

Ludlum Neutron Meters Comparison Table

Model	Detector	Moderator	Measurement Range	Sensitivity (bare AmBe neutrons)	Energy Response	Gamma Rejection (¹³⁷ Cs gamma)	Other Detector	Meter	Features	Size (H x W x L)	Weight	
30-7	2 atm ³ He proportional detector	19.5 cm (7.7 in.) dia. polyethylene sphere	0 to 99.9 mSv/h (0 to 9.99 rem/hr)	10 cpm per μSv/h (100 cpm per mrem/hr)	Provides approximate inverse RPG curve for neutrons from thermal through 7 MeV, provides response up to 12 MeV	< 10 cpm through 0.1 Sv/hr (10 R/hr)	no	Digital, 3-digit LCD Units: cps, cpm, Sv/h, rem/hr	Modes: rate, max, count Alarms Auto-ranging Digital calibration Dead Time Correction: SCC	34.4 x 19.5 x 26.8 cm (13.5 x 7.7 x 10.6 in.)	4.8 kg (10.6 lb)	
30-7B				4.5 cpm per μSv/h (45 cpm per mrem/hr)								
30-4		22.9 cm (9.0 in.) dia. polyethylene sphere		10 cpm per μSv/h (100 cpm per mrem/hr)								
3007	2 atm ³ He proportional detector	19.5 cm (7.7 in.) dia. polyethylene sphere	0 to 100 mSv/h (0 to 10,000 mrem/hr)	10 cpm per μSv/h (100 cpm per mrem/hr)			Internal Gamma Detector Versions -i, -i/4, -i/6: energy-compensated GM -i/1: Csl scintillator	Digital, 3-digit LCD Units: cps, cpm, Bq, Bq/cm ² , dpm, R, R/hr, Sv, Sv/h, rem, rem/hr, c (counts), d (disintegrations)	Modes: rate, max, integrated dose, count Data logging Alarms Auto-ranging Digital calibration Dead Time Correction: SCC	37.1 x 19.5 x 24.4 cm (14.6 x 7.7 x 9.6 in.)	5.5 kg (12.2 lb)	
3007B												4.5 cpm per μSv/h (45 cpm per mrem/hr)
3007-1				10 atm ³ He proportional detector								17 cpm per μSv/h (170 cpm per mrem/hr)
12-4-7	2 atm ³ He proportional detector	19.5 cm (7.7 in.) dia. polyethylene sphere	0 to 100 mSv/h (0 to 10,000 mrem/hr)	10 cpm per μSv/h (100 cpm per mrem/hr)								no
12-4		22.9 cm (9.0 in.) dia. polyethylene sphere					43.2 x 22.9 x 26.7 cm (17.0 x 9.0 x 10.5 in.)	8.3 kg (18.3 lb)				
2241-4	2 atm ³ He proportional detector	22.9 cm (9.0 in.) dia. polyethylene sphere	0 to 100 mSv/h (0 to 10,000 mrem/hr)	10 cpm per μSv/h (100 cpm per mrem/hr)			no	Digital, 4-digit LCD Units: cps, cpm, Sv/h, rem/hr	Modes: rate, scaler Alarms Auto-ranging Dead Time Correction: DTC	43.2 x 22.9 x 26.7 cm (17.0 x 9.0 x 10.5 in.)	8.3 kg (18.3 lb)	
375-31H	2 atm ³ He proportional detector	22.9 cm (9.0 in.) dia. polyethylene sphere	0 to 100 mSv/h (0 to 10 rem/hr)	10 cpm per μSv/h (100 cpm per mrem/hr)			no	Digital, 4-digit LED display Units: μSv/h, mSv/h, mrem/hr, or rem/hr (fixed units, configured at calibration)	Area monitoring Alarms Network and relay options Dead Time Correction: DTC	45.7 x 25.4 x 27.9 cm (18 x 10 x 11 in.)	9.5 kg (21 lb)	
15	2 atm ³ He proportional detector	7.6 cm (3 in.) dia., cadmium lined (removable)	0 to 500,000 cpm	5.5 cpm per μSv/h (55 cpm per mrem/hr)	Not linear through energy spectrum (0.025 to 12 MeV)	< 10 cpm through 0.1 Sv/hr (10 R/hr)	External Alpha-Beta-Gamma Detector: end-window GM (Model 44-7)	Analog, 0 - 500 cpm scale (other scales available)	4 ranges Switch between alpha-beta-gamma and neutron measurements	31.8 x 8.9 x 21.6 cm (12.5 x 3.5 x 8.5 in.)	3.7 kg (8.1 lb)	
30 w/ 42-38	2 atm ³ He proportional detector (Model 42-38 WENDI-2)	22.9 x 21.2 cm (9 x 8.36 in.) [D x L] polyethylene cylinder	0 to 99.9 mSv/h (0 to 9.99 rem/hr)	45 cpm per μSv/h (450 cpm per mrem/hr)	0.1 MeV to 5 GeV, Closely follows the radiation protection guide curve for neutron dose	< 10 cpm through 0.1 Sv/hr (10 R/hr)	no	Digital, 3-digit LCD Units: cps, cpm, Sv/h, rem/hr	Modes: rate, max, count Alarms Auto-ranging Digital calibration Dead Time Correction: SCC	38.9 x 22.9 x 27.7 cm (15.3 x 9.0 x 10.9 in.)	13.7 kg (30.4 lb)	
2363 w/ 42-41L	PRESCILA scintillator (Model 42-41L)	N/A	0.1 mrem/hr to 1 rem/hr	350 cpm per mrem/hr	Thermal to 100 MeV	400 cpm at 100 mR/hr	Internal Gamma Detector: energy-compensated GM	Analog, 0 - 10 mrem/hr scale Digital 6-digit LCD scaler	4 ranges Switch between neutron, gamma, or neutron+gamma measurements Scaler Integrated dose Data logging Alarms Dead Time Correction: DTC	32.3 x 13.7 x 34.3 cm (12.7 x 5.4 x 13.5 in.)	4.2 kg (9.2 lb)	