SPC DOZA

UIM-MD

RADIATION
AREA / CONTAMINATION
MONITORING SYSTEM

UIM-MD

Local area radiation / contamination monitoring system

Permanently installed, online, easy-to-operate two-channel multipurpose system to monitor different types of radiation parameters.

Depending on the connected detectors the system is able to measure:

- Ambient doze equivalent rate of gamma (photon) radiation
- Ambient doze equivalent rate of neutron radiation
- Absorbed doze rate of photon radiation
- Flux density of alpha radiation
- Flux density of beta radiation
- Surface activity of radionuclides: Pu^{239}, Sr^{90} + Y^{90}

Comply with IEC 61098 Standard

UIM-MD system components

UIM-3D

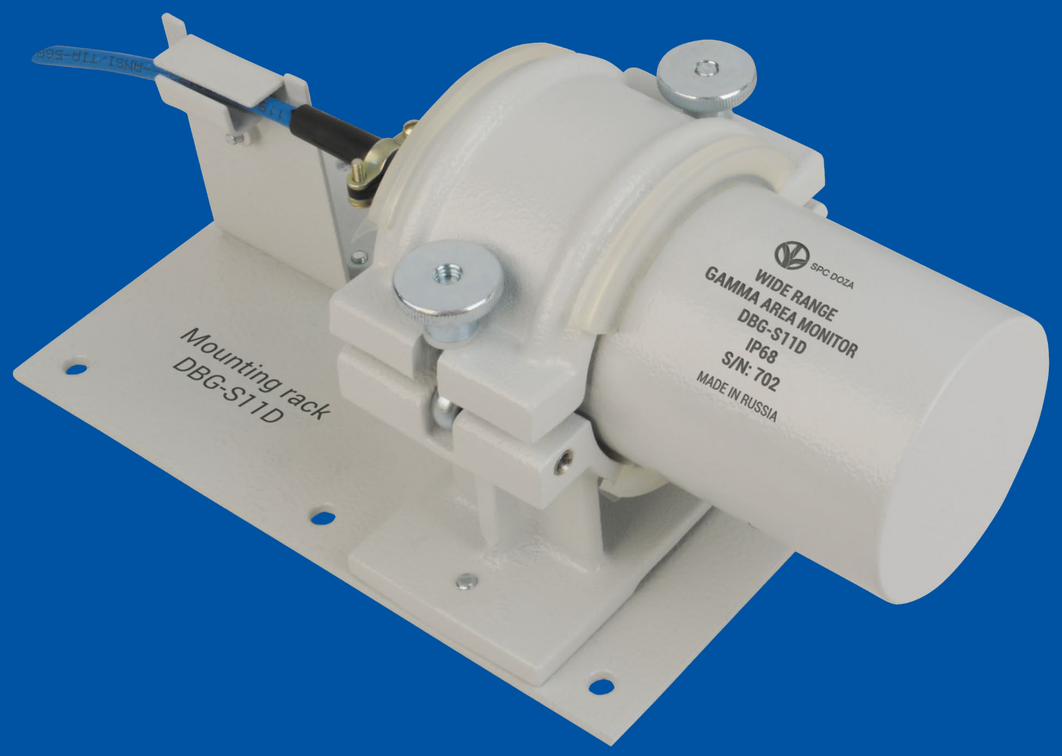
Local data processing and display unit

- One or two measuring channels per unit.
  A choice of 9 detectors to be connected.
- Color TFT screen to display the current measurement values and detectors' condition information.
- Configurable alarm threshold levels for each measuring channel.
- Light and sound alarm is case of alarm threshold exceeding.
- Up to 50 m cable length to detector unit.
- Dry contact relay output to external alarm or executive device.
- Wall or table-top mounting.
- Connection to PC for parameters configuration and archive reading.

Technical characteristics

- Power input: 220 V, 50 Hz; Power output: 12 V DC (to the connected detectors)
- Operating temperature range: -20°C ÷ +50°C
- Overall dimensions: 223×174×166 mm, weight: 3.9 kg
- IP65 wall-mount enclosure

UIM-MD system components



DBG-S11D

Wide range gamma area monitor

Continuous measurement of ambient dose equivalent rate H*(10) for gamma radiation. Transfer of the measured values and self-check information to UIM-3D local display unit.

Measuring range:

- Basic version: 0.1 µSv/h ÷ 10 mSv/h
- Version 01: 0.1 µSv/h ÷ 10 Sv/h
- Version 02: 0.1 µSv/h ÷ 100 Sv/h

Other Characteristics

- Energy range: 0.05 ÷ 3.0 MeV
- Temperature range: −60°C ÷ +80°C
- IP68 enclosure

Overall dimensions and weight:

- Basic version: Ø 68×141 mm, 0.65 kg
- Version 01 and 02: Ø 68×179 mm, 0.7 kg
- Wall-mount bracket: 200×122×117 mm, 2.24 kg

DBG-S101D

High range gamma and X-Ray monitor

Continuous measurement of ambient dose equivalent rate (ADER) for X-Ray and gamma radiation. Consists of ionization chamber module and electrometric interface unit.

Measuring range:

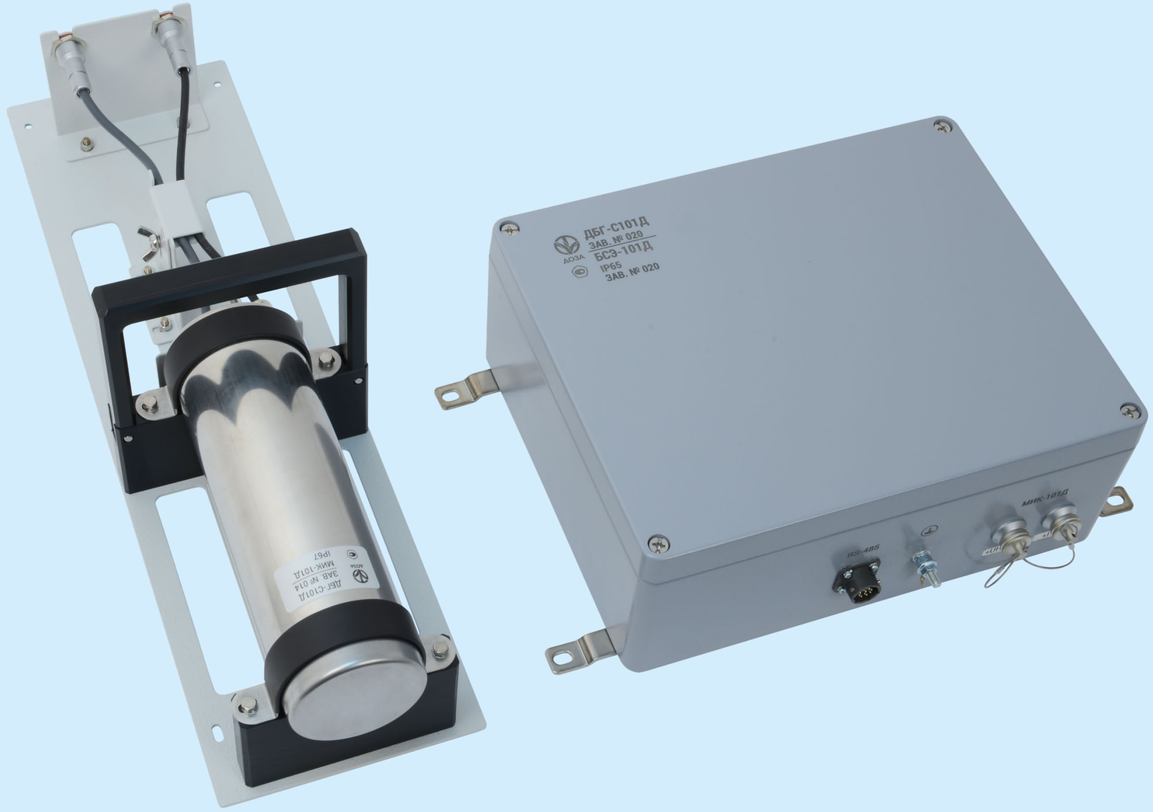
- $1 \cdot 10^{-5}$ Sv/h ÷ 10^{4} Sv/h
- Energy range: 0.05 ÷ 3.0 MeV

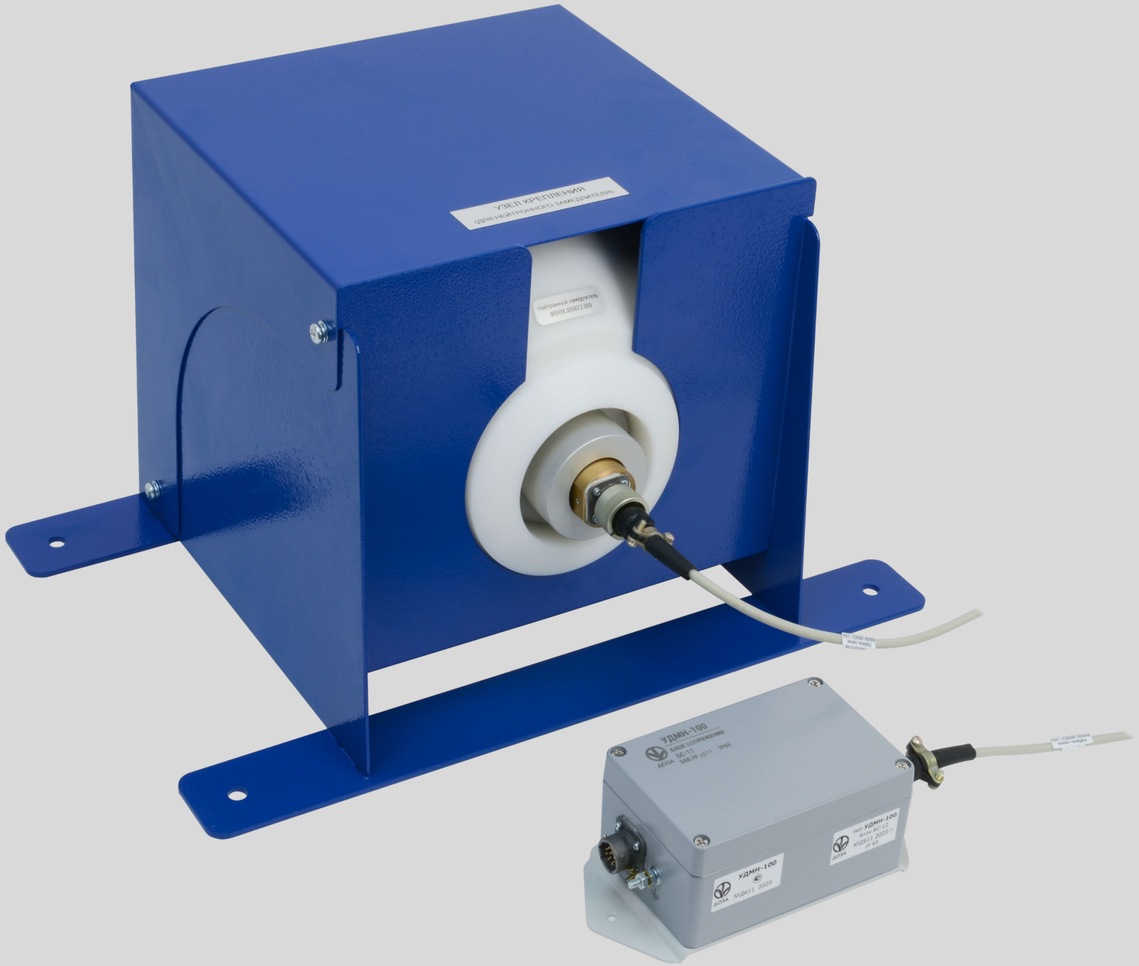
MIC-101D ionization chamber module:

- Temperature range: −40°C ÷ +80°C
- IP67 enclosure
- Overall dimensions and weight: 500×140×160 mm, 2.6 kg

BSE-101D electrometric interface unit:

- Temperature range: −40°C ÷ +55°C
- IP65 enclosure
- Overall dimensions and weight: 350×260×120 mm, 5.5 kg





UDMN-100

Neutron area monitor

Continuous measurement of ambient dose equivalent rate (ADER) for neutron radiation.

- Spherical polyethylene moderator Ø 239 mm
- Measuring range: 0.1 μSv/h ÷ 0.1 Sv/h
- Energy range: 0.025 eV ÷ 10.0 MeV
- Temperature range: −45°C ÷ +50°C
- IP65 enclosure
- Overall dimensions and weight: 428×347×258 mm, 13.8 kg

BDZA-07D

High sensitivity scintillator detector for Alpha radiation measurement

- Type of detector – Plastic scintillator
- Detector size: 146,4 cm^2
- Energy range of detected alpha radiation: 4.0 ÷ 8.0 MeV
- Measurement range of alpha radiation flux density: 0.1 ÷ $1 \cdot 10^5$ $min^{-1}cm^{-2}$
- Measurement range of surface activity of Pu^{239} radionuclide: $1.0 \cdot 10^{-2}$ ÷ $3.4 \cdot 10^3$ Bq/cm^2
- Sensitivity to alpha radiation of radionuclide Pu^{239}, no less: 1.2 $s^{-1}/(min^{-1} \cdot cm^{-2})$
- Temperature range: −30°C ÷ +55°C
- Overall dimensions: 180×170×75 mm
- Weight: 1.2 kg
- Hand grip and wall-mount holder

UIM-MD system components

BDZA-09D

High sensitivity scintillator detector for Alpha radiation measurement

- Type of detector – Plastic scintillator
- Detector size: 465 cm^2
- Energy range of detected alpha radiation: 4.0 ÷ 8.0 MeV
- Measurement range of alpha radiation flux density: 0.1 ÷ $1 \cdot 10^5$ $min^{-1}cm^{-2}$
- Measurement range of surface activity of Pu^{239} radionuclide: $1.0 \cdot 10^{-2}$ ÷ $3.4 \cdot 10^3$ Bq/cm^2
- Sensitivity to alpha radiation of radionuclide Pu^{239}, no less: 1.2 $s^{-1}/(min^{-1} \cdot cm^{-2})$
- Temperature range: −30°C ÷ +55°C
- Overall dimensions: 360×200×85 mm
- Weight: 2.9 kg
- Wall-mount bracket (for hand measurement)
- Floor-mount support (for foot measurement)

UIM-MD system components

BDZB-18D

High sensitivity scintillator detector for Beta radiation measurement

- Type of detector – Plastic scintillator
- Detector size: 465 cm^2
- Energy range of detected Beta radiation: 0.156 ÷ 3.54 MeV (max); 0.049 ÷ 1.508 MeV (average)
- Measurement range of beta radiation flux density: 1.0 ÷ $5 \cdot 10^5$ $min^{-1}cm^{-2}$
- Measurement range of surface beta-activity of $Sr^{90}+Y^{90}$ radionuclide: $3.4 \cdot 10^{-2} \div 1.7 \cdot 10^4$ Bq/cm^2
- Sensitivity to beta-radiation of radionuclide $Sr^{90}+Y^{90}$, no less: 3.6 pulses$\cdot s^{-1}$ / ($min^{-1} \cdot cm^{-2}$)
- Temperature range: −30°C ÷ +55°C
- Overall dimensions: 360×200×85 mm
- Weight: 2.9 kg
- Wall-mount bracket (for hand measurement)
- Floor-mount support (for foot measurement)

UIM-MD system components

BDZB-19D

High sensitivity scintillator detector for Beta radiation measurement

- Type of detector – Plastic scintillator
- Detector size: 146.4 cm^2
- Energy range of detected Beta radiation: 0.156 ÷ 3.54 MeV (max); 0.049 ÷ 1.508 MeV (average)
- Measurement range of beta radiation flux density: 1.0 ÷ $1 \cdot 10^6$ $min^{-1}cm^{-2}$
- Measurement range of surface beta-activity of $Sr^{90}+Y^{90}$ radionuclide: $3.4 \cdot 10^{-2} \div 3.4 \cdot 10^4$ Bq/cm^2
- Sensitivity to beta-radiation of radionuclide $Sr^{90}+Y^{90}$, no less: 1.2 pulses·s^{-1} / ($min^{-1} \cdot cm^{-2}$)
- Temperature range: −30°C ÷ +55°C
- Overall dimensions: 180×170×75 mm
- Weight: 1.2 kg
- Hand grip and wall-mount holder

SPC DOZA

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All pictures are for illustrative purpose only. Technical characteristics are subject to change without prior notice.