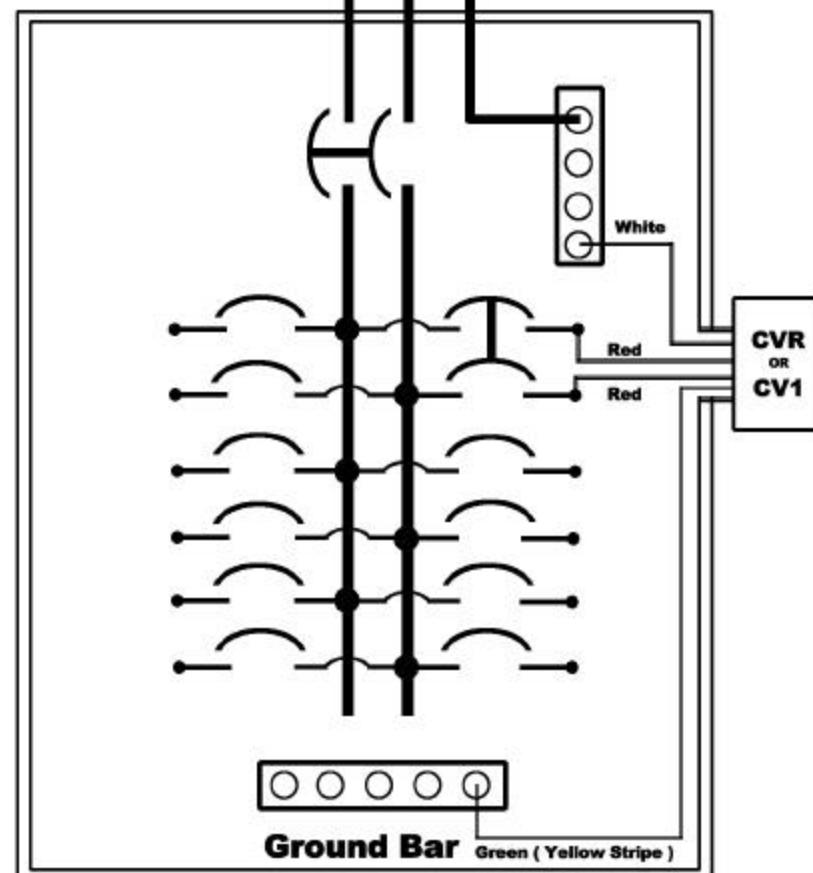


# CVR - CV1

L1 - L2 240 Volts

L1 - Neutral 120 Volts

L2 - Neutral 120 Volts



This is a typical installation schematic. This schematic is for connection purposes. Installations may differ from location to location. Electrical installer **SHOULD** CALL 1-800-252-6614 with any questions regarding their particular situation should it be different from the one seen to the left here.

**Keep phase leads as short as possible.**

**DO NOT parallel unit with refrigeration.**

Place unit on with a **FULL SIZE 20 AMP** branch breaker nearest Main Breaker as shown in drawing.

**Green conductors (Yellow Stripe)** are case ground for units.

**Chase nipple installation - 3/4" hole.**  
Use proper punches when making holes.

In some cases breakers will be required to be moved. Installation wiring practice may vary.

Check with local Electrical Safety Authority.

**CALL 1-800-252-6614 with any questions concerning your particular installation.**

# CLEANVOLT™

## THE NEW ERA OF SURGE PROTECTION.

Patented technology that improves power quality.



RESIDENTIAL.



COMMERCIAL.



INDUSTRIAL.



AGRICULTURAL.



At Clean~Volt our mission is to provide superior state-of-the-art products that meets client expectations and exceeds them.

Founded by Ken McIntyre and Frank Hack in 1997, Clean~Volt offers a high quality product that surpasses those offered by other surge protection devices.

Our products utilize a patented technology which makes our varistors incredibly stable. Our technology was tested and certified without an internal fuse by Underwriters Laboratories (UL). We offer the lowest connected voltage protection rating in the industry, keeping levels at 10% above the rated RMS voltage. With a response time of less than a nanosecond when installed with 6 inch leads (15.24 cm), Clean~Volt is the clear industry leader.

## ULTIMATE PROTECTION

Clean~Volt was approved as a Type 1 Surge Protection Device by CSA C233.1-1987. Also, we have the Surge Arrester Certification by CSA. This implies two important facts:

- › The product passed a series of 8 x 20  $\mu$ s lightning simulation tests. Those strikes are up to 30 KA.
- › The product can be installed on the supply side.

While other surge protection devices let-through equipment damaging occurrences, Clean~Volt is a surge arrester with unique properties that can address these common issues by clamping down within the connected equipment rating.

## WHAT TO LOOK FOR IN A SURGE PROTECTOR

When selecting protection, it is important to look for these specifications and abilities:

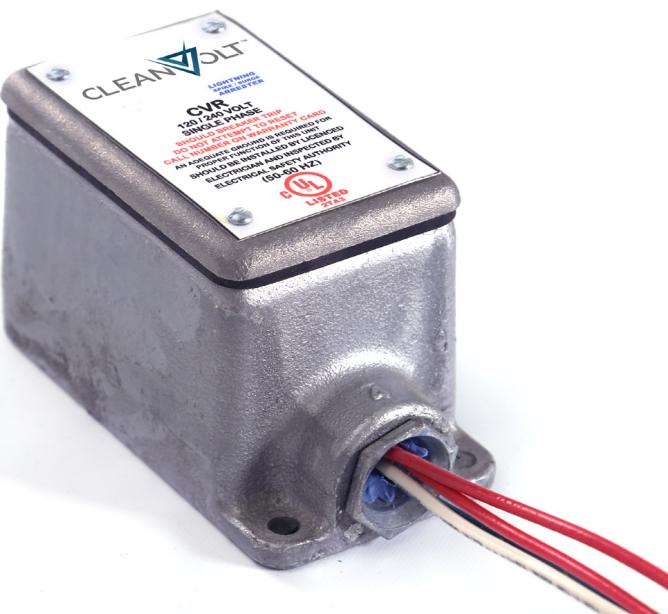
- › Fastest Connected Response Time
- › Fail-Safe Not Requiring a Current Limiting Fuse
- › Bi-Directional Operation
- › VFD Applications
- › Ability to Trip the Main Overcurrent Devices During Lightning Induced Surges
- › Highest Instantaneous KA Rating
- › Life Span
- › Warranty
- › Certifications:



Intertek



IEEE



PRODUCT	CV1	CV2	CVS 120 V	CVS 240 V	CV4	CV6
<b>Electrical Specifications</b>						
<b>Voltage and Phase</b>	120/240 V 1 Ø	120/208 V 3 Ø	120 V 1 Ø	240 V 1 Ø	347/600 V WYE 3 Ø 4 Wire	600 V Delta 3 Ø 3 Wire
<b>Maximum Panel Rating</b>	Up to 600 Amps	Up to 1000 Amps	Up to 600 Amps	Up to 600 Amps	Up to 3000 Amps	Up to 3000 Amps
<b>Nominal Discharge Rating (In)</b>	N/A	N/A	N/A	N/A	N/A	N/A
<b>Response Time With 6-Inch Lead</b>	< 1 NS	< 1 NS	< 1 NS	< 1 NS	< 1 NS	< 1 NS
<b>Clamping Voltage</b>	132/250 V	132/230 V	132 V	250 V	395/690 V	710 V
<b>Discharge Capacity</b> 1 Ø to Neutral/Ground 8x20 Micro Second Pulse	10,000 A	20,000 A	10,000 A	10,000 A	30,000 A	30,000 A
<b>Standards and Certifications</b>						
<b>Agency Certification</b>	cUL, Type 1 / C62.1 / CSA protection-Arresters 9084-01					
<b>CSA Standard</b>	C22.2 #No. 0-M1982, 233.1-1987					
<b>ANSI/IEEE Category</b>	*Previously Tested & Passed Under C62.1*					
<b>Flammability</b>	Category UL #94V-0					
<b>Mechanical Specifications</b>						
<b>Size</b>	2.75 X 4.0 X 2.5"	3.0 X 4.5 X 4.75"	2.75 X 4.0 X 2.5"	2.75 X 4.0 X 2.5"	3 boxes of: 2.75 X 4.0 X 2.5"	3 boxes of: 2.75 X 4.0 X 2.5"
<b>Weight</b>	3.5 lb	7.75 lb	3.5 lb	3.5 lb	11 lb	11 lb
<b>Neutral Colour</b>	White	White	White	White	White	Green
<b>L1 Colour and Voltage</b>	Red – 120 V	Orange – 120 V	Black – 120 V	Black – 240 V	Orange – 347 V	Red – 600 V
<b>L2 Colour and Voltage</b>	Red – 120 V	Orange – 120 V	N/A	N/A	Yellow – 347 V	Red – 600 V
<b>L3 Colour and Voltage</b>	N/A	Orange – 120 V	N/A	N/A	Black – 347 V	Red – 600 V
<b>Ground Colour</b>	Green	Green	Green	Green	Green	Green
<b>Wire Size/Insulation</b>	#12 THHN	#12 THHN	#12 THHN	#12 THHN	#10 THHN	#10 THHN
<b>Size of Optional Enclosure</b>	N/A	N/A	N/A	N/A	24 X 12 X 8"	24 X 12 X 8"
<b>Recommended Breaker Ka Rating</b> *Same or greater than main over current.	2 pole – 20 A	3 pole – 20 A	1 pole – 20 A	1 pole – 20 A	3 pole – 30 A	3 pole – 30 A
<b>Warranty</b>						
<b>Product Warranty</b>	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
<b>Connected Equipment</b>	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000

\*Clamping, discharge capacity, and all other specifications were provided by Kearney company division of Kearney National Inc. under c62.1

PRODUCT	CV3	CV5-3	CV7-4	CV8	CVR RESIDENTIAL
<b>Electrical Specifications</b>					
<b>Voltage and Phase</b>	277/480 V 3 Ø 4 wire	240 V 3 Ø Delta	480 V 3 Ø Delta	120/208/120 3 Ø Tapped Delta	120/240 V Residential
<b>Maximum Panel Rating</b>	Up to 3000 Amps	Up to 1000 Amps	Up to 3000 Amps	Up to 1000 Amps	Up to 400 Amps
<b>Nominal Discharge Rating (In)</b>	N/A	N/A	N/A	N/A	N/A
<b>Response Time With 6-Inch Lead</b>	< 1 NS	< 1 NS	< 1 NS	< 1 NS	< 1 NS
<b>Clamping Voltage</b>	320/510 V	275 V	575 V	132/250 V	132/250 V
<b>Discharge Capacity</b> 1 Ø to Neutral/Ground 8x20 Micro Second Pulse	30,000 A	20,000 A	30,000 A	20,000 A	10,000 A
<b>Standards and Certifications</b>					
<b>Agency Certification</b>	cUL, Type 1 / C62.1 / CSA protection-Arresters 9084-01				
<b>CSA Standard</b>	C22.2 #No. 0-M1982, 233.1-1987				
<b>ANSI/IEEE Category</b>	*Previously Tested & Passed Under C62.1*				
<b>Flammability</b>	Category UL #94V-0				
<b>Mechanical Specifications</b>					
<b>Size</b>	3 boxes of: 2.75 X 4.0 X 2.5"	3.0 X 4.5 X 4.75"	3 boxes of: 2.75 X 4.0 X 2.5"	3.0 X 4.5 X 4.75"	2.75 X 4.0 X 2.5"
<b>Weight</b>	11 lb	7.75 lb	11 lb	7.75 lb	3.5 lb
<b>Neutral Colour</b>	White	Green	Green	White	White
<b>L1 Colour and Voltage</b>	Blue – 277 V	Blue – 240 V	Black – 480 V	Black – 120 V	Red – 120 V
<b>L2 Colour and Voltage</b>	Blue – 277 V	Blue – 240 V	Black – 480 V	Orange – 208 V	Red – 120 V
<b>L3 Colour and Voltage</b>	Blue – 277 V	Blue – 240 V	Black – 480 V	Black – 120 V	N/A
<b>Ground Colour</b>	Green	Green	Green	Green	Green
<b>Wire Size/Insulation</b>	#10 THHN	#12 THHN	#10 THHN	#12 THHN	#12 THHN
<b>Size of Optional Enclosure</b>	24 X 12 x 8"	N/A	24 X 12 x 8"	N/A	N/A
<b>Recommended Breaker Ka Rating</b> <small>*Same or greater than main over current.</small>	3 pole – 30 A	3 pole – 20 A	3 pole – 30 A	3 pole – 20 A	2 pole – 20 A
<b>Warranty</b>					
<b>Product Warranty</b>	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime
<b>Connected Equipment</b>	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000	Up to \$1,000,000

\*Clamping, discharge capacity, and all other specifications were provided by Kearney company division of Kearney National Inc. under c62.1