宏发股份
HONGFA GROUP

HONGFA GROUP

Contactor Relay

UECAN series

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

UECAN Contactor Relay

Content List

NOTE:
The contents and data in this catalogue are not binding. We reserve the right to modify the contents of this document on the basis of technical development of the products, without prior notice. The real order requirements and technical agreements shall prevail.

UECAN series

UECAN-22…40 Contactor Relay

Production overview

Scope of Application

UECAN contactor relay (relay for short below), mainly used for AC 50Hz or 60Hz, rated insulation voltage up to 690V, the maximum operational current of 10A, mainly used to control a variety of magnet coils and as electrical signal amplification and transmission. It can provide a variety of contact configuration solutions to meet the needs of different applications.

Product Features

- Small size, low power consumption.
- Wide range of operating voltage and can reliable operation though there's grid voltage fluctuation.
- Terminals electroplating protection, competent for high humidity and high salt spray environment application.
- Buffer optimization, less noise of electromagnetic system.

Structural Features

- Modular accessories like auxiliary contact block, suppressor module, etc., can be equipped to meet different applications.
- The main contacts and auxiliary contacts are designed in the same layer to reduce the structure height and save installation space.
- The contact adopts forced friction mechanism, and the moving contacts and the fixed contacts are mesh contacting, which can improve the contact reliability and have self-cleaning effect.
- The Coil wiring can be either on the same side or on the opposite side, which is convenient for maintenance.
- The installation method can be by 35mm DIN rail or by screw installation, compatible with similar products.

Product Application

It can be widely used in controlling various magnet coils and for amplifying and transmitting electrical signals.

Approval Certificate

	CCC	GB/T 14048.5
	CE	EN 60947-5-1
	UKCA	BS EN 60947-5-1

Ordering Information

UECAN Contactor Relay

UECA	N	22	M7

Contactor relay

Product structure

Number of NO contacts / NC contacts

40: 4NO **31:** 3NO1NC **22:** 2NO2NC

Coil control voltage (AC supply - 50/60Hz)

B7: 24V **F7:** 110V
CC7: 36V **M7:** 220-230V
E7: 48V **Q7:** 380V

* Other coil versions on request

CA1 Auxiliary Contact Blocks

CA	1	R	22

Auxiliary Contact Block

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

CA1U 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

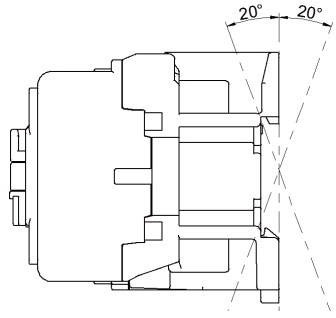
Suitable for coil voltage range

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)

Technical Data

Parameters		Model	UECAN
Operating environment			
Rated insulation voltage U_i		**V**	690
Rated impulse withstand voltage U_{imp}		**kV**	6
Conforming to standards			GB/T 14048.5, IEC/EN 60947-5-1, BS EN 60947-5-1
Certifications			CCC, CE, UKCA
Degree of protection (front only)			Against direct finger contact: IP20
Ambient air temperature	**Storage**	**℃**	-60…+80
	Operation	**℃**	-40…+60（+60…+70, for operation at 1.0Us…1.1Us）
Max. operating altitude without derating		**m**	3000
Pollution degree			3
Mounting category			Ⅲ
Mounting type			Screw or 35mm DIN-rail
Flame resistance			Current-carrying part: 850°C
Operating position (1)			Vertical mounting (±20°) 

Notes: (1) The products should be installed in a place without strong shaking or vibration.

Technical Data

Parameters \ Model			UECAN					
Max. rated operational voltage U_e		V	690					
Conventional thermal current I_{th}		A	10					
Min. switching capacity	U_{min}	V	17					
	I_{min}	mA	5					
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 I_e	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					
P600 DC-13	Conventional enclosed thermal current I_{the}	A	2.5					
	Rated operational voltage U_e	V	125	250	—	400	500	600
	Rated operating current I_e	A	1.1	0.55	—	0.31	0.27	0.2
	Make apparent power VA rating	VA	138					
	Break apparent power VA rating	VA	138					
Non-overlap time of NO and NC contacts		ms	1.5					
Electrical durability		10^6 cycles	1.2					
Max. electrical operating frequency		cycles/h	1200					
Mechanical durability		10^6 cycles	10					
Max. mechanical operating frequency		cycles/h	7200					
Auxiliary contact block (1)			CA1R，CA1S					
Outline dimension W x H x D		mm	45×74×80					
Net weight		kg	0.3					

Note: (1) 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.

Technical Data

Parameters / Model			UECAN
Coil Control Circuit, a.c. supply			
Rated control voltage U_s 50Hz/60Hz		**V**	24V, 36V, 48V, 110V, 220-230V, 380V
Control voltage range （+60℃）	**Operating voltage**		$0.85U_s…1.1U_s$
	Drop-out voltage		$0.2U_s…0.75U_s$
Average power consumption at 25°C (for reference)	**Inrush**	**VA**	70
	Sealed	**VA**	9
Operating time Between coil energization and	**NO closing**	**ms**	12…22
	NC opening	**ms**	4…19
Operating time Between coil de-energization and	**NO opening**	**ms**	4…35
	NC closing	**ms**	6…40
Power circuit connections			
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
	I >	**mm**	3.7
Connection capacity according 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	10.7

Accessories

CA1R(4P)

CA1U

Safety cover

CA1S

CA1R(2P)

Note: Safety cover is not sold separately, please contact the manufacturer for details.

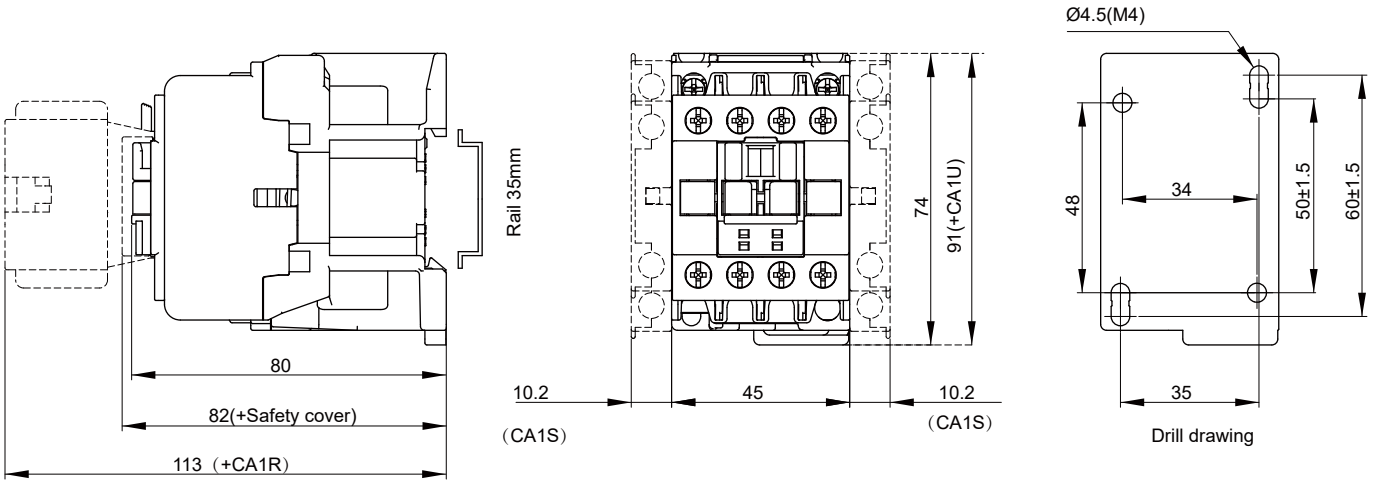
Suppressor Module

Parameters \ Model			Varistors	RC circuits
			CA1UV2…	CA1URC2…
Ambient air temperature	Storage	℃	-60…+70	
	Operation	℃	-40…+70	
Max. operating altitude without derating		m	3000	
Suitable for coil voltage	50Hz/60Hz	V	24…440	
Increase in contactor relay operating time			delay 1.1 to 1.5 times	delay 1.2 to 2 times
For use with contactor relay			UECAN	

Accessories

Auxiliary Contact Blocks									
Parameters / Model			CA1R, CA1S						
Standards			GB/T 14048.5, IEC/EN 60947-5-1, BS EN 60947-5-1, UL 60947-5-1(CSA C22.2 No. 60947-5-1)						
Certifications			CCC, CE, UKCA, VDE, UL (cULus LISTED)						
Degree of protection			IP20						
Ambient air temperature	Storage	°C	-60…+80						
	Operation	°C	-40…+70						
Max. operating altitude without 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						
	I >	mm	3.7						
Connection capacity acc. to UL/CSA	1 conductor	AGW	18…10						
	2 conductors	AGW	18…10						
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	U_{min}	V	24						
	I_{min}	A	0.1						
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 I_e	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 I_e	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 on contactor relay			UECAN						

Dimensions

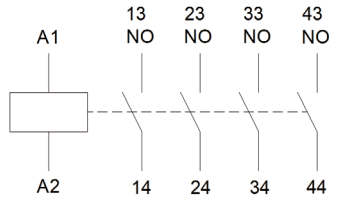
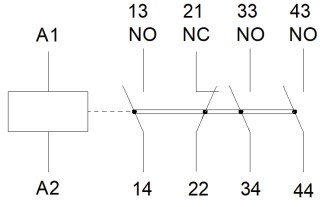
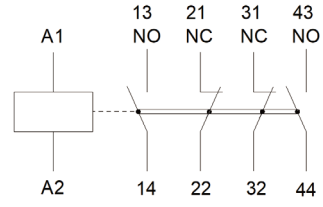


UECAN Contactor Relay

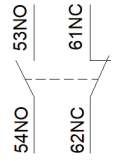
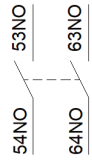
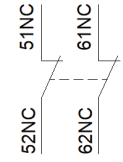
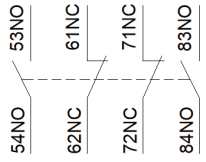
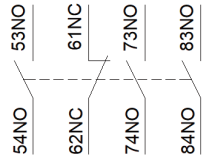
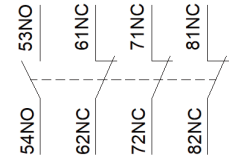
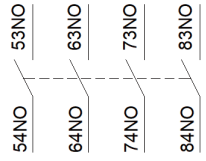
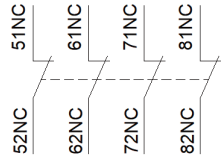
Note: unit mm. The tolerance for mounting holes: ±0.5; for other external dimensions: ± 1.5, unless otherwise specified.

Circuit Diagram

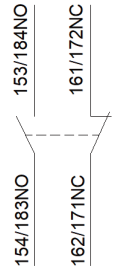
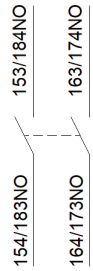
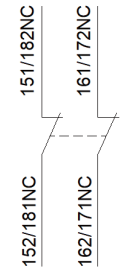
Contactor relay

UECAN40 (4NO)	UECAN31 (3NO1NC)	UECAN22 (2NO2NC)
		

Top mounting CA1R

CA1R11 (1NO1NC)	CA1R20 (2NO)	CA1R02 (2NC)
		
CA1R22 (2NO2NC)	**CA1R31 (3NO1NC)**	**CA1R13 (1NO3NC)**
		
CA1R40 (4NO)	**CA1R04 (4NC)**	
		

Side mounting CA1S

CA1S11 (1NO1NC)	CA1S20 (2NO)	CA1S02 (2NC)
		

Reference Selection Table

Switching capacity	Numbers of contacts	Auxiliary contacts (1)		Coil control voltage (2) 50Hz/60Hz	Type (3)	Net weight (1pc)
				V		kg
A600 P600	4	4	0	24	**UECAN40B7**	0.3
				110	**UECAN40F7**	
				220-230	**UECAN40M7**	
				380	**UECAN40Q7**	
A600 P600	4	3	1	24	**UECAN31B7**	
				110	**UECAN31F7**	
				220-230	**UECAN31M7**	
				380	**UECAN31Q7**	
A600 P600	4	2	2	24	**UECAN22B7**	0.3
				110	**UECAN22F7**	
				220-230	**UECAN22M7**	
				380	**UECAN22Q7**	

Coil control voltage (V) (50Hz/60Hz)	24	36	48	110	220-230	380
Coil control voltage code	**B7**	**CC7**	**E7**	**F7**	**M7**	**Q7**

Note: Coil control voltage codes are shown in the table above (other coil versions on request).

Reference Selection Table

Auxiliary Contact Block

Mounting type		Switching capacity	Auxiliary contacts[1]		Type[3]	Net weight (1 pc)kg
						
Top mounting		A600 Q600	0	2	**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	**CA1S11**	0.040

Suppressor Module

Mounting type		Protection type	Coil voltage range[2]	Type[3]	Net weight (1 pc) kg
Top mounting		**Varistors**	24-48V	**CA1UV2EAD**	0.016
			110-250V	**CA1UV2UAD**	
		RC circuits	24-48V	**CA1URC2EAC**	
			110-250V	**CA1URC2UAC**	

Notes: [1] All the above auxiliary contacts are all instantaneous auxiliary contacts.

[2] Please contact the sales company for specific coil voltage specifications.

[3] For other types, please refer to the details in page 07...08.

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.

MEMO

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