

BITT Technology

RS04/X Gammameter



The gammameter, model RS-04/X, developed and manufactured by **BITT TECHNOLOGY**, is designed for measuring radioactivity of the 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.

MAIN APPLICATIONS

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

- sensor in monitoring network for early warning system 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.



Power supplies for Gamma-Detector RS04/X

Version PS03/A

Simple power supply with accumulator. Operating time without mains approx. 30 hours. On/Off switch, green LED for mains control, red LED for accu-control (controlled accu charging with disconnection -no accu deep discharge), fixed mains cable, D-Sub built-in socket for connecting the Gamma-Detector RS04/X, D-Sub built-in socket for connecting a PC (RS-232), connecting cable for a PC (RS-232).

D-Sub built-in socket for connecting an external display

Dimension: approx. width = 270 mm, deep = 220 mm, height = 90 mm,

Weight: approx. 1,5 kg

Version PS03/LAN

With this version it is possible to establish the data-communication between the RS04/X and the collector (PC) through existing Ethernet- Fast Ethernet- wiring.

Technical data identical PS03/A.



for more information

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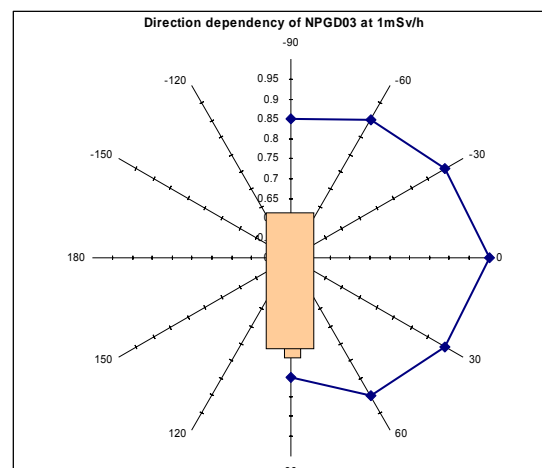
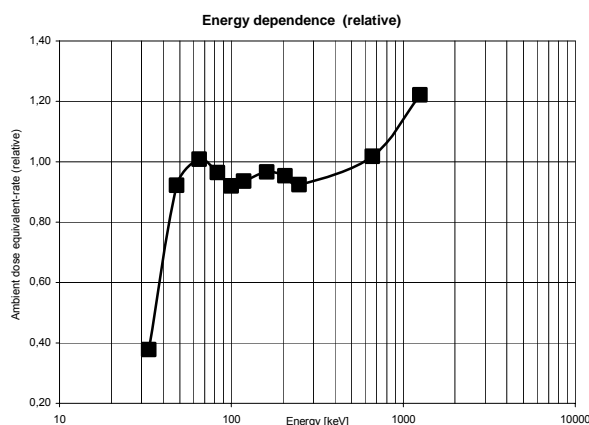
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RS04/X Gammameter



| | | |
|----------------------------------|---------------------------------------------------------------------------------------------------|----------------------|
| Type | RS04H/232, RS04H/485 | RS04L/232, RS04L/485 |
| Detector | Proportional counter, Type NPGD 02 with energy compensation (produced by BITT Technology) | |
| Microprocessor | Type C8051F022 Silicon Labs, compatible with Intel 8051 | |
| Measuring range | 10 nSv/h ÷ 10 Sv/h | 10 nSv/h ÷ 15 mSv/h |
| Energy range (±30%, ref. Cs-137) | $\dot{H}^*(10) \leq 30$ mSv/h: 40 keV ÷ 3 MeV $\dot{H}^*(10) > 30$ mSv/h: 100 keV ÷ 3MeV | 40 keV ÷ 3 MeV |
| Temperature range | -30°C ÷ +70°C | |
| Temperature dependence | $\dot{H}^*(10) \leq 1$ mSv/h: ±3% $\dot{H}^*(10) > 1$ mSv/h: -20%, +50% | |
| Measuring uncertainty | $\dot{H}^*(10) \leq 1$ Sv/h: ±10% $\dot{H}^*(10) > 1$ Sv/h: ±15% | |
| Output | RS-232 or RS-485 ¹ | |
| Services | | |
| Protokoll version ² | BSN, BSS, OS€, OS@ | |
| Real time clock | Yes | |
| Data storage memory | Yes | |
| Real time data | Yes | |
| Additional software | Bittsens, Vcomtest, Bittwin, AMAR, Procomm, Terminalprogram, RS-Datalogger with Modem, BOREAS BCU | |
| Power consumption | max. 50 mA ³ (10,5V _{DC} ÷ 13,8 V _{DC}) | |
| Dimensions | Ø76 mm x 500 mm | |
| Mass | ca. 2,5 kg | |



Technical modifications are subject to change

¹ For request it is available with RS422 interface, other parameters are equivalent with the RS485-ös interface.

² BSN Bittsens protocol, it answers on all request, report is generated automatically

BSS Selectiv Bittsens protocol, it answers only on the request from the addressed and 999 addresses, none report is generated automatically.

³ Operating consumption ≤50 mA, transient current is max. 100 mA, max. 5 s.

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