCA, VDE, UL (cULus LISTED)					
Degree of protection			IP20					
Ambient air temperature	Storage	°C	-60…+80					
	Operation	°C	-40…+70					
Max. operating altitude（No derating）		m	3000					
Solid cable without cable end	1 conductor	mm^2	1…4					
	2 conductors	mm^2	1…4					
Flexible cable without cable end	1 conductor	mm^2	1…4					
	2 conductors	mm^2	1…4					
Flexible cable with cable end	1 conductor	mm^2	1…4					
	2 conductors	mm^2	1…2.5					
Lugs	L ≤	mm	8.1					
	l >	mm	3.7					
Connection capacity acc. to UL/CSA	1 conductor	AWG	18…12					
	2 conductors	AWG	18…12					
Screwdriver	Phillips screwdriver		N°2					
	Φ Slotted screwdriver		Φ6					
Tightening torque		Nm	1.2					
		lb.in	11					
Max. rated operating voltage U_e		V	690					
Max. insulation voltage U_i		V	690					
Min. switching capacity			24V, 0.1A					
A600 AC-15	Conventional enclosed thermal current I_{the}	A	10					
	Rated operational voltage U_e	V	120	240	380	480	500	600
	Rated operational current	A	6	3	1.9	1.5	1.4	1.2
	Make apparent power VA rating	VA	7200					
	Break apparent power VA rating	VA	720					
Q600 DC-13	Conventional enclosed thermal current I_{the}	A	2.5					
	Rated operational voltage U_e	V	125	250	—	400	500	600
	Rated operational current	A	0.55	0.27	—	0.15	0.13	0.1
	Make apparent power VA rating	VA	69					
	Break apparent power VA rating	VA	69					
For use with contactor[1]			UEC1-09…95					

Note: [1]For use with contactor, please refer to the details in Reference Selection Table.

Accessories

Technical Data for Coil Suppressor Module

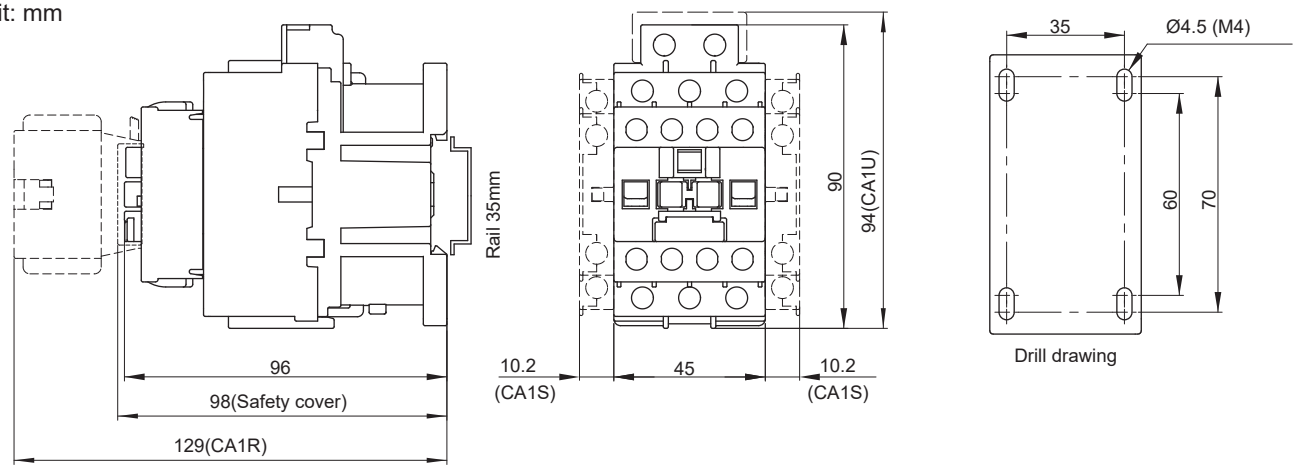
Parameters			Model	Varistors	RC circuits
				CA1UV2…	CA1URC2…
Ambient air temperature	Storage	℃		-60...+80	
	Operation	℃		-40...+70	
Max. operating altitude		m		3000	
Suitable for coil voltage range	50/60Hz	V		24...440V	24...440V
	DC	V		24...440V	—
Increase in contactor operating time				delay 1.1 to 1.5 times	delay 1.2 to 2 times
For use with contactor (1)				UEC1-09...95	

Note: (1) AC/DC coil product has built-in suppressor module, no need to install external suppressor module.

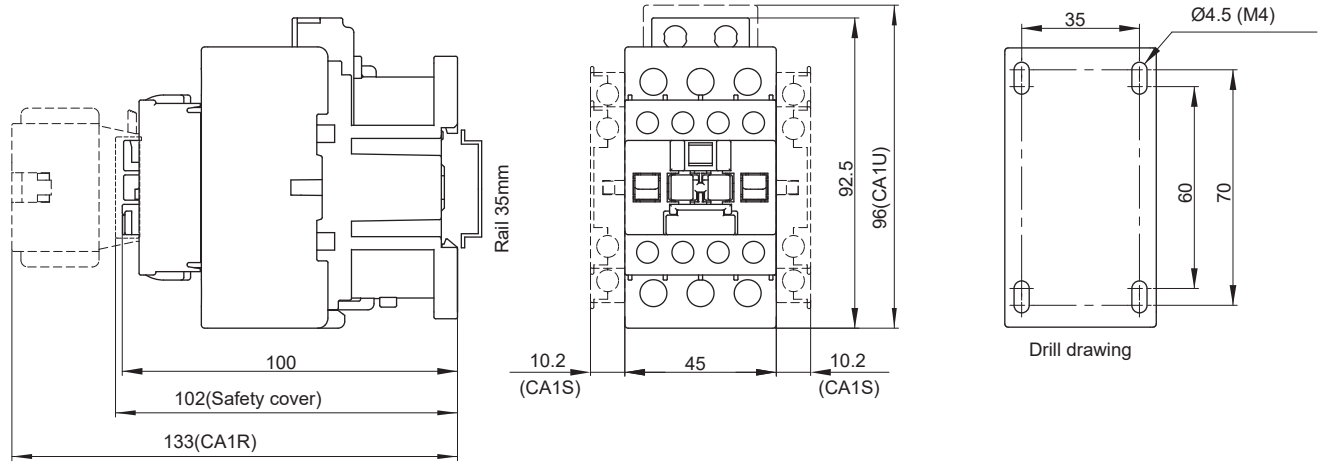
Outline and Installation dimensions

AC contactor

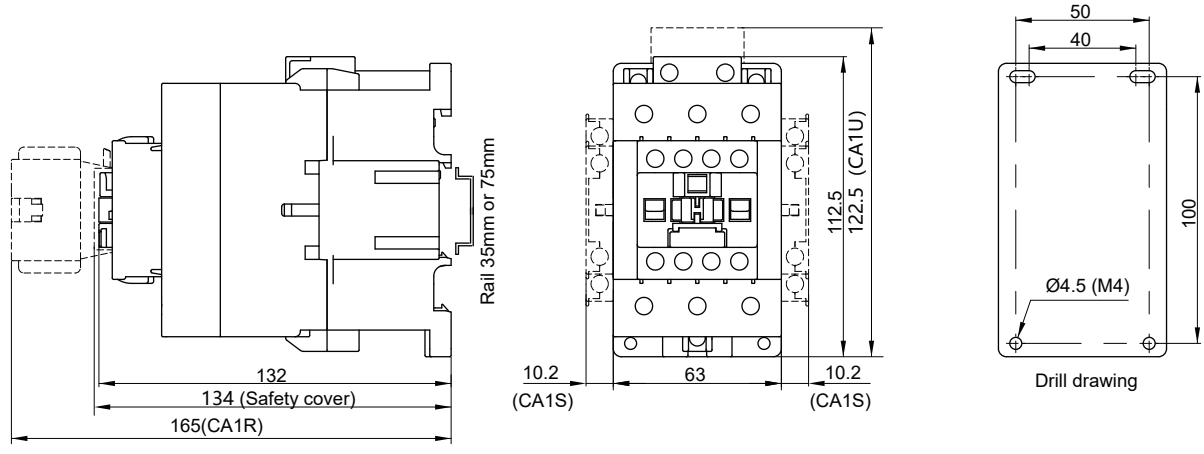
Unit: mm



UEC1-09，UEC1-12，UEC1-18 (AC Coil)



UEC1-25，UEC1-32，UEC1-38 (AC Coil)



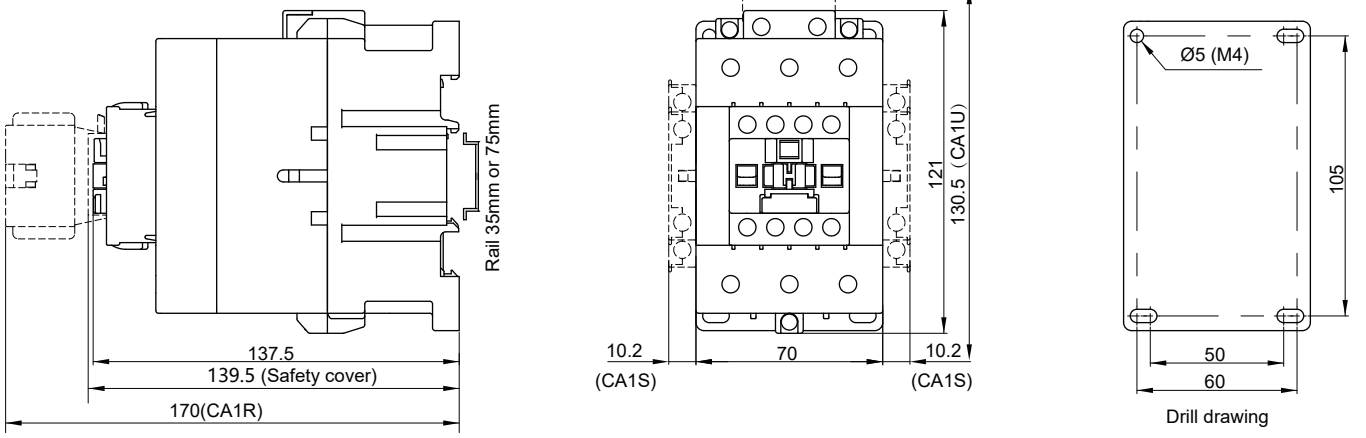
UEC1-40，UEC1-50，UEC1-65 (AC Coil and AC/DC Coil)

Note: The unit is mm. The tolerance for mounting holes: ± 0.5; for other external dimensions: ± 1.5, unless otherwise specified.

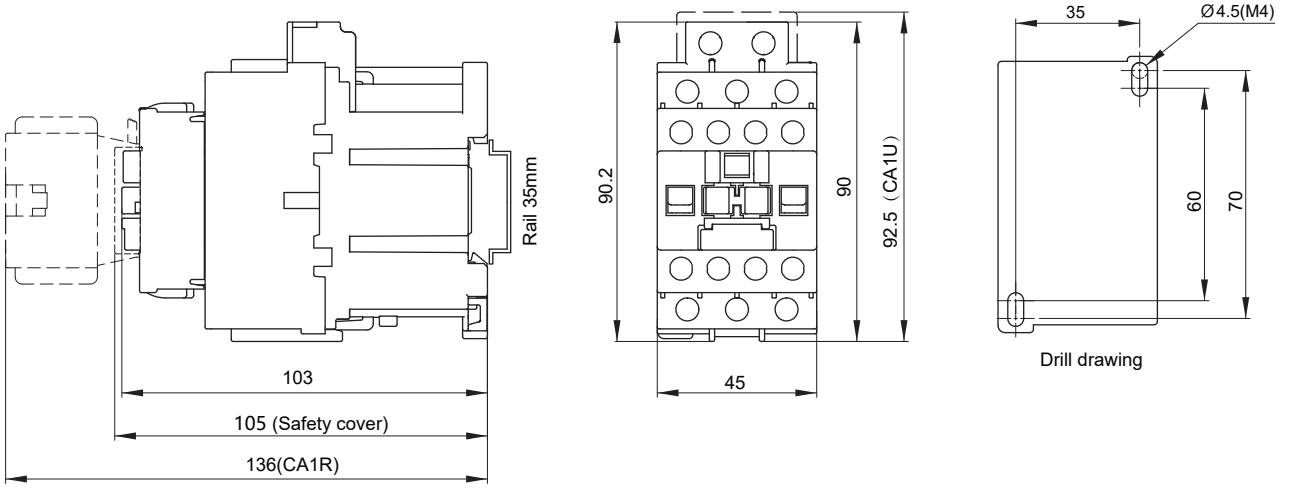
Outline and Installation dimensions

AC contactor

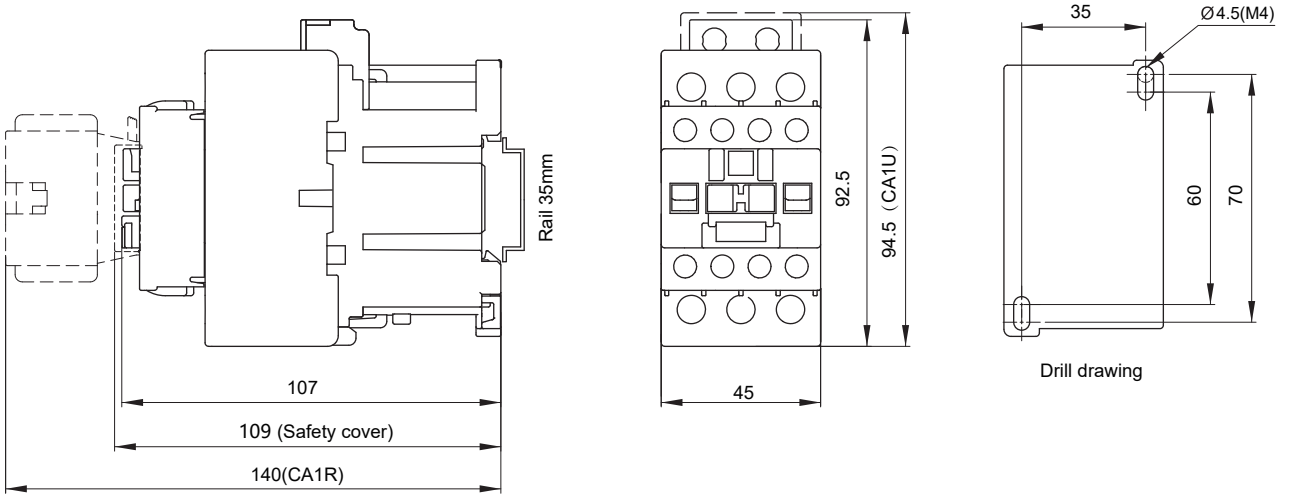
Unit: mm



UEC1-80, UEC1-95 (AC Coil and AC/DC Coil)



UEC1-09, UEC1-12, UEC1-18 (DC Coil)



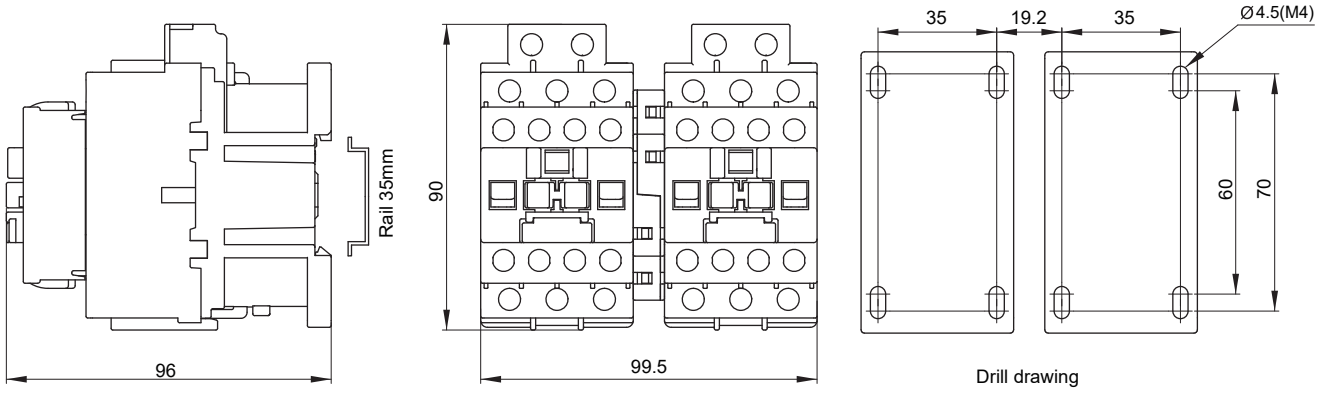
UEC1-25, UEC1-32, UEC1-38 (DC Coil)

Note: The unit is mm. The tolerance for mounting holes: ± 0.5; for other external dimensions: ± 1.5, unless otherwise specified.

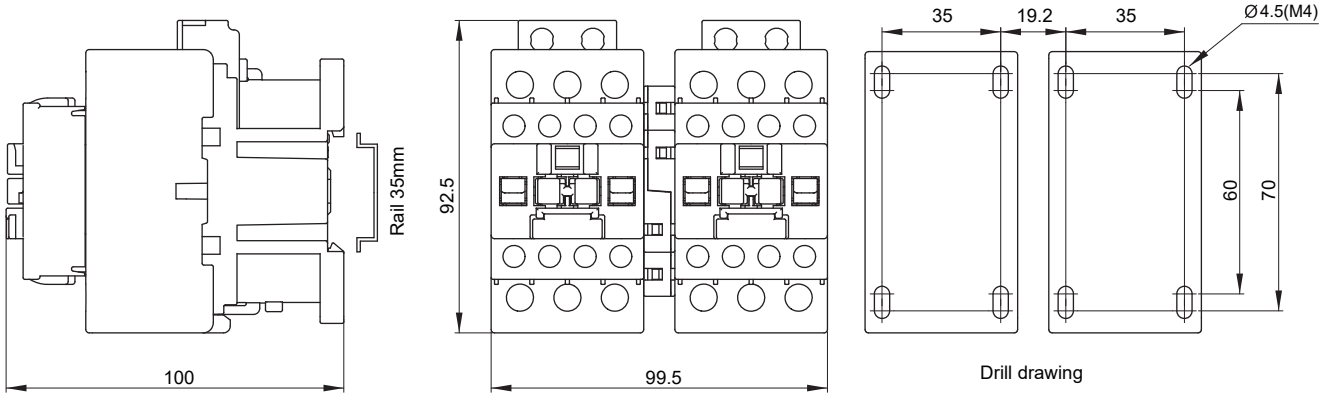
Outline and Installation dimensions

Interlock contactor

Unit: mm



UEC1-09，UEC1-12，UEC1-18 (AC Coil)



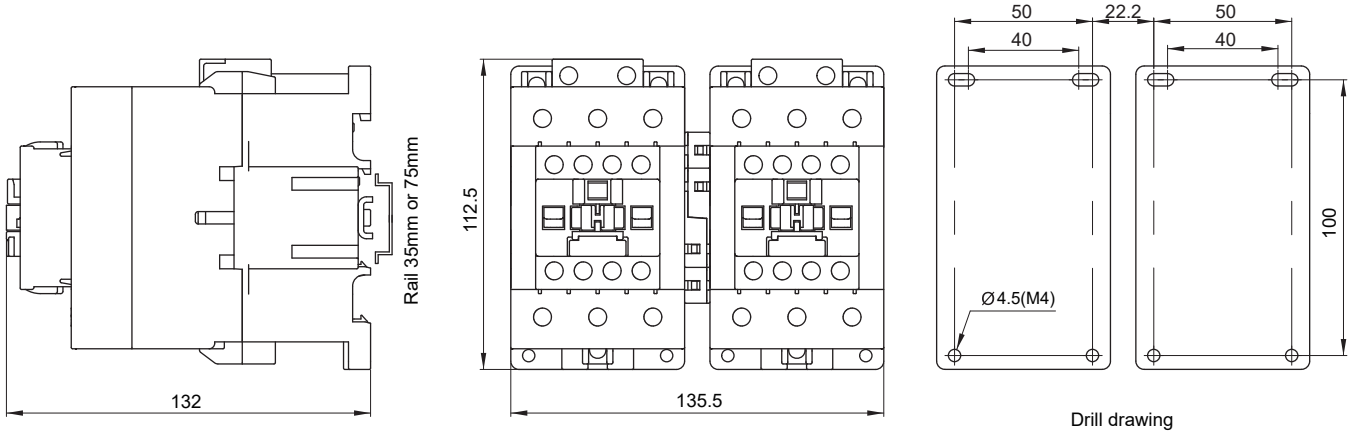
UEC1-25，UEC1-32，UEC1-38 (AC Coil)

Note: The unit is mm. The tolerance for mounting holes: ± 0.5; for other external dimensions: ± 1.5, unless otherwise specified.

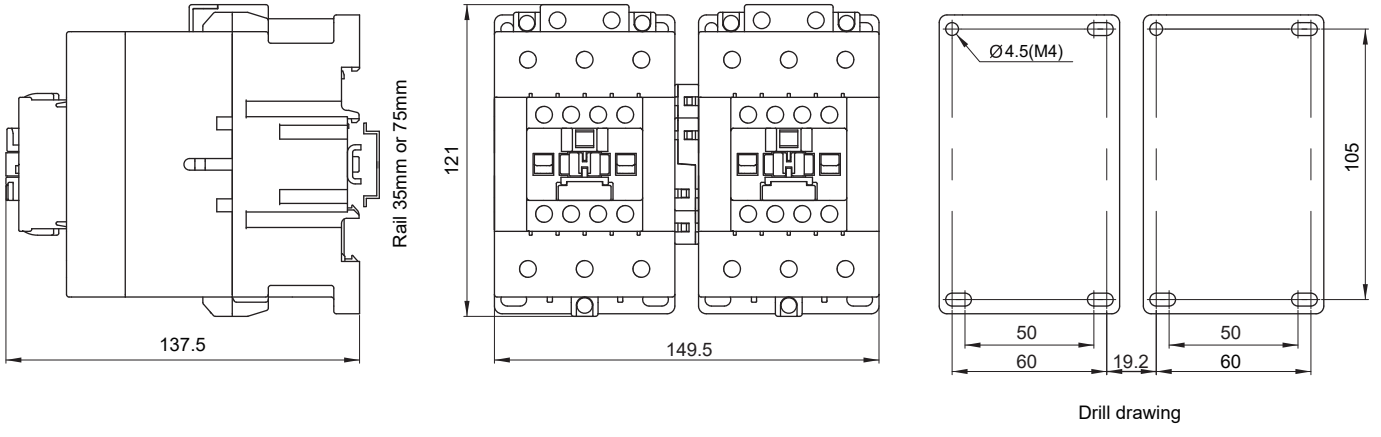
Outline and Installation dimensions

Interlock contactor

Unit: mm



UEC1-40，UEC1-50，UEC1-65 (AC Coil and AC/DC Coil)



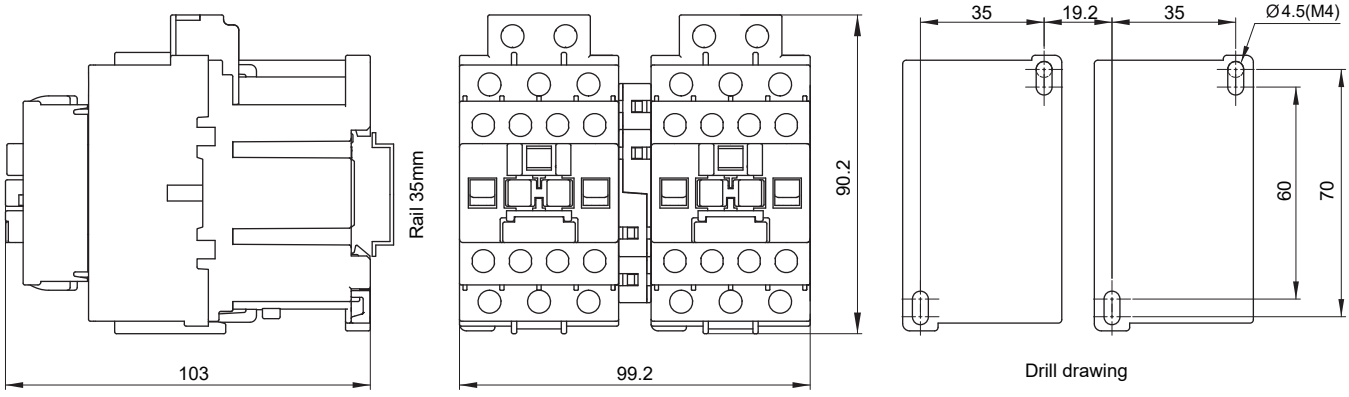
UEC1-80, UEC1-95 (AC Coil and AC/DC Coil)

Note: The unit is mm. The tolerance for mounting holes: ± 0.5; for other external dimensions: ± 1.5, unless otherwise specified.

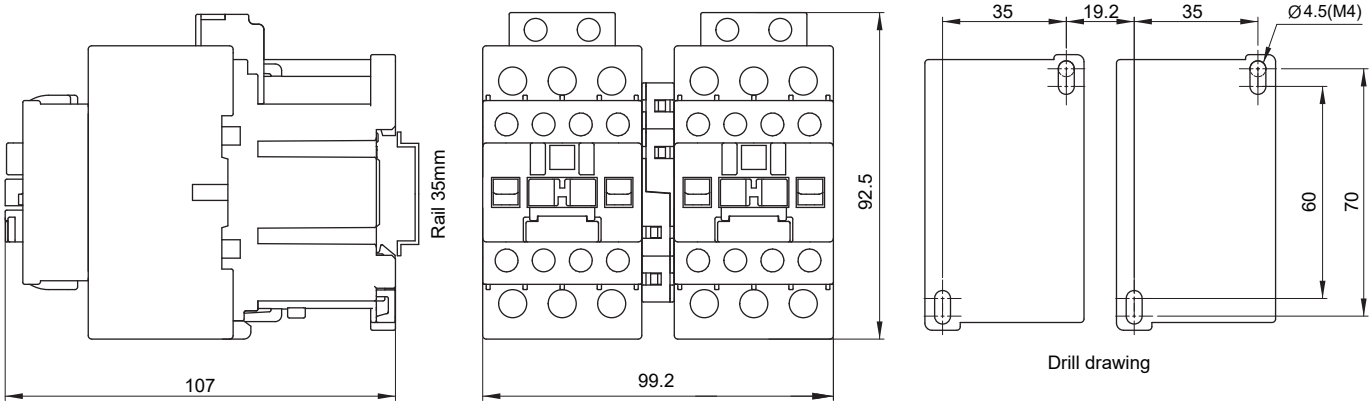
Outline and Installation dimensions

Interlock contactor

Unit: mm



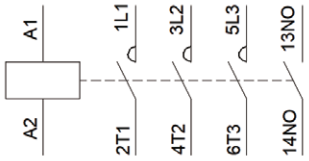
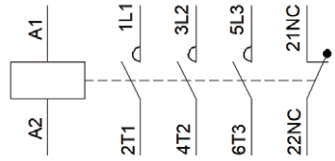
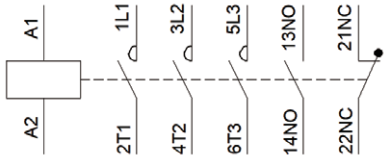
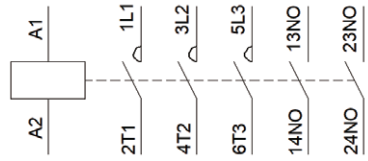
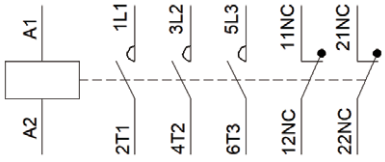
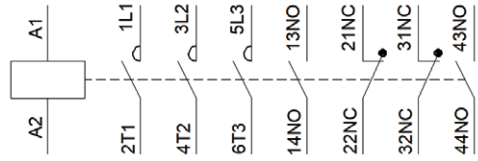
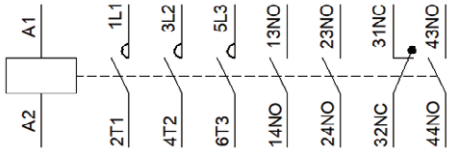
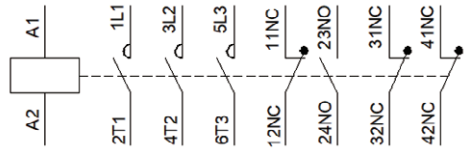
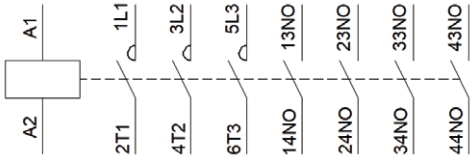
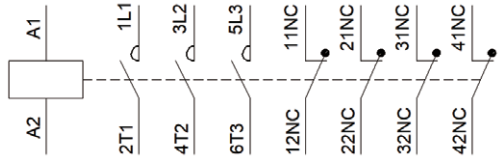
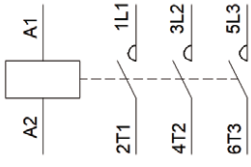
UEC1-09，UEC1-12，UEC1-18 (DC Coil)



UEC1-25，UEC1-32，UEC1-38 (DC Coil)

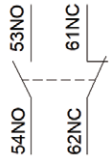
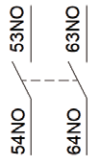
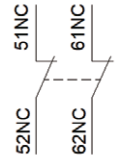
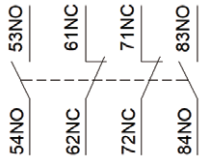
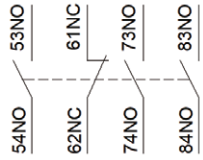
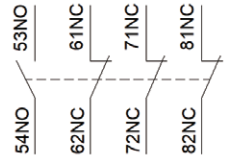
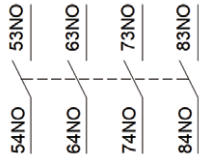
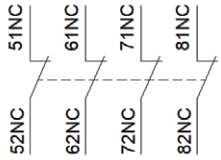
Note: The unit is mm. The tolerance for mounting holes: ± 0.5; for other external dimensions: ± 1.5, unless otherwise specified.

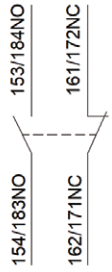
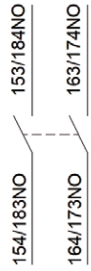
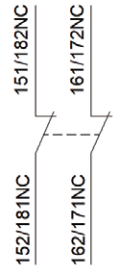
Circuit Diagram

AC Contactor	
3P+1NO	3P+1NC
	
3P+1NO1NC	3P+2NO
	
3P+2NC	3P+2NO2NC
	
3P+3NO1NC	3P+1NO3NC
	
3P+4NO	3P+4NC
	
3P	
	

Note: The DC coil product has positive and negative polarity (positive pole A1, negative pole A2). If the positive and negative poles are connected inversely, the product will not be able to operate.

Circuit Diagram

Top mounting CA1R		
1NO1NC	2NO	2NC
		
2NO2NC	3NO1NC	1NO3NC
		
4NO	4NC	
		

Side mounting CA1S		
1NO1NC	2NO	2NC
		

Reference Selection Table

AC Contactor

IEC			UL/CSA			Number of poles	Built-in auxiliary contacts (1)		Complete Type					Net weight (1 pc) (2)
Standard power ratings of 3-phase motors 50Hz/60Hz in category AC-3 (θ≤60°C)		Rated operational current	3-phase motor rating		General use rating					Coil control voltage				
220V 230V	380V 400V	400V	220 V 240 V	440 V 480 V	600 V				Type	50/60Hz	DC	low consum -ption	AC/DC	
kW	kW	A	hp	hp	A									kg
2.2	4	9	3	5	25	3	1	1	UEC1-09D11…	M7	BD	BL	—	0.42
							2	2	UEC1-09D22…	M7	BD	—	—	
3	5.5	12	3	7-1/2	25	3	1	1	UEC1-12D11…	M7	BD	BL	—	0.42
							2	2	UEC1-12D22…	M7	BD	—	—	
4	7.5	18	5	10	32	3	1	1	UEC1-18D11…	M7	BD	BL	—	0.42
							2	2	UEC1-18D22…	M7	BD	—	—	
5.5	11	25	7-1/2	15	40	3	1	1	UEC1-25D11…	M7	BD	BL	—	0.47
							2	2	UEC1-25D22…	M7	BD	—	—	
7.5	15	32	10	20	50	3	1	1	UEC1-32D11…	M7	BD	BL	—	0.47
							2	2	UEC1-32D22…	M7	BD	—	—	
9	18.5	38	10	25	50	3	1	1	UEC1-38D11…	M7	BD	BL	—	0.47
							2	2	UEC1-38C22…	M7	BD	—	—	
11	18.5	40	15	30	60	3	1	1	UEC1-40D11…	M7	—		KUE	1.00
							2	2	UEC1-40D22…	M7	—		KUE	
15	22	50	15	40	70	3	1	1	UEC1-50D11…	M7	—		KUE	1.00
							2	2	UEC1-50D22…	M7	—		KUE	
18.5	30	65	20	50	80	3	1	1	UEC1-65D11…	M7	—		KUE	1.00
							2	2	UEC1-65D22…	M7	—		KUE	
22	37	80	30	60	105	3	1	1	UEC1-80D11…	M7	—		KUE	1.40
							2	2	UEC1-80D22…	M7	—		KUE	
25	45	95	30	75	115	3	1	1	UEC1-95D11…	M7	—		KUE	1.40
							2	2	UEC1-95D22…	M7	—		KUE	

Note: (1) For other types of built-in auxiliary contacts, please refer to the details in page 2.

(2) The net weight in the table refers to the weight of the standard AC control contactor. The weight increases by 0.01kg with the inclusion of 2NO+2NC auxiliary contacts compared to 1NO+1NC. For DC control contactors UEC1-09…38, the weight increases by 0.15kg. The weight of AC/DC control contactors UEC1-65…95 is the same as that of AC control contactors.

Coil control voltage:

AC supply-50/60Hz (9A...170A)	Voltage (V)	24	36	42	48	110	115	127	220	230	240	380	400	415
	Code	B7	CC7	D7	E7	F7	FE7	FC7	M7	P7	U7	Q7	V7	N7
DC supply (9A...38A)	Voltage (V)	12	24	36	48	60	72	110	125	220	250	-	-	-
	Code	JD	BD	CD	ED	ND	SD	FD	GD	MD	UD	-	-	-
DC supply low consumption (9A...38A)	Voltage (V)	12	24	48	110	220	250	-	-	-	-	-	-	-
	Code	JL	BL	EL	FL	ML	UL	-	-	-	-	-	-	-
AC/DC supply -50/60Hz DC (40A...95A)	Voltage (V)	24...60		100...250		-								
	Code	BNE		KUE		-								

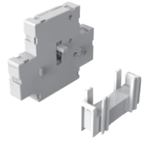
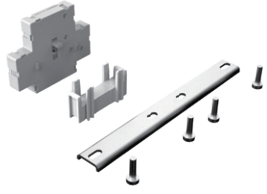
Reference Selection Table

Auxiliary Contact Block

Mounting type		Switching capacity	Auxiliary contacts[1]		For use with contactor	Reference[2]	Net weight (1 pc) kg
							
Top mounting		A600 Q600	0	2	UEC1-09…95 AC Coil UEC1-09…38 DC Coil[2] UEC1-40…95 AC or DC Coil	CA1R02	0.035
			1	1		CA1R11	
			2	0		CA1R20	
			0	4		CA1R04	0.066
			1	3		CA1R13	
			2	2		CA1R22	
			3	1		CA1R31	
			4	0		CA1R40	
Side mounting			1	1	UEC1-09…95 AC Coil UEC1-40…95 AC or DC Coil	CA1S11	0.040
			2	0		CA1S20	
			0	2		CA1S02	

Note: [1] All the above auxiliary contacts are all instantaneous auxiliary contacts.
[2] For low consumption, the max. total number of add-on NO and NC auxiliary contact is 2 besides the build-in auxiliary contact.

Mechanical Interlock Block

Mounting type		For use with contactor	Type	Net weight (1 pc) kg
Side mounting		UEC1-09…38	CA1M38	0.021
		UEC1-40…95	CA1M65	0.056

Reference Selection Table

Suppressor Module

Mounting type		Protection type	Coil voltage range	For use with contactor(1)	Reference	Net weight (1 pc) kg
Top mounting		Varistors	24-48V	UEC1-09…95 AC Coil UEC1-09…38 DC Coil(2)	CA1UV2EAD	0.016
			50-127V		CA1UV2GAD	
			110-250V		CA1UV2UAD	
			380-440V		CA1UV2NAD	
		RC circuits	24-48V	UEC1-09…95 AC Coil UEC1-09…38 DC Coil(2)	CA1URC2EAC	
			50-127V		CA1URC2GAC	
			110-250V		CA1URC2UAC	
			380-440V		CA1URC2NAC	

Note: (1) AC/DC coil product has built-in suppressor module, no need to install external suppressor module.
(2) The control peripheral circuit of the DC coil cannot be directly connected in parallel with a diode, otherwise it may conflict with products with specific configurations (equipped with built-in varistor), causing the product to release more slowly, which in turn affects the electrical life of the product. If there are special requirements, please contact the manufacturer for evaluation.

Information for Use

Altitude dependent compensation factor

The rarefied atmosphere at high altitude reduces the dielectric strength of the air and hence the rated operational voltage of the contactor. It also reduces the cooling effect of the air and hence the rated operational current of the contactor (unless the temperature drops at the same time).

At an altitude of less than 3000m, no significant effect on the performance of the product. When the altitude is above 3000m, con -ditions of air cooling and decrease of rated impulse withstand voltage have to be considered, so the design and application need to be further communicated with manufacturer.Correction coefficients of operational voltage and operational current when the alt -itude is above 3000m are described as below.

Altitude(m)	Rated operational voltage	Rated operational current
≤3500	0.90	0.92
≤4000	0.80	0.90
≤4500	0.70	0.88
≤5000	0.60	0.86

Technical parameter explanation

Parameters contained in this catalogue such as electrical durability and mechanical durability are based on standard samples' test results, and the actual use may differ from these due to the difference of environment, operating frequency, devices etc.

Xiamen Hongfa Electroacoustic Co. Ltd

Add: No.560-578, Donglin Rd., Jimei North Ind. Dist., Xiamen, China
TEL: +86-592-6106688 **FAX:** +86-592-6106678 **E-mail:** marketing@hongfa.com

Marketing & Sales Network

Hongfa Europe GmbH

ADD: Marie-Curie-Ring 26, D-63477 Maintal, Germany
TEL: +49-6181-4306-0
E-mail: info@hongfa-europe.com

Hongfa America,Inc.

ADD: 20381 Hermana Circle, Lake Forest, CA92630, USA
TEL: +1-714-669-2888
E-mail: sales@hongfaamerica.com

KG Technologies,Inc.

ADD: 6028 Stat Farm Drive Rohnert Park, CA 94928, USA
TEL: +1-888-513-1874
E-mail: info@kgtechnologies.com

Hongfa Electroacoustic (Hongkong) Co.,Ltd.

ADD: Rm 1810-12, 18/F., Shatin Galleria, 18-24 Shan Mei St., Fotan, N.T, HongKong
TEL: +852-2947-7889
E-mail: hongkong@hongfa.com

Shanghai Hongfa Electroacoustic Co.,Ltd.

ADD: NO.51.341, Jiuxin Rd., Jiuting Town, Songjiang Dist., Shanghai
TEL: +86-21-37693111
E-mail: shanghai@hongfa.com

Beijing Hongfa Electroacoustic Relay Co.,Ltd.

ADD: 111Bldg, Phase IV Westside of Lian -dong U Valley,Tongzhou Dist., Beijing
TEL: +86-10-56495556
E-mail: beijing@hongfa.com

Sichuan Hongfa Relay Co.,Ltd.

ADD: 12F, Hongfa Building, No.6 Wuxing 4th Road, Wuhou District, Chengdu
TEL: +86-28-86627550
E-mail: sichuan@hongfa.com

Hongfa India Branch

TEL: +86-592-6196714
E-mail:power-sa@hongfa.com

TEL: +91-9971187792
E-mail: rohit@hongfa.com

Hongfa Philippine Branch

TEL: +63-9177189352
E-mail: nia-videna@hongfa.com

Hongfa Korea Branch

ADD: Sanggadong 203, 24, Cheonghak-ro 68beon-gil, Byeollae-myeon, Namyangju-si, Gyeonggi-do, Republic of Korea
TEL: +82-10-8704-4706
E-mail: khlee@hongfa.com

Hongfa Brazil Branch

Non-automotive relay project
TEL: +86-592-6196714
E-mail: southamerica@hongfa.com

Automotive relay project
TEL: +86-592-6196751
E-mail: auto-asia3@hongfa.com

Hongfa Turkey Branch

TEL: +90-535-0221881
E-mail: info-turkey@hongfa.com

April 2025

Headquarter's Marketing & Sales Center
ADD: No.566-578, Donglin Rd., Jimei North Ind. Dist., Xiamen
E-mail: marketing@hongfa.com

SALES SERVICE HOTLINE
400-600-1502

HONGFA GROUP HONGFA ELECTRIC