



# NOVOTEST

## Pulse Holiday Detector NOVOTEST SPARK-1



**Datasheet**

**2022**

## 1. Introduction

Pulse Holiday Detector NOVOTEST SPARK-1 is a device for detecting defects (thinning, microholes, cracks, etc.) in dielectric coatings on metals.

The principle of operation of the device is based on the electrospark method. A probe with electrode connected to one pole of the voltage source scans the surface of the tested object directly along the coating. The second pole of the voltage source from the ground connector is connected directly to the metal structure. The electronic unit fixes the gaps by voltage between the electrode and the conductive base..

### Key benefits and features of Pulse Holiday Detector NOVOTEST SPARK-1:

#### - *RAPID TESTING OF COATING*

Using the device is possible to do rapid nondestructive testing of the integrity of the coating of vessels (tanks, barrels, etc.), pipelines (inner and outer surfaces), ships and other structures with a coating thickness of up to 12 mm and more, with a discontinuity size of 0.1 mm.



#### - *VARIOUS ELECTRODES*

Depending on the task, the device can be equipped with a T-shaped, sickle, brush, ring, spring and other types of electrodes for individual customer testing objects



#### - *AUTOMATIC DEFECT SIGNALING MODE*

The device has a sound alarm function when detecting an electric spark breakdown in the control process, which allows user to work with the device without permanent monitoring of the process, thus greatly simplifying the operator's work.





### - DESIGN

The electronic unit of the device is made of durable aluminum alloy, and dense rubber bumpers, which makes the device body resistant to falls and shocks, protect the side faces. Also, the device is not demanding on operating conditions, can be used in the temperature range from -40 to + 50 ° C.

## 2. Specifications

### 2.1 Advantages

- Reliability
- Small size and lightweight
- High capacity batteries
- Long battery life with enhanced battery
- Accurate digital voltage and sensitivity settings
- Indicator of batteries charge
- Sound defect signaling

### 2.2 Specifications

Measurement thickness range of tested coatings, no more	12 mm
Measurement diameter range of the detected defects, not less	0,1 mm <sup>2</sup>
Operation speed of electrode, not more	25 cm/s
Output voltage	0 – 40 kV
Output voltage resolution	0.1 kV
Pulse frequency	30 – 35 Hz
Batteries life, up to	15 h
Weight of high-voltage transformer	1,6 kg
Weight of electronic unit	1,1 kg
Operating conditions	-40 to + 50 °C, Humidity 95%
Total weight with kit and package	4 kg or 8kg (depends on the case)

### 2.3 Available options

There is a wide range of interchangeable electrodes for solving any tasks of coatings testing. Such as:

- T-type rod probe for NOVOTEST SPARK-1
- C-type wire brush probe for NOVOTEST SPARK-1
- Band-brush probe for NOVOTEST SPARK-1
- Spring probe for NOVOTEST SPARK-1

We also can manufacture electrodes for customer requirements or user tasks.

### 2.4 Standard package

- Probe
- Electronic unit
- Ground wire with crocodile clip
- T-shaped electrode
- Charger
- Operating manual
- Package

