

# RADIOACTIVITY

1630\_ENG Rev. 02



## GM-Tube in holder Type 1630-20

This GM-tube is well suited for measuring alpha, beta and gamma radiation.

The GM tube is mounted in a black housing. For mounting the GM tube is equipped with a steel rod 10 mm in diameter.

The tube's window is made of a very thin and delicate material which is very fragile. For this reason the tube is delivered with a protective cap. It is recommendable always to use this cap for protection when the tube is not in use. The cap is provided with a venting hole to avoid vacuum when removing it or the opposite when mounting it again. I.e. it is of the utmost importance that this venting hole is uncovered when mounting or removing the cap. For certain measurements removing the cap is quite unnecessary e.g. gamma rays will penetrate the cap without any problems.

The GM-tube comes complete with cable mounted with a BNC-plug for connection to GM-counters with BNC-bushing.

Please notice that the GM-tube has no built-in anode resistor. This is built into the GM counters from IMPO.

### Technical specifications:

The tube is sensitive to  $\alpha$ ,  $\beta$  and  $\gamma$  radiation.

Plateau threshold voltage ( $V_{b1}$ ): 450V

Plateau length ( $V_{b2} - V_{b1}$ ): 150V

Recommended supply voltage: 500V

Window specifications:

Thickness: 1,5 to 2,0 mg/cm<sup>2</sup>

Useful diameter: 9,14 mm

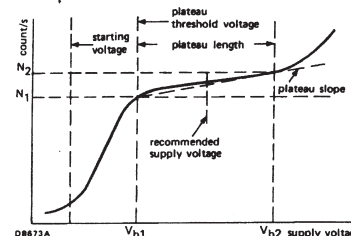
Material: Mica

Gas filling: Neon, Argon and Halogen

Dead time, typical including cable: 190  $\mu$ s

### Plateau:

The plateau is the part of the diagram where the number of counts per second is (almost) independent of the voltage applied.



### Beta transmission efficiencies:

Isotope	Average-energy (Mev)	%Transmission	Max. Energy	% Transmission
P32	0.694	92,5	1.709	97,5
P33	0.076	30	0.248	76
C14	0.049	10	0.158	62
S35	0.048	10	0.167	65

