



SW EPDS-S

ELECTRONIC PERSONAL DOSIMETRY SYSTEM FOR SMALL WORKPLACE

KEY FEATURES

- The system is independent of the type or manufacturer of the electronic personal dosimeter used
- Automatic accumulation of received doses E, Hp(10), Hp(0.07) over various time intervals: 1 and 5 years
- Recording and reporting of personal dose consumption in accordance with limits set by legislation
- If limits are exceeded, the system automatically denies the worker access to the controlled area
- Possibility to replace doses from electronic dosimetry with doses from integral (legal) dosimetry for selected time periods
- Enables export and printing of standard analyses for managing doses received by workers in the controlled area
- Data export to files of various formats
- Option to connect with other information systems via SQL and TCP/IP
- Worker identification via ID cards
- Allows operation with terminals even in case of communication loss with the EPDS-S server, without loss of basic system functionality

PURPOSE

The EPDS-S system is designed for daily operational assessment of personal dose consumption by workers in radiation controlled areas (RCA) at smaller facilities with sources of ionizing radiation, such as research institutes or hospitals. For real-time monitoring of worker doses, EPDS-S uses directly readable electronic personal dosimeters. If integral personal dosimeters (e.g., OSL, TLD) are also used at the facility, EPDS-S allows for archiving and evaluating worker doses measured by both types of dosimeters, in accordance with applicable legislation.

Dose assessment is carried out in compliance with basic limits over intervals of 1 year and 5 years, ensuring that these limits are not exceeded.

The system consists of four main components:

- Electronic personal dosimeters
- TED-S terminals
- A server with a central ORACLE-type database
- Administrator PCs with EPDS-S software

EPDS-S can communicate with various types of dosimeters from different manufacturers. However, only one type of electronic dosimeter is used per facility.

Terminals, the server, and administrator stations are connected via a standard Ethernet LAN. Multiple terminals can be installed at a single site to cover all entry and exit points of the controlled area, along with several administrator stations.

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The software consists of four main modules:

- Records
- Limits
- Dosimetry
- Radiation Controlled Area (RCA)

The Records module is used to maintain records of workers in the controlled area (validity of access permissions, validity of medical examinations), an overview of dose consumption from electronic dosimetry, and an overview of dose consumption from legal dosimetry.

The Limits module is used to set non-exceedable personal dose limits and alarms for electronic dosimeters.

The Dosimetry module is intended for tracking the electronic personal dosimeters in use, including the validity of their calibration.

The Radiation Controlled Area (RCA) module records all stays in the controlled area and displays the current presence of individuals within it.

The Administration module is used to manage the EPDS-S system, particularly the TED-S electronic personal dosimetry terminals.

Optionally, the EPDS-S system can activate the DPD module for working with DPD-02 dosimeter dispensing machines and/or the MOP module for recording measurements taken by hand and foot contamination monitors.

Access to the application is restricted to authorized users to prevent unauthorized manipulation of stored data.

SPECIFICATION

Number of electronic dosimeters	max. 999
Number of terminals	max. 20
Number of servers	1
Number of individuals entering the controlled area per day	unlimited
Database records:	
• number of individuals:	max. 10 ⁷
• number of different departments	max. 10 ⁶

OPTIONAL ACCESSORIES

RAD 60	Personal electronic dosimeter produced by RADOS
EPD MK2	Personal electronic dosimeter produced by THERMO
TED-S	Electronic Dosimeters Terminal
DPD	Module for managing operations with DPD dosimeter dispensing machines
MOP	Module for recording measurements of individuals using hand and foot contamination monitors



TED-S Electronic Dosimeters Terminal



DPD-02M Dispenser of Personal Dosimeters