

# Perfect

## Instrument Transformers upto 33 kV Class

## Conforming to :

IS : 2705 IS : 3156 IS : 3427 IEC : 185

IEC : 186

- Outdoor Oilcooled CT's, PT's and CT-PT Combined Units
- Indoor Resin Cast CT's and PT's
- Dry Type CT-PT Combined Units
- Metering Cubicles / Units / Panels
- Interposing and Summation CT's
- L.T. Tape Wound & Resin Cast CT's
- Control Transformers
- Indoor Resin Cast CT's and PT's suitable for different make Panels / Switchgears

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Perfect Sales Corporation
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Fully Type tested by CPRI & ERDA

## Company Profile

Perfect was formed in the year 1990 as a L.T. C.T. manufacturers. Inspired by the overwhelming response, the manufacturing range was further upgraded upto 33 kV class backed by team of technocrats.

Today, we are recognized as one of the reputed manufacturers of Instrument Transformers.

Our Instrument Transformers upto 33 kV class are fully type tested from CPRI and ERDA.

Our plant is well equipped with manufacturing and testing equipments.

We have the privilege of having a long list of clients both private and public sectors including State Electricity Boards.

### **Product Profile**

#### **CURRENT TRANSFORMER**

A Current Transformer is the measuring device for metering and protection system. The primary current of the CT is transformed into the required secondary current of 5A or 1A.

Measuring CT's have different class of accuracy i.e. 0.1, 0.2S, 0.2, 0.5S, 0.5 & 1.0 and protection CT's have 5P10, 5P20 and 10P10. In the case of special protection CT's (PS class), the Knee Point Voltage (Vk) of the CT is specified alongwith secondary resistance and magnetizing current.

The construction of the CT not only depends upon the ratio but also on the Short Time Current Rating, Burden and Class of Accuracy.



11 kV Resin Cast C.T.

33 kV Oil Cooled CT.

#### POTENTIAL TRANSFORMER

The primary and secondary winding of Potential Transformer is magnetically coupled by a core. PT is used to further step down the system voltage to measurable value upto 63.5 V, 100 V or 110 V as per standard of the equipment.

The typical class of accuracy of metering PT are 0.1, 0.2, 0.5, 1.0 and protection PT is 3P. The PT's are offered in single phase or three phase version.



33 kV Oil Cooled PT

11 kV Resin Cast PT

#### CT-PT COMBINED UNIT

CT-PT Combined Unit are also called metering units. These units can be offered as Dry Type or Oil Immersed.

The Metering Unit Consists:

- i) 02 nos. Single Phase CT's & 01 no. Three Phase PT
- ii) 03 nos. Single Phase CT's & 01 no. Three Phase PT
- iii) 02 nos. or 03 nos. Single Phase CT's & 03 nos. Single Phase PT's.

CT-PT Combined Units are used for both indoor / outdoor application.



22kV / 33kV CT-PT Combined Unit

(Oil Cooled)

11kV CT-PT Combined Unit (Dry Type / Oil Cooled)



#### METERING UNIT / CUBICLE / PANEL

Metering Cubicle is a combination of CT-PT unit and metering chamber.

#### The CT-PT Chamber Consists:

- i) 02 nos. Single Phase CT's & 01 no. Three Phase PT.
- ii) 03 nos. Single Phase CT's & 01 no. Three Phase PT.
- iii) 02 or 03 nos. Single Phase CT's & 03 nos. Single Phase PT's.

#### The Metering Chamber Consists:

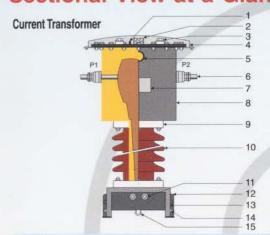
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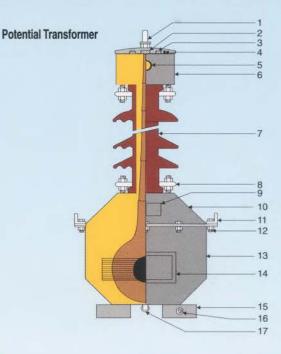
11kV metering cubicle with bottom cable entry

11kV metering cubicle with side cable entry

## Sectional View at a Glance



Sr.No.	Description	Material
1.	Nitrogen Valve	MS / Brass
2.	Pressure Release Device	MS
3.	Oil Filing Cap	MS
4.	Canopy / Hood	MS
5.	Oil Level Gauge	MS
6.	Primary Terminals	Cu / Brass
7.	Name Plate	Aluminium
8.	CT Tank	MS / SS
9.	Bushing Clamps	Aluminium/MS
10.	Insulator (Bushing)	Porcelain
11.	Secondary Terminals	Brass
12.	Lifting Lugs	MS
13.	Mounting Base	MS
14.	Earthing Terminals	MS
15.	Oil Drain Plug	MS



Sr. No.	Description	Material
1.	HV Terminal	Brass
2.	Pressure Release Device	MS
3.	Oil Filling Cap	MS
4.	Nitrogen Valve	MS/Brass
5.	Oil Level Gauge	MS
6.	Oil Conservator	MS
7.	Insulator (Bushing)	Porcelain
8.	Bushing Clamps	MS/Aluminium
9.	Name Plate	Aluminium
10.	Top Tank Cover	MS
11.	Lifting Lugs	MS
12.	Cover Fixing Bolts	MS
13.	PT Tank	MS
14.	Secondary Terminal Box	MS
15.	Mounting Channels	MS
16.	Earthing Terminal	MS
17.	Oil Drain Plug	MS

## **Constructional Features**

The core is made from non-ageing CRGO silicon steel laminations & Insulation is done with high grade paper insulation for proper distribution of electrical stresses & better voltage withstand capability.

EHV Grade new Insulating Oil is used as per IS: 335.

## **Testing**

#### **ROUTINE TEST**

Each Instrument Transformer is subject to all routine test as per customer specification and relevent IS / IEC.

#### TYPE TEST

The Instrument Transformers are regularly tested for type test as per respective IS / IEC from the Govt. recognized test houses like CPRI & ERDA. **Perfect** has inhouse facility for Temperature Rise Test.



T-Connector for ACSR Conductor



P.G. Clamp for ACSR Conductor.



Brass lug for Dist. Transformer



**Our other Product Range** 

CT Meter Box



Bus Bar Spout for 11 kV Switchgears



Trolly / Isolator Bushing for 11 kV OCB's



Pad Clamp



Turbulator / Arcpot for 11 kV OCB's



LT Bushing Rod for Dist. Transformer



\* Due to continual efforts to improve the design & quality of the product, hence, the supplied product may differ from the picture illustrated in this brochure.



## **Perfect Sales Corporation**

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