



Universal Locator-Recorder NPR-03

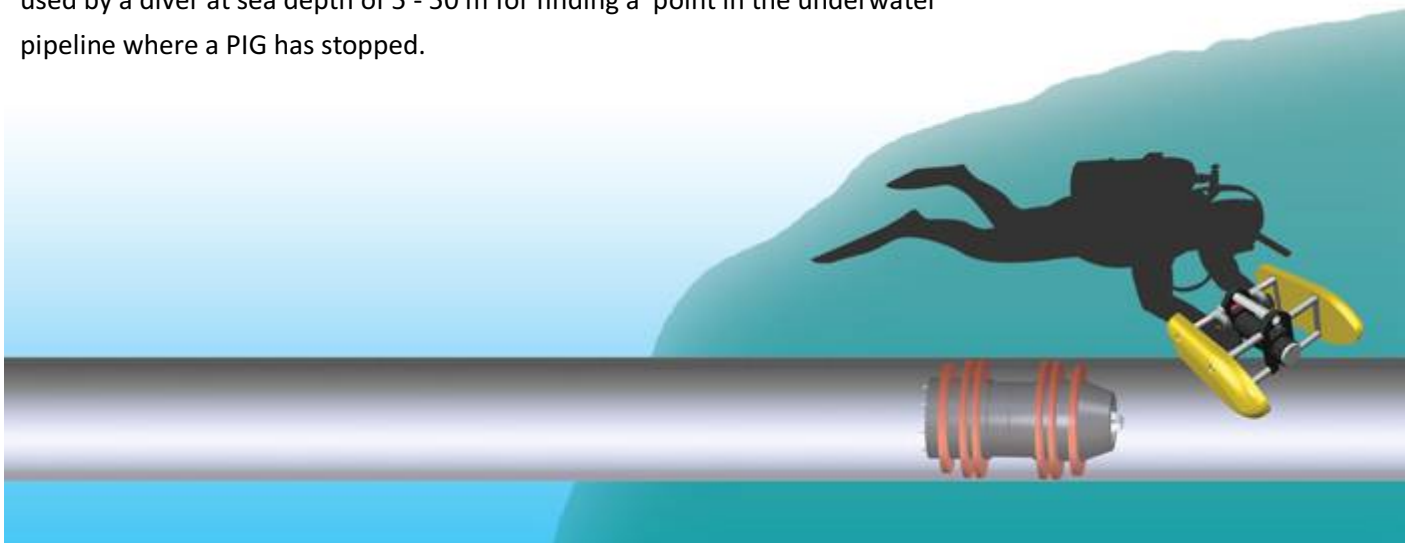
Universal underwater locator-recorder NPR-03 is a stand-alone device which was designed for work in support of utility and inspection PIGs while their run through underwater pipelines, as well as for recording the passage of the PIGs through marker points on underwater pipelines.



Depending on the selected mode of operation, the NDP-03 can keep a record of any change in weak magnetic fields (associated with movement of a PIG through the pipeline), or electromagnetic oscillations at a frequency of 22 Hz from a transmitter mounted on the PIG. The received signal passes through analog and digital electronic filters for noise suppression. About registration of the signal and about its strength one can judge by the shining LEDs in the LED bar on the front panel that light up if the filtered signal exceeds a certain threshold value. Simultaneously, the signal is recorded to the internal non-volatile memory of the device.

Managing of NPR-00 is performed by pressing the two spring-loaded arms on the side of the front surface of the polyurethane cladding of the device. Is possible to switch modes of the device and adjusts its sensitivity using the manipulator of underwater vehicle. Also it can do a diver by pushing on the levers by his wrists.

The locator can be equipped with lateral floats which provide its neutral buoyancy. In this case the NPR-03 can be used by a diver at sea depth of 5 - 50 m for finding a point in the underwater pipeline where a PIG has stopped.



Rugged housing of NPR-03 allows its use at depths of up to 3000 m with external pressure up to 30 MPa (43500 PSI).



To work with NPR-03 at greater depths an underwater remotely operated vehicle (ROV) is needed.

The battery life of NPR-03 allows to place it at the underwater pipeline for up to 6 months. In this variant NPR-03 is equipped with a protective "cage" (from metallic bars), which can be attached to the underwater pipeline. On the "cage" an additional equipment such as underwater ultrasonic transducer (pinger) can be installed. It will allow to determine the exact coordinates of the registrar NPR-03. Also in the "cage" an additional battery pack can be installed.

The signal about the passage of a PIG can also be transferred via cable from NPR-03 to the underwater pinger for subsequent transmission to a ship which located at a distance of up to 7 km from the "cage" with the pinger.

BASIC TECHNICAL CHARACTERISTICS OF NPR-03

Received signals	Electromagnetic oscillations with frequency 22 Hz; Changing magnetic field
Detection range with PNT transmitters (in air)	up to 25 meters
Autonomous work time	up to 3800 hours
Ingress protection	IP68
Maximum working pressure	30 MPa (43500 PSI)
Working temperature range	- 40°C...+60°C
Power supply	4 alkali batteries D (LR 20) with voltage 1.5 V or 2 lithium batteries DD, with voltage 3.7 V
Overall dimensions	without floats - 400 mm x 280 mm x 260 mm with floats - 550 mm x 400 mm x 300 mm
Weight (excluding floats, cage and other equipment)	Not more than 12 kg
Mean time before any failure	Not less than 5000 hours
Batteries remaining life indication	YES
Automatically adjusted brightness of LED indicators	YES
Recording time into non-volatile memory	40 minutes

Detailed instruction in Russian and English languages, as well as a plastic or wooden box for transport and storage are included into delivery kit.

Receivers NPR are produced in accordance with Technical Conditions TU 4276-001-96335610-2008. They comply with technical regulations of the Customs Union TR CU 012/2011 "On the safety of equipment for use in potentially explosive atmospheres" as well as with IEC 60079-0-98 and IEC 60079-11- 99.

They are also listed in the Register of technical devices, recommended for use in the energy complex of Russian Federation.

The warranty is 12 months.