

# Area Monitors

## GRAETZ WS05C-1 / C-2 / C-3

The area monitors WS05C-1 / WS05C-2 and WS05C-3 are stationary room monitoring systems for the dose rate measurement of  $\gamma$ -radiation and X-rays, preferably used for the permanent monitoring of isotope laboratories, radiotherapy rooms, storage rooms for radioactive materials, etc..

### The WS05C is available in the following versions:

- **WS05C-1:** Area monitor (1 measuring channel) with RS232-interface for the operation with any probe of the GRAETZ-programme.
- **WS05C-2:** Area monitor (2 measuring channels) with RS232-interface for one measuring channel, for the simultaneous operation of max. 2 different or similar probes – any of the GRAETZ-programme.
- **WS05C-3:** Area monitor (3 measuring channels) with RS232-interface for one measuring channel, for the simultaneous operation of max. 3 different or similar probes – any of the GRAETZ-programme.

Each measuring channel indicates the measured values on a digital, illuminated LC-display (60x30 mm). For each measuring channel four individual dose rate alarm thresholds are free programmable over the whole measuring range of the connected probes.

When using  $\gamma$ -probes, the dose rate shown on the LC-Display is Sv/h. When an end-window probe for  $\alpha$ -/ $\beta$ -measurements or a NaI-scintillation probe for  $\beta$ -/ $\gamma$ -measurements is connected, the measured value is displayed in cps. Additionally to the digital display, the dose rate is also indicated in analog form by a logarithmic bar graph.

The instrument is autoranging. When a measuring channel triggers a dose rate alarm, the integrated alarm light of the WS05C gives an optical and acoustical alarm. In the standard version: green  $\rightarrow$  "ready for operation", orange  $\rightarrow$  "alarm threshold exceeded" / red  $\rightarrow$  "error" (e.g. defective probe). The red LED situated above the display indicates by which measuring channel the alarm has been triggered.

For connecting the WS05C with a computer, an RS232-interface for one measuring channel is available.

### Options

- **Relay output** for an additional external alarm lamp for each measuring channel or a **potential free relay output** for each measuring channel instead of the relay output for the external alarm lamps (max. switching voltage/current: 24V, 20 mA).
- **Acoustic alarm disconnectible:** only triggered when an alarm threshold is exceeded and the monitored room's door is open.
- **Emergency power supply** (300W) for the uninterruptible operation of the WS05C in case of mains failure.
- **External alarm lamps** (optical/acoustical)
- **Probe cable** (standard length: 1,25 m), extension up to 100 m
- **Special versions upon request**



### GRAETZ Strahlungsmesstechnik GmbH

Westiger Straße 172 · 58762 Altena / Germany  
P.O. Box 81 00 · 58754 Altena / Germany  
Phone: +49 2352 7007-0 · Fax: +49 23527007-10  
E-Mail: info@graetz.com  
Website: www.graetz.com

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subject to technical change



## Technical Data WS05C

- Types:** **WS05C-1** for the connection of one probe (1 channel)  
**WS05C-2** for the simultaneous connection of max. 2 probes (2 channels)  
**WS05C-3** for the simultaneous connection of max. 3 probes (3 channels)
- Probes:** The probes are preferably connected by means of a probe cable (up to 100 m) or directly to the sockets of the WS05C.
- Measurand:** ambient dose rate equivalent rate  $\dot{H}^*(10)$  for CE-probes

### Available probes

The PTB-approval of the probes is only valid when used together with the dose rate meter X5C *plus*.

Probe type	Measuring range	PTB-approved measuring range <sup>1)</sup>
18545 CE	0 nSv/h – 200 µSv/h	150 nSv/h – 200 µSv/h (γ-radiation and X-rays)
18550 CE	0 nSv/h – 20 mSv/h	10 µSv/h – 20 mSv/h (γ-radiation and X-rays)
18529 CE	0 µSv/h – 10 Sv/h	0,5 mSv/h – 10 Sv/h (γ-radiation and X-rays)
18509 CE	0 µSv/h – 1 Sv/h	50 µSv/h – 1 Sv/h (γ-radiation and X-rays)
18526 D	cps, α-, β-, γ-radiation	
Nal-Scintillation probe 2002	cps, β-/ γ-radiation	

<sup>1)</sup> PTB-approved measuring range for measurements specifically demanded by German authorities

**Measuring accuracy:**  $\leq \pm 10\%$

**Display:** each measuring channel is equipped with an illuminated LC-display

**Indication:** - digital indication in Sv/h or cps, depending on the connected probe  
- analog indication by a logarithmic bar graph

**Alarm:** - probe failure alarm  
- dose rate alarm thresholds 1 - 4  
- dose alarm thresholds 1 - 4

**Alarm signals:** - integrated optical/acoustical signal, triggered when a connected probe signalizes a dose rate alarm (orange) and/or an error (red)  
- red LED for alarm indication when an alarm thresholds is triggered (at each measuring channel)

**Interface:** RS232 for one measuring channel (WS05C-2 / WS05C-3 → first measuring channel)

### Dose rate alarm

**thresholds:** for each measuring channel 4 dose rate alarm thresholds free programmable over the whole measuring range of the connected probe(s)

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**thresholds:** for each measuring channel 4 dose alarm thresholds free programmable over the whole measuring range of the connected probe(s)

### Temperature

**range:** 0 °C up to +40 °C for the area monitor  
-30 °C up to +60 °C for the probes

### Humidity:

max. 90% relative humidity

### Power supply:

90-260V AC 200 mA max. 50/60 Hz

### Housing:

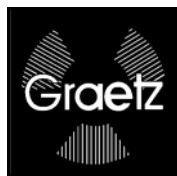
plastic, high-impact

### Dimensions:

260 mm x 230 (455) mm x 150 mm

### Weight:

approx. 2,8 kgs



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Westiger Straße 172 · 58762 Altena / Germany  
P.O. Box 81 00 · 58754 Altena / Germany  
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E-Mail: [info@graetz.com](mailto:info@graetz.com)  
Website: [www.graetz.com](http://www.graetz.com)