

3721 & 3723

Dissipation Factor $\tan \delta$ Standards

Datasheet



HAEFELY

Current and voltage – our passion

Designed by



General Description

Dissipation factor $\tan \delta$ standards are designed for checking the accuracy of capacitance and dissipation factor measuring instruments.

A $\tan \delta$ standard is basically a standard capacitor in series with a resistor. To avoid excessive resistance values, a 1000 pF capacitor with a negligible dissipation factor should be used.

The resistance units are included in the scope of supply and have to be calibrated together with the standard capacitor.

The type 3721 resistance unit contains the resistors for all four $\tan \delta$ values accommodated in a sheet-metal casing. Four sockets for Lemo 3 cable are provided on one side of the casing and the two plugs on the other. The resistance of the unit plugs directly into the top of the type 3320/1000 standard capacitor.

The type 3723 resistance unit resistors for each $\tan \delta$ values are accommodated in a separate casing. Each casing plugs directly into the top of the type 3370 NK/1000/30 standard capacitor.



Type 3370 NK/30 standard capacitor used for connection of a 3723 resistance unit



Type 3721 installed on a 3320 standard capacitor

Features

- Plug in into the capacitor connector
- Tested together with the capacitor

Advantages

- ☑ No additional cables required and fast to connect
- ☑ Exact $\tan \delta$ values are submitted for the system

Applications

Checking accuracy of capacitance and $\tan \delta$ measuring instruments

Scope of Supply

- 3723 resistance units
- Test Certificate.

Technical Data

Measurement	
Dissipation factor ($\tan \delta$)	5×10^{-5} , 1×10^{-4} , 5×10^{-4} , 1×10^{-3}
Operating voltage/ capacitance	3320/1000 with 3721: max. 2 kV/1000 pF 3370 NK/1000 with 3723: max. 30 kV/1000 pF
Overall accuracy of $\tan \delta$	± 1 % of certified value $\pm 1 \times 10^{-5}$ ⁽¹⁾

⁽¹⁾Accuracy depends on dissipation factor of standard capacitor uncertainty ($\tan \delta \leq 1 \times 10^{-5}$), and measuring bridge uncertainty (see 2823-REF specs)

Environmental	
Operating temperature	0 °C +40 °C
Storage temperature	-20 °C +70 °C
Humidity	5 .. 90 % r.h. , non-condensing

Mechanical	
Dimensions (W x D x H)	Type 3721: 150 x 115 x 60 mm (5.9 x 4.5 x 2.4 in) Type 3723: 38 x 130 x 32 mm (1.5 x 5.1 x 1.3 in) each unit
Weight	Type 3721: 0.85 kg (1.87 lb) Type 3723: 0.65 kg (1.43 lb) (complete set of four)

Global Presence

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HIGH VOLTAGE



INSTRUMENTS



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