

PRODUCT PROFILE

Outdoor Cyclo-aliphatic Resin Cast Instrument Transformers up to 36 kV

As per IEC 60044-1 & IEC 60044-2



GENERAL TECHNICAL PARTICULARS FOR CURRENT AND VOLTAGE TRANSFORMERS						
Sr. No.	Particulars	Unit	12 kV	12 kV	24 kV	36 kV
1	Type Designation CT	--	GDC 12-1	--	GDC 36-1	GDC 36-1
2	Type Designation VT	--	GDV 12-1	GDV 12-2	GDV 36-1	GDV 36-1
3	Rated System Voltage	kV	11	11	22	33
4	Highest System Voltage	KV	12	12	24	36
5	1 Min. Power Frequency. Dry/Wet withstand Voltage on Primary Winding	kV	28/38	28/38	50/55	70/85
6	1 Min. Power Frequency. Dry/Wet withstand Voltage on Secondary Winding	kV	3 or as per relevant standard	3 or as per relevant standard	3 or as per relevant standard	3 or as per relevant standard
7	Lightning Impulse Withstand Voltage(1.2x 50 μ s)	kVp	95/110	95/110	125/150	170/200
8	Minimum Creepage Distance	mm	400	400	1040	1040

CURRENT TRANSFORMERS- TECHNICAL PARTICULARS						
1	Rated Primary Current	A	Up to 1600 A	--	Up to 1600 A	Up to 1600 A
2	Rated secondary Current	A	1 or 5	--	1 or 5	1 or 5
3	Short Time Thermal Withstand Current /Duration	KA/s	40/1	--	40/1	40/1
4	Short Time Dynamic Withstand Current	kAp	100	--	100	100
5	Number of Cores	--	2/3 or as per requirement	--	2/3 or as per requirement	2/3 or as per requirement
6	Output /Accuracy	--	as per requirement	--	as per requirement	as per requirement

VOLTAGE TRANSFORMERS- TECHNICAL PARTICULARS						
1	Rated primary Voltage	kV	11 kV $\pm$ 3	11 kV	22 kV $\pm$ 3	33 kV $\pm$ 3
2	Rated Secondary Voltage	kV	110/ $\pm$ 3 or 110/3 or 110V	110V or as per requirement	110/ $\pm$ 3 or 110/3 or 110V	110/ $\pm$ 3 or 110/3 or 110V
3	Voltage Factor	--	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont.	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont. / 1.9 for 8 hrs
4	Output / Accuracy	--	As per requirement	As per requirement	As per requirement	As per requirement
5	Short Circuit Withstand Capability	s	1	1	1	1
6	Number of Secondary Windings	--	Maximum 3	Maximum 3	Maximum 3	Maximum 3

Note: The above information is very general in nature. Please contact us with your detailed specification to check the feasibility of design.

Construction:

The toroidal core and winding assembly (in case of CT) or core and coil assembly (in case of VT) is encapsulated in cyclo-aliphatic epoxy resin in a single process under vacuum. The resin colour is brick red or can be as per requirement. The epoxy resin has excellent tracking resistance, high mechanical strength, ability to withstand ultraviolet radiation and weathering effects. It is also inflammable and thus no risk of fire.

Secondary Terminal Box:

The cast aluminium terminal box is designed to take one or more cable glands at the bottom side. The box is attached to the transformer body in an industry standard pattern and can be easily detached.

Base Plate:

The base plate is made up of painted steel / HDG Steel (stainless steel optional). Exposed metal parts are shot blasted, cold zinc sprayed followed by zinc rich primer coat and polyurethane based top coat. Mounting dimensions can be as per customer requirement.

Name plates:

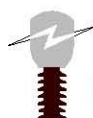
Transformers are provided with stainless steel rating plates.

Type and Routine Tests:

All type tests are done as per latest IEC 60044-1: 2003 and 60044-2: 2003.

All units shall be tested for all routine tests as per relevant standard. Each transformer will carry detailed routine test report.

All transformers are assured for partial discharge free performance.



GEMINI INSTRATECH
PRIVATE LIMITED

PRODUCT PROFILE

OUTDOOR OIP INSULATED CURRENT & VOLTAGE TRANSFORMERS up to 145 kV

As per IEC 60044-1 & 60044-2



GENERAL TECHNICAL PARTICULARS

Sr. No.	Particulars	Unit	Voltage Class				
			12 kV	36 kV	52 kV	72.5 kV	145kV
1	Type Designation CT	--	GCT 12	GCT 36	GCT 52	GCT 72.5	GCT 145
2	Type Designation VT	--	GVT 12	GVT 36	GVT 52	GVT 72.5	GVT 145
2	Rated System Voltage	kV	11	33	47	66	132
3	Highest System Voltage	KV	12	36	52	72.5	145
4	1 Min. Power Frequency, Dry/Wet withstand Voltage on Primary Winding	kV	28/38	70/80	95	140/160	275
5	1 Min. Power Frequency, Dry/Wet withstand Voltage on Secondary Winding	kV	3 or as per relevant standard	3 or as per relevant standard	3 or as per relevant standard	3 or as per relevant standard	3 or as per relevant standard
6	Lightning Impulse Withstand Voltage(1.2x 50 μ s)	kVp	95	170	250	325	650
7	Minimum Creepage Distance	mm	400	1040	1300	2250	3625
8	Minimum Arcing Distance	mm	208	425	425	816	1208

CURRENT TRANSFORMER - TECHNICAL PARTICULARS

1	Rated Primary Current	A	Up to 1600 A	Up to 1600 A	Up to 1600 A	Up to 1600 A	Up to 2000 A
2	Rated secondary Current	A	1 or 5	1 or 5	1 or 5	1 or 5	1 or 5
3	Short Time Thermal Withstand Current /Duration	kA/s	40/1	40/1	40/1	40/1	40/1
4	Short Time Dynamic Withstand Current	kAp	100	100	100	100	100
5	Number of Cores	--	3 /4 or as per requirement	3 /4 or as per requirement	3 /4 or as per requirement	3 /4 or as per requirement	4 /5 or as per requirement
6	Output /Accuracy	--	as per requirement	as per requirement	as per requirement	as per requirement	as per requirement

VOLTAGE TRANSFORMER - TECHNICAL PARTICULARS

1	Rated primary Voltage	kV	11 kV / $\sqrt{3}$	33 kV / $\sqrt{3}$	47 kV / $\sqrt{3}$	66 kV / $\sqrt{3}$	132 kV / $\sqrt{3}$
2	Rated Secondary Voltage	kV	110/ $\sqrt{3}$ or 110/3 or 110V	110/ $\sqrt{3}$ or 110/3 or 110V	110/ $\sqrt{3}$ or 110/3 or 110V	110/ $\sqrt{3}$ or 110/3 or 110V	110/ $\sqrt{3}$ or 110/3 or 110V
3	Voltage Factor	--	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont. / 1.9 for 8 hrs	1.2 Cont. / 1.9 for 8 hrs
4	Output / Accuracy	--	As per requirement	As per requirement	As per requirement	As per requirement	As per requirement
5	Short Circuit Withstand Capability	s	1	1	1	1	1
6	Number of Secondary Windings	--	Maximum 3	Maximum 3	Maximum 3	Maximum 3	Maximum 3

Note: The information given above is very general in nature. Please contact us with your detailed specification to check the feasibility of design.

SURFACE TREATMENT

Pre-treatment	Shot Blasting and Spray Galvanizing
Exterior Coat	2 Coats of Zinc Rich Primer followed by 1 Coat of Poly-urethane base paint
Minimum DFT	120 microns
Shade	As per requirement

Notes:

- When Aluminium parts are used for housing / fabrication, pre-treatment shall be only shot blasting, followed by exterior coating as stated above.
- In some special cases, HDG can be offered for the bottom-housing unit only.

SPECIAL FEATURES OF OUR PRODUCTS

- The transformers are fully oil filled and truly hermetically sealed. Stainless steel diaphragm is used for oil volume compensation.
- Insulator is cemented to the metallic flanges.
- All gaskets and 'o' rings are assembled in dimensioned grooves and are not exposed to atmosphere.
- Insulation is capacitively graded and processed for partial discharge free performance.
- The primary terminal is a single component and cannot be removed from outside.
- The top cover is shaped so that rainwater / dust do not accumulate.
- The secondary terminal stations are sealing independent and are replaceable.
- The products are Shatter- Proof in the event of internal failure.
- Higher creepage distance can also be offered.