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IPC Irwin GM Tube & Holder

Part Number: IPC-6200-R

User Instructions



INTRODUCTION.

The IPC Irwin GM Tube & Holder has been designed to work directly with our Timer Scaler & Frequency Meter (IPC-3342-T) via its TNC connection. It can also be used with many other makes of Scaler units simply by purchasing one of our TNC to BNC adapters (IPC-6205-R).

The GM Tube itself is contained in a robust case (holder) to provide added protection to the delicate tube. The case also provides the option of attaching a support rod (supplied) to the underneath, therefore allowing it to be connected to a retort stand. Electrical connection to the GM Tube is via a fixed 750mm coaxial cable to a TNC plug, also contained within the case is a high ohmic value (4M7) series resistor required by most Counter and Ratemeter (Scaler) units.

Please note: the original industry standard GM Tube PET connector is now obsolete (looks very similar to a TNC connector), therefore should any of your existing equipment have one of these PET connectors fitted, IPC Irwin would be happy to carry out a retrofit, both to Timer Scalers and GM Tubes.

DESCRIPTION.

The GM Tube contained within the Holder is the industry standard type: LND2233 (this being equivalent to the ZP1482 GM Tube), as recommended in the CLEAPSS document GL:138 (Choosing a Geiger Muller Tube). The LND2233 has a large area detection window making it suitable for all practical demonstrations and investigations as well as having an efficiency level suitable for detecting alpha, beta and gamma radiation.

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INSTRUCTIONS.

Place the GM Tube & Holder unit either on the bench or mount it onto a support stand (using the supplied fixing rod), then connect the TNC connector to the Scaler unit (use our BNC adapter if required), first making sure the HT voltage supply is set to minimum. Now remove the protection cover from the front of the GM Tube and place the radiation source to be used close to the detection window of the GM Tube (approx. 5 to 10mm from the window). **Note:** the mica detection window at the front of the GM Tube is delicate and therefore care should be taken not to damage it. We also recommend that the cover is refitted whenever the unit is not in use. Now slowly increase the HT voltage supply until the Scaler unit starts to count, the GM Tube should start to detect the radiation source between 350VDC to 450VDC, for ease of setting the audio (beep) on the Scaler unit should be switched on.

Testing the GM Counting System & Efficiency (using a Standard Source)

It is the responsibility of the school/college that periodic testing of the GM Counting System and the efficiency of the GM Tube are performed. Both these test procedures use a Standard Radiation Source, type K-40, this source is available from IPC Irwin (IPC-6225-R), please visit our website www.ipcirwin.com for more details. If you require advice and instructions on how to perform these tests please call our technical support on 015395 58555.

SPECIFICATIONS.

GM Tube Type	= LND2233 (equivalent to ZP1482)
Connection Type	= TNC on 750mm lead (TNC to BNC Adapter is available, IPC-6205-R)
Detection Window	= 20mm diameter
Detection Source	= Alpha, Beta & Gamma Radiation
Working Voltage	= 350 to 450VDC
Internal Resistor	= 4M7
Mounting Method	= Bench Mounted or Support Rod (supplied)
Dimensions	= 44 x 60 x 140mm (overall)
Mass	= 0.16kg

IPC Irwin also provide Portable Appliance Testers and a Calibration service, for more details please go to www.ipcirwin.com or call our sales and technical support line on 015395 58555.



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