



## Combination Current Voltage Transformer

### Application

All CVTO combination transformers shown in this section are suitable for revenue metering or protective relaying applications on high voltage systems rated 115 kV, 69,000 volts at 550 BIL primary with current ratings from 10 to 3000 amperes

### Fabrication

Domes and tanks are fabricated from mild steel and protected with the latest technology, powder coated external finish. ANSI 70 light gray is the standard finish color. Stainless steel domes and bases are available for high corrosion applications.

One piece, wet-process porcelain insulators are used to provide high mechanical strength with suitable cantilever for high wind and seismic locations. ANSI 70 light gray is the standard color.

Primary terminals are NEMA standard 4-hole pads, suitable for copper or aluminum connectors. The H1 terminal is provided with a by-pass protector to safeguard primary turn-to-turn insulation in cases of voltage stresses induced by high frequency, high current surges.

Separate weatherproof, hinged cover, terminal boxes with three (3) 1-½" conduit hubs are supplied for the CT and VT secondary terminations. A shorting terminal block is provided in the CT element box

All CVTO's are equipped with a 5kV HO bushing, NEMA 2-hole ground pad, magnetic oil level gauge, ¾" drain valve, ¾" oil fill plug and pressure relief valve.

### Accuracy and Thermal Rise

Current Transformer elements are available at 0.3 accuracy class at burdens of B0.1 to B1.8 for revenue metering applications. In addition, 0.15 and 0.15s high accuracy class designs are available.

CVTO-550 voltage elements are designed to provide 0.3% accuracy class when loaded with IEEE burdens of W, X, Y, Z and ZZ. Optional high accuracy 0.15% class is available at W, X, Y and Z Burdens.

Extended range elements and custom designs are available for wind and solar applications. Contact the factory with your specific requirements.



### Magnetic Circuits

CVTO's are available in single ratio, dual ratio by secondary tap, dual ratio by series-parallel primary connection, or multi-ratio winding configurations as well as multiple core designs to fit specific requirements.

### Mounting

All CVTO transformers are designed for outdoor, vertical platform mounting and must not be tilted more than 15 degrees from vertical during installation or shipment.

### Seismic Rating

The CVTO-550 has been qualified through Dynamic Analysis to withstand High Level per IEEE 693-2005.

### Testing

Every transformer is tested in accordance with IEEE Standard C57.13 (latest revision).

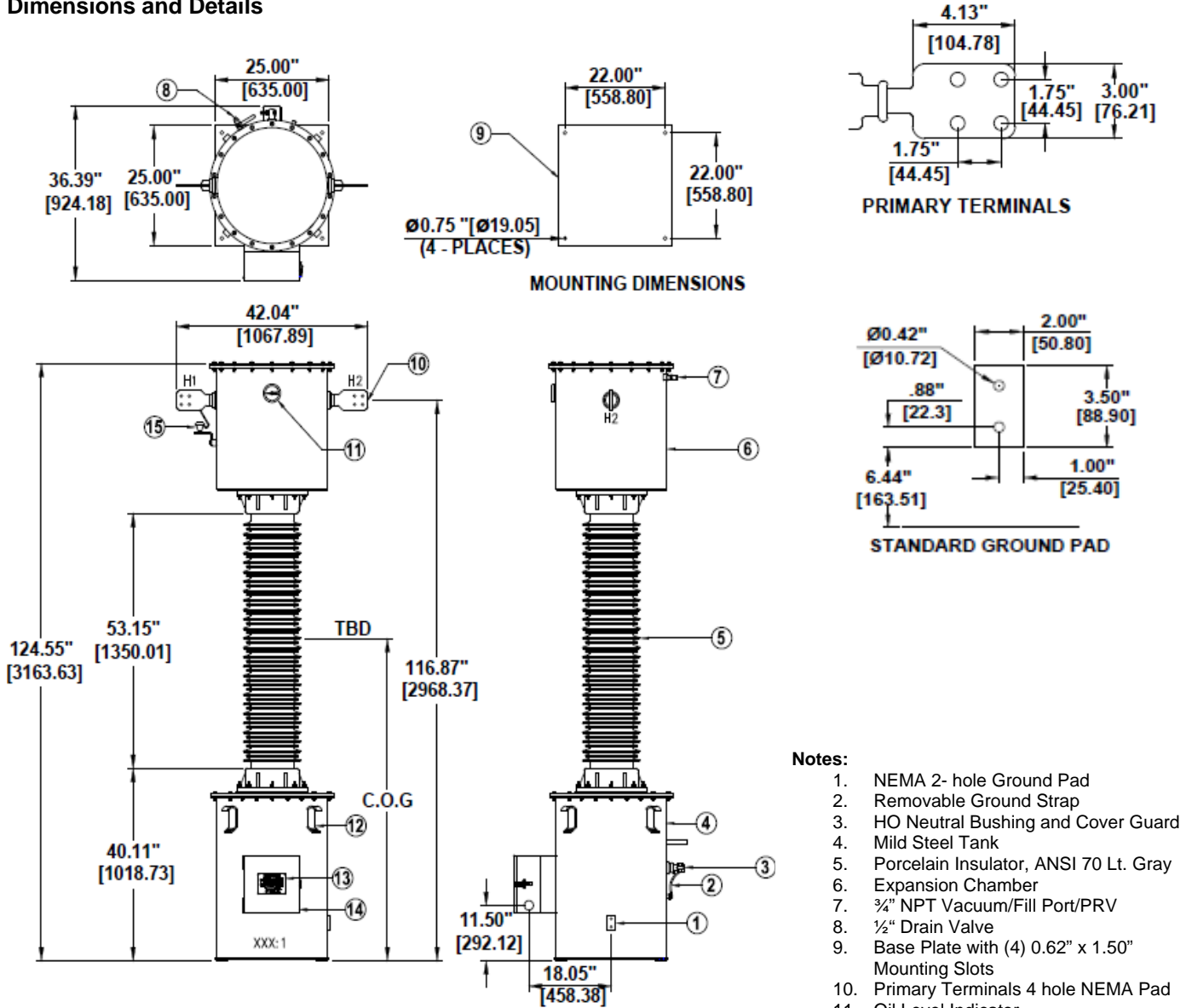
## Instrument Transformer Equipment Corporation

**Product Data**  
 CVTO-550  
 Combo Current  
 Voltage Transformer  
 115 kV Class  
 550 kV BIL



## Combination Current Voltage Transformer

### Dimensions and Details



**CVTO-550**  
 550 kV BIL  
 Weight: 2,100 lbs.  
 Oil: 110 Gallons.  
 Creep Min: 74 inches  
 Strike Min: 53 inches

#### Notes:

1. NEMA 2- hole Ground Pad
2. Removable Ground Strap
3. HO Neutral Bushing and Cover Guard
4. Mild Steel Tank
5. Porcelain Insulator, ANSI 70 Lt. Gray
6. Expansion Chamber
7. 3/4" NPT Vacuum/Fill Port/PRV
8. 1/2" Drain Valve
9. Base Plate with (4) 0.62" x 1.50" Mounting Slots
10. Primary Terminals 4 hole NEMA Pad
11. Oil Level Indicator
12. Lifting Eyes
13. Terminal Box Cover and Nameplate
14. Secondary Terminal Box with (3) 1.5" conduit hubs.
15. By Pass Protector

This information is subject to change without notice.  
 ITEC is not responsible for typographical errors.

Other ratings and options may be available  
 Please contact the factory with your requirements.

### Instrument Transformer Equipment Corporation

PO Box 129  
 Monroe, NC 28110-0129  
[www.itec-ctvt.com](http://www.itec-ctvt.com)

Tel: (704)-282-4331  
 Fax: (704) 283-3017  
 Email: [sales@itec-ctvt.com](mailto:sales@itec-ctvt.com)

## Combination Current Voltage Transformer

**Voltage Transformer Ratings - 550 BIL 115 kV 69000 V, 600/1000:1, 115/69 and 6000 VA**  
**Current Transformer Characteristics with accuracy of 0.3 B1.8**

| Dual Ratio "C" | Catalog Number  | Single Ratio "S" | Catalog Number  | Rating Factor at 30° C | Mech. Current Rating kA RMS | 1 Sec Thermal Rating kA RMS | Accuracy and Burden Rating |
|----------------|-----------------|------------------|-----------------|------------------------|-----------------------------|-----------------------------|----------------------------|
| 25/50:5        | MD205500050C000 | 50:5             | MD205500050S000 | 1.5                    | 3.75                        | 3.5                         | 0.3 B1.8                   |
| 50/100:5       | MD205500100C000 | 100:5            | MD205500100S000 | 1.5                    | 7.5                         | 6.0                         | 0.3 B1.8                   |
| 75/150:5       | MD205500150C000 | 150:5            | MD205500150S000 | 1.5                    | 11.5                        | 10.0                        | 0.3 B1.8                   |
| 100/200:5      | MD205500200C000 | 200:5            | MD205500200S000 | 1.5                    | 15.0                        | 12.0                        | 0.3 B1.8                   |
| 150/300:5      | MD205500300C000 | 300:5            | MD205500300S000 | 1.5                    | 20.0                        | 18.0                        | 0.3 B1.8                   |
| 200/400:5      | MD205500400C000 | 400:5            | MD205500400S000 | 1.5                    | 25.0                        | 25.0                        | 0.3 B1.8                   |
| 300/600:5      | MD205500600C000 | 600:5            | MD205500600S000 | 1.5                    | 30.0                        | 25.0                        | 0.3 B1.8                   |
| 400/800:5      | MD205500800C000 | 800:5            | MD205500800S000 | 1.5                    | 60.0                        | 50.0                        | 0.3 B1.8                   |
| 500/1000:5     | MD205501000C000 | 1000:5           | MD205501000S000 | 1.5                    | 60.0                        | 50.0                        | 0.3 B1.8                   |
| 600/1200:5     | MD205501200C000 | 1200:5           | MD205501200S000 | 1.5                    | 60.0                        | 50.0                        | 0.3 B1.8                   |
| 750/1500:5     | MD205501500C000 | 1500:5           | MD205501500S000 | 1.5                    | 90.0                        | 90.0                        | 0.3 B1.8                   |
| 800/1600:5     | MD205501600C000 | 1600:5           | MD205501600S000 | 1.5                    | 90.0                        | 90.0                        | 0.3 B1.8                   |
| 1000/2000:5    | MD205502000C000 | 2000:5           | MD205502000S000 | 1.5                    | 90.0                        | 90.0                        | 0.3 B1.8                   |
| 1500/3000:5    | MD205503000C000 | 3000:5           | MD205503000S000 | 1.0                    | 90.0                        | 90.0                        | 0.3 B1.8                   |

**Voltage Transformer Ratings - 550 BIL 115 kV 69000 V, 600/1000:1, 115/69 and 6000 VA**  
**Current Transformer Characteristics with accuracy of 0.15 B.18**

| Dual Ratio "P" | Catalog Number  | Single Ratio "S" | Catalog Number  | Rating Factor at 30° C | Mech. Current Rating kA RMS | 1 Sec Thermal Rating kA RMS | Accuracy and Burden Rating |
|----------------|-----------------|------------------|-----------------|------------------------|-----------------------------|-----------------------------|----------------------------|
| 75 X 150:5     | MH205500150P000 | 150:5            | MH205500150S000 | 1.5                    | 11.5                        | 10.0                        | 0.15 B1.8                  |
| 100 X 200:5    | MH205500200P000 | 200:5            | MH205500200S000 | 1.5                    | 15.0                        | 12.0                        | 0.15 B1.8                  |
| 150 X 300:5    | MH205500300P000 | 300:5            | MH205500300S000 | 1.5                    | 20.0                        | 18.0                        | 0.15 B1.8                  |
| 200 X 400:5    | MH205500400P000 | 400:5            | MH205500400S000 | 1.5                    | 25.0                        | 25.0                        | 0.15 B1.8                  |
| 300 X 600:5    | MH205500600P000 | 600:5            | MH205500600S000 | 1.5                    | 30.0                        | 25.0                        | 0.15 B1.8                  |
| 400 X 800:5    | MH205500800P000 | 800:5            | MH205500800S000 | 1.5                    | 60.0                        | 50.0                        | 0.15 B1.8                  |
| 500 X 1000:5   | MH205501000P000 | 1000:5           | MH205501000S000 | 1.5                    | 60.0                        | 50.0                        | 0.15 B1.8                  |
| 600 X 1200:5   | MH205501200P000 | 1200:5           | MH205501200S000 | 1.5                    | 60.0                        | 50.0                        | 0.15 B1.8                  |
| 750 X 1500:5   | MH205501500P000 | 1500:5           | MH205501500S000 | 1.5                    | 90.0                        | 90.0                        | 0.15 B1.8                  |
| 800 X 1600:5   | MH205501600P000 | 1600:5           | MH205501600S000 | 1.5                    | 90.0                        | 90.0                        | 0.15 B1.8                  |
| 1000 X 2000:5  | MH205502000P000 | 2000:5           | MH205502000S000 | 1.5                    | 90.0                        | 90.0                        | 0.15 B1.8                  |
| 1500 X 3000:5  | MH205503000P000 | 3000:5           | MH205503000S000 | 1.0                    | 90.0                        | 90.0                        | 0.15 B1.8                  |

This information is subject to change without notice.  
 ITEC is not responsible for typographical errors.  
 © Copyright 2016 Instrument Transformer Equipment Corporation

Other ratings and options may be available  
 Please contact the factory with your requirements.

### Instrument Transformer Equipment Corporation

PO Box 129  
 Monroe, NC 28110-0129  
[www.itec-ctvt.com](http://www.itec-ctvt.com)

Tel: (704)-282-4331  
 Fax: (704) 283-3017  
 Email: [sales@itec-ctvt.com](mailto:sales@itec-ctvt.com)