Electronic Personal Dosimeter

with tissue-equivalent energy response

The new Mission Support MS-EPD3 electronic personal dosimeter is primarily designed as a versatile device for personnel of Nuclear Power Plants (NPP). Operating across various energies and dose rates, it contains a plastic scintillator detector which makes its energy response close to that of human tissue. Due to its superior sensitivity compared to semiconductor p-n junction detectors, the MS-EPD3 provides very fast and accurate measurements at variable radiation fields, is capable of correctly measuring pulsed radiation from NDT and medical equipment, and demonstrates better performance at low background measurements.

The MS-EPD3 has several data interface options: USB or RS-485 for use as an individual dosimeter or within a dose management system at NPPs, as well as optional Bluetooth LE to operate within wireless mesh networks. Powered by a single AA-type regular or rechargeable battery easily replaceable in the field, the MS-EPD3 personal dosimeter is convenient for use in emergencies, for example by first responders. Furthermore, sensitivity of the detector in many scenarios is sufficient to replace gamma search instruments (PRDs).

The ability to operate correctly in pulsed radiation fields makes the MS-EPD3 an ideal choice for security check points where X-ray or accelerator-based scanners are used, in medical applications, oil and gas industry and similar institutions.

FUNCTIONAL HIGHLIGHTS

- Tissue-equivalent plastic scintillator detector
- Gamma sensitivity equivalent to large-volume GM-tubes
- Fast response to background changes
- Designed to correctly measure pulsed radiation from accelerators and X-ray scanners
- IEC 61526 and ANSI N42.20 standards compliant
- Shockproof and weatherproof rugged housing
- Functions on one AA-type battery
- Designed for group operation and programming

POTENTIAL APPLICATIONS

- Personnel of Nuclear Power Plants and related industry
- Wide range of medical applications; hospitals and clinics
- May be used as versatile EPD for First Responders in case of accidents
- NDT applications with pulsed x-ray
- Personnel of security check-points that use accelerators and baggage scanners

MS-EPD3 — Electronic Personal Dosimeter

Specifications

Radiological	
Detector type	doped plastic scintillator
Dose rate measurement range	0.1 µSv/h - 10 Sv/h
Accuracy within the dose rate measurement range, less than	20%
Hp(10) dose measurement range (photon)	1 µSv - 20 Sv
Accuracy within Hp(10) dose measurement range (accuracy + linearity), less than	20%
Energy range	40 keV - 7 MeV
Energy response	30%

Operational	
Display units	µSv, mSv, Sv
Data interfaces	USB, RS-485
Internal memory	up to 2000 events
Type of alarms	sound, light, vibration
Cleaning	housing easy to decontaminate
Power supply	AA-type Alkaline or rechargeable battery
Operation time from one battery charge, not less	90 days

Functional	
	Clip may be reversed to meet different wearing scenarios (within the pocket or outside)
	Designed for automatic charging and readout when used with group storage rack at NPPs
	Optional Bluetooth Low Energy for operation in mesh wireless networks

Environmental and mechanical	
Temperature	from -10 to +50 °C
Humidity	up to 95% at +35 °C
Atmospheric pressure	from 84 to 106,7 kPa
Ingress protection	IP65
Size, mm	23×63×91 without clip
Weight, g	85

Specifications are subject to change without notice.
Copyright © 2026 Mission Support. All rights reserved.

Mission Support · Alexanderveld 5, 2585 DB The Hague, Netherlands
E: info@cbrn-missionsupport.com · cbrn-missionsupport.com