



Technical description



The LoRaWAN-based telemechanics system node provides remote collection of signals and measurements about the equipment condition via the LoRaWAN radio link and data transmission through GSM/GPRS, Ethernet channels to the upper layer.

LoRaWAN wireless data transmission technologies feature low energy consumption, long range (up to 15 km) and secure data transmission channels. These technical parameters allow the TSU to be used to build distributed wireless telemechanics networks, which can perform both independent functions and be integrated into the automated dispatch control systems of energy companies.

Characteristics

Maximum possible number of connected devices	up to 10 000
LoRaWAN transmitter power	up to 100 mW
Communication range	up to 5 km in urban areas up to 15 km in the line of sight
Frequency range	864 – 870 MHz
Encryption	AES-128
Upper layer Ethernet data link	Ethernet 10/100/1000. GSM, CSD, GPRS, Wi-Fi
Integration interface with external services	HTTP, SMTP, TCP or UDP
Web services support	SOAP, REST API, JSON-RPC, XML-RPC, gRPC
GSM antenna type	external/built-in
LoRaWAN antenna type*	external/built-in
Electrical power supply*	220 V ± 20%
Working temperature	from -40°C to +65C
Size	600 x 400 x 200 mm

*Note – use of internal antennas is allowed

LoRaWAN-based telemechanics system node



LoRaWAN-based telemechanics system node is designed for use in the following systems:

- telemechanics;
- automation of technological production processes;
- accounting of energy resources;
- monitoring;
- dispatching;
- access control;
- outdoor lighting control.

Supported protocols for transmitting data to upper layers and adjacent systems:

- IEC 60870-5-101;
- IEC 60870-5-104;
- Modbus(RTU/ASCII/GRANITE);
- Support for HTTP-methods GET, POST, PUT.

Support for integration with the following systems:

- MicroSCADA ABB;
- Automated system of commercial accounting of electricity INTEP;
- Energy accounting system "Energocenter";
- Complex telemechanics and accounting system "Energy".

At the Customer's request, the system configuration can be changed.

The manufacturer reserves the right to make changes that do not impair technical characteristics.

