



Gamma ionization chamber

Application

- Measurement of high intensity gamma radiations

Features

- Measurements up to 400 °C

Nuclear characteristic ¹		
Sensitivity to ⁶⁰ Co gamma-rays	4.8x10 ⁻¹³	A/Gy.h ⁻¹
Gamma dose rate range ²	10 – 10 ⁸	Gy.h ⁻¹
Exposure limits	max 10 ⁷	Gy

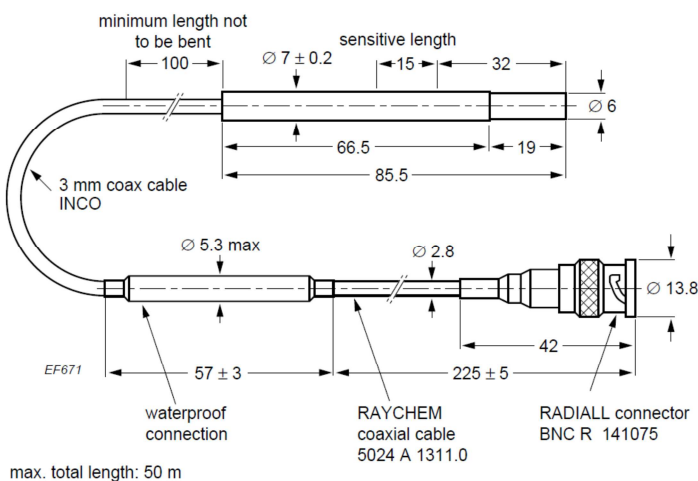
Electrical characteristics			
Insulating resistance at 200 VDC		min 10 ¹²	Ohm
Operating voltage ³	Nominal up to 400°C	200 - 400	VDC
	Maximum at 20°C	500	VDC
	Limit with no radiation	800	VDC

Mechanical and physical characteristics		
Detector	Outer shell, electrodes	Stainless steel
	Insulators	Al ₂ O ₃
	Filling gas ⁴	Nitrogen at 100 kPa
Cable	Type	Coaxial
	Insulator	Al ₂ O ₃
	Curvature radius	30 mm
Connector	Type ⁵	BNC
	Insulator	PTFE

Notes.

- ¹ All characteristics are given for ⁶⁰Co gamma-ray energy (1.25 MeV).
- ² The lower limit highly depends on the capability of the measurement equipment to separate the useful signal from the background (leakage current).
- ³ The operating voltage depends on the gamma dose rate to be measured.
- ⁴ Other characteristics are possible by adjusting the gas pressure. Request when ordering.
- ⁵ 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).
- ⁶ 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 detector⁶: 400 °C
 Max operating temperature of connector⁶: 70 °C

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