

Instruction Manual

—Y-M06 Radiation Dose Alarmer



1, Product Overview:

Y-M06 alarmer is a small and high sensitive radiation dose detector, which is designed to monitor X-rays, γrays and hard β rays. The instrument adopts energy compensated GM counter tube as the detector, which has the characteristics of high sensitivity and accurate measurement. The microprocessor with powerful function is selected and equipped with dot matrix TFT display, which makes the operation simple and user-friendly, and has strong anti-interference ability. The two alarm modes of sound and flash can be combined arbitrarily, and the alarm threshold can be set arbitrarily. When the alarm threshold is reached, an alarm will be issued to remind the staff to pay attention to safety in time. The main technical indicators of the instrument meet the national and international standards, and it is the instrument with powerful function, small size and low power consumption in the same kind of instruments in China.

2, Application:

It is widely used in home improvement radiation, irradiation processing enterprises, health and epidemic prevention, radiotherapy, nuclear laboratories, nuclear power plants, import and export commodity inspection, building materials, petrochemicals, geological censuses, scrap iron and steel, industrial non-destructive testing and other environments where ionizing radiation exists.

6, Operating Instructions:

① Power :



When the instrument is turned off, press the ON Button for 3 seconds to complete the power on.

Press the MODE button again to enter the statistical measurement interface. On this interface, turn on (or off) the statistical measurement function by pressing the ON button;

② Alarm Mode Settings:

The instrument is free to set the two alarm modes (sound, flash) on and off.

Power :



After entering the menu setting interface, select the shutdown menu option by pressing the MODE button, then press the ON button again to enter the shutdown confirmation interface. Press the MODE button to confirm the shutdown, then the screen of the instrument will go off, and shut down; otherwise press the ON button to return to the menu settings interface.

7, Safety Tips:

When the instrument falls accidentally	Please confirm whether the radiation dose indication is normal and whether it will be updated. If abnormal, please do not apply the instrument to high-intensity radiation.
When the instrument prompts the malfunction of sensor	Do not apply the instrument to high-intensity radiation.
When using it under dark environment	Please confirm if the backlight of the instrument is on.
When using it under the environment with explosive gas or dust	Do not use the instrument in such environment which contains explosive & flammable gas, and dust.
Underwater operation	Do not use the instrument under water.

3, Radiation Dose Limit:

Radiation Dose Limit for Personnel Dealing with Radioactive Work:

Yearly average effective dose in five consecutive years	20mSv
Effective dose in any year	50mSv
Yearly equivalent dose for eye lens	150mSv
Yearly equivalent dose for limbs (hands and legs)	500mSv

Radiation Dose Limit for Public:

Yearly effective dose	1mSv
If the yearly average effective dose in five years is no more than 1mSv, Then it should be based on the effective dose of a single year.	5mSv
Yearly equivalent dose for eye lens	15mSv
Yearly equivalent dose for limbs (hands and legs)	50mSv

Exposure to radiation sources by members of the public, including exposure from authorized sources and practices and exposure received in intervention situations, but excluding occupational exposure, medical exposure and exposure to normal local natural background radiation.

Note: Based on GB18871–2002 Ionizing Radiation Protection and Radiation Source Safety Standards.

4, Main Features:

- ① Measure real-time dose rate and accumulated dose



- ② Dose rate alarm threshold and dose alarm threshold can be set arbitrarily (continuously adjustable).
- ③ Either sound alarm mode or flash alarm mode or any combination of them can satisfy various alarm needs.
- ④ It has alarm prompt function for sensor malfunction (Display screen shows “////GMBad”)
- ⑤ It has alarm prompt function for blocking when the radiation dose rate exceeds 10 mSv / h, (display shows 99.99Sv / h).
- ⑥ It has built-in memory, even if the power is off, the accumulated dose value, dose rate alarm threshold and dose alarm threshold data will not get lost.

- ⑦ It is able to monitor battery level continuously, with prompt for low battery state.

5, Technical Parameters:

- ① Detector: Energy-compensated GM counter tube
- ② Measuring Range: Dose Rate: 00.00μSv/h ~ 10mSv/h
Dose : 00.00μSv ~ 10Sv
- ③ Sensitivity :> 1.5 cps / μSv / h (vs. 137Cs)
- ④ Energy Response: 48keV ~ 3.0MeV
- ⑤ Relative Error: <5% (at 1mSv / h)
- ⑥ Power Supply: 2 pcs of No.7 batteries
- ⑦ Power Dissipation: <24mW
- ⑧ Temperature Characteristic : -10°C ~ +50°C ± ±10%
- ⑨ Weight: 266g

Display contents

- ① Battery Level Indicator (When the battery is in low state, the indicator flashes to remind the user to replace the battery)
- ② R, Dose Rate Alarm Indicator (Only blinks when the dose rate alarm is on), with audible and visual alarms
- ③ D, Dose Alarm Indicator (Only blinks when the dose alarm is on), with audible and visual alarms
- ④ Real-time Test Result
- ⑤ Statistical Measurement Running Indicator (Only blinks when the statistical measurement function is on)
- ⑥ Unit
- ⑦ The Current Measuring Mode of the Dose Rate

Note:

1. r: Abbreviation of radiation, refers to radiation statistical mode

B: Abbreviation of background, refers to environmental background mode. in brackets.

ON Button: Setting Button, Power On Button, which is used to Turn On/Off the Statistical Measurement Function.