

Product Data CVTO-350 Combination Current Voltage Transformer 69 kV Class 350 kV BIL

## **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 69 kV, 40,250 volts at 350 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, <sup>3</sup>/<sub>4</sub>" drain valve, <sup>3</sup>/<sub>4</sub>" 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-350 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-350 has been qualified through Dynamic Analysis to withstand High Level per IEEE 693-2005.

## **Testing**

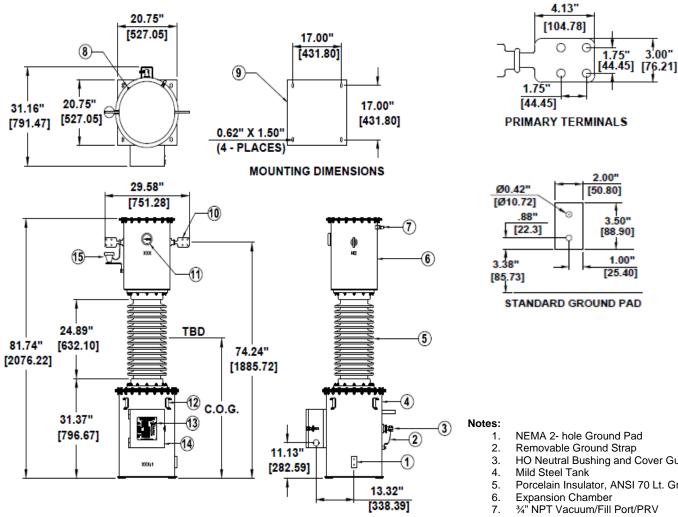
Every transformer is tested in accordance with IEEE Standard C57.13 (latest revision).

Tel: (704)-282-4331 Fax: (704) 283-3017 Email: sales@itec-ctvt.com **Product Data CVTO-350** Combo Current Voltage Transformer 69 kV Class 350 kV BIL



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#### **Dimensions and Details**



#### **CVTO-350**

350 kV BIL

Creep Min: 52 inches Strike Min: 23 inches Weight: 1100 lbs.

NEMA 2- hole Ground Pad

Removable Ground Strap

HO Neutral Bushing and Cover Guard

3.00"

Porcelain Insulator, ANSI 70 Lt. Gray

3/4" NPT Vacuum/Fill Port/PRV

1/2" Drain Valve

Base Plate with (4) 0.62" x 1.50" Mounting Slots

Primary Terminals 4 hole NEMA Pad

Oil Level Indicator 11

Lifting Eyes

Terminal Box Cover and Nameplate 13.

Secondary Terminal Box with (3) 1.5" conduit hubs.

By Pass Protector

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

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# **Combination Current Voltage Transformer**

Voltage Transformer Ratings - 350 BIL 69 kV 40,250 V, 350/600:1, 115/67.08 and 4000 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	MC203500050C000	50:5	MC203500050S000	1.5	3.75	3.5	0.3 B1.8
50/100:5	MC203500100C000	100:5	MC203500100S000	1.5	7.5	6.0	0.3 B1.8
75/150:5	MC203500150C000	150:5	MC203500150S000	1.5	11.5	10.0	0.3 B1.8
100/200:5	MC203500200C000	200:5	MC203500200S000	1.5	15.0	12.0	0.3 B1.8
150/300:5	MC203500300C000	300:5	MC203500300S000	1.5	20.0	18.0	0.3 B1.8
200/400:5	MC203500400C000	400:5	MC203500400S000	1.5	25.0	25.0	0.3 B1.8
300/600:5	MC203500600C000	600:5	MC203500600S000	1.5	30.0	25.0	0.3 B1.8
400/800:5	MC203500800C000	800:5	MC203500800S000	1.5	60.0	50.0	0.3 B1.8
500/1000:5	MC203501000C000	1000:5	MC203501000S000	1.5	60.0	50.0	0.3 B1.8
600/1200:5	MC203501200C000	1200:5	MC203501200S000	1.5	60.0	50.0	0.3 B1.8
750/1500:5	MC203501500C000	1500:5	MC203501500S000	1.5	90.0	90.0	0.3 B1.8
800/1600:5	MC203501600C000	1600:5	MC203501600S000	1.5	90.0	90.0	0.3 B1.8
1000/2000:5	MC203502000C000	2000:5	MC203502000S000	1.5	90.0	90.0	0.3 B1.8
1500/3000:5	MC203503000C000	3000:5	MC203503000S000	1.0	90.0	90.0	0.3 B1.8

Voltage Transformer Ratings - 350 BIL 69 kV 40,250 V, 350/600:1, 115/67.08 and 4000 VA Current Transformer Characteristics with accuracy of 0.15 B1.8

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	MH203500150P000	150:5	MH203500150S000	1.5	11.5	10.0	0.15 B1.8
100 X 200:5	MH203500200P000	200:5	MH203500200S000	1.5	15.0	12.0	0.15 B1.8
150 X 300:5	MH203500300P000	300:5	MH203500300S000	1.5	20.0	18.0	0.15 B1.8
200 X 400:5	MH203500400P000	400:5	MH203500400S000	1.5	25.0	25.0	0.15 B1.8
300 X 600:5	MH203500600P000	600:5	MH203500600S000	1.5	30.0	25.0	0.15 B1.8
400 X 800:5	MH203500800P000	800:5	MH203500800S000	1.5	60.0	50.0	0.15 B1.8
500 X 1000:5	MH203501000P000	1000:5	MH203501000S000	1.5	60.0	50.0	0.15 B1.8
600 X 1200:5	MH203501200P000	1200:5	MH203501200S000	1.5	60.0	50.0	0.15 B1.8
750 X 1500:5	MH203501500P000	1500:5	MH203501500S000	1.5	90.0	90.0	0.15 B1.8
800 X 1600:5	MH203501600P000	1600:5	MH203501600S000	1.5	90.0	90.0	0.15 B1.8
1000 X 2000:5	MH203502000P000	2000:5	MH203502000S000	1.5	90.0	90.0	0.15 B1.8
1500 X 3000:5	MH203503000P000	3000:5	MH203503000S000	1.0	90.0	90.0	0.15 B1.8

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