



YL Series

High Voltage Standard Capacitor
(10-1800kV)



- ✓ Capacitance & Tan delta Measurement
- ✓ Reactor Loss & Power Factor Measurement
- ✓ Accuracy Measurement for Potential Transformer
- ✓ High Accuracy Voltage Measurement
- ✓ Partial Discharge Measurement

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Brief

YL series High Voltage Standard Capacitor is a stable SF6 gas-insulated standard capacitor with the voltage range from 10kV to 18000kV. Those HV and UHV test labs widely use it with the measuring bridge or the tan delta measurement device so as to measure the technical data of the test objects in the accurate way, including capacitance, tg delta value, power factor, voltage, frequency etc.. While these data are very important for the insulation evaluation upon the capacitive test object such as cable, bushing, instrument transformer, capacitor etc. Furthermore, YL series HV standard capacitor can also work with the high accurate current transformer to measure the inductance and loss of those reactors which have low power factor.



YL series High Voltage Standard Capacitor can be the HV arm for a capacitive voltage divider. Its good temperature coefficient and voltage coefficient ensures its high accuracy in the voltage measurement. With an electronic LV arm, YL capacitor can replace the standard potential transformer from 10kV to 1000kV for the calibration of angle error and ratio error upon the potential transformer. Moreover, it can do accurate voltage measurement for the HV output of transformer.



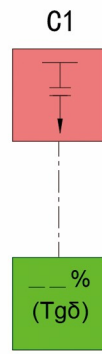
The YL series capacitor (800kV class above) has three independent capacitors in parallel, C1 (300pF), C2 (20pF) + QND standard voltage divider, and C3 (500pF~1000pF) coupling capacitor which is used for partial discharge test. These three capacitors are working independently, which is a good choice to replace the coupling capacitor in the traditional HV test system so as to save a lot of space for a normal AC test system in the HV lab.

YL series High Voltage Standard Capacitor has unique internal voltage distribution structure, which allows the whole capacitor to work continuously at full rated voltage with the humidity of 95%. Equipped with composite outskirt, YL standard capacitor can work outdoor. The good 304 stainless steel is applied as the electrode for the capacitor so as to ensure the high stability, low temperature coefficient and low voltage coefficient for the capacitor.

Advantage

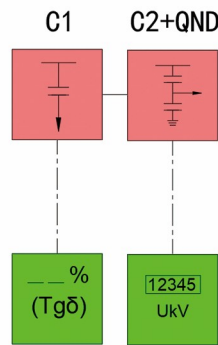
- ✓ Capacitance :10pF~10000pF;
- ✓ More than 30 sets HV standard capacitors (1000kv class above) in the world market;
- ✓ 3 in1 structure, simplifying the test procedure and decreasing the space requirement in the lab;
- ✓ The even field strength design;
- ✓ Upside-down structure for the electrode to match the impulse voltage measurement in national standard;
- ✓ Tan delta: $<1 \times 10^{-5}$;
- ✓ Wika air pressure meter, LEMO socket;
- ✓ PD Level $<5\text{pC}$ (special requirement $<2\text{pC}$) following IEC60270;
- ✓ 304# stainless steel, with super low voltage coefficient and temperature coefficient, capacitance stability $<0.01\%$ /year;
- ✓ different base option, wheel base, fixed base, air cushion base, hydraulic driving base;

YL-1 HV Standard Capacitor:



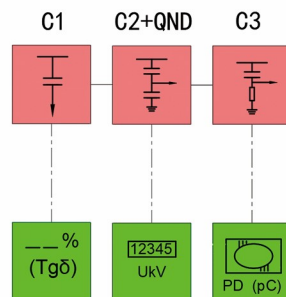
- ◆ Voltage range:10kV~800kV;
- ◆ Max Frequency:1000Hz;
- ◆ Better economic;
- ◆ Compact structure,operating in lab;
- ◆ Continuously running @ 100% rated voltage with 75% humidity, @ 80% rated voltage with 95% humidity;

YL-2 Upside-down Standard Capacitor:



- ◆ Voltage range:20kV~800kV;
- ◆ Max frequency:10MHz @ 10pF,available for impulse waveform measurement;
- ◆ Mobile structure;
- ◆ Continuously running @ 100% rated voltage with 95% humidity;

YL-3 Active Voltage-equalizing Standard Capacitor(1000kV-1800kV):



- ◆ Voltage range:1000~1800kV;
- ◆ Max frequency:1000Hz;
- ◆ UHV design , operating in lab;
- ◆ Even electric field on surface, continuously running @ 100% rated voltage with 95% humidity;
- ◆ 3 in 1 structure, with three independent capacitors,C1–standard capacitor, C2–voltage divider, C3–coupling capacitor;



Main Specification

Model	YL 10/100	YL 30/1000	YL 100/100	YL 200/100	YL 400/50	YL 600/50	YL 800/50	YL1000 /30(20)(1000)	YL1200 /30(20)(500)	YL1600 /30(20)(500)
Rated Voltage	10kV	30kV	100kV	200kV	400kV	600kV	800kV	1000kV	1200kV	1600kV
Test Voltage	15kV	36kV	120kV	240kV	480kV	660kV	880kV	1100kV	1320kV	1760kV
Rated capacitance (C ₁ /C ₂)	100pF	1000pF	100pF	100pF	50pF	50pF	50pF	30pF/20pF	30pF/20pF	30pF/20pF
Rated capacitance (C ₃)	/	/	/	/	/	/	/	1000pF	500pF	500pF
Capacitance difference (C ₁ /C ₂)	<2%									
Capacitance difference (C ₃)	<5%									
capacitance stability	0.01%/year									
tanδ (C ₁ / C ₂)	<1 x10 ⁻⁵									
PD level	< 5pC (special requirement <2pC)									
SF6 pressure	400±50kPa									
SF6 leakage rate	<0.25%/year									
Frequency	0-1000Hz (upside-down structure 0-10MHz)									
Working temperature	-5~+45°C									
Altitude	< 1000m , Note : voltage decrease by every1% when altitude increases by every 100m (above 1000m sea level)									
relative humidity	< 95%									
Temperature coefficient	3×10 ⁻⁵ /°C									
Pressure coefficient	2.2×10 ⁻³ /kPa									
Voltage deviation(0...UN)	< 3×10 ⁻⁵									
Operation	Long-term running									
Height	14cm	55cm	117cm	150cm	2.5m	3.8m	6.95m	10.6mm	11.4m	13.5m
Corona ring diameter	/	/	/	55cm	1m	1.5m	2.1m	2.8m	3.4m	4.5m
Base size	/	30cm	35cm	40cm	1.1m	1.65m	2.5m	4m	4.5m	5.5m
Weight	1.2kg	35kg	55kg	150kg	390kg	1050kg	3000kg	7000kg	8500kg	12000kg

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