



## Gamma ionization chamber

### Application

- Measurement of high intensity gamma radiations

### Features

- Measurements up to 125 °C

Nuclear characteristic <sup>1</sup>		
Sensitivity to <sup>60</sup> Co gamma-rays	6x10 <sup>-10</sup>	A/Gy.h <sup>-1</sup>
Gamma dose rate range <sup>2</sup>	10 <sup>-3</sup> – 10 <sup>5</sup>	Gy.h <sup>-1</sup>
Exposure limits	max 10 <sup>9</sup>	Gy

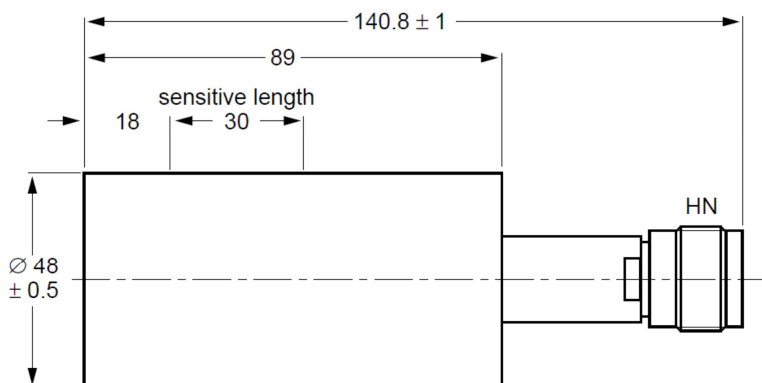
Electrical characteristics			
Insulating resistance at 600 VDC		min 10 <sup>12</sup>	Ohm
Operating voltage <sup>3</sup>	Nominal up to 125°C	200 - 1000	VDC
	Maximum at 20°C	1200	VDC
	Limit with no radiation	1500	VDC

Mechanical and physical characteristics		
Detector	Outer shell	Stainless steel
	Electrodes	High purity aluminum
	Insulators	Al <sub>2</sub> O <sub>3</sub>
	Filling gas <sup>4</sup>	Nitrogen at 100 kPa
Connector	Type <sup>5</sup>	HN
	Insulator	PTFE

### Notes.

- <sup>1</sup> All characteristics are given for <sup>60</sup>Co gamma-ray energy (1.25 MeV).
- <sup>2</sup> The lower limit highly depends on the capability of the measurement equipment to separate the useful signal from the background (leakage current).
- <sup>3</sup> The operating voltage depends on the gamma dose rate to be measured.
- <sup>4</sup> Other characteristics are possible by adjusting the gas pressure. Request when ordering.
- <sup>5</sup> In order to avoid humidity penetration during storage, the HN connector is closed with a cap to be removed just before use. As a general rule, prevent any humidity penetration at the connection level (refer to "Instructions for use and handling" in the package).
- <sup>6</sup> Including temperature increase due to gamma radiation. The leakage current in the cables increases rapidly with temperature. It is therefore necessary to take into account this characteristic, which limits the maximum temperature so that the ratio of wanted signal/parasitic signal remains acceptable.

### Outline



Max operating temperature of detector <sup>6</sup>: 125 °C

Unless otherwise stated, all characteristics are given at 20°C and dimensions in mm.

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