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UEC2-12C...30C AC Contactors

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UEC2-12C...30C AC Contactors

Product Overview

UEC2 series AC contactors (hereinafter referred to as Contactors) are mainly used in circuits with AC 50Hz or 60Hz, rated insulation voltage up to 690V, rated operational voltage of 400V and rated operational current of 30A under AC-3 utilization category for remote connection and disconnection. It's suitable for frequently starting and controlling AC motors, electric heating or lighting circuits, especially for controlling the connection and disconnection of marine or vehicle compressors, electric heating, fans and other loads.

Product Features

- Greater contact distance and strong impact and vibration resistance
- Class H enameled wire to reduce the risk of coil overheating and burning
- Adapt to the severe high temperature + 85 °C, with strong environmental adaptability and corrosion resistance

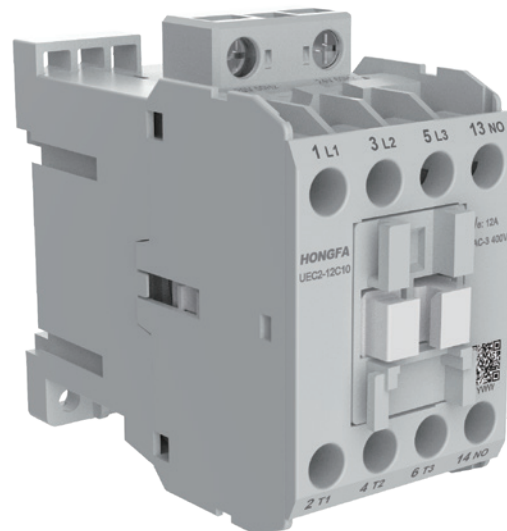
Design Features

- The main and auxiliary contacts are designed in the same layer structure to reduce the height and save installation space
- The installation method can be 35mm standard DIN rail or screw installation, and the size is compatible with other similar products.




Typical Applications

Apply in vehicular and marine occasions with impact and vibration.

Product Appearance



Approval Certificate

	CCC	GB/T 14048.4, GB/T 14048.5
	CE	EN 60947-4-1, EN 60947-5-1
	UKCA	BS 60947-4-1, BS 60947-5-1

Ordering Information

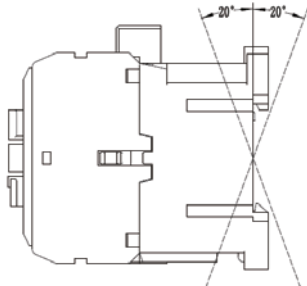
UEC2 Contactors

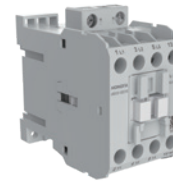
	UEC	2	-	12	C	10	M7
Contactor series							
Design serial number							
Rated operating current at rated operating voltage 400V under AC-3 category							
12: 12A 30: 30A							
Product structure							
C: C type							
Number of built-in auxiliary NO / NC contacts							
10: 1NO 01: 1NC							
Coil control voltage (AC supply - 50/60Hz)							
B7: 24V M7: 220V Q7: 380V							
*Other special voltages need to be customized							


C23A Auxiliary Contact Blocks

	C23	A	11
For UEC2 Series contactors			
Auxiliary contact block			
Number of auxiliary NO contacts/NC contacts			
11: 1NO+1NC 20: 2NO 02: 2NC 01: 1NC 10: 1NO			

Technical Data

Parameter		Type	UEC2-12C	UEC2-30C
Operating environment				
Rated insulation voltage U_i		V	690	
Rated impulse withstand voltage U_{imp}		kV	6	
Conforming to standards		GB/T 14048.4, GB/T 14048.5, IEC/EN 60947-4-1, IEC/EN 60947-5-1, BS 60947-4-1, BS 60947-5-1		
Approval Certificate		CCC, CE, UKCA		
Degree of protection (front only)		Against direct finger contact: IP20		
Ambient temperature	Storage	°C	-55...+85	
	Operation	°C	-40...+85	
Max. operating altitude		m	3000	
Pollution degree		3		
Mounting category		III		
Mounting type		Screw or 35mm DIN rail		
Flame resistance		Current-carrying parts 850 °C		
Impact resistance	Contactor opening:	Half sine wave, pulse duration 11ms, acceleration > 80m / s ²		
	Contactor closing:	Half sine wave, pulse duration 11ms, acceleration > 150 m / s ²		
Anti vibration performance		Frequency range 5Hz ~ 60Hz, acceleration 40m / s ²		
operating position		Vertical installation ($\pm 20^\circ$) 		











				Type		UEC2-12C	UEC2-30C
Parameters							
Main circuit, 3-pole							
IEC	AC-3	Rated operational current I_e	400V	A		12	30
		Rated operational power	220V/230V	kW		3	7.5
			380V/400V	kW		5.5	15
			660V/690V	kW		7.5	18.5
	AC-1	Rated operational current I_e	≤690V	A		32	32
		Conventional thermal current I_{th}		A		32	32
Built-in auxiliary contacts (standard type)					1NO or 1NC		
Electrical durability (according to ARI 780/790)				10^4 cycles	20		
Max. electrical operating frequency AC-3 / 400V				cycles/h	1200		
Mechanical durability				10^4 cycles	1000		
Max. mechanical operating frequency				cycles/h	3600		
Outline dimension W x H x D (mm)				mm	45×81×86.5		
							
Net weight				kg	0.42		





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		Type	UEC2-12C...30C					
Coil control circuit, a.c. supply								
Rated control voltage U_s 50Hz/60Hz		V	24V, 220V, 380V					
Control voltage range	Operating voltage	V	0.85 U_s ...1.1 U_s					
	Drop out voltage	V	0.2 U_s ...0.75 U_s					
Max. power consumption at 25 °C (for reference)	Inrush	VA	130					
	Sealed	VA	14					
Operating time Between coil energization and	Main NO contact closing	ms	12...22					
	Built-in auxiliary NO closing	ms	12...25					
	Built-in auxiliary NC opening	ms	9...17					
Operating time Between coil de-energization and	Main NO contact opening	ms	5...19					
	Built-in auxiliary NO opening	ms	9...17					
	Built-in auxiliary NC closing	ms	10...25					
Built-in auxiliary contacts								
Max. rated operational voltage U_e		V	690					
Max. insulation voltage U_i		V	690					
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		7200					
	Break apparent power VA rating		720					
P600 DC-13	Conventional enclosed thermal current I_{the} A		2.5					
	Rated operating voltage U_e V		125	250	—	400	500	600
	Rated operational current I_e A		1.1	0.55	—	0.31	0.27	0.2
	Make apparent power VA rating		138					
	Break apparent power VA rating		138					

Parameter	Type		UEC2-12C...32C
	Main circuit connections, Built-in auxiliary circuit connections		
Solid cable without cable end 	1 conductor	mm ²	1...6
	2 conductors	mm ²	1...6
Flexible cable without cable end 	1 conductor	mm ²	1...6
	2 conductors	mm ²	1...6
Flexible cable with cable end 	1 conductor	mm ²	1...6
	2 conductors	mm ²	1...6
Lugs 	L Maximum size	mm	9.5
	l Minimum size	mm	3.7
Connection capacity According to UL / CSA	1 conductor	AWG	18-10
	2 conductors	AWG	18-10
Screwdriver	Philips screwdriver (POZI)		PZ2
	Φ Slotted screwdriver		Φ 6
Tightening torque		N·m	1.7...2.0
		lb.in	15...18
Coil 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...4
Lugs 	L Maximum size	mm	8.1
	l Minimum size	mm	3.7
Connection capacity According to UL/CSA	1 conductor	AWG	18-12
	2 conductors	AWG	18-12
Screwdriver	Philips screwdriver (POZI)		PZ2
	Φ Slotted screwdriver		Φ 6
Tightening torque		N·m	0.8...1.2
		lb.in	7...10.7

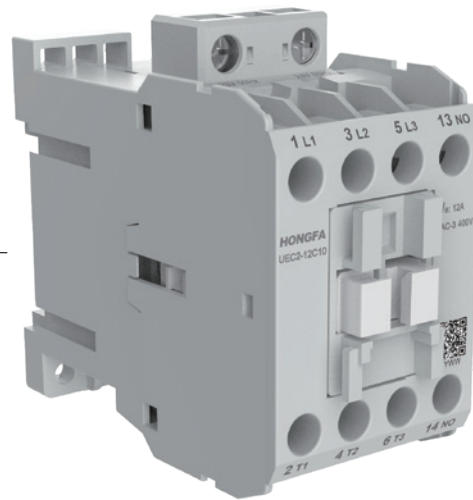
Accessories - auxiliary contact blocks

Parameters		Type	C23A					
standards			GB/T 14048.5, IEC/EN 60947-5-1, BS 60947-5-1					
Approval Certificate			CCC, CE, UKCA					
Degree of protection			IP20					
Ambient air temperature	Storage	°C	-55...+85					
	Operation	°C	-40...+85					
Max. operating altitude		m	3000					
 Solid cable without cable end	1 conductor	mm ²	1...2.5					
	2 conductors	mm ²	1...2.5					
 Flexible cable without cable end	1 conductor	mm ²	1...2.5					
	2 conductors	mm ²	1...2.5					
 Flexible cable with cable end	1 conductor	mm ²	1...2.5					
	2 conductors	mm ²	1...2.5					
 Lugs	L Maximum size	mm	7.5					
	I Minimum size	mm	3.7					
Connection capacity According to UL / CSA	1 conductor	AWG	18-14					
	2 conductors	AWG	18-14					
Screwdriver	Philips screwdriver (POZI)		PZ2					
	Φ Slotted screwdriver		Φ6					
Tightening torque		N·m	0.8...1.2					
		lb.in	7.1...10.7					
Max. rated operational voltage U _e		V	690					
Max. insulation voltage U _i		V	690					
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 on contactors			UEC2-12C...30C					

Accessories - auxiliary contact blocks



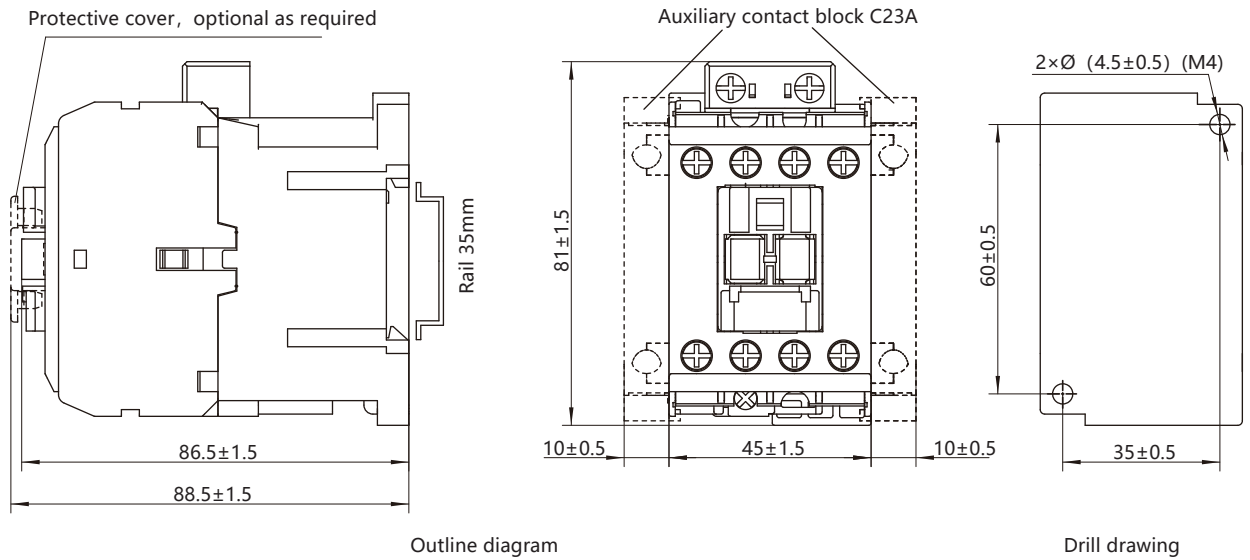
Auxiliary contact blocks C23A



Contactor UEC2

Dimensions

unit: mm





UEC2-12C, UEC2-30C

Circuit Diagram

<p>UEC2-12C10 UEC2-30C10</p>	
<p>UEC2-12C01 UEC2-30C01</p>	




Reference Selection Table

IEC				Number of Poles	Built-in auxiliary contacts		Coil control voltage ⁽¹⁾ 50Hz/60Hz	Reference	Net weight (1 pc)
Standard power ratings of 3-phase motors 50Hz/60Hz in category AC-3 (θ≤85°C)			Rated operational current AC-3						
220V 230V	380V 400V	660V 690V	400V						
kW	kW	kW	A						
3	5.5	7.5	12	3	0	1	24	UEC2-12C01B7	0.42
							220	UEC2-12C01M7	
							380	UEC2-12C01Q7	
					1	0	24	UEC2-12C10B7	
							220	UEC2-12C10M7	
							380	UEC2-12C10Q7	
7.5	15	18.5	30	3	0	1	24	UEC2-30C01B7	0.42
							220	UEC2-30C01M7	
							380	UEC2-30C01Q7	
					1	0	24	UEC2-30C10B7	
							220	UEC2-30C10M7	
							380	UEC2-30C10Q7	

Note: ⁽¹⁾ Coil control voltage code as followed (other coil versions on request).

Coil control voltage V (50Hz/60Hz)	24	220	380
Coil control voltage code	B7	M7	Q7

C23A Auxiliary contact blocks

Mounting type	Switching capacity	Auxiliary contacts ⁽¹⁾		Reference	Net weight (1 pc)
					kg
Side mounting 	A600 Q600	0	2	C23A02	0.036
		1	1	C23A11	
		2	0	C23A20	
		0	1	C23A01	0.030
		1	0	C23A10	

Note: ⁽¹⁾ All the above auxiliary contacts are all instantaneous auxiliary contacts.

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, conditions 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 altitude 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.