

BITT Technology

Autonomously measuring station



This autonomous measuring station for our Gamma detector RS03/X permits measuring in an area where no infrastructure (telephone wiring and power supply) is available.

The unit is equipped with a 12 V solar station to supply the measuring instruments with power. The integrated accumulator is designed for a station operation time of about 30 days without power production and full accu capacity.

The data can be sent to a master station via GSM terminal modem. Consequently, the only requirement for the operation of this measuring station is the following:

The measuring station has to be in the receiving area of a GSM sending station. If this is not the case, the data transfer via radio or satellite can be used. Provided that one of the latter transfer systems is used, however, a change in the system set-up (power supply and data communication) is absolutely necessary.

If there is no data connection to the master station, the station can save the measuring data for one week. In this case, The WEBDL is in charge of saving the measuring data and of modem control.

This Datalogger has been developed especially for use in this measuring station. Furthermore, this unit is fully compatible with our RSDL Datalogger, which implies that for both units only one control routine instrument is required in the master station.

The entire casing of the measuring station is made of aluminium and has the protection class IP55. The casing has a double – wall design with very good isolation properties. For the installation, a strong concrete ground work should be available. For the mounting the sensor RS03/X, there are various options. The sensor is usually mounted on its own equipment, at a distance of several meters to the station to ensure that there is no influence on the direction dependence of the sensor. This kind of mounting, however, requires the installation of an earth wire to connect the sensors with the measuring station. A simpler installation option would comprise mounting the sensor directly on the measuring station with an expositor. (→ Direction dependence of the sensor changes)



Technical data of the measuring station:

Dimensions (l x b x h):	700 x 500 x 3400 mm
Weight:	ca. 100 kg (incl. Akku)
Power supply:	150W Panel; Akku: 120Ah (controlled accu charging with disconnection -no accu deep discharge)
Temperature range	-40°C.....+60°C
Protection class:	IP55
Possible measuring devices:	RS03/232-S; RS03/232-SL
Data transfer:	GSM Terminal Modem

Technical modifications are subject to change

face the invisibility

for more information
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The gammameter, model RS-03/X, developed and manufactured by **BITT TECHNOLOGY**, is designed for measuring radioactivity of gamma radiation. It is calibrated in "ambient dose equivalent" units [$H^*(10)$] and its measuring range comprises 9 decades (from 10 nSv/h up to 10 Sv/h). This wide measuring range permits detecting minor changes in the ambient natural radioactivity as well as measuring high dosage rates.

This robust and unique detector lends itself to an extensive range of utilizations:

- sensor in monitoring networks for early warning systems covering a wide area,
- hospital surveillance at radiation therapy wards,
- measuring unit in scientific institutions and development centres,
- supervision unit at borders, airports, railway stations and in aircrafts, etc.,
- control unit in municipal sector mainly for the instant check of accidental radiation, generated by nuclear
- industry (nuclear power plants, storage of fusionable material and truck/train transportation of such materials),
- measuring unit in private sector, especially for owners of fallout shelters.



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