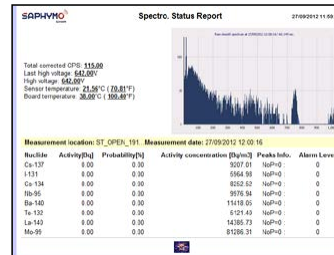


SpectroTRACER Air/Soil

Intelligent Gamma Spectroscopic Probe



The intelligent SpectroTRACER probe is a continuous measurement system for detecting lowest gamma radiation in air and on the ground, but also excellently suited for high gamma radiation measurement, e.g. in emergency cases.

SpectroTRACER performs a spectrometric analysis of the measurement to identify the detected radionuclides. The device is used for gamma monitoring whenever a pure gamma dose rate monitor is not efficient enough or if it is necessary to qualify the nature of the gamma radiation.

All components are integrated in a hermetically sealed housing allowing permanent and maintenance-free operation even under harsh conditions. The compact design of the probe includes: detector – HV – preamp – MCA – low power PC – LAN interface – Optional: GPS, wireless data transmission modules, GM module (two tubes, up to 10 Sv/h). Input for external devices: meteo station, rain sensor etc. Seismic qualified version available.

Low power consumption allows stationary as well as mobile application. Autonomous operation is possible in combination with battery backup for up to 10 days or unlimited with additional solar power supply. The compact mobile setup can be installed within a few minutes. Available wireless data transmission options are: WIFI, GPRS/3G, satellite, proprietary ShortLINK/SkyLINK radio. Possibility for different redundant configurations.

The monitor calculates the ground contamination (Bq/m²) and the activity concentration (Bq/m³) for each identified nuclide as well as the dose rate H*(10) according to IEC60846.

FEATURES

- Online γ -spectrometry in air and on the ground
- High resolution and sensitivity with LaBr₃ detector (optional: NaI, CeBr₃, others on request)
- GM tube option (up to 10 Sv/h, 1 000 R/h)
- Wide measurement range (Digital MCA up to 8k channel and 80 MHz sampling rate)
- Automatic peak stabilization over wide temperature range (-30°C ... +60°C, -22°F ... +140°F)
- Compact and robust for mobile and stationary use (GPS option)
- Automatic nuclide identification
- Calculation of dose rate H*(10), ground contamination (Bq/m²), activity concentration (Bq/m³)
- Low power consumption, solar option
- Built-in communication options: LAN, WIFI, GPRS/3G, SkyLINK/ShortLINK radio, satellite
- Typical applications: Perimeter, environmental and process monitoring for routine as well as emergency operation

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PHYSICAL CHARACTERISTICS / PERFORMANCE

Crystal	LaBr3:Ce 1,5"x1,5"	LaBr3:Ce 1"x1"	Nal(Tl) 2"x2"	Nal(Tl) 3"x3"
Multichannel analyzer characteristics	up to 8 192 channels (80 MHz sampling) up to 2 048 available			
Resolution for Cs-137	< 3 %	< 3.5 %	< 7 % or optional < 7.5 %	
Spectroscopic measurement range	1 nSv/h ... 1 mSv/h	1 nSv/h ... 3 mSv/h	1 nSv/h ... 200 iSv/h	1 nSv/h ... 100 iSv/h
Measured units (quantities)	H*(10), Bq/m2, Bq/m3			
Energy range	30 keV ... 2 MeV or 30 keV ... 3 MeV (configurable)			
Option: GM module – dose rate range	up to 1 Sv/h (extended: 10 Sv/h)			
Storage capacity	2 GB storage (allows up to 1 year local storage in 10 min mode)			
Two measurement cycles	2 min ... 24 h, user configurable			
Mechanical characteristics	length: 561 mm, diameter: 120 mm (flange diameter: 160 mm), weight: ~4.8 kg, housing: aluminum varnished with nano paint Optional: teflonized housing for highly corrosive environments			

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)
- Relative humidity: 100%
- Built-in sensors: Temperature, humidity, shock

ELECTRICAL CHARACTERISTICS

- Power supply: 230 V ~ 50 Hz or 10 V ... 24 V, 2.5 W
- Electromagnetic compatibility: according to 2014/30/EU and IEC 61000
- Backup battery: 4 or 10 days / charger and solar panel (optional)

INTERFACES

- Standard interface: Ethernet/LAN with ANSI N42.42 data format. Built-in FTP server (push or pull mode). Data can be sent to two different destinations, allowing easy setup of redundant server systems. Built-in web interface and VPN secured transmission.
- Data transmission options:
 - GPRS/3G module
 - Combined GPRS/3G and SkyLINK/ShortLINK radio module (up to 100 km / 60 mi, offers high availability even in catastrophe scenario with overload of public networks)
 - Satellite (Globalstar a.o.)
 - DSL modem
 - Others on request



OPTIONS

- GPS
- Rain sensor
- Weather station (barometric pressure, humidity, precipitation, temperature, wind speed and direction)
- Seismic qualified version
- DataEXPERT monitoring software, WebVIEW access via web browser
- Supports (wall support, tripod, etc.)
- Transport and storage case
- For water application ask for SpectroTRACER Aqua

