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MEDICINE

DPD-02

DISPENSER OF PERSONAL DOSIMETERS



MAIN ADVANTAGES

- Optimizing the total amount of monthly used dosimeters
- Protection against unauthorized handling of dosimeters, use subject to identification
- Dosimeter will be not dispensed, before the employee has been identified and checked for permission to enter to the radiation-controlled zone (RCA)
- Optional contamination check of returned dosimeters
- Modular (block) concept for quick on-site service
- Online transmission of information to the host dosimetry data system

PURPOSE

The DPD-02 dispensers of personal dosimeters are used for the automatic, fast and controlled issuing of personal dosimeters for workers that enter into radiation-controlled areas in nuclear power plants and other nuclear facilities, and also in hospitals and other workplaces.

The basic DPD Master Unit consists of the following parts:

- Wall-mounted enclosure for a few rows (blocks) of slots
- Internal PLC control unit with touchscreen
- Reader for personal ID and dosimeter identification
- Uninterruptible power supply (UPS)
- Dosimeter contamination monitor – optionally

Each Master Unit can be complemented by several Slave Units. The Slave Unit does not contain a control unit but takes over the functions of the Master Unit, to which it is connected.

To ensure automatic distribution and collection of dosimeters, four basic processes are implemented in the dispenser:

- Filling the dispenser by new unused dosimeters at the beginning of the reporting period by an authorized person.
- Automatic dispensing of dosimeters to workers when entering the RCA.
- Returning of dosimeters to the dispenser by workers at the exit of the RCA.
- Collecting used and expired dosimeters by an authorized person for subsequent evaluation.

Each vending machine has a local database that contains the data necessary for its operation. It contains information about:

- Persons entering and exiting the radiation-controlled area
- Dosimeters present at any time in the dispenser
- Slot positions assigned to persons and dosimeters

The capacity of the local database is limited. It contains only the data necessary for autonomous operation.

In Autonomous Mode, the information is not shared between multiple DPDs.

Sharing all data, updating and coordinating all allocations, dispensing and returning dosimeters from the dispenser allows only the connection to the host dosimetry data system. The host system contains a complete database of people and dosimeters, allows remote management of all connected dispenser units, and the creation of user overviews, analysis and reports of monitored data about persons, dosimeters and dispensers.

DISPENSER OF PERSONAL DOSIMETERS

SPECIFICATION

Type of slot	Max. dosimeter dimension [mm]
A	13 × 46 × 96
B	33 × 67 × 85
C	25 × 42 × 72
D	13 × 62 × 88
E	13 × 46 × 117
F	15 × 46 × 117
G	18 × 46 × 96

OPTIONAL ACCESSORIES

SCD-35	Module for dosimeter surface contamination measurement before the dosimeter is returned to the slot
	Readers for person identification dosimeters, eg barcode readers

MODELS OF DISPENSERS

Type of block	Type	Unit type	Number of blocks	Number of slot	Case dimension (W × H × D) [mm]	Max. number of Slave units
A	DPD-02M / 3A-60	Master	1 - 3	20 - 60	760 x 615 x 240	7
A	DPD-02S / 3A-60	Slave	1 - 3	20 - 60	560 x 615 x 240	
A	DPD-02M / 6A-120	Master	4 - 6	80 - 120	760 x 1060 x 210	3
A	DPD-02S / 6A-120	Slave	4 - 6	80 - 120	560 x 1060 x 210	
B	DPD-02M / 3B-30	Master	1 - 3	10 - 30	760 x 615 x 240	7
B	DPD-02S / 3B-30	Slave	1 - 3	10 - 30	560 x 615 x 240	
B	DPD-02M / 6B-60	Master	4 - 6	40 - 60	760 x 1060 x 240	3
B	DPD-02S / 6B-60	Slave	4 - 6	40 - 60	560 x 1060 x 240	
C	DPD-02M / 5C-50	Master	1 - 5	10 - 50	750 x 800 x 225	7
C	DPD-02S / 5C-50	Slave	1 - 5	10 - 50	550 x 800 x 225	
D	DPD-02M / 6D-120	Master	1 - 6	20 - 120	760 x 1060 x 210	3
D	DPD-02S / 6D-120	Slave	1 - 6	20 - 120	560 x 1060 x 210	
E	DPD-02M / 5E-100	Master	1 - 5	20 - 100	760 x 1000 x 210	3
E	DPD-02S / 5E-100	Slave	1 - 5	20 - 100	560 x 1000 x 210	
F	DPD-02M / 5F-100	Master	1 - 5	20 - 100	800 x 1000 x 210	3
F	DPD-02S / 5F-100	Slave	1 - 5	20 - 100	600 x 1000 x 210	
G	DPD-02M / 6G-120	Master	1 - 6	20 - 120	800 x 1060 x 210	3
G	DPD-02S / 6G-120	Slave	1 - 6	20 - 120	660 x 1060 x 210	

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Specification subject to change without prior written notice.