

SARA–SPECTROSCOPIC MONITORING STATION

SARA is a flexible gamma spectroscopic system which can be used for versatile applications. The SARA – Spectroscopic Gamma Detector in combination with different base units forms the powerful SARA - Spectroscopic Monitoring Station. Different base units are available each optimized to provide the best solution for the customer needs.

The SARA – Spectroscopic Gamma Detector is able to detect even minor changes of the composition of the gamma spectra in the environment. This improves significantly the recognition of artificial isotopes, which is very important for the radiation early warning system, for example. Not only does it support the fast detection of artificial radiation but it can also identify the nuclear isotopes. It is designed for outdoor use even in harsh environments and for continuous operation without any maintenance. The hermetically sealed detector unit guarantees optimal protection for the detector and the electronics against environmental conditions. The NaI(Tl)- or LaBr₃(Ce)-based scintillation detector provide high energy resolution under ambient temperature operation conditions. The integrated embedded Linux-PC enables online isotope identification and versatile data exchange through several interfaces. The integrated web server facilitates easy data access using a web browser. Total and nuclide specific gamma dose rate measurement is calibrated according to ambient dose equivalent rate H*(10). For more details refer to the SARA – Spectroscopic Gamma Detector. This detector can be combined with different base units to form following stations.

SARA – BASE UNIT SPECTROSCOPIC MONITORING STATION

The SARA-80F is designed for a fixed installation using 110 V / 230 V power supply with battery backup and solar power supply as an option. Data communication between the station and Network Monitoring Center (NMC) uses LAN, DSL or wireless LTE in each case through a secure VPN. The SARA-80F is designed for wall or pole installation.

SARA – BASE UNIT AUTONOMOUS SPECTROSCOPIC STATION

The SARA-80S for stationary use is designed for fixed installation and unlimited operation that is achieved by the solar panel and a back-up battery. Data communication between the SARA-80S and Network Monitoring Center (NMC) uses the LTE or RADIO service of cellular networks through a secure VPN. The SARA-80X is the version with larger solar panel and battery.

SARA – BASE UNIT MOBILE SPECTROSCOPIC STATION

The SARA-80M can be quickly deployed in case of emergency (battery-based temporary use). This independency from any wired connections eases the installation of the station at any place of interest and permits simple relocation if necessary. Data communication between the SARA-80M and Network Monitoring Center (NMC) uses the LTE or RADIO service of cellular networks through a secure VPN.



**SPECTROSCOPIC
MONITORING STATION
SARA DETECTOR+BASE UNIT
SARA-80F**



**AUTONOMOUS SPECTROSCOPIC
STATION SARA DETECTOR+BASE
UNIT SARA-80S (WITH
MOUNTING PLATFORM)**



**AUTONOMOUS SPECTROSCOPIC
STATION SARA-80X (WITH
MOUNTING PLATFORM)**



**MOBILE SPECTROSCOPIC
STATION
SARA DETECTOR+BASE
UNIT SARA-80M**

PERFORMANCE SPECIFICATION

| | Unit | SARA-80F | SARA-80S SARA-80X | SARA-80M |
|--|----------|---|--|---|
| Features | | Pole or wall installation | Easy to install & set-up No infrastructure required | Easy to deploy & set-up No infrastructure required |
| Compatible detector | | All SARA detectors (data sheet SARA – SPECTROSCOPIC GAMMA DETECTOR) | | |
| Operation temperature | °C °F | -40...+60 -40...+140 | | |
| Protection class base unit | | IP66 | IP65 | |
| Humidity | % | 0...100 | | |
| Power | W | 1.8 (average) | | |
| Supply voltage | | 110 V / 230 V AC | 110 V / 230 V AC (battery charger) | |
| Battery voltage | V | 12 | | |
| Battery capacity | Ah | 24 | 2x10 (SARA-80S) 175 (SARA-80X) | 10 |
| Battery operation time with SARA detector | days | 5 | 5 (SARA-80S) 40 (SARA-80X) | 2.5 |
| EMC-proofed | | EN55022 ClassB, EN55024 61000-3-2, 61000-3-3 | EN55022 ClassB EN55024 | |
| Diameter | mm | -- | 168 (SARA-80S) -- (SARA-80X) | |
| Depth | mm | 210 | -- (SARA-80S) 300 (SARA-80X) | |
| Width | mm | 390 | -- (SARA-80S) 500 (SARA-80X) | -- |
| Height | mm | 390 | 545 (SARA-80S) 550 (SARA-80X) | 585 |
| Weight | kg | 16.55 | 20.85 (SARA-80S) 80 (SARA-80X) | 11.3 |
| Communication interfaces additional to SARA detector | | DSL (SARA-400-A, optional) Other communication interfaces on request | -- | -- |
| Optional Accessory base unit | | Mounting pole Solar power supply | Mounting platform Solar power supply | Transport box Solar power supply |

ORDERING INFORMATION

| The Spectroscopic Monitoring Station consists of a Spectroscopic Gamma Detector SARA-1xx-Lx-x and the base unit. The base unit can be selected as follows: | | | Additionally the SARA detector can be selected as follows (examples): | | | | |
|--|-------|-----|---|-------|-----|-----|----|
| | SOLAR | DSL | | RADIO | LTE | GPS | RD |
| SARA-80F-AS | X | X | SARA-1xx-L4R-GR | X | X | X | X |
| SARA-80F-S | X | | SARA-1xx-L4 | | X | | |
| SARA-80F-A | | X | SARA-1xx-L4R | X | X | | |
| SARA-80F | | | SARA-1xx-L4R-G | X | X | X | |
| SARA-80S | X | | SARA-1xx-L4R-R | X | X | | X |
| SARA-80X | X | | SARA-1xx-L4R-GR | X | X | X | X |
| SARA-80M | | | SARA-1xx-LR-GR | X | | X | X |
| SARA-80M-S | X | | SARA-1xx-L-R | | | | X |
| | | | SARA-1xx-L | | | | |
| | | | SARA-1xx-Lx-xT comes with additional GM detector. SARA-1xx-Lx-xH with an additional high dose rate spectrometer. | | | | |

RELATED PRODUCTS: SARA – SPECTROSCOPIC GAMMA DETECTOR

SARA – SPECTROSCOPIC MONITORING STATION /03EN_2/03/2017

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