

# CVS Hardwired series: Constant voltage transformers

Superior voltage regulation of  $\pm 1\%$  sets the CVS series apart from other power conditioning technologies on the market. Extremely tight regulation is accomplished by SolaHD's ferroresonant transformer technology. The CVS recreates a well regulated sinusoidal waveform that is well isolated from input disturbances including:

- Impulses
- Brownouts
- Severe waveform distortion
- Swells
- Sags

## Suitable Applications

- Industrial automation and control equipment PLCs
- Analytical laboratory and factory automating equipment
- Photo processing equipment
- Sound/recording systems
- Photographic enlargers
- Broadcast equipment



## Features & Benefits

- Superior voltage regulation of  $\pm 1\%$
- Surge protection tested to ANSI/IEEE C62.41, Class A & B waveform
- Harmonic filtering
- Hardwired
- Acts as a step-up/step-down transformer
- Galvanic isolation provides exceptional circuit protection
- 25 year typical mean time between failure
- Low maintenance required

## Certifications and compliances

-  Listed
  - UL 1012
  - CSA C22.2 No. 107.1
- RoHS Compliant

## Selection Tables: Single Phase Group 1 – CVS Series, 60 Hz

| VA     | Catalog Number | Voltage Input      | Voltage Output | Height in (mm) | Width in (mm) | Depth in (mm) | Ship Weight lbs (kg) | Design Style | Elec Conn |
|--------|----------------|--------------------|----------------|----------------|---------------|---------------|----------------------|--------------|-----------|
| 120    | 23-22-112-2    | 120, 240           | 120            | 8.00 (203.2)   | 4.00 (101.6)  | 5.00 (127.0)  | 13.0 (5.90)          | 1            | J         |
| 250    | 23-23-125-8    | 120, 240, 480      | 120            | 11.00 (279.4)  | 6.00 (152.4)  | 8.00 (203.2)  | 29.0 (13.15)         | 1            | G         |
| 500    | 23-23-150-8    | 120, 208, 240, 480 | 120, 240       | 13.00 (330.2)  | 9.00 (228.6)  | 7.00 (177.8)  | 42.0 (19.05)         | 1            | H         |
| 1000   | 23-23-210-8    | 120, 208, 240, 480 | 120, 240       | 17.00 (431.8)  | 9.00 (228.6)  | 7.00 (177.8)  | 65.0 (29.48)         | 1            | H         |
| 2000   | 23-23-220-8    | 120, 208, 240, 480 | 120, 240       | 18.00 (457.2)  | 13.00 (330.2) | 10.00 (254.0) | 111.0 (50.35)        | 1            | H         |
| 3000   | 23-23-230-8    | 120, 208, 240, 480 | 120, 240       | 19.00 (482.6)  | 13.00 (330.2) | 10.00 (254.0) | 142.0 (64.41)        | 1            | H         |
| 5000   | 23-23-250-8    | 120, 208, 240, 480 | 120, 240       | 28.00 (711.2)  | 13.00 (330.2) | 10.00 (254.0) | 222.0 (100.70)       | 1            | H         |
| 7500 ① | 23-28-275-6    | 240, 480           | 120, 240       | 27.00 (685.8)  | 25.00 (635.0) | 9.00 (228.6)  | 365.0 (165.56)       | 2            | J         |

① This unit is  Listed only.

For more information:  
[www.Emerson.com/SolaHD](http://www.Emerson.com/SolaHD)

**SOLAHD™**

  
**EMERSON™**

## CVS Hardwired series: Constant voltage transformers

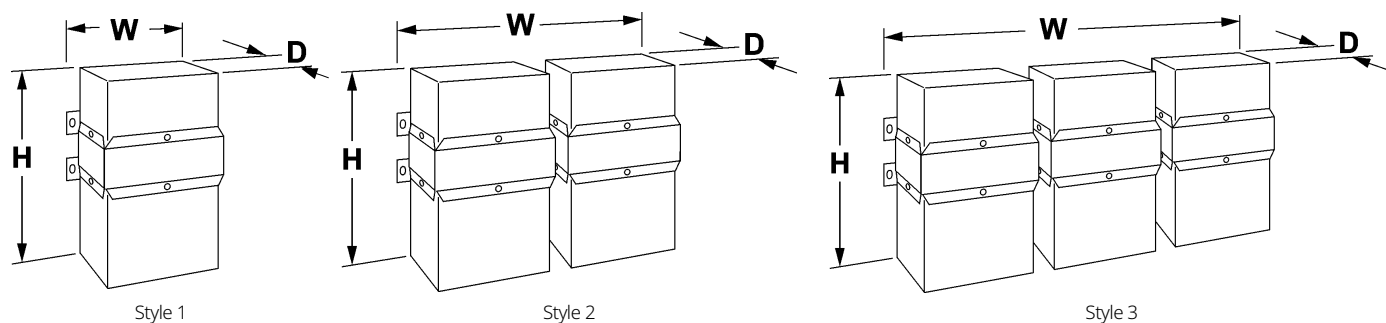
### Specifications

| Parameter                  | Condition                                                              | Value                                        |
|----------------------------|------------------------------------------------------------------------|----------------------------------------------|
| <b>Input</b>               |                                                                        |                                              |
| Voltage                    | Continuous at full load (lower input voltage possible at lighter load) | +10% to -20% of nominal                      |
|                            | For temporary surge or sags                                            | +20% to -35% of nominal                      |
| Current ①                  | at Full Load & 80% of nominal input voltage                            | $I_{in} \cong (VA/.87)/(V_{in} \times 80\%)$ |
| Frequency                  | Please refer to catalog for more details.                              | 60 Hz                                        |
| <b>Output ②</b>            |                                                                        |                                              |
| Line Regulation            | $V_{in} > 80\%$ and $< 110\%$ of nominal                               | $\pm 1\%$                                    |
| Overload Protection        | At Nominal Input Voltage                                               | Current limited at 1.65 times rated current  |
| Output Harmonic Distortion | At Full Load within Input Range                                        | 3% total RMS content                         |
| Noise Attenuation          | -Common Mode                                                           | 40 dB                                        |
|                            | -Transverse Mode                                                       | 40 dB                                        |
| <b>General</b>             |                                                                        |                                              |
| Efficiency                 | At Full Load                                                           | Up to 92%                                    |
| Storage Temperature        | Humidity $< 95\%$ non-condensing                                       | $-20^{\circ}$ to $80^{\circ}\text{C}$        |
| Operating Temperature      | Humidity $< 95\%$ non-condensing                                       | $-20^{\circ}$ to $50^{\circ}\text{C}$        |
| Audible Noise              | Full Resistive Noise                                                   | 32 dBA to 65 dBA                             |
| Warranty                   | 10 year limited warranty                                               |                                              |

① Consult user manual for fuse sizing.

② It is recommended that the unit run at a minimum of 40-50% load. Please refer to catalog for more details.

### Design Styles ① (CVS and MCR Hardwired)



① These styles are single phase only.