

## Borehole scintillation radiometer SRP-20



Borehole scintillation radiometer SRP-20 – the most advanced version of well-known logging radiometers SRP-97K and SRP-68-02/03 and their analogue in terms of functionality and application. The device is designed to conduct gamma-ray logging in wells up to 300 m depth and drillings. The borehole and hand-held (analogue of SRP-68-01, SRP-88 and SRP-97) versions are in series production.

When conducting gamma-ray logging, a continuous curve or chart is recorded, which displays the intensity of gamma radiation in  $\mu\text{R/hr}$ . Due to natural absorption by host rock, ionizing radiation from rocks and objects within a radius of up to 30 cm from the scintillation detector is recorded.

### Why SRP-20?

- Borehole radiometer SRP-20 includes both probe and control unit, so that it becomes all-sufficient system for gamma-ray logging
- Waterproof detection unit of borehole version can be used both in dry / filled with liquid boreholes and with any types of casing (or without it)
- Waterproof control unit
- User friendly interface and simple operation

- Built-in Bluetooth and USB enable real time data visualization on a PC or smartphone (tablet)
- The instrument can be supplied with a well logging rod feeder system and a set of rods in order to use the probe in horizontal, inclined, and ascending wells and drillings
- Adjustment of time averaging window enables to record stable data on low level anomalies and provides immediate response during quick scanning
- Upon request, the detection unit can be manufactured for placing in a more than 300 m deep boreholes
- Easy-to-use pointer indicator equipped with a stepper motor eliminates oscillations caused by measuring console movement
- Indicator backlight provides comfort measurements at any conditions
- Rugged transport case, Co-60 control source and high-quality open type headphones

#### **Areas of SRP-20 application:**

- Radioactive / nonradioactive ore exploration
- Lithology studies in boreholes
- Identification and refinement of reservoir intervals (oil and gas-saturated formations)
- Tying to depth during perforating operations
- Determination of clay content and fracturing of rocks

#### **Package contents:**

- Logging probe
- Measuring console with built-in battery
- Charger
- Koss Porta Pro headphones
- Control source (Co-60) in a container
- Rugged Case
- Reel with slip ring
- Well logging rod feeder system with rods (optionally)

Measurement range of exposure dose rate of gamma radiation	0 ÷ 3 000 mcR/h
Fundamental error of measurement of exposure dose rate of gamma radiation of <sup>226</sup> Ra radionuclide	no more than ±15% (not standardized in the measurement subrange 30 mcR/h)

Measurement range of the average count rate of recorded gamma	0 ÷ 10 000 s <sup>-1</sup>
Fundamental error of measurement of average count rate of recorded gamma	no more than ±10%
Energy range of detecting gamma	35 ÷ 3 000 keV
Variation limit of averaging window	1 ÷ 20 s
Setting time of operating mode	no more than 1 min
Power supply voltage	12.5 ± 2 V
Average power	0.9 W
Life time of power supply	no less than 25 h
Operating temperature range	-40 ÷ +50 °C
Measurement range of exposure dose rate of gamma radiation	0 ÷ 3 000 mcR/h
Fundamental error of measurement of exposure dose rate of gamma radiation of <sup>226</sup> Ra radionuclide	no more than ±15% (not standardized in the measurement subrange 30 mcR/h)
Measurement range of the average count rate of recorded gamma	0 ÷ 10 000 s <sup>-1</sup>
- detection unit	36 × 1010 mm
- measuring console with power supply	200 × 90 × 145 mm
Interfaces	USB, Bluetooth
- detection unit	2.5 kg
- measuring console with power supply	2.6 kg

