

# Models PA-1210

## Scintillation Voltage Divider/Preamplifier (GSP-1000)

The PA-1210 is for use with scintillation detectors coupled to 12-pin, 10-stage photomultiplier tubes (PMTs). The PA-1210 is a plug-on PMT base/voltage divider that includes the same preamplifier contained in the Saint-Gobain GSP-1000, configured in a compact package with an optimized voltage divider. The plug-on models are easy to connect. You simply push the PA-1210 onto the 12-pin PMT base. The PA-1210 contains a charge-sensitive preamplifier for use in detection of X-rays, gamma rays, charged particles and neutrons.

### Standard Features -

- Aluminum housing
- RoHS compliant
- Mount directly to a 12-pin base of a PMT or radiation detector.
- Optimized to work with Saint-Gobain Crystals standard detectors.



### Voltage Divider Specifications -

- Positive HV max: 1500V
- Total divider resistance: 4MOhm (nominal) if gain potentiometer set to minimum
- Anode load resistor: 1MOhm (nominal)
- HV gain range adjustment: Varies with PMT applied HV between 80% and 100% of applied high voltage
- HV gain and focus: Lockable screw driver adjustable potentiometers.
- Signal connector: BNC
- High voltage connector: SHV
- Preamp power connector: Lemo EHP.0S.302.CLL or equivalent
- Supplied preamp power cable: 10 feet with Amphenol (9) PIN "D" Connector
- Voltage ratio cathode to dynode 1 is 2R
- Maximum operating temperature: -20°C - +60°C

### Preamplifier Specifications -

- High input impedance
- Nominal Charge sensitivity: 2.66 mV/pC
- Decay time constant: 50μS (other time constants are possible.)
- Power requirements: ±12VDC @less than 10mA
- Rise time (square input): ~10nS
- Cable driving capability: <750 feet
- Output impedance: 50 Ohms
- Charge rate capacity over 6μC/sec

### Options -

- High voltage connector: SHV or MHV
- Signal connector: Other types available upon request
- Conformal coating for high humidity applications
- Negative high voltage option available (Model PA-1210N)
- Charge sensitivity: Other gains as up to 50 mV/pC
- Output impedance: 50 ohm, 93 ohm or capacitor coupled
- Other preamp power cable lengths available upon request

Compatible Photomultiplier Tubes			
Size	Electron Tubes Model	Hamamatsu Model	Photonis Model
1.5"	9102	R980	XP2012
	9902	R580	XP2013
	9903	2060	XP2040
			XP2052
			XP2060
			XP2072

