



# Profotech

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Profotech, established in 2010, is engaged in the development, production and implementation of its own innovative technologies in the field of photonics.

The company offers fiber-optic measuring current transformers and electronic voltage transformers, on the basis of which solutions for digital intelligent energy and energy-intensive industries are built. Profotech promotes its products to the market with its know-how and based on its own technologies in the field of photonics. The company is a leader in the field of digital measuring systems for the electric power industry in Russia and actively develops sales in the international market.

## Background

In 2010, a group of scientists from the Fryazino branch of the state budgetary institution of science - Kotelnikov Institute of Radio Engineering and Electronics, developed a technology that allowed accurate current measurements using a special magnetic-sensitive optical fiber of its own design. The project attracted the attention of RUSNANO, after which it was decided to bring the technology to the industrial stage and establish mass production of products. About 1 billion rubles was invested into the Profotech project.

In 2012 the pilot production was launched in the walls of the scientific institute in Fryazino, in 2016 the enterprise was transferred to Technopolis Moscow, and in 2018 the company became a resident of the special economic zone Technopolis Moscow and set up serial production.

## Products and

# manufacture

The product line Profotech is represented by four classes of devices, each of which is included in the State Register of measuring instruments:

- electronic fiber-optical current transformers;
- electronic voltage transformers;
- combined non-conventional instrument transformers;
- flexible electronic fiber-optical current transformer.

A full production cycle is organized in Profotech company:

- development (including fiber optics, electronics, high-voltage design);
- assembly of devices (production is certified according to GOST R ISO 9001 standart);
- Installation and commissioning (service-oriented architecture);
- warranty and post-warranty support;
- production of special optical fibers in own optical laboratory;
- temperature tests of assemblies and devices;
- metrological and high-voltage testing (there is a testing center accredited for the right to conduct acceptance tests and verification).

The portfolio of orders is more than

**500** million  
rubles

## Partners

The first strategic partner of Profotech was the Swiss company Condis (ex Maxwell), which was acquainted with during the exhibition International Council on Large Electric Systems in Paris. The cooperation proved to be successful for both parties: the use of Swiss capacitive dividers as part of a complete solution has improved the quality and accuracy of the device. The first joint project was implemented in Europe in 2017 at Groupe E substation. In 2018, an agreement was signed with Portuguese corporation EFACEC, and in 2019 - with Nano Imports General Trading (United Arab Emirates). In addition, a memorandum of promotion of Profotech products in South Korea was signed.

Today, the portfolio of orders of Profotech is more than 500 million rubles, the company successfully promotes its products on international markets. Among the company's partners are major players in the energy market: Hydro Quebec (Canada), KEMA (Netherlands), EFACEC (Portugal), Electrosoul Brazile (Brazil), EDF (France), Terna (Italy).

An indicator of global recognition is the initiative of Siemens, ABB, NARI, EFACEC, SEL to test the equipment of Profotech (2016-2018) for compatibility with digital terminals of these companies, which gave 100% successful results, confirmed by joint protocols.

Profotech's digital measuring systems are installed at RUSAL's aluminium factories, the Nizhny Novgorod Hydroelectric Power Plant (RusHydro), the 500 kV digital substation Tobol (Federal Grid Company of Unified Energy System), the substation Gertsevo and other facilities throughout Russia. Several projects were implemented jointly with Transneft. In 2019, the current measurement system was replaced at the Kazakhstan Electrolysis Plant - now it uses electronic optical transformers with a flexible sensing element for measuring direct current.

## Key projects

### **Ensuring compatibility with manufacturers of secondary**

The Profotech team has done a lot of work to ensure compatibility with secondary systems manufacturers (both Russian and foreign),

**systems**

the work was carried out in accordance with the requirements of international industry standard IEC 61850. This allowed the company to participate in complex projects and offer customers fully digital solutions in partnership with global manufacturers.

## Profotech Test Center

Opportunities of the Profotech Test Center: verification of measuring instruments, testing of current and voltage transformers, testing of relay protection and automation devices, as well as current and voltage transformers, meters and meters of quality parameters of electrical network and process bus interface devices, climatic tests, analysis of current and voltage transformers' characteristics in the transition processes of primary networks.

## Development of a reference flexible electronic fiber-optical current transformer

The Company has developed a reference flexible electronic fiber-optical current transformer - mobile expert system for verification and calibration of measuring transformers. The international company KEMA, conducting certification tests of products of world manufacturers, equipped its laboratories with standards Profotech.

Photo: Profotech

## Awards

In 2018 and 2019 Profotech took part in the TechUspekh contest, a national rating of Russian high-tech fast-growing enterprises, and for two years in a row was one of the top five small companies.

In 2018, the EFOCT and EVT brought the companies victory in the Session of Moscow energy producers. Urban customers evaluated the devices according to three key criteria: novelty, economic efficiency and potential for application in urban economy.


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The company is a resident of Technopolis Moscow

# Contacts



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