

GammaTRACER

Autonomous Environmental
Gamma Measurement Probe



detection
monitoring
radiation

The GammaTRACER is designed for continuous measuring, recording and optionally transmitting the environmental gamma dose rate – more than 3 000 probes in worldwide use. The hermetically sealed probe, including the GM detectors as well as all electronic components, operates completely autonomously and is independent of any physical connections, thus resisting extreme climatic and environmental conditions. Energy-saving chip technology allows maintenance-free non-stop operation of the GammaTRACER probe of typically five years, optionally up to ten years!

The time resolved measurement values are stored together with the auxiliary and QA parameters (built-in storage up to 12.800 data sets). Data download and parameterization can be performed via an interactive infrared or cable port. DataEXPERT, a professional user-friendly database, communication- and analyzing software guarantees both, a simple and safe access to the stored data as well as their powerful visualization and fast, precise analysis. Via WebVIEW data can be accessed and configured via any standard browser.

Offering easy installation, fast relocation and long autonomy, GammaTRACER, enhances new approaches in environmental monitoring for routine as well as for emergency management. Additional interface possibilities for online and real-time data transmission, ranging from wired modules (RS232, RS485) to sophisticated wireless transmitters (SkyLINK, ShortLINK) fulfill a wide variety of user needs.

The flexible GammaTRACER XL2 version includes moreover standardized transmission services (SMS/GSM/GPRS, WiFi, DSL, LAN). Optionally GPS acquisition, additional sensors, display and solar power supply. A seismic qualified version is also available.

The latest GammaTRACER type SPIDER, particularly designed for emergency response, enables deployment of probes via remotely controlled aerial drones without human intervention also via satellite data transmission (IRIDIUM).

FEATURES

- Autonomous waterproof gamma dose rate probe for stationary and mobile use
- Battery operation up to 10 years
- Built-in quality assurance system (QA)
- Long-time stable calibration
- High sensitivity and accuracy
- Wide measurement range: 10 nSv/h to 10 Sv/h (dep. on type)
- DataEXPERT data management software for evaluation and reporting, access to data via Web Browser
- Approvals: Approvals: PTB (DE), NRPB/PHE (UK), GOS Standard (RU, UA), CTHIR (FR)

PHYSICAL CHARACTERISTICS

- Detector type: Geiger-Mueller tubes
- Length of measurement cycle : 1, 2, 5, 10, 15, 30, 60, 120 min / optional "Fast Response Mode - FRM" 1s (XL2 probe)
- Internal storage: GT-BASIC, -WIDE, -HIGH, -XL: 12 800 data sets (up to 1 065 days depending on measurement cycle)
- GT-XL2-2 and -XL2-3: 8 000 data sets

| | GT-BASIC | | GT-WIDE | | GT-HIGH | | GT-XL | | GT-XL2-2 | | GT-XL2-3 | | |
|---|--|-----|---|---|--|---|---|---|---|---|---|---|------|
| Number of GM tubes | 2 | | 2 | | 2 | | 2 | | 2 | | 3 | | |
| Detector channel | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 3 |
| Number of pulses at 100 nSv/h in 10 min | 150 | 150 | 150 | 2 | 2 | 2 | 1100 | 2 | 1100 | 2 | 1100 | 2 | 1100 |
| Measurement range | 20 nSv/h ... 10 mSv/h 2 iR/h ... 1 R/h | | 20 nSv/h ... 10 Sv/h 2 iR/h ... 1 000 R/h | | 1 mSv/h ... 10 Sv/h 100 iR/h ... 1 000 R/h | | 10 nSv/h ... 10 Sv/h 1 iR/h ... 1 000 R/h | | 10 nSv/h ... 10 Sv/h 1 iR/h ... 1 000 R/h | | 10 nSv/h ... 10 Sv/h 1 iR/h ... 1 000 R/h | | |
| Measured unit (Quantity) | H*(10) or Kerma/Hx/X | | H*(10) or Kerma/Hx/X | | H*(10) or Kerma/Hx/X | | H*(10) | | H*(10) | | H*(10) | | |
| Energy range | 45 ... 3 000 keV | | 45 ... 3.000 keV | | 80 ... 4.400 keV | | 45 ... 2.000 keV | | 45 ... 2.000 keV | | 45 ... 2.000 keV | | |

ENVIRONMENTAL CHARACTERISTICS

- Operating temperature range: Standard -20 ... +50°C (-4 ... +140°F), optional -40 ... +60°C (-104 ... +158°F)
- IP index: IP68 (hermetically sealed housing), IP67 (cable versions)
- Built-in sensors: Temperature, humidity, shock

MECHANICAL CHARACTERISTICS

| | GT-BASIC | GT-WIDE | GT-HIGH | GT-XL | GT-XL2-2 | GT-XL2-3 |
|--------------------|-------------------|----------------|----------------|----------------|-------------------|-------------------|
| Dimensions (Ø x L) | 60 mm x 665 mm | 60 mm x 665 mm | 60 mm x 665 mm | 80 mm x 900 mm | 80 mm x 580 mm | 80 mm x 580 mm |
| Weight | 950 g | 950 g | 950 g | 1.600 g | 2.000 ... 3.000 g | 2.000 ... 3.000 g |
| Casing material | Anodized aluminum | | | | | |

ELECTRICAL CHARACTERISTICS

- Power supply: Lithium batteries (optionally: 12VDC external via RS232 or RS485, solar)
- Autonomy: depending on transmission channel and measurement cycle length, typ. 5 years (opt.: 10 years, lifetime with solar)

INTERFACES & SOFTWARE

- Infrared-port in every probe
- Serial interface module (RS232 or RS486) in XL2 (optionally in BASIC, WIDE, HIGH, XL)
- Optionally ShortLINK / SkyLINK radio module (integrated)
- Optionally in XL2: GSM, GPRS, SMS
- Optionally in XL2: GPS module
- DACC module for ETHERNET connection (LAN)
- IRIDIUM Satellite module (SPIDER, integrated)
- DataEXPERT monitoring software, WebVIEW access via browser

OPTIONS & RELATED PRODUCTS

- Supports (wall support, tripod, etc.)
- Battery Extension Pack (standard probes BASIC, WIDE, HIGH, XL)
- Alarm unit / Alarm display unit
- Meteorological sensors for GT-XL2
- Seismic qualified version
- Lifetime autonomy with solar extension possible

