R G M
System

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R G M
System

contents

1 General

The RGM system may be used for different operations of radioactivity-monitoring, mainly it is used for monitoring of trains and trucks.

1.1 General - Hardware

The hardware of the RGM system is constructed by modules and herewith it enables a great flexibility of the system. Due to this hardware-system by modules, customer requests may be realised very simple and cost-effective.

1.2 General - Software

The software of the RGM system is also constructed by modules and may be increased cost-effective acc. to customer requests.

2 Hardware

The hardware of the RGM system consists of some components which are used correspondingly to customer requests and circumstances of the operating place. The mechanical elements can be modified at any time, if they do not prove as functional on the requested place.
Furthermore, the system can also be installed additionally to another, already existing measuring unit.

2.1 Mechanical hardware-elements

2.1.1 Substructure

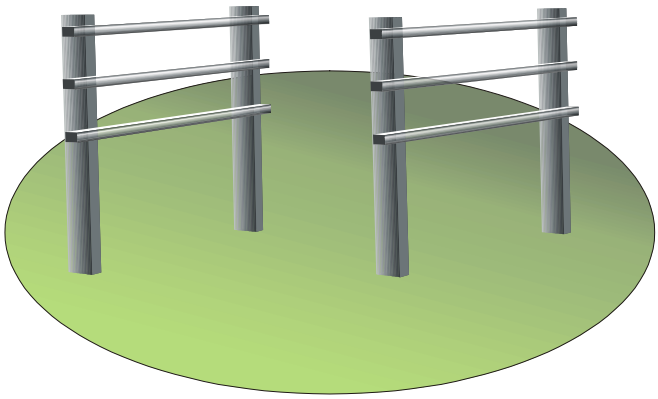
The substructure is the necessary construction which is needed for the solid installation of the system. As substructure also already existing facts may be used, if they can meet the required criterions of stability and security.
The substructure of the RGM will be adapted to the facts on the place of installation and will be discussed correspondingly with the customer.

2.1.2 RGM200-H frame

The RGM200-Horizontal frame consists of form-tubes, on which the several RGM-200 detectors are fixed horizontal. The detectors can be installed in any height. Furthermore the number of detectors on every side can vary between 1 and 5 detectors. On the RGM200-H frame also the photo-electric device and the RGM distributor is installed. In order to obtain the necessary stability, the RGM200-frame is connected with the substructure.

Dimensions:

Height:	3500mm
Length:	2400mm
Width :	1600mm

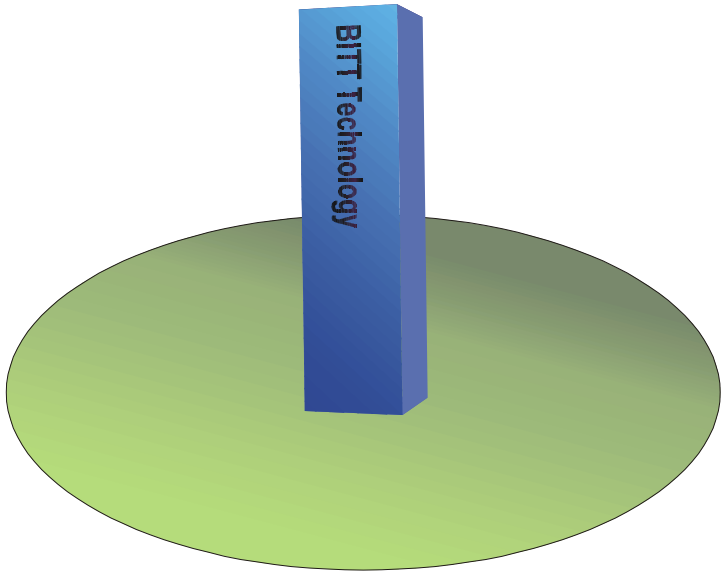


2.1.3 RGM200-V frame

The RGM200-V frame is used for installation of the RGM200 vertical detectors. This kind of installation is mainly used if the place of installation is very small, or if the system should be inserted into the environment unobtrusively
Also on this installation the RGM200-V frame is connected with the substructure (and also with the RGM200-H frame, if existing) in order to obtain the necessary stability.

Dimensions:

Height:	2300mm
Length:	185mm
Width:	110mm



2.1.4 RGM Distributor

All detectors and photoelectric devices are connected on the RGM distributor. All signals of the RGM system are forwarded through the control lead to the evaluating unit.

2.2 Hardware elements for measuring technique

2.2.1 RGM200

The gate monitor of radioactive radiation is the new product of BITT Technology, based on the own research and long-time experience in this sector. The monitor RGM is a very useful device for operation in the gate of passing people, goods or vehicles. The monitor has special application at the border check points for its long-term (24h/d, 365d/y) service and maintenance-free operation. The monitor RGM ensures instant indication of the increase of radioactivity and generation of alarm signal. The design of the monitor RGM allows high quality and simple operation but also very acceptable price. The proportional counter tube S20 serves as the detector of this monitor, which has been verified in different stationary and mobile

In order to obtain the highest possible flexibility a RGM200/sta is used as standard.

2.2.1.1 More from the *RGM series*

RGM100/sta	stationary-analogue	more sensitive, faster reaction, tube-length 100 cm
RGM100/std	stationary-digital	like RGM100/sta, option RS-232
RGM150/sta	stationary-analogue	like RGM100/sta, tube-length 150 cm
RGM150/std	stationary-digital	like RGM150/sta, option RS-232
RGM200/sta	stationary-analogue	like RGM100/sta, tube-length 200 cm
RGM200/std	stationary-digital	like RGM200/sta, option RS-232

The monitors of the RGM series allow creation of such configuration which will completely solve the specific alarm problem. As for example, the gate for heavy trucks could be composed from four RGM200/std monitors (two monitors in vertical position on each side of the gate and two ones in horizontal position over and under the trucks profile). Such gate transfers the alarm signal to the distant post of police, custom officer or controller.

2.2.2 RGM PS

The RGM PS is a switching power supply, buffered by AKKUs, which can provide all detectors with steady voltage. The voltage of 12 V is supplied through a supply line to the RGM distributor and is herewith available for all components in the system.

2.3 Evaluating unit

As evaluating unit a computer of commercial quality (AT comp.) with additional input and output cards is used. All detectors are processed in the computer by means of the input cards (counter cards) and visualised on the monitor and printer (optionally).

2.3.1 Option

As an option an output card can be installed, which enables the connection of optical and acoustic sensors. All options are obtainable separately.

3 Software

The software runs on MS Windows and is divided into several independent modules. In this way all detectors of the horizontal-system, as well as all detectors of the vertical-system, are evaluated separately.

3.1 Warning

The warning in the RGM system can be made in different kinds.
As standard the warning is made visually and acoustically on the evaluating unit (PC). An additional warning, resp. also recording, can be made through a protocol-printer (obtainable optionally), which can be connected on the evaluating unit.
Further warnings are available by means of an output card, on which sirens and warning lights can be connected. Furthermore it is possible with this output card that a barrier or other similar equipment will respond in case of an alarm.
The kind of warning is eligible, resp. it is also possible to have several kinds of warning.

3.2 Warning thresholds

The warning thresholds are eligible and will be adapted correspondingly to the circumstances.