ADVANCED TECHNOLOGIES FOR A SAFER WORLD

PRM 470 C/G/N/GN

Gamma, Neutron, Gamma-Neutron Hand-Held Detectors

Description

TSA's PRM-470C hand held series is a popular choice for locating radioactive sources and measuring intensity in the field. It uses low power CMOS electronics to provide extended operation from the rechargeable batteries. The versatile, easy to operate PRM-470C series also features a self-test during power up, automatic background count and user determined alarm settings. Settings may be configured from the front panel, or from a personal computer using RS-232 communications. Count information and unit parameters are presented to the user on an alphanumeric 4 line, 16 character display.

The PRM-470 series utilizes a motion switch to automatically switch from background to search mode when the instrument is moved. After the instrument has been at rest for a preset duration, it will revert to background update. The unit may be programmed by the user to scale the display to CPS, µsv/hr or mR/hr. This conversion is not energy compensated. Therefore, the value displayed is only an approximation of actual dose rate.

Due to popular demand, the PRM-470C series now features an audio and visual search/find mode to assist in locating radioactive sources. As detected counts increase, so does the frequency of the audio signal, helping to pinpoint the location of the radioactive source. LED indicators respond in similar fashion, flashing faster as counts increase. On gamma and neutron instruments, the LED indicators also assist to identify the type of radiation being detected (a red LED for gamma, and blue LED for neutron radiation).

TSA Systems offers the following line of PRM-470C series hand held monitors:

- PRM-470CG - Gamma only search/find instrument
- PRM-470CN - Neutron only search/find instrument
- PRM-470CGN - Gamma & Neutron (simultaneous) search/find instrument

Applications

Applications include special nuclear material (SNM) searches at plant exits and material access areas, as well as contamination and background monitoring. The small size, light weight, and long battery life make it ideal for searching vehicles that require extended search times.

PRM-470 Specifications

SENSITIVITY:
Will detect 10g HEU or 1g ^{239}Pu when tested in accordance with ASTM Standard C 1237*****

DETECTORS:
PM-470CG: One, 3.5"h x 2.88"w x 1.24"d (8.8 x 7.2 x 3.1cm) organic plastic scintillator detector; provides approximately 12.6 in^3(206 cc) of detector volume

PM-470CN: One, He^{3}tube, 4" (10.2cm) active, 4 ATM

PM-470CGN: One, 3.5"h x 2.88"w x 1.24"d (8.8 x 7.2 x 3.1cm) organic plastic scintillator detector; provides approximately 12.6 in^3(206 cc) of detector volume and one, He^{3}tube, 4" (10.2cm) active, 4 ATM

ALARM LEVEL:
User configurable from 0.1 to 9.9 sigma

ALARM INDICATION:
Audible tone and LED

COUNT TIME:
Gamma search mode: 0.05 sec. count with 0.4 sec. moving average.
Neutron search mode: 1 sec. count time.
Background time: User configurable

DISPLAY:
Alphanumeric LCD, four lines x 16characters, with backlight

POWER REQUIREMENTS:
Internal rechargeable battery pack

DIMENSIONS:
Preliminary

WEIGHT:
2.4 lb (1.1kg) with batteries

ENVIRONMENTAL:
32° to 100°F (0° to 38°C)

*****ASTM Standard C 1237-93 is available from TSA Systems, Ltd. or The American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428, (610) 832-9585.

LAURUS SYSTEMS