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Leading Innovation >>>



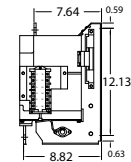
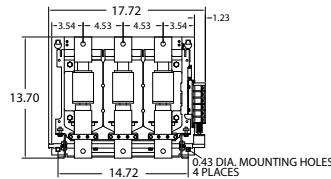
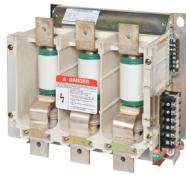
VACUUM CONTACTORS
LOW & MEDIUM VOLTAGE



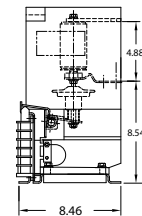
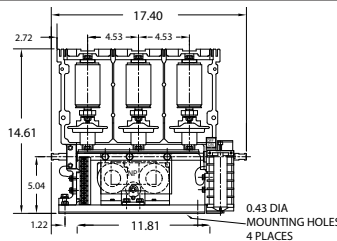
COMPACT DESIGN, ADVANCED TECHNOLOGY

- **Environment-Resistant:** Ideal for use in high-dust areas. Switching arc is contained within the vacuum bottle, shielding the main contacts.
- **Reduced Maintenance:** Vacuum bottle contacts have long life with virtually no maintenance required.
- **No External Surge Protection:** Special main contact materials minimize chopping current. No surge suppressor is required.
- **Designed for Safety:** High voltage and low voltage parts are completely separated by an insulated barrier (non-flammable molded frame).
- **Electronic Control Drive Unit:** All contactors include electronic control of the operating coil, which offers a wide control voltage of 100 to 240 VAC and 100 to 250 VDC, anti-chopping feature, and reduced power consumption.
- **CV-10H (13.8/15 kV) Contactor:** Rated at 400 A inductive and 450 A thermal and is available in latched and non-latched versions. The CV-10HB is designed for capacitor switching and rated up to 13.8 kV.
- **Designed for Longer Wear:** Unique vertical magnetic arc dispersion system. USA patents on HCV-1KAU, HCV-6KAU, and HCV-6KALU.
- **Compact & Lightweight:** Smaller than air break contactors of equivalent electrical performance.
- **Conformance to International Standards:** Conforms to international industrial standards such as UL, CSA, AS, BS, NEMA, and IEC. Consult factory for each series.
- **Higher Interrupting Performance:** Offers a wide margin of protective coordination with any type of power fuse, resulting in increased electrical safety and reliability.

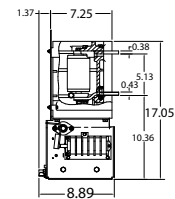
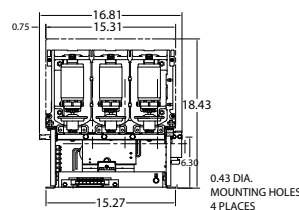
HCV-1JBU/1KAU



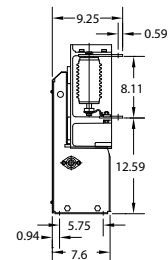
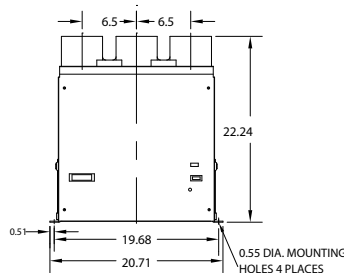
HCV-5HA



HCV-6KAU



CV-10H



VACUUM CONTACTORS

> SPECIFICATIONS

CONTACTOR MODEL		HCV-1JBU	HCV-1KAU	HCV-5HA	HCV-5HAL*	CV-10HA(L)	CV-10HB(L)	HCV-6KAU	HCV-6KALU*
Rated Voltage		208 to 1500 V		2400/4200/6900 V (7.2 kV Max)		12/15 kV	12/13.8 kV (Max)	2400V/4200/6900 V (7.2 kV Max)	
Rated Operational Current		600 A	720 A	400 A		400 A		720 A	
Rated Thermal Current		600 A	720 A	450 A				800 A	
Interrupting Current		42,000 A		7000 A (4.5 kA at 7.2 kV)		4000/5000 A	5000 A	7200 A	
Peak Withstand Current		—	85 kA (Peak)	15.8 kA		12.5 kA		20 kA	
Short-Circuit Making/ Breaking Current per IEC 60470 (2000)		6000 A (100 Times)	7200 A (100 Times)	6300 A		4000/5000 A	5000 A	8000 A	
		6000 A (25 Times)	7200 A (25 Times)	O for Three Minutes; CO for Three Minutes					
Class E1 MVA		—		25/50 (36/60)		120		30/60/85	
Class E2 MVA		—		200/400/570		1200		200/400/600	
Withstand Overload Current		3600 A for 30 Seconds	4320 A for 30 Seconds	2400 A for 30 Seconds		1920 A for 30 Seconds		4320 A for 30 Seconds	
		6000 A for Two Seconds	7200 A for Two Seconds	4000 A for 12 Seconds		—		—	
		9000 A for One Second	10,800 A for One Second	6300 A for Two Seconds		8000 A for One Second		10,800 A for One Second	
		30,000 A for 0.05 Seconds	36,000 A for 0.05 Seconds	—		—			
Overcurrent Strength (Peak Value)		—		—		See Coordination Below		85 kA (Peak)	
Coordination with Current- Limiting Fuses		50 kA	45 kA	—		Prospective Short-Circuit Current 50 kA; Cut-Off Current 36 kA (Peak)		—	
Switching Frequency		1200/Hour		1200/Hour	300/Hour	300/Hour (Latched-Type 120/Hour)		600/Hour	300/Hour
Mechanical Life**		2.5M		2.5M	250K	250K		1M	200K
Electrical Life**		500K		250K	250K	100K		200K	
Impulse Withstand		15 kV		60 kV		75 kV (95/110 kV with SA)		60 kV	
Dielectric Strength		5.5 kV for One Minute		22 kV for One Minute		36 kV for One Minute		22 kV for One Minute	
¹ Closing Time (120 VAC)		60 to 80 ms		50 to 90 ms		120 to 145 ms		80 to 100 ms	
¹ Opening Time (120 VAC)		50 to 65 ms		15 to 40 ms		80 to 90 ms	30 to 40 ms	40 to 65 ms	
Arcing Time		10 ms or Less							
¹ Pick-Up Voltage (Max.)		70% (Cold) to 85% (Hot)		70% (Cold) to 85% (Hot) AC or DC					
¹ Drop-Out Voltage (Max.)		20% or More of Rated Control Voltage (Cold)		60% (Cold) to 70% (Hot) AC or DC					
Tripping Voltage		—		<60% of Coil Rating (Cold) DC					
Control Voltage	Standard	100 to 240 VAC/VDC		120 VAC at 50/60 Hz		100 to 240 VAC/100 to 250 VDC		115 to 240 VAC/125 to 250 VDC	
	Optional	—		240 VAC/125 VDC/250 VDC		—		-	
Control Circuit Burden	Closing	1080 VA		5.4 A Peak at 120 VAC; 670 VA (AC) to 700 W (DC)		7.2 A Peak at 120 VAC; 864 VA (AC) to 900 W (DC)		6 to 7.0 A at 120 VAC; 840 VA (AC) to 875 W (DC)	
	Holding	50 VA		0.12 A Average at 120 VAC; 85 VA (AC) to 85 W (DC)		0.16 A Average at 120 VAC; 80 VA (AC) to 90 W (DC)		0.8 to 1.0 A at 120 VAC; 48 VA	
	Tripping*	—		4.8 A Peak at 125 VDC					
Auxiliary Contact Ratings	Arrangement	3NO-3NC		3NO-3NC	2NO-2NC	4NO-2NC (Latched-Type 2NO-1NC)		3NO-3NC	2NO-2NC
	Current	10 A (A600)							
	Voltage	48 to 600 V							
	AC	720 VA with 0.35 Power Factor							
	DC	60 W (L/R 150 ms)							
Application Conditions	Altitude (No Derate)	Lower than 3300 Feet (1000 Meters)							
	Ambient	-5 to 40°C							
	Relative Humidity	45 to 95% Non-Condensing							
	Vibration	Maximum 20 Hz at 1G							
	Shock	Maximum 30G							
Weight in lbs. (kg)		59.5 (27)	61.7 (28)	43 (19.5)	44 (20)	88 (40)	91 (41)	60 (27)	62 (28)

¹ - These are typical values under the following conditions:

a) No external devices connected to the mechanism. b) At sea level. c) For HCV-5: 120Vac control power applied to terminals 1 & 2. d) For HCV-5: contactor controlled (open/close) via terminals 3 & 4.

*Latched-type. **Maximum required test. Actual life under normal conditions is greater.

VACUUM CONTACTORS

➤ LOW VOLTAGE APPLICATIONS

Model Number	HCV-1JBU	HCV-1KAU
Rated Voltage	1500 V	1500 V
Rated Current	600 A	720 A
Rated Frequency	50/60 Hz	
Three-Phase Motor	208 V	200 HP
	230 V	250 HP
	380 V	300 HP
	460 V	300 HP
	460 V	500 HP
	575 V	600 HP
	762/796 V	800 HP
Three-Phase Capacitor	1500 V	1600 HP
	240 V	200 kVAR
	480 V	400 kVAR
	600 V	500 kVAR
Single- & Three-Phase Transformer	1500 V	1400 kVAR
	120 V	1 φ 60 kVA
	230 V	3 φ 100 kVA
	277 V	1 φ 120 kVA
	460 V	3 φ 200 kVA
	277 V	1 φ 150 kVA
	460 V	3 φ 260 kVA
	575 V	1 φ 240 kVA
	762/796 V	3 φ 400 kVA
	1500 V	1 φ 320 kVA
	762/796 V	3 φ 560 kVA
	1500 V	1 φ 400 kVA
Discharge Lighting	1500 V	600 A

➤ MEDIUM VOLTAGE APPLICATIONS

Model Number	HCV-5HA(L) (400 A)	CV-10HA(L) (400 A)	CV-10HB(L) (320 A Continuous, 230 A Breaking)	HCV-6KA(L) U (720 A)
0.8 PF Induction/ Synchronous Motor	2.2 to 2.5 kV	1750 HP	—	2500 HP
	3 to 3.3 kV	2250 HP	—	3000 HP
	4 to 5 kV	3000 HP	—	4500 HP
	6 to 6.6 kV	4500 HP	—	6000 HP
	6.9 to 7.2 kV	—	3500 HP	—
	11 to 12 kV	—	5500 HP	—
	13.8 kV	—	7000 HP	—
1.0 PF Synchronous Motor	2.2 to 2.5 kV	2000 HP	—	2500 HP
	3 to 3.3 kV	2500 HP	—	3000 HP
	4 to 5 kV	3500 HP	—	4500 HP
	6 to 6.6 kV	5000 HP	—	6000 HP
	6.9 to 7.2 kV	—	4000 HP	—
	11 to 12 kV	—	6000 HP	—
	13.8 kV	—	7500 HP	—
Three-Phase Transformer	2.2 to 2.5 kV	1500 kVA	—	2500 kVA
	3 to 3.3 kV	2000 kVA	—	3500 kVA
	4 to 5 kV	3000 kVA	—	4500 kVA
	6 to 6.6 kV	4000 kVA	—	7000 kVA
	6.9 to 7.2 kV	—	3000 kVA	—
	11 to 12 kV	—	5500 kVA	—
	13.8 kV	—	6500 kVA	—
Three-Phase Capacitor	2.2 to 2.5 kV	1500 kVAR	—	1500 kVAR
	3 to 3.3 kV	2000 kVAR	—	2000 kVAR
	4 to 5 kV	2000 kVAR	—	2000 kVAR
	6 to 6.6 kV	2000 kVAR	—	2000 kVAR
	6.9 to 7.2 kV	—	—	—
	10 to 13.8 kV	—	—	—
	11 to 12 kV	—	—	—

APPLICABLE INDUSTRIES

- Aggregate
- Mining
- Oil & Gas
- Pulp & Paper
- Steel
- Utility/Power Generation
- Water/Wastewater

APPLICABLE APPLICATIONS

- Pumps
- Conveyors
- Transformers



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