

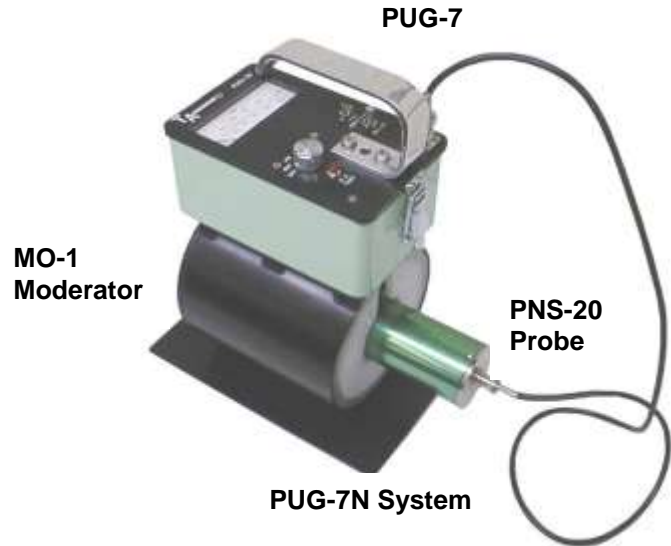
NEUTRON PUG

中子 PUG

Model - PUG-7N

FEATURES: 特点

- ❖ DETECTS FAST OR SLOW NEUTRONS
- ❖ 检测快慢中子
- ❖ GAMMA REJECTION TO 1R/hr
- ❖ γ 抑制到 1R/hr
- ❖ EASY TO CARRY - LESS THAN 9 POUNDS
- ❖ 易于携带-低于 9 磅
- ❖ BATTERY OPERATED
- ❖ 电池供电
- ❖ FOUR RANGES
- ❖ 4 量程



APPLICATION: 应用

Neutron count rate monitoring in and about nuclear reactors, accelerators, neutron sources, neutron generators, customs inspection, etc.

应用在核电站内部或周围、加速器、中子源、中子发生器、海关检查

DESCRIPTION:

The **PUG-7N** is a complete fast-slow neutron monitor system. It includes the **PUG-7**, four-range survey meter with attached detection system: the **MO-1** Moderator, and the **PNS-20** Probe.

The **PUG-7N** System, or "Neutron PUG" detects fast or slow neutrons by means of a thermal neutron scintillation detector and a moderator. When the detector (**PNS-20**) is external to the moderator, thermal neutrons are detected and measured by means of counts produced in the scintillator as read on the meter of the **PUG-7** instrument.

The polyethylene moderator is surrounded by a cadmium shield. The cadmium shield absorbs thermal neutrons and allows fast neutrons to enter the moderator. The moderator "thermalizes" the entering neutrons thus allowing them to affect the scintillator.

When the thermal neutron detector is within the moderator, thermal neutrons are excluded by the cadmium layers and the detector measures only fast neutrons which have entered the moderator and been "thermalized". See **PUG-7** Spec Sheet for more detailed information.



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US NUCLEAR CORP.

NEUTRON PUG

中子 PUG

Model - PUG-7N

描述:

型号 PUG-7N 是一套完整的快-慢中子监测器。包括带探测系统的 4 量程测量仪，附带探测系统 MO-1 减速器和 PNS-20 探头。

PUG-7N 或“Neutron PUG”通过热中子闪烁探头和一个减速器来检测快慢中子。当探头(型号 # PNS-20)外接到减速器，热中子被检测到，并通过闪烁体计数方法测量，同时 PUG-7 仪器上仪表读出读数。

聚乙烯减速器外包镉屏蔽。镉屏蔽层吸收热中子并允许快中子进入到减速器。减速器“热化”进入的中子，因此允许中子对闪烁体产生影响。当热中子探头在减速器内部时，热中子被镉层排除在外，减速器内部探头仅测量已经进入减速器并被“热化”的快中子。（见关于 PUG-7 规格说明书）

SENSITIVITY: 灵敏度

Ranges are 0-500; 5,000; 50,000; and 500,000 cpm. Detection system includes PNS-20 plus moderator with polyethylene inner sleeve and cadmium outer shield.

测量范围 0-500; 5,000; 50,000; 和 500,000 cpm，检测系统包括 PNS-20，加上带聚乙烯内套筒和镉外屏蔽的减速器

SPECIFICATIONS:

- | | |
|----------------------------------|--|
| • Class: | Portable - Survey Meter used with moderator and probe. |
| • 类别: | 便携式-测量仪，同减速器和探头一道使用 |
| • Principle of Operation: | Boron - 10 in ZnS (Ag) scintillator matrix (neutron, alpha reaction) and photomultiplier tube, polyethylene moderator. |
| • 操作原理: | ZnS (Ag)闪烁体基态中（中子， α 反应掺硼-10，光电倍增管，聚乙烯减速器 |
| • Energy: | Epithermal to fast (Probe in moderator)
Thermal (Probe removed from moderator) |
| • 能量: | 超热中子-快中子（探头在减速器内）
热中子（探头不在减速器内） |
| • Probe Size: | (PNS-20) 2" diameter x 8" L |
| • 探头尺寸: | (PNS-20) 直径 2" x 8" L |
| • Moderator Size: | (MO-1) Approximately 5" diameter x 6" 长 |
| • 减速器尺寸: | (MO-1) 约直径 5" d x 6" 长 |
| • Total Weight: | 8-3/4 pounds |
| • 总重量: | |
| • Shipping Weight: | 15 pounds |
| • 邮寄重量: | |
| • Dimensions: | 10.25" L x 10" H x 6" W, including handle |
| • 尺寸: | 10.25" 长 x 10" 高 x 6" 宽, 不含把手 |

规格



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- **Batteries:** (2) 9 Volt batteries.
- **电池:** (2 节) 9V 电池
- **Sensitivity Ranges:** 0-500; 5,000; 50,000; 500,000 cpm
Corresponds with 0-8; 80; 800; 8,000 thermal neutrons/cm²/sec.
(Nominal)
- **灵敏度范围:** 0-500; 5,000; 50,000; 500,000 cpm
与 0-8; 80; 800; 8,000 热中子/cm²/秒对应
- **Gamma Rejection:** Insensitive to gamma in field up to 1R/hr.
- **γ 抑制:** 对 1R/hr 伽马场不敏感
- **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.

其它探头: 任何测 P 和 PS 系列 α - β - γ 探头可以通过拔下或插入 BNC 接头盒电缆和此电子学一起使用。

Probes TA MODELS: TA 探头型号	For Use With: 兼容	Type: 类型	Application: 应用
PNS-19	PUG-7 OR PRS-5	Neutron Scintillator 中子闪烁体	Detects Fast Neutrons 检测快中子
PNS-20	PUG-7 or PRS-5	Neutron Scintillator 中子闪烁体	Detects Slow Neutrons 检测慢中子
PN-13	PUG-7 or PRS-5	Proportional REM Ball 正比雷姆球体	Detects Fast & Slow Neutrons 检测快&慢中子

PUG-7N System

Probes TA MODELS:	For Use With:	Type:	Application:
PUG-7N	MO-1	Moderator	Detects Fast & Slow Neutrons
	PNS-20	Neutron Scintillator	



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