

TEST BENCH FOR SEISMIC SENSORS

Test bench for seismic sensors (hereinafter TBSS) is designed for:

- ▶ visual control of discrete signals, generated by seismic sensors SS-1 and SS-1-1 (hereinafter sensor);
- ▶ conversion of current signals, generated by sensor, into voltage;
- ▶ emulation of break in the sensor's current circuits;
- ▶ connecting sensor to PC using digital conversion device;
- ▶ sensor power supply.



Test Bench performs the following functions:

- ▶ Generation of seven individual LED signals, corresponding to the sensor discrete outputs;
- ▶ Conversion of current signals from sensor current outputs into voltage;
- ▶ Emulation of break in the sensor's current circuits to check sensor's ability to test its own performance;
- ▶ Connection of sensor to PC using digital conversion device;
- ▶ Sensor power supply (24V).

Test Bench power supply should be provided by 24V DC;

Security requirements

According to the electric shock protection measures the Test Bench belongs to class 01 in compliance with GOST 12.2.007.0.

The resistance value between the protective grounding bolt and each accessible metal non-conductive test bench part under voltage does not exceed 0.1 Ohm.

Technical Parameters

Power supply	DC 24 V
Maximum electrical power, consumed by the test bench	
when connected to the Sensor SS-1	not more than 3 W
when connected to the Sensor SS-1-1	not more than 10 W
Dimensions:	
length	170 mm
width	180 mm
height	115 mm
Weight, not more than	2 kg

The Product Line of Physical Processes Analysis Design Bureau

Physical Process Analysis Design Bureau is focused on the development of seismic protection systems, calibration and qualification of data, received from devices, used at NPP. One of the most important products of the design bureau is the seismic sensor which obtains seismic impact data to provide seismic protection for equipment at nuclear power plants, mines, and other facilities that require seismic monitoring. The design bureau engineers also develop vibration measuring systems to carry out seismic sensors periodic calibration in a semi-automatic mode. In addition to nuclear industry oriented products engineers are developing information acquisition and display unit which is the key part of any monitoring system, including automatic systems for early diagnostics of emergencies. The other important task product is a high precision device to measure angles with different measurement ranges.