

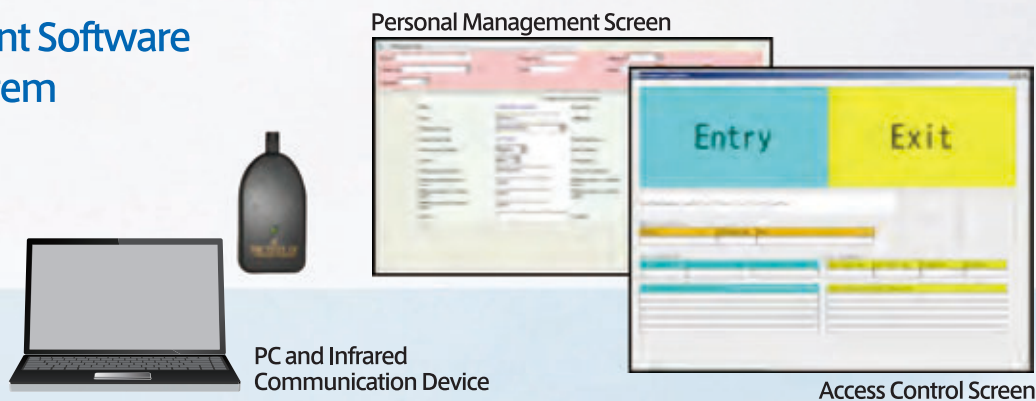
Electronic Personal Dosimeter

NRF3 Series

Dose Management Software for Small Size System

Functions

- Personal Management
- Access Control
- RWP Management
- System Management



Dosimeter Reader

Reads entry/exit information, and writes the setting information received from computer system into dosimeter.



Specifications	
Display	5.7 / 8.4 inch color LCD
Communication	Ethernet (Computer system) Digital I/O (Portal monitor, Turnstile, etc) Infrared (Dosimeter)
Dimensions	5.7" LCD type 200(W) x 250(H) x 105(D) mm (7.9(W) x 9.8(H) x 4.1(D) in)
	8.4" LCD type 250(W) x 285(H) x 115(D) mm (9.8(W) x 11.2(H) x 4.5(D) in)
Weight	5.7" LCD type 2.8 kg approx. (6.2 lb approx.)
	8.4" LCD type 4.0 kg approx. (8.8 lb approx.)
Power Supply	100 to 240 V AC

CAUTION

Read the instruction manual provided before using this product, to make sure you operate it safely.



Headquarters sales Dept. III
Global Energy Div. Sales Group

Gate City Ohsaki, East Tower, 11-2, Osaki 1-chome, Shinagawa-ku, Tokyo 142-0032, Japan
Phone: +81-3-5435-7276, FAX: +81-3-5435-7436 <http://www.fujielectric.com/products/radiation/>

Information in this sheet is subject to change without notice due to the product improvement.

Printed in Japan DEC 2016.07

- Compact and Lightweight
- Long Battery Life



Model/Appearance	NRF30	NRF31	NRF34	NRF40
Radiation Measured	Gamma (X) rays	Gamma (X) rays and Neutron	Gamma (X) rays and Beta rays	Gamma (X) rays
Detector	Silicon semiconductor			
Measurement Range	1 μ Sv to 9.999 Sv (0.1 mrem to 999.9 rem) 1 μ Sv/h to 9.999 Sv/h (0.1 mrem/h to 999.9 rem/h) for dose measurement			
Display Range	Accumulated Dose 1 μ Sv to 9.999 Sv (0.1 mrem to 999.9 rem)			
	Dose Rate* 1 μ Sv/h to 9.999 Sv/h (0.1 mrem/h to 999.9 rem/h)			
Accuracy	$\leq \pm 10\%$ (0.1 mSv to 9.999 Sv (10 mrem to 999.9 rem), ¹³⁷ Cs)	Gamma(X) rays : $\leq \pm 10\%$ (0.1 mSv to 9.999 Sv (10 mrem to 999.9 rem), ¹³⁷ Cs) Neutron : $\leq \pm 15\%$ (0.5 mSv to 9.999 Sv (50 mrem to 999.9 rem), ²⁵² Cf)	Gamma(X) rays : $\leq \pm 10\%$ (0.1 mSv to 9.999 Sv (10 mrem to 999.9 rem), ¹³⁷ Cs) Beta rays : $\leq \pm 15\%$ (0.1 mSv to 9.999 Sv (10 mrem to 999.9 rem), ⁹⁰ Sr/ ⁹⁰ Y)	$\leq \pm 10\%$ (0.1 mSv to 9.999 Sv (10 mrem to 999.9 rem), ¹³⁷ Cs)
Energy Range	30 keV to 6 MeV	Gamma(X) rays : 30 keV to 6 MeV Neutron : 0.025 eV to 15 MeV	Gamma(X) rays : 30 keV to 6 MeV Beta rays : 0.2 MeV to 0.8 MeV (Mean energy)	30 keV to 6 MeV
Energy Response	$\leq \pm 20\%$ (50 keV to 6 MeV, ¹³⁷ Cs reference)	Gamma(X) rays : $\leq \pm 20\%$ (50 keV to 6 MeV, ¹³⁷ Cs reference) Neutron : $\leq \pm 50\%$ (250 keV to 4.5 MeV, ²⁴¹ Am-Be reference)	Gamma(X) rays : $\leq \pm 20\%$ (50 keV to 6 MeV, ¹³⁷ Cs reference) Beta rays : $\leq \pm 30\%$ (0.2 MeV to 0.8 MeV (Mean energy), ⁹⁰ Sr/ ⁹⁰ Y reference)	$\leq \pm 20\%$ (50 keV to 6 MeV, ¹³⁷ Cs reference)
Angular Response	$\leq \pm 20\%$ (Up to ± 60 degree vertical and horizontal, ¹³⁷ Cs) $\leq \pm 50\%$ (Up to ± 60 degree vertical and horizontal, ²⁴¹ Am) $\leq \pm 30\%$ (All around horizontal, ¹³⁷ Cs, free air)	Gamma(X) rays : $\leq \pm 20\%$ (Up to ± 60 degree vertical and horizontal, ¹³⁷ Cs) $\leq \pm 50\%$ (Up to ± 60 degree vertical and horizontal, ²⁴¹ Am) $\leq \pm 30\%$ (All around horizontal, ¹³⁷ Cs, free air) Neutron : $\leq \pm 30\%$ (Up to ± 75 degree vertical and horizontal, ²⁴¹ Am-Be)	Gamma rays : $\leq \pm 20\%$ (Up to ± 60 degree vertical and horizontal, ¹³⁷ Cs) $\leq \pm 50\%$ (Up to ± 60 degree vertical and horizontal, ²⁴¹ Am) $\leq \pm 30\%$ (All around horizontal, ¹³⁷ Cs, free air) Beta rays : $\leq \pm 30\%$ (Up to ± 60 degree vertical and horizontal, ⁹⁰ Sr/ ⁹⁰ Y)	$\leq \pm 20\%$ (Up to ± 60 degree vertical and horizontal, ¹³⁷ Cs) $\leq \pm 50\%$ (Up to ± 60 degree vertical and horizontal, ²⁴¹ Am) $\leq \pm 30\%$ (All around horizontal, ¹³⁷ Cs, free air)
Dose Rate Linearity	$\leq \pm 10\%$ (0.1 mSv/h to 9.999 Sv/h (10 mrem/h to 999.9 rem/h), ¹³⁷ Cs)	Gamma(X) rays : $\leq \pm 10\%$ (0.1 mSv/h to 9.999 Sv/h (10 mrem/h to 999.9 rem/h), ¹³⁷ Cs) Neutron : $\leq \pm 20\%$ (0.5 mSv/h to 9.999 Sv/h (50 mrem/h to 999.9 rem/h), ²⁵² Cf)	Gamma(X) rays : $\leq \pm 10\%$ (0.1 mSv/h to 9.999 Sv/h (10 mrem/h to 999.9 rem/h), ¹³⁷ Cs) Beta rays : $\leq \pm 20\%$ (0.1 mSv/h to 9.999 Sv/h (10 mrem/h to 999.9 rem/h), ⁹⁰ Sr/ ⁹⁰ Y)	$\leq \pm 10\%$ (0.1 mSv/h to 9.999 Sv/h (10 mrem/h to 999.9 rem/h), ¹³⁷ Cs)
Display	LCD (with backlight)			
Alarm Volume	85 to 100 dB (at 30cm)			
Communication Method	Infrared communication			
Operating Temperature	- 20 °C to 50 °C (- 4 °F to 122 °F)			
Operating Humidity	35 % to 95 %RH (Non-condensing)			
Power Supply	Primary Battery (CR123A) x 1			
Battery Life	2880 hours (without alarm/ communication)			
Dimensions	60 (W) x 33 (D) x 78 (H) mm (2.4(W) x 1.3(D) x 3.1(H) in)	60 (W) x 33 (D) x 78 (H) mm (2.4(W) x 1.3(D) x 3.1(H) in)	60 (W) x 33 (D) x 78 (H) mm (2.4(W) x 1.3(D) x 3.1(H) in)	62 (W) x 35 (D) x 82 (H) mm (2.4(W) x 1.4(D) x 3.2(H) in)
Weight	100 g approx. (0.22 lb approx.)	120 g approx. (0.26 lb approx.)	105 g approx. (0.23 lb approx.)	115 g approx. (0.25 lb approx.)

*Note) NRF indicates rough value for dose rate measurement in low radiation field such as less than 1 mSv/h (100 mrem/h), so it should be used just for reference.