

# Pole Mounted Transformers

## Main Features

<b>Applicable Standard</b>	ANSI C57.12.20
<b>Type</b>	CON and CSPCON Type & CSP Type
<b>Frequency</b>	60Hz / 50Hz
<b>Efficiency Standard</b>	DOE 2016 / CSA 802.1 / TP1
<b>Core</b>	C.R.G.O (Cold Rolled Grain Oriented) / Core & Amorphous Core
<b>Winding Material</b>	Cu-Cu / Cu-Al / Al-Al
<b>Tap Range</b>	±5% in 2.5% increments (4 tap positions: +2, +1, 0, -1, -2)
<b>Product Scope</b>	5 kVA – 167 kVA
<b>Primary Voltage</b>	2400V to 19920V
<b>Secondary Voltage</b>	120V to 600V



## Additional Parameters

<b>Insulation Class</b>	Typically Class A or B (consult spec sheet for precise class)
<b>Cooling Method</b>	ONAN (Oil Natural Air Natural)
<b>Mounting Type</b>	Pole-mounted or Pad-mounted (based on CSP or CON type)
<b>Temperature Rise</b>	Generally 55°C / 65°C
<b>Impedance Range</b>	Usually 2% to 6% depending on size
<b>BIL (Basic Impulse Level)</b>	95kV (typical for 15kV class), varies with voltage rating
<b>Enclosure Type</b>	Sealed Tank (with pressure relief) or Conventional vented tank
<b>Protection Features (CSP)</b>	Internal primary fuse, secondary breaker, lightning arrester, relay
<b>Primary Voltage</b>	2400V to 19920V
<b>Secondary Voltage</b>	120V to 600V

## Single-Phase Pole-Mounted Distribution Transformers

Rated Power (kVA)	High Voltage (kV)	Low Voltage (V)	No-Load Loss (W)	Load Loss (W)	Oil Weight (kg)	Total Weight (kg)
3	6, 6.35, 6.66, 7.2, 7.6, 10, 11, 13.2, 13.8	120/240, 240/480, 139/277, 120/208, 600	9	45	–	–
5	Same as above	Same as above	19	75	–	–
10	Same as above	Same as above	36	120	22	150
15	Same as above	Same as above	50	195	30	210
25	34500 / 19920 or 6–13.8 (per above)	120–240, 240–480, 347, 600	80	290	45	258
37.5	13800 / 7957	Same as above	105	360	50	340
50	13200 / 7620	Same as above	135	500	62	395
75	12470 / 7200 or others	Same as above	190	650	88	480
100	Same as above	Same as above	210	850	94	530
167	Same as above	Same as above	350	1410	138	680
250	–	–	–	2000	–	990
333	–	–	–	2500	–	1160

## Transformer Manufacturing Overview

Transformer Specifications we follow and passed to produce the product.

### Three Phase Transformers Table 2

Voltage Ratio	kVA Rating	Maximum No-Load Losses in Watts	Maximum Load Losses in Watts
33kV/400/230V	25	85	1210
33kV/400/230V	50	160	1440
33kV/400/230V	100	310	1900
33kV/400/230V	200	540	2810

### Single Phase Transformers Table 3

Voltage Ratio	kVA Rating	Maximum No-Load Losses in Watts	Maximum Load Losses in Watts
33kV/250V-0-250V	10	25	614
33kV/250V-0-250V	15	40	652
33kV/250V-0-250V	25	52	780
33kV/250V-0-250V	50	100	1008

## Standards Compliance

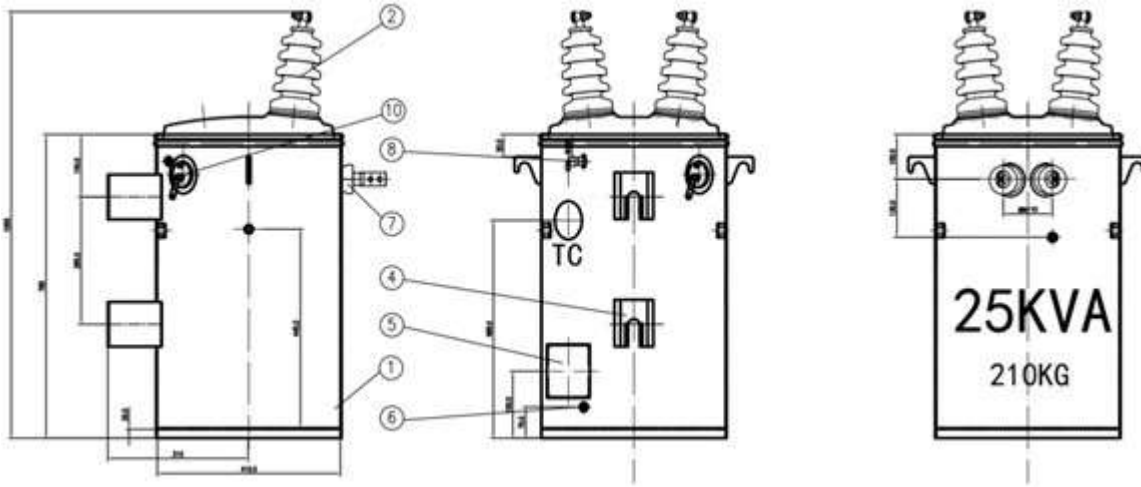
We adhere to the following international standards to ensure the quality and reliability of our pole-mounted transformers:

- IEC 60137 – Insulated bushings for AC voltages above 1 kV
- IEC 60076-1 – Power Transformers – General
- IEC 60076-2 – Temperature rise
- IEC 60076-3 – Insulation levels, dielectric tests, and external clearances in air
- IEC 60076-5 – Ability to withstand short circuits
- IEC 60076-7 – Loading guide for oil-immersed transformers
- IEC 60296 – Specification for unused mineral insulating oils for transformers and switchgear
- IEC 60076-10 – Determination of transformer and reactor sound levels
- IEC 60437 – Radio Interference Test on High Voltage Insulators
- IEC 296-1969, IEC 76 – Specification for power transformers
- IEC 296-1969 – Bushing for alternating voltages above 1000V
- DIN 42531 to 33 – Specification for Outdoor Bushings
- ASTM D-1275 – Specification for fittings and accessories for power transformers
- IEC 76 – Guide for loading of oil-immersed transformers
- BS 159:1957, BS 3288 (Part-1):1960 – Electrical power connector
- IEC 554 – Specification for Insulating Kraft Paper
- IEC 641 – Specification for Insulating Press Board
- ASTM B-233 – Specification for Al Wire rods
- ASTM D-1275 – Manual on Transformer
- ASTM D-202 – Testing of Insulation Papers
- ISO 2063 – Metallic Coatings – Protection of Iron and Steel against Corrosion

## Single-Phase Pole-Mounted Distribution Transformers

Rated Capacity (kVA)	High Pressure (kV)	High-Pressure Tap Range (%)	Low Pressure (kV)	Vector Group Symbol	No-Load Loss (W)	Load Loss (W)	No-Load Current (%)	Short Circuit Impedance (%)
5	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	40	215	3.2	3.5
10	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	45	235	2.8	3.5
15	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	53	315	2.8	3.5
20	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	62	405	2.8	3.5
25	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	70	480	2.8	3.5
30	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	80	560	2.8	3.5
50	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	120	855	2.3	3.5
63	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	135	1020	2.1	3.5
80	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	160	1260	2.0	3.5
100	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	190	1485	1.9	3.5
125	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	220	1755	1.8	3.5
160	6 / 6.3 / 10 / 10.5 / 11	±2×2.5 / ±5	0.22 / 0.23 / 0.24	iio / li6	260	2050	1.6	3.5

## Dimensions & Features



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