

HV FILTERS

Partial discharge measurements are conducted in frequency ranges, which are partly covered by radio transmission. Further, impulse noise interference hamper sensitive measurements. Besides using small filters in the acquisition chain, power filters allow removing such disturbance from the high voltage supply. Power Diagnostix offers a range of different high voltage filters.

π -Filters are for three-phase systems up to 2 kV, whereas the single-phase T-filters are used for testing with higher voltages.

Those filters are installed inline between voltage source and device under test.

The typical frequency range of Power Diagnostix HV filters is 0–300 Hz. For a short time they can be operated with frequencies up to 400 Hz.

For gating purposes, filters that are used in combination with an ICMflex can be equipped with a high frequency current transformer (HF CT) and a BNC output.



Filter T100/100

TYPE	NAME	$U_{N,RMS}$	$I_{N,RMS}$	SIZE IN MM (W X H X D)
3 π -Filters	3PI1/20	1 kV	20 A	400 x 170 x 460
	3PI1/50	1 kV	50 A	400 x 170 x 460
	3PI2/20	2 kV	20 A	400 x 170 x 460
T-Filters	T30/1	30 kV	1 A	357 x 620 x 357
	T30/5	30 kV	5 A	357 x 620 x 357
	T30/20	30 kV	20 A	357 x 620 x 357
	T30/100	30 kV	100 A	507 x 620 x 357
	T50/1	50 kV	1 A	357 x 800 x 357
	T50/5	50 kV	5 A	357 x 800 x 357
	T50/20	50 kV	20 A	357 x 800 x 357
	T50/100	50 kV	100 A	500 x 800 x 450
	T100/1	100 kV	1 A	357 x 1000 x 357
	T100/5	100 kV	5 A	357 x 1000 x 357
	T100/20	100 kV	20 A	357 x 1000 x 357
	T100/100	100 kV	100 A	507 x 1000 x 457

HV filters of different ratings (U_N , I_N) are available on request.

GROUND FILTER

Partial discharge (PD) measurement requires a reasonable noise-free environment. Power Diagnostix' GF50 filter box is designed to reduce high frequent disturbance signals from the ground leads. It can be used for HF separation of the test specimen from the ground potential of the power supply or other HV equipment within the environment without influencing the power frequency. The efficiency strongly depends on the

general earthing within the laboratory. A splitted ground lead or copper band can be connected to the multi contact connectors or alternatively to the wing screws beside.



FILTER MODELS FOR SPECIAL APPLICATIONS

Besides the standard HV filters, Power Diagnostix offers various filters for special high voltage applications, including line filters for cable testing (such as the LF15 and LF350) and filters with AC current and AC voltage measurement.

With the latter a high voltage filter ist combined with a high voltage divider and a high current transformer in one unit; conventionally on rolls, or upside-down, as shown.

