

July 23, 2026
Fuji Electric Co., Ltd.

Reducing the Burden of Neutron Monitoring
Launch of a New Neutron Survey Meter for Global Markets

Fuji Electric Co., Ltd. is pleased to announce that it has released a neutron survey meter for global markets that complies with an international standard and offers high workability and safety.

1. Background

With the spread of AI and digital technologies, demand for electricity is expected to increase even further, spurring growing momentum for the use of nuclear energy to ensure safety from the perspective of decarbonizing energy and ensuring a stable supply of electricity.

Neutron radiation is present at nuclear facilities including nuclear power plants and nuclear research institutes. These facilities use a survey meter to measure the neutron air dose rate* in order to manage worker safety.

Because neutrons move through the air at a wide range of energies, neutron survey meters are required to capture and measure them accurately. These survey meters tend to be heavy due to structural reasons, which has caused issues in terms of safety and the burden on workers.

*The hourly dose of airborne radiation.

2. Product Features

Fuji Electric's neutron survey meter is lightweight and durable while satisfying the required measurement accuracy. It is also compliant with IEC 61005, an international standard, with a view to global rollout.

1) Using an organic mixed gas detector to reduce the amount of neutron moderator used, achieving a weight reduction of about 50%

Since general neutron survey meters use a detector that only captures low-energy neutrons, the detector is covered with a massive moderator made of a material like polyethylene in order to decelerate fast (high-energy) neutrons so they can be detected.

This product uses an organic mixed gas detector, which is capable of capturing neutrons at a wide range of energies while reducing the amount of moderator used. This has resulted in a weight reduction of about 50% compared to conventional products. It also reduces the burden on workers during measurement as well as the risk of the product falling or toppling during transport and operation.



A new neutron survey meter for
global markets

2) Improved the handle structure for higher durability

The product housing was redesigned to provide support for the handle at two points, rather than just one point as with conventional products. This has made the handle stronger and improved the durability compared to conventional products, reducing the frequency of failures.

3. Main Customers

Nuclear power plants in Japan and overseas, nuclear research institutes, hospitals, etc.

4. Product Specifications

Type of radiation measured	Neutrons (excluding pulsed neutrons)
Range of energy measured	0.025 eV to 15 MeV
Detector	Organic mixed gas counter
Effective measurement range	1 cm dose equivalent rate: 1 µSv/h to 99.999 mSv/h (5 decades) 1 cm dose equivalent: 0.1 µSv to 99.999 mSv (6 decades)
Measurement accuracy	Dose rate measurement: Within ±20% (at 10 µSv/h) Dose measurement: Within ±20% (at 1 µSv)
Weight	Approx. 3.5 kg
Dimensions	Approx. 165 (W) × 305 (L) × 225 (H) mm (Excluding the handle and other protrusions)

5. Launch Date

The date of this announcement

6. Product Inquiries

Sales Department III, Social Solution Division, Power Electronics Sales Group, Fuji Electric Co., Ltd.

☎03-5435-7049

Radiation Systems Engineering Department, Radiation Equipment Division, Industry Business Group, Fuji Electric Co., Ltd.

☎042-585-6024

Product Website

https://www.fujielectric.co.jp/products/sensor/radiation/product_detail/servy_nsn.html#nsn3

*The information conveyed in this release is accurate as of the date of this announcement and is subject to change without prior notice.