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MEDICINE

MDG-12S, MDG-13S

SMART DIRECTIONAL DOSE RATE METERS



KEY FEATURES

- Directional measurement of gamma dose rate with an integrated collimator and detector shielding
- Smaller size and lower weight compared to the probes with an external collimator and detector shielding
- Standard or robust version (can optionally be equipped with internal or external electronics shielding)
- Four adjustable alarm levels
- Integrated processing electronics

DESCRIPTION

The MDG-12S and MDG-13S meters are designed for directional dose rate measurement, where the measurement from only one source of interest is required (for example one pipe, one filter, etc.), and it is desired to depress the response due to other sources.

They can be used as part of host monitoring systems or with a local display unit as autonomous monitors that display the measured values directly at the measurement location.

Both models include a semiconductor detector located within a lead shielding and collimation block, with integrated signal processing electronics. The collimator provides attenuation of radiation coming from the side and rear directions and therefore the detector is sensitive mainly to radiation entering the front end of the detector housing.

The monitor components are protected by the waterproof cylindrical metal housing.

The MDG-12S and MDG-13S detectors are available in two versions - standard and robust. The robust version has larger diameter and is equipped with a collimator with better attenuation.

The processing electronics in the robust version can optionally be protected against radiation by internal or external lead shielding. The standard version does not have this option.

The measured values and status of the monitor are transmitted to the host system or local display unit by RS-485 data interface.

SPECIFICATION

Detector type

- MDG-12S	semiconductor CdTe (5 x 5 x 5) mm
- MDG-13S	semiconductor Si 7 mm ²

Measurement range

- MDG-12S	from 1E-6 to 1E-1 Gy/h
- MDG-13S	from 1E-4 to 1E+1 Gy/h

Dimensions

- MDG-12S-03 (standard)	65 × 186 mm
- MDG-12S-01 (robust)	80 × 229 mm
- MDG-12S-01 (with external shielding)	129 × 244 mm
- MDG-13S-03 (standard)	65 × 186 mm
- MDG-13S-01 (robust)	80 × 229 mm
- MDG-13S-01 (with external shielding)	129 × 244 mm

Weight

Standard version of MDG-12S, MDG-13S	1,6 kg
Robust version without electronics shielding	3,6 kg
Robust version with internal shielding	5,8 kg
Robust version with external shielding	16,8 kg

Collimators angle

- standard	15°
- optionally	30°

Power supply

24 V DC / 2 W

Temperature range

from 5 to 50 °C

Humidity range

max. 80 % non-condensing

OPTIONAL ACCESSORIES

50-A-0012351 Internal shielding of electronics 1 cm*

50-A-0014068 External shielding of electronics 2 cm*

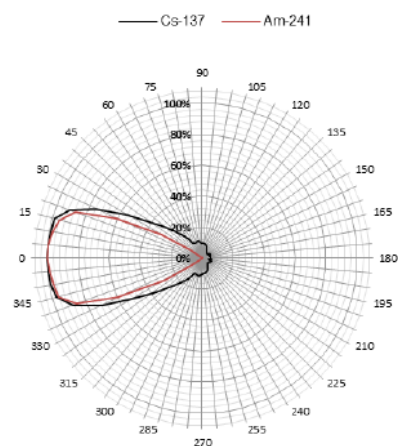
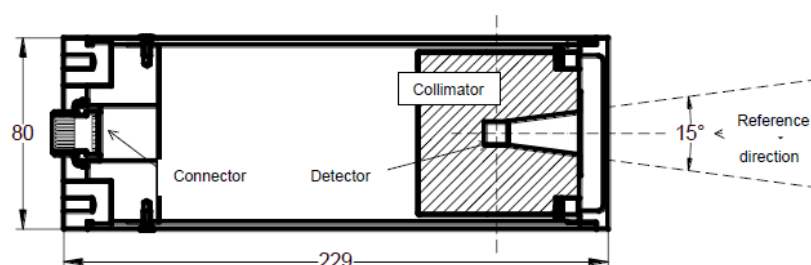
* Shielding is available only for the robust versions with a diameter of 80 mm

RELATED PRODUCTS

RDU-02	Radiation measuring channels	Display	Unit	for	4
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RDU-22	Radiation measuring channels	Display	Unit	for	16
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MDG-04/08e	Smart Dose Rate Meters
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Section drawing of the MDG-12/13S detector and its directional response



RDU-02 with integrated signal tower



MDG-04/08e Smart Dose Rate Meters