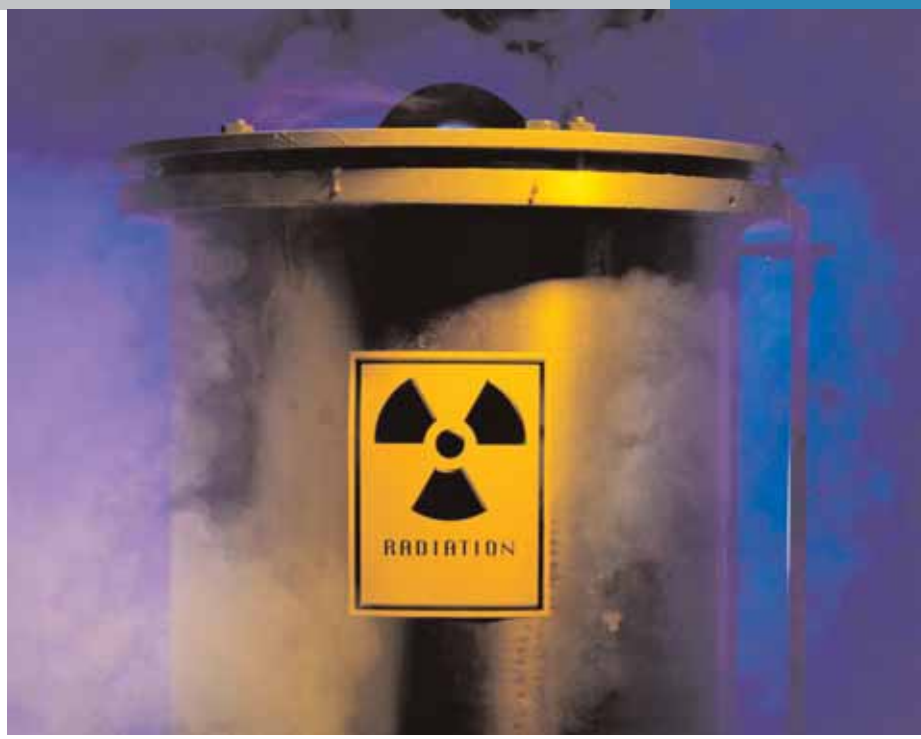
Product Specifications

E-600/NRD

Portable Survey Neutron REM Meter



Features

- Measures Thermal Through Fast Neutrons Closely Follows RPG Dose Curve
- Gamma Rejection Up To 500 R/h
- Direction Independent Measurements
- Rate/Integrate/Scaler/Peak Trap Functions Background Subtraction
- Data Logging

The Model E600/NRD combines the popular E-600 Survey Meter with its NRD neutron REM detector. The NRD is a nine inch diameter, cadmium-loaded polyethylene sphere with a BF3 tube in the center. This detector has been shown to have an energy response which closely follows the theoretical dose from neutrons over the energy range from 0.025 eV thermal to about 10 MeV. The BF3 tube allows excellent gamma rejection.

The E-600 survey meter is an advanced design incorporating numerous capabilities and unique features in a user-friendly package. These features include a custom, back-lit LCD display, smart probe recognition, ratemeter, scaler, integrate, peak trap and background subtraction modes, data logging, three possible operating channels, real time clock and PC assisted setup and calibration. The E-600 has successfully passed ANSI N42.17A testing.

System Specifications

DETECTOR

Detector Type
- BF_3 Tube in a 22.9 cm (9") cadmium loaded polyethylene sphere

Plateau
- Approximately 200 V with a slope of 5% per 100 V

Operating Voltage
- Dependent on sensitivity of counter and cable length
- typically 1,600 to 2,000 V

Directional Response
- Within ±10%

Neutron Energy Range
- Thermal to approximately 10 MeV

Gamma Rejection
- Up to 500 R/h
- Rejection is Dependent on voltage selected
- The factory default is 10 mR/h.

Sensitivity
- Approximately 45 cpm/mrem/h (3,000 counts per mrem)

SURVEY METER

Count Range
- 1 to 1.3 million cpm

Response Times
- Slow, Medium, Fast
- Each time setting is programmable between from 0 to 255 seconds

Audible Alarm
- 85 dB @ 30 cm

Dead Time Correction
- 0 to 255 µsec

Operating Modes
- Ratemeter, Scaler, Integration, Peak Trap, Background Accumulation
- Functions may be locked out if not desired

Controls
- Instrument off, check mode, 5 operating modes, speaker on/off, gross/net counts display, display back light, multifunction soft key and channel select

COMBINED DETECTOR/METER

Size
- 41.6 x 22.9 x 22.9 cm (16.38" H x 9" W x 9" L)

Weight
- 8.16 Kg (18 lb)

Operating Temperature
- -20 °C to 50 °C (-4 °F to 122 °F)

Operating Humidity
- Up to 95% non-condensing

ORDERING INFORMATION

Can be ordered as E600/NRD.
Made up of the following items:

E-600
- Multi-purpose Digital Survey Instrument

NRD
- Neutron Rem Detector Ball

E600 OPT21
- Probe Bracket for NRD

E600 OPT10
- Smart Cable to MHV, 0.9 m (36") Long

Alternate to E600 OPT10, Used to Make the NRD "Smart"

E600 OPT12
- Smart Cable to Smart Probe, 0.9 m (36") Long

SMARTPACMHV
- Smart Pac Adapter for the NRD Required to calibrate the E600 are E600 OPT7 Calibration Software and the CA-104-60 PC Data Cable

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