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Data Sheet 1.32/1

AC Capacitor/Resistor, Type WCR

Application

The HV AC capacitor/resistor is used together with an ohmic-capacitive low-voltage measuring branch to form a compensated AC voltage measuring divider. The HV AC capacitor/resistor has high stability and a low temperature coefficient.

General Design

The HV AC capacitor/resistor, type WCR, consists of a high-voltage (HV) AC capacitor, a parallel connected HV high-ohmic resistor, a support isolator, a top frame and a busbar connector (see Fig. 1). The capacitor has a partial-discharge-free, liquid-impregnated paper or foil-paper insulation inside a GRP tube. The thermal expansion of the liquid is compensated by means of special bellows.
The HV AC capacitor/resistor is installed on the customer's busbar system. The support isolator and the busbar connector will be specifically manufactured according to the distance from the busbars (X1) to the ceiling and the diameter of busbars (X2).

Table 1: General parameters and conditions

Duty cycle		continuous operation[1)]
Operating conditions: Ambient temperature Relative humidity Height above sea level	 °C % m	 5 … 40 ≤ 90 ≤ 1000[2)]
Installation		indoor, not-loaded mechanically
Reference atmospheric conditions (according to IEC 60060-1: 2010): Absolute pressure Temperature Absolute humidity	 hPa °C g/m[2)]	 1013 20 11

[1)] Related to the specified frequency range
[2)] Higher altitude with reduced voltage

Table 2: Main parameters

Type	Rated phase-earth Voltage	Rated capacitance	Rated resistance	Frequency	Dimension (L x W x H) (approx.)	Weight (approx.)
	kV	nF	MΩ	Hz	mm	kg
WCR 4-22/50	50	4	22	40…300	500 x 150 x 800	25
WCR 3.3-22/100	100	3.3	22	40…300	550 x 200 x 1000	30
WCR 3.3-22/160	160	3.3	22	40…300	600 x 250 x 1400	60

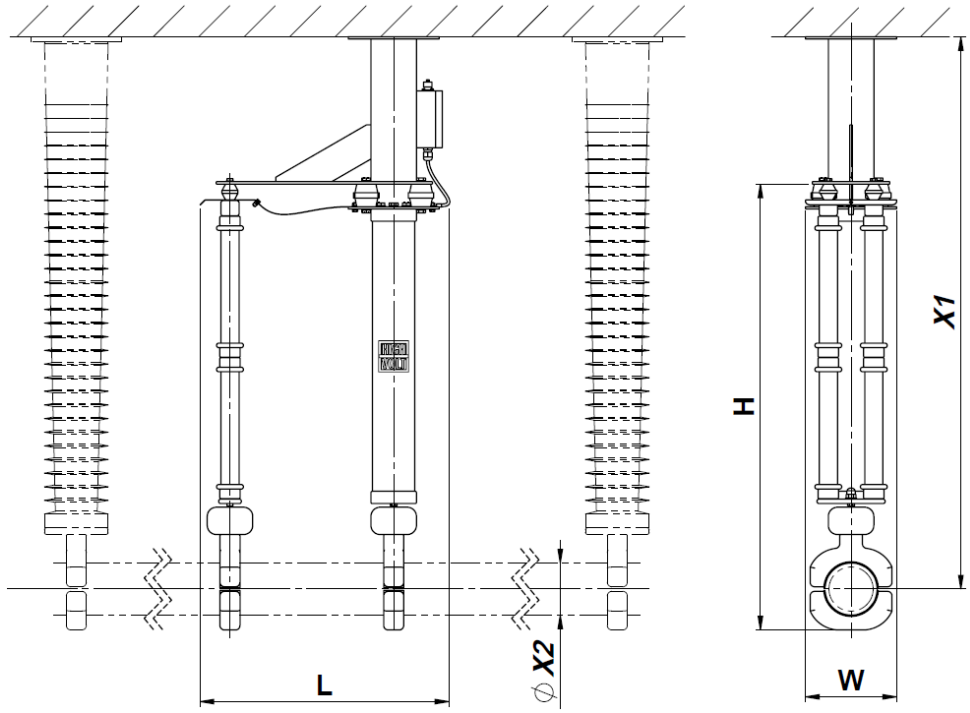

Figure 1: Sketch of an AC capacitor/resistor installed on a customer's busbar system (X1≤2H)

Type designation

WCR a-b/c

a = rated capacitance in nF
b = rated resistance in MΩ
c = rated phase-earth voltage in kV