



VF NUCLEAR



NUCLEAR
POWER PLANTS



WASTE
MANAGEMENT



CALIBRATION
LABORATORIES



RESEARCH
CENTRES



INDUSTRY
& MANUFACTURING



NUCLEAR
MEDICINE

MDN-01

NEUTRON DOSE RATE METER



MAIN ADVANTAGES

- High reliability and durability
- Two adjustable alarm levels
- Can be an autonomous local monitor with alarm lights or part of a host system
- Outdoor and indoor use

PURPOSE

The MDN-01 monitor is designed for the measurement of ambient dose equivalent rate $\dot{H}^*(10)$ in neutron fields in different environments, such as spent fuel storage facilities in nuclear power plants, PET centres with cyclotrons, workplaces with particle accelerators, radioactive waste repositories, neutron calibration laboratories, etc.

The MDN-01 Monitor can be used as part of a large monitoring system with a remote centralized indication of measurements, or it can be directly connected to a local display unit, as an autonomous monitor, which provides the data indication locally. It is possible to have both local indication and transmission to a remote display.

The MDN-01 includes a proportional ^3He detector, sensitive to low energy neutron.

The detector is mounted in a moderator - a Bonner sphere made of polyethylene with a diameter of 25 cm. The moderator provides a slow-down of high-energy neutrons to neutrons of detectable energies.

The measured values are compared to two adjustable alarm levels and are transferred to the host system via the RS-485 or Ethernet interface. Exceeding the alarm level will trigger an alarm

SPECIFICATION

Detector type	proportional ^3He
Dimensions ($\varnothing \times h$)	250 × 348 mm
Measuring range	from 1E-7 to 0.1 Sv/h
Efficiency (^{252}Cf)	4 cps/ $\mu\text{Sv/h}$
Weight	app. 10 kg
Power supply	24 V DC or PoE
Temperature range	from -10 to +45 °C

MODELS

K0917-03	MDN-01 with RS-485 interface
K0917-04	MDN-01 with Ethernet interface

OPTIONAL ACCESSORIES

50-A-0010333	MDN-01 basic wall mount holder
50-A-0012722	MDN-01 advanced wall mount holder
51-A-0000469	Cable with RS-485 / USB converter (for RS-485 interface)
1-0217-00022	ECTA connector, 12 pin, female, with cable backshell (for RS-485 interface)
1-0217-00018	
1-0214-00165	Stabilized adapter (injector) for +48V PoE power supply (for Ethernet interface)
1-0217-00754	RJ45 connector, male (for Ethernet interface)

MDN-01

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RELATED PRODUCTS

RDU-22 Radiation Display Unit for 16 measuring channels

RDU-02 Radiation Display Unit for 4 measuring channels

ASU-50 Alarm Slave Unit

RMS Radiation Monitoring System



MDN-01, Ethernet interface



MDN-01, RS-485 interface



MDN-01 holders, basic and advanced



RDU-22 Radiation Display Unit



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Specification subject to change without prior written notice.

VF1810170021 / 08 / 2024-03-14