

SSVT 72.5~550kV

SF₆ Station Service Voltage Transformers SF₆ Power Voltage Transformers



Standards

Voltage transformer are designed in accordance with IEC61869-3, ANSI/IEEE C57.13,
Power transformer are desinged in accordance with IEC 60076, ANSI/IEEE C57.12

Description

The SSVT is a voltage transformer insulated in SF₆ Gas that combines the characteristics of a voltage transformer with power transformation capability. The SSVT has been designed for voltage up to 245 kV and with power capability up to 333 kVA. SSVT converts the optimum power directly from high voltage side to medium/low voltage side.

The SSVT feature rugged transformer designs incorporating high creepage porcelain insulators and high over-voltage capability with impedance protection to limit fault currents. The SSVT is a line-to-ground connected single-phase transformer that can be used either as an individual unit for supplying single-phase

loads, or in a three-phase bank to support larger kVA three-phase loads.

There is a pressure relief device at the top of the power transformer, when the pressure is more than 0.8MPa (1.0 MPa only for 500 kV) if the power transformer is discharge inside, the relief device will be broken to release the pressure and send an alarm information. There is a SF₆ density monitor fix at the base, it can indicate the SF₆ pressure which inside the power transformer (its indicated value is the SF₆ pressure at 20°C), and it will provide an information when the SF₆ pressure is drop down to the minimum service pressure of the power transformer, to remind the user replenish the SF₆ gas to the rated pressure.

Main Technical Characteristics

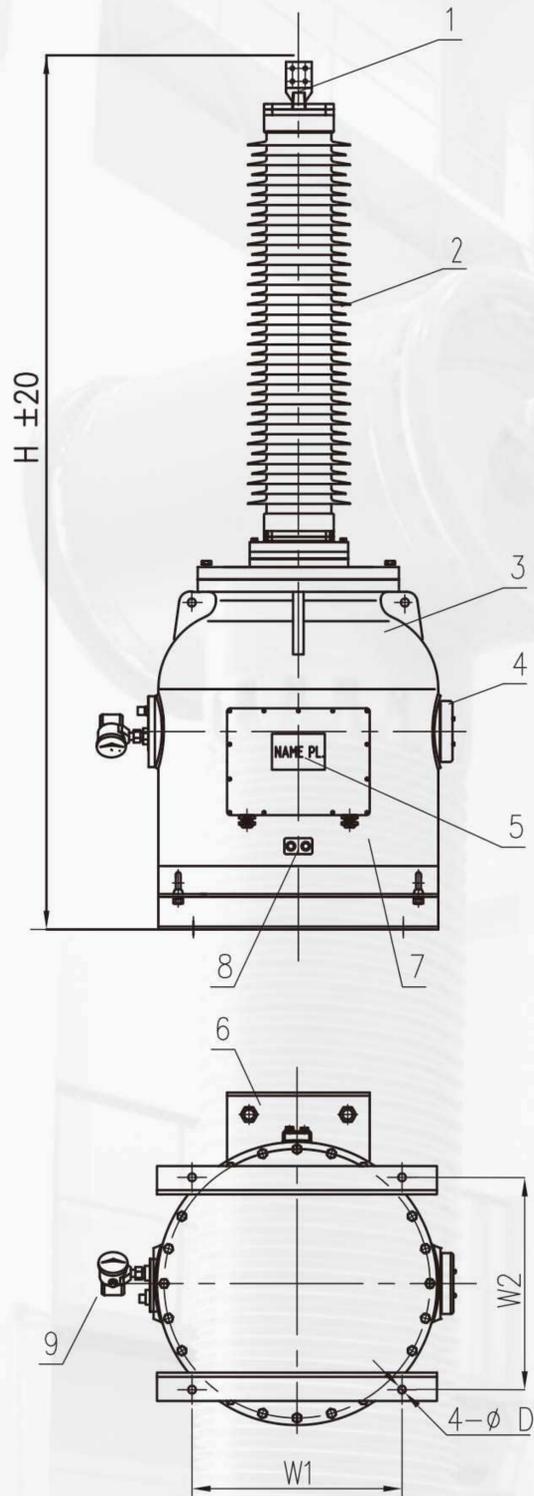
- Highest system voltage: 72.5~245kV
- Rated frequency: 50Hz or 60 Hz
- Output voltage: 120 to 400V
or according to the requirements of the clients.
- Rated power:25, 50, 75, 100, 125 and 333 kVA
or according to the requirements of the clients
- Partial discharge level:<10pC
- Metering accuracy class IEC:0.2, 0.5, 1.0
- Metering accuracy class IEEE:0.3, 0.6, 1.2
- Protection accuracy class:3P, 6P
- Rated voltage factor: 1.2 continue, 1.5/30s
- Rated operating pressure of gas Sf6is 0.40MPa
(0.50 Mpa only for 500kV)
- Minimun operating pressure of the gas is 0.35MPa
(0.45 Mpa only for 500kV)
- Annual leakage:≤0.1% at the rated pressure of Sf₆
- Sf₆ moisture content:≤100X10⁻⁶(V/V)
- Temperature rise limit: ≤60K

- Ambient temperature: -50°C~+50°C
- Creepage distance: 25mm or 31mm/kV
- Earthquake standard design: up to 0.5g

Basic insulation level

Type	Highest system voltage kV (r.m.s)	Power frequency withstand voltage kV (r.m.s)	Lightning impulse test voltage kV (peak)
SSVT-72.5	72.5	140	350
SSVT-110	123	230	550
SSVT-145	145	275	650
SSVT-170	170	325	750
SSVT-245	245	460	1050
SSVT-362	362	510	1175
SSVT-420	420	680	1550
SSVT-550	550	740	1675

Outline Drawing & Dimensions



BASE MOUNTING DIMENSION

- 1, PRIMAY TERMINAL
- 2, COMPOSITE INSULATOR
- 3, ALUMINUM HOUSING
- 4, RUPTUR DISK
- 5, NAME PLATE
- 6, SECONDARY TERMINAL BOX
- 7, LV CABLEGLAND PG 42X2 PG 21x2
- 8, EARTHING TERMINAL
- 9, DENSITY MANOMETER

Type	Rated power (KVA)	H (mm)	W1 (mm)	W2 (mm)	D (mm)
SSVT-72.5	25	1650	400	400	20
	50	1650	400	400	20
	75	1780	600	600	24
	100	1922	600	600	24
	125	1922	600	600	24
SSVT-110	25	2005	600	600	24
	50	2005	600	600	24
	75	2272	600	600	24
	100	2435	600	600	24
	125	2435	600	600	24
SSVT-145	25	2005	600	600	24
	50	2005	600	600	24
	75	2272	600	600	24
	100	2435	600	600	24
	125	2435	600	600	24
SSVT-170	25	2125	600	600	24
	50	2125	600	600	24
	75	2375	600	600	24
	100	2568	600	600	24
	125	2568	600	600	24
SSVT-245	25	3670	600	600	24
	50	3670	600	600	24
	75	3822	600	600	24
	100	3982	600	600	24
	125	3982	600	600	24
SSVT-362	25	4450	600	600	24
	50	4450	600	600	24
	75	4630	600	600	24
	100	4730	600	600	24
	125	4730	600	600	24
SSVT-420	25	4920	600	600	24
	50	4920	600	600	24
	75	4920	680	680	32
	100	4920	680	680	32
	125	4920	680	680	32
SSVT-550	25	6220	600	600	24
	50	6220	600	600	24
	75	6438	680	680	32
	100	6550	680	680	32
	125	6550	680	680	32