3370 NK

Standard Capacitors

Datasheet

Sold & Serviced in USA by:

HV TECHNOLOGIES, Inc.

8526 Virginia Meadows Dr.
Manassas, VA 20109
(703) 365-2330
www.hvtechnologies.com
hvsales@hvtechnologies.com

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General Description

The 3370 is a series of SF6 insulated, highly stable capacitors and is used together with a power factor / tan δmeasuring instrument as a comparison standard for exact measurements of capacitance and tan d of HV equipment like cables, transformers, bushings, capacitors, etc.

The capacitors are provided with a top electrode making possible partial-discharge-free interconnections to other elements of the HV circuit. The SF6 insulated standard capacitor is designed for indoor service and is mobile on castors.

The capacitor is built as steel pressure vessel, with bushing for voltages up to 30 kV included. Above this voltage the measuring capacitance Cs is formed by the metallic pressure tank and the corresponding internal concentric electrode.

The electrodes are insulated from each other with SF6 gas. All capacitors are fitted with a pressure indicator and filling valve. Surge arrestors protect the measuring output from transients.

Features	Advantages
▪ Highly stable capacitance with no influence from atmospheric pressure and humidity	☑ Can be used as references in a variety of climate conditions
▪ Very low internal dissipation factor	☑ Suitable as references for power factor (tan δ) measurements
▪ Partial Discharge free	☑ Can stay in the circuit during the partial discharge test.
▪ Simultaneous tan d and voltage measurement (-Dual) possible upon request.	☑ One capacitor for voltage and tan δ (power factor) measurements
▪ Secondary unit for high Voltage AC measurement under request	☑ Can be connected to a kilovoltmeter for AC measurement
▪ Surge arrestors over output terminal	☑ Protection from transients

Applications

The standard capacitors are used in several applications as listed below:

- Measurements of power factor / tan delta together with a measuring bridge
- Reference Measurements of high voltages AC voltages (AC divider)

Accessories (not included)

- SF_6 filling device including:
  - 1 SF_6 filling device with …kg of SF_6 and
  - 1 connection hose with adapted fitting
- Set of HV connections type HSEV
- Secondary part for voltage measurements type SEK AC

Scope of Supply

- Standard capacitor with top electrode
- Mobile base frame
- Spare surge arrestor
- Instruction manual
- Test report

Technical Data

Measurement	
Stability of capacitance	< 0.01 % / year
Loss of pressure	< 1 % / year
Service pressure (absolute)	450 ± 50 kPa
Test pressure (absolute)	1000 kPa
tan δ	<1 x 10^{-5}
Insulation resistance	>500 MΩ
Voltage drift (0 … U_n)	< 3 x 10^{-5}
Frequency drift (10 … 1000 Hz)	< 1 x 10^{-5}

Environmental	
Operating temperature	-5 °C +45 °C
Storage temperature	-20 °C +50 °C

Type NK Un	Voltage kV	Capacitance ± 3 % pF	PD Level at Un pC	Type	Height H mm	Diameter top electrode D mm	Base frame dimension B mm	Weight net, approx. kg
5	5	1000	≤ 1(*2)	A	255	---	200	10
30	30	1000(*1)	≤ 1	B	685	---	510	90
100	100	100	≤ 2	C	1340	270	400	91
200	200	100	≤ 2	D	2000	600	1200	180
300	300	50	≤ 3	D	2570	1200	1200	350
400	400	50	≤ 3	D	3120	1200	1200	400
600	600	33.3	≤ 3	D	4300	1200	2200	800
600	600	50	≤ 3	D	4300	1200	2200	800
800	800	50	≤ 10	D	6260	2200	2790	1300
1000	1000	20	≤ 10	E	7980	2500	3020	2000
1200	1200	20	≤ 10	E	8000	3400	3700	3000

(*1): for 3370 NK/1000/30 (1000 pF, 30 kV) the capacitance specification is ± 5 %

(*2): only up to 2500 V (for NK 5 only) big b

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Global Presence

Europe
HAEFELY AG
Birsstrasse 300
4052 Basel
Switzerland

☎ + 41 61 373 4111
sales@haefely.com

China
HAEFELY AG Representative Office
8-1-602, Fortune Street, No. 67
Chaoyang Road, Beijing 100025
China

☎ + 86 10 8578 8099
sales@haefely.com.cn

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