

Digital Neutron Pug

Model: PUG-7N-D System

Sensitivity

Range is 1 to 10,000 cps. Detection system includes PNS-20 plus moderator with polyethylene inner sleeve and cadmium outer shield.

Specifications

- **Class:** **Portable - Survey Meter** used with moderator and probe.
 - **Principle of Operation:** Boron-10 in ZnS (Ag) scintillator matrix (Neutron, Alpha reaction) and photomultiplier tube, polyethylene moderator.
 - **Energy:** Epithermal to fast (Probe in moderator)
Thermal (Probe removed from moderator)
 - **Electronics:** One Hand Operation; Built-In Speaker; Rugged; Lightweight
 - **Alarm:** User Settable Audio / Visual
 - **Power:** (6) AA batteries. Approximate life: 100 hours. **Optional: AC (230 V)**
 - **Sensitivity Ranges:** 1 to 10,000 cps (600,000)
Corresponds with 0-8; 80; 800; 8,000 thermal neutrons/cm²/sec. (Nominal)
 - **Gamma Rejection:** PNS-19 and PNS-20 Insensitive to Gamma in field up to 10R/hr.
PN-17 Insensitive to all Gamma
 - **Detector PNS-20:** **Slow Neutron Scintillation Probe** Thermal neutrons are detected by means of the boron n-alpha reaction. Probe delivers approximately 60 cpm per neutron/cm²/second and requires a 900 volt supply. The probe is 8" long x 2" in diameter. It is completely insensitive to Gammas in fields below 10R/hr.
 - **Detector PNS-19:** **Fast Neutron Scintillation Probe** insensitive to gamma radiation in fields below 100 R/hr. The n-p reaction is used to measure energy deposited by neutrons. A shaped light pipe and moderator about the ZnS.Ag phosphor gives a consistent Rem to count ratio for incident neutrons 15 MeV and above, within $\pm 30\%$.
 - **Probe Size:** **(PNS-20 and PNS-20H)** 2" dia. x 8" L
 - **Probe Size:** **(PNS-19)** 2" dia. x 8" L
 - **Probe Size:** **(PN-17)** 2" dia. x 8" L
- Other Probes:** Any Alpha, Beta or Gamma probes of the P and PS series can be used with this electronics by unplugging and plugging in their BNC connector and cable.



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