

MediSmarts

GM-40 Area Monitoring channel

The GM-40 Area monitoring channel is used as part of the MediSmarts system to monitor and record radiation levels in populated areas of cyclotron sites and nuclear medical departments. The measuring range is between 250 $\mu\text{Sv/h}$ to 10 Sv/h (25 mR/h to 1000 R/h).

The Monitoring Channel consists of the following Components:

- Connection Unit.
- Data Processing Unit (DPU).
- GM-40 Detector.
- Cable between Connection Unit and DPU.
- Cable Between Detector and DPU.
- Optional Alarm Unit.

The DPU is the linking stage between the detector and the computer. The DPU processes the detector's signal and transmits the processed radiation data via an RS-485 communication network to the MediSmarts software in the computer. The DPU automatically recognizes the detector's type and its calibration factor. The automatic detector identification enables flexibility in using and switching between different detectors on the same DPU.



DPU Features

- Output relay contacts activated if exceeded radiation threshold levels & malfunction.
- Radiation measurement is displayed on a large, easy to read, digital LCD.
- Four indication LED's
- Displays Threshold and Malfunction alarms.
- Automatic identification of the detector calibration factor.
- RS-485 Communication.
- Self test and parameter display on start up:
- Automatic identification of detector malfunction.
- Background subtraction.
- Accumulating and Saving the Dose
- Output for alarm unit and remote display unit



Specifications

Connection Unit

Dimensions: 15cm x 14 cm x 2.5 cm

Cat No: BAK-1000

Data Processing Unit

Dimensions: 20cm x 9 cm x 3.5 cm

Cat No: BAK-1040

Cable between Connection Unit and DPU.

Standard length: 1.5 meters

Cat No: BAK-0790

Cable Between Detector and DPU.

Standard length: 2 meters

Cat No: BAK-0710

GM-40 Detector.

Type	GM-40
Geiger Type	ZP1301
Measuring Range	250 μ Sv/hr - 10Sv/hr 25mR/hr - 1000R/h
Sensitivity	30cps/mSv/hr (0.3cps/mR/hr)
Accuracy	\pm 15% reading within the measuring range
Energy Range	50 keV - 1.3 MeV
Energy Dependence	\pm 20%
Angular Dependence	Less than \pm 20% for \pm 45° of preferred direction
Temperature Range	Operation: -10°C to 50°C Storage: -20°C to +60°C
Humidity Range	40% to 95% RH (non condensing)
Dimensions:	
Length	170 mm (6.7")
Diameter	38 mm (1.5")
Weight	250 gr (0.55 lb)
Casing	Aluminum, splash proof
Hook-up cable length	up to 100 m
Output signals	TTL pulses (5V, 5ms) Detector status logic: - identification - malfunction - radiation overflow

From previous Monitoring Channel



To next Monitoring Channel

To Current Monitoring Channel

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

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