

Data Sheet 6.23/1

## Partial Discharge Detector, Type SPECcompact



Figure 1: SPECcompact

### Description

The SPECcompact is a partial discharge analyzer comprising a partial discharge (PD) detector, a spectrum analyzer and a RIV meter in one instrument. It is well suited for both, laboratory and on-site tests. The SPECcompact fulfils all requirements of IEC 60270.

This combination enables PD measurements even with a large background noise, e.g. in non-shielded test areas. The analysis of the frequency spectrum of a harshly disturbed PD signal allows the selection of frequency bands with less disturbances. Using these frequencies for PD acquisition gives a largely improved signal-to-noise ratio resulting in a clear pattern acquisition.

A simple pushbutton interface and on-screen menus in an embedded LCD panel (240x180 dots) are provided to operate the SPECcompact. The device is available as both stand-alone and plug-in version. It is characterized by the following main features:

### Main features

- 4 input channels for both PD measurement and voltage synchronization (switchable)
- various displays for PD measurement such as PD pattern, analog/ digital display etc.
- noise reduction by various methods, e.g. frequency-selective PD measurement, adjustable low level discriminator for suppression of low periodic signals, windowing, gating with external sensor (optional)
- connectable to the industrial computer of the control systems type CMS, data transfer and evaluation test record via USB interface (additional software required)
- possible adaptation of various other components to enhance the PD measurement performance
- optional "TTL Gating" for unconditioned gating for noise suppression referring to an external TTL signal (e.g. to gate IGBT switching pulses)

Table 1: Main parameters

Type	Detectable charge (min.)	Measuring frequency	Bandwidth	Input impedance	Synchronization		Ambient temperature <sup>1)</sup>
	pC	kHz	kHz	$\Omega$	Voltage (max.)	Frequency	$^{\circ}\text{C}$
					$V_{\text{rms}}$	Hz	
SPEC compact E	0.1	10 ... 10000	9 or 270	50	140	10 ... 500	10 ... 40
SPEC compact G	0.1	10 ... 10000	9 or 270	50	140	10 ... 500	10 ... 40

<sup>1)</sup> non-condensing

Table 2: Power supply and dimensions

Type	Power supply		Dimensions		
	Voltage	Frequency	Length x Width x Height (approx.)	Weight (approx.)	Design
	V	Hz	mm	kg	
SPEC compact E	85 ... 264	47 ... 440	320 x 483 x 133	4	19" plug-in
SPEC compact G	85 ... 264	47 ... 440	320 x 236 x 133	4	stand-alone