ROSENERGOSERVIS

PRODUCTION CATALOGUE

ROSENERGOSERVIS LTD
MANUFACTURING OF ENERGY EQUIPMENT

PROFESSIONALISM. KNOWLEDGE. COMPETENCE.

The “Rosenergoservis” company was founded in 1997 in Rostov-on-Don, Russia.
The main directions of company’s activity – development and production of power equipment:

1. Electric boards and panels - low voltage switchgear:
   - Low voltage switchgear;
   - Instrumentation and automation cabinets;
   - Relay protection and Emergency control schemes;
   - Outdoor switchgear equipment for the power plants and substations (6 to 750 kV)
2. High voltage switchgear(6-35 kV);
3. Transformer substations;
4. High-frequency communication equipment;
5. Telecom hardware cabinets;
6. LED lighting devices

OUR DEVELOPMENT

Numerous achievements in energy equipment constructing, performed by ROSENERGOSERVIS designers, are high-rated by the energetic industry professionals:

- High-frequency communication equipment – VZ series HF-traps, multi-purposes adjusting elements, coupling and separation filters, etc.
- Voltage takeoff cabinets ShON;
- Unilateral maintenance cells KSO series;
- Metal-clad installations (Kiosk substations);
- Common auxiliaries AC and DC systems;
- Electric drive controlling devices RTZO;
- Transformer substations with capacities from 25 to 2500 kVA, and so on.

OUR ADVANTAGES

The main advantage of ROSENERGOSERVIS is the opportunity to deliver unique, innovative, technically complex devices, developed and manufactured in strict accordance with the requirements of the specific order. Even the typical products can be adapted upon customer’s request to the industrial specifics and according to technical parameters and design requirements. The customer can define the equipment characteristics and configuration – with both domestic and foreign manufactured termimals such as Siemens, Legrand, ABB, General Electric, Schneider Electric, Alstom, etc., or use the developments of ROSENERGOSERVIS design bureau. Either typical or customed products confirms GOST R and Eurasian Economic Union TR requirements and possess conformity certificates.

“Rosenergoservis”. Incarnating your needs.

RESEARCH AND DEVELOPMENT

ROSENERGOSERVIS design bureau stands for a continuous search for new ideas, based on deep knowledge and know-how. Company designers are constantly developing the fresh modern ideas and improving the contemporary technical solutions, bearing in mind the user’s tasks and introducing advanced domestic and foreign experience. Models constructed are thoroughly tested in company’s own electrical laboratory. It allows us to create a highly reliable equipment of any complexity, including customized products.

ROSENERGOSERVIS is actively involved in research in emerging areas of the energy sector, collaborating with the Department of automation of production and distribution of electric energy of the South Russian Technical University Energy Faculty.

“Rosenergoservis”. Designing the present – constructing the future.

ООО Rosenergoservis. Development and manufacture of power equipment.
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PRODUCTION

ROSENERGOSERVIS has cultivated the full cycle of energy equipment production - from metal cutting to packaging of the products manufactured. The company industrial park is equipped with:

- High-precision robotic line for sheet metal processing by Finn-Power (Finland);
- Modern computer controlled Metalworking equipment, by Haas inc. (USA);
- Automatic and semi-automatic welding equipment;
- Automated powder coating line by SCS Co., (Sweden), etc.

The modern high-tech equipment and the highly qualified staff are the keys to the manufacturing of quality-assured products with excellent consumer properties, and at the best prices. And we are always ready to arrange a tour of our production areas for your sure.

"Rosenergoservis". What is really works.

QUALITY

Our equipment undergoes a thorough multi-level system of control not only on Factory QC Department, but also in independent laboratories of Russia, Germany, the Czech Republic, the Netherlands, Italy, and France. But the most important validation - is our products operation experience in the most demanding industrial and climatic conditions: at Polar North and in the Central Asian deserts, in mountainous and sea climate, under the ionizing radiation and severe environments. Customers' numerous gratitudes are the best evidence that ROSENERGOSERVIS has this test passed with flying colors!

"Rosenergoservis". For the long haul.

CLIENT RELATIONSHIP

The main objective of the company is to do our best to meet the customers' demands and expectations. That's why our managers and dealers are multi-disciplined professionals in production, economics, logistics and document management.

The ability to reach the mutually beneficial terms of cooperation, to deliver the ordered equipment in the shortest time and at minimal cost, to provide technical support for the order, permanent readiness for a constructive dialogue and effective care – that's the reasons that makes people to become our company clients.

"Rosenergoservis". Always beside. Always together.

CUSTOMER SERVICE

Delivery of even the best equipment is only the half of a story, and that half is not enough for ROSENERGOSERVIS. The customer service for us is not only the matter of product supply. It is a great variety of issues – from the warranty period increasing to the equipment setup, configuration, and installation supervision – that we are solving rapidly, competently and reliably. The company staff is ready to render any support, both remotely and right on the spot. Even if the problem is not our fault – we never leave the client helpless.

"Rosenergoservis". Be sure. Be assured.

CERTIFICATION

ROSENERGOSERVIS equipment possesses all the GOST R and Eurasian Economic Union TR conformity certificates, as well as the voluntary certification. ROSENERGOSERVIS equipment held the regular certification of Russian Interconnected Systems Co. ("Rosseti"), the Interregional Distribution Grid Company holding ("MRSK"), JSC "FGC UES", JSC "Gazprom". The quality management system is certified according to ISO 9001:2008. A number of employees possess expert certificate.

"Rosenergoservis". The one you can trust. The one you can test.

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HIGH FREQUENCY COMMUNICATION EQUIPMENT

INTENDED to provide high-frequency channels for the purposes of communication, relay protection and remote tripping via high-voltage power transmission lines with voltage of 35–750 kV.

ADVANTAGES:
Ready-to-use equipment; High-quality signal; Highly reliable communication channels; Stop band stability in a specified range; Minimum maintenance costs; Minimum heat loss; Continuous lifetime; Certified equipment, GOST R and Eurasian Economic Union TR conformity certificates available.

VZ Series High-Frequency Communication Line Traps 100 - 4000 A with inductance 0.1-2.5 mH

VZ series high-frequency communication line traps with natural air cooling are intended to set up high-frequency communication channels via high-voltage power transmission lines.

Multi-Purpose Adjusting Element (HF-trap integral part)

Multi-purpose Adjusting Element ENU is intended for work with reactors with inductance 0.1–2.0 mH on current 100-4000 A. Multi-purpose Adjusting Elements in the circuit with the HF-traps are used for high-frequency processing of high-voltage transmission lines to mitigate the shunting effect of substation buses on the baseband transmission path of the high-frequency channel generated by the HV-line.

Coupling Filters FPM-Rs

FPM-Rs Coupling Filters are intended to connect a high-frequency communication channel and telemechanics equipment to the high-voltage lines, set up channels of the telephone communication, telemechanics, relay protection, emergency automatics via air power transmission lines with voltage 35 kV to 750 kV, as well as to overhead ground wires, by “phase-to-earth” or “wire-to-wire” configuration. Provides an efficient transmission of the high-frequency signals between HF-communication equipment and high-voltage line, the protection of maintenance personnel and HF-communication equipment low-voltage circuits from the industrial frequency and overvoltage effects in transition processes.

Separation Filters RF

Intended to set up a relay protection (or remote tripping) channel on a common base with the communication channels and at a frequency within the range of 36–1,000 kHz at 1 kHz interval.
Used to eliminate the influence of High-frequency communication equipment on the relay protection and emergency automatics cascades in the case of their connection by one coupling filter.

Disconnectors

Intended to disable and enable voltage-carrying sections of high-voltage electric circuit in the absence of load current and to change the connection diagram, as also to enable and disable charge currents of air filters and cable lines, transformer idle currents and small load currents. Ensures operation safety at a disabled section.

Coupling Capacitors KS series

Intended for separation of communication equipment from the transmission line current at frequency of 50-60 Hz running through the high voltage transmission lines 6-500 kV and the grounding cables.. In this case high-frequency signal continue to transmit via HV-lines without interference. Uses as an essential element s of power takeoff devices and measuring instruments, such as voltage dividers and transformers.

Voltage Takeoff Cabinets ShON

Intended for voltage takeoff from the coupling capacitors in existing and projected power transmission lines with nominal voltage 35 to 750 kV AC at frequency of 50 and 60 Hz, as well as for transmission of measuring data signals to automatic circuit reclosers and synchronizing devices.

COMPLETE TRANSFORMER SUBSTATIONS WITH CAPACITY OF 25-2500 KWA FOR VOLTAGE 6, 10, 35 KV

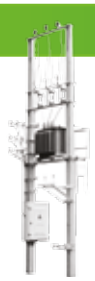
INTENDED for the purposes of power supply of industrial and agricultural facilities, settlements, infrastructure objects and other consumers of electricity.

ADVANTAGES:
possibility to manufacture as a typical issue or upon individual request;
reliability, continuity and extended lifetime in a wide range of climatic conditions;
minimal operating costs. Certified equipment, GOST R conformity certificates available.

Pole-Mounted Substations STP series

Pole-mounted transformer substations with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are the single-transformer substations for the outdoor installation. Uses for the purposes of power supply of cottages, farms, communities, agricultural facilities, and small industrial objects in regions with temperate and cold climate

Mast-Mounted Substations MTP series



Mast-mounted transformer substations with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are the single-transformer substations for the outdoor installation. Uses for the purposes of power supply of individual building areas, cottage communities, small agricultural and industrial facilities (including oil and gas sector), individual settlements and other consumers in areas with temperate and cold climate.
Mast-mounted transformer substations equipped with air transformer can be installed nearby the responsible entities of infrastructure (hospitals, kindergartens, etc)

Outdoor Installation Transformer Substations KTPN series

Outdoor transformer substations with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are the single-transformer dead-end type substations for the outdoor installation. Uses for the purposes of power supply of agricultural facilities, individual settlements and small industrial facilities (e.g. gas compressor stations), and other consumers in areas with temperate and cold climate.

Outdoor Installation Transformer Substations KTPs series (“Selyanka” – “Countrygirl”)

Outdoor transformer substations with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are the single-transformer dead-end type substations for the outdoor installation. Used for the purposes of power supply of agricultural facilities, individual settlements and small industrial objects in areas with temperate and cold climate.

Urban Type Transformer Substations KTPG series (single- and double- transformer)

Transformer substations of dead-end and passway type with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are intended for the reception, conversion and distribution of electricity in the single-beam, two-beam and meshed power supply diagram of urban networks and field circuits in areas with temperate and cold climate.

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Stall-Type Transformer Substations KTPK series (single- and double- transformer)

Transformer substations of dead-end (KTPK-T series) and passway type (KTPK-P series) with capacity 25-250 kVA with voltage of 6-10/0.4 kV and frequency of 50 Hz of three-phase alternating current are the single- and double-transformer substations for the outdoor installation. Uses for the purposes of power supply of oil and gas facilities, chemical, power and other industrial enterprises, agricultural consumers, individual settlements in areas with temperate and cold climate.
KTPK is performed with a cable bushing or air bushing inputs and outputs in various combinations.

Thermal Insulated Transformer Substations KTPU series

Metal modular building adapted to the installation of high and low voltage switchgear intended for reception, conversion and distribution of electricity of three-phase AC voltage up to 10 kV with frequency of 50 Hz. Uses for the purposes of power supply of industrial, residential, utility consumers. Extremely convenient for the power supply of small remote objects of industry, construction, oil and gas sector, etc. With small dimensions gives the possibility of individual positioning of all types of switchgear equipment for each facility, and installation of all types of power transformers with a capacity from 250 to 1000 kVA of Russian or foreign production.

Auxiliary Substation KTPSN series

Auxiliary substation KTPSN series with capacity 250, 400, 630, 1000, 1600, 2500 kVA are intended for reception, conversion and distribution of electricity with voltage of 6-10/0.4 kV, capacity up to 2500 kVA and frequency of 50 Hz of three-phase alternating current. Auxiliary substation KTPSN series are the single- and double-transformer substations for the indoor installation with the directly earthed or isolated transformer neutral leads on low-voltage side, also with or without emergency power supply bushing.
Uses in auxiliary power supply systems of nuclear, thermal and hydroelectric power plants. Can be used for powering of industrial enterprises and other facilities of corresponding capacity, on similar terms of power supply where electrical circuits corresponds to the main and auxiliary connection diagrams of substation.

Block-Modular Buildings BMZ series

Modular buildings are the modular type pre-engineered buildings, constructed of block modules and block-containers, with the dimensions dependable on the customer's order. Ideal for the installation of build-in high-voltage switchgear with voltage of 6-35 kV, transformer substations 6-35/0.4 kV, substation control boards and other equipment produced by "Rosenergoservis" and other manufacturers.
Modular buildings have been specifically designed for use as an electrical facilities and power equipment installation units. However, due to the high protective properties, corrosion, fire and explosion resistance, can be used to solve a wide range of tasks, from simple summer stalls to complex substation structures.
The size, construction and build-in equipment are individual and dependable on the customer's order.

Block-Modular Transformer Substations KTPMB series

Constructed as mobile modular building of full factory readiness with the build-in equipment.
Designed for reception, conversion, distribution and transit of electric energy of three-phase alternating current of power frequency of 50 Hz. Uses to the purposes of power supply of the large network substations, industrial and municipal users, agricultural and large constructions areas.

HIGH VOLTAGE EQUIPMENT

High Voltage Switchgear 6-35 kV

INTENDED for reception and distribution of electric energy of three-phase alternating current of power frequency 50 Hz and voltage of 6 and 10 kV.

ADVANTAGES:
small dimensions, the ability to integrate into existing power facilities connection diagrams, high safety level ensured by the multi-level interlocking devices, remote controlling possibility, ease and efficiency of interfacing with AMRS (Automated Meter Reading Systems), durability and extended lifetime.

Metal-Clad Installations (Kiosk Substations) KRU-RES series

Intended for the reception and distribution of AC with power frequency 50 Hz and voltage of 6 and 10 kV substations in systems with earthed or arc suppression coil grounded neutral. Uses in frequent power switching switchgear. Manufactured with the middle and lower position of draw-out unit, busbar location – upper and lower.
Uses as a high-voltage switchgear of the power plants, transformer substations and distributing points in the oil and gas, metallurgical, chemical industry, engineering, agriculture, municipal networks.

Voltage Measuring Blocks Cabinets BIN series 10-14 kV

BIN cabinets are intended to voltage measuring at the rectifier input with voltage of 10 to 14 kV in the direct current ice melting schemes in high-voltage transmission lines of three-phase power frequency AC. Can be installed in outdoor and indoor switchgear of substations and power plants. Being produced in the dimensions of metal-clad installations (kiosk substations), easily combines with existing equipment. Available as ready-to-use equipment.

Unilateral Maintenance Cells KSO series

Intended for installation in switchgear and transformer substations with the voltage of 6-20 kV and any mode of neutral earth connection. Can be used to control or protect motors, transformers, generators and capacitor banks. Modularity enables any arrangement of the switchgear. Small size enables the use of KSO-RES for modernization or expansion of existing substations. Uses as distributing points in urban and industrial substations, industrial electric networks, agriculture, power plants and railway power supply.

Accounting and partitioning point PUS-RES series

Intended to power line section protection, and power metering in network section given, to use in the EMS (Energy Management Systems) and control of excessive capacity consuming.
Uses for distributing networks automation and control: the operating switching in distributing networks with voltage of 6 (10) kV and emergency intertripping of the power line. Uses in field circuits, industrial enterprises and agriculture.

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LOW VOLTAGE SWITCHGEAR

INTENDED for low-voltage electrical systems control and protection. Low voltage switchgear are the articles (cabinet, board, panel, box) with the build-in miscellaneous devices electrically connected according to a certain diagram.
The devices are produced as a unified system of metal cabinets, switchboards, panels, cases (overhead cabinets), control panels for industry, energy and utility.

ADVANTAGES:
possibility to manufacture as a typical issue or upon individual request; reliability and continuity of functioning in a wide environmental withstand; minimum operating costs.

EMERGENCY CONTROL CABINETS

INTENDED to use as a local and common emergency control schemes of substations, Power plants (including CHP - combined heat and power plants, TPP - thermal power plants, NPP - nuclear power plants) and implementation of emergency conditions control.

ADVANTAGES:
Ensures the implementation of all necessary functions for relay protection and automation, high accuracy and reliability, ultimate convenience for the maintenance personnel.
Receivers/transmitters cabinets PRM/PRD series are manufactured on the basis of emergency automation commands reception and transmission equipment introduced by "Kalina" Co., " AKA "KEDR", and other manufacturers.

EC Cabinets

Transmitters cabinet PRD series with the common output key up to 32 commands;
Receivers cabinet PRM series with the controlling elements up to 32 commands;
EC cabinets with the controlling elements up to 32 commands;
Automatic Load-Shedding Control cabinets;
Voltage Reduction Limiting Automation cabinets;
Asynchronous Operation Automatic Liquidation cabinets;
Underfrequency Load Shedding cabinets, etc.

RELAY PROTECTION, INDICATION, CONTROL AND MEASUREMENT CABINETS

INTENDED for the implementation of management, protection, automation, alarm signaling, measurement and control at power stations and substations with HV of 35-500 kV. On customer request, implemented in the terminal Alstom, GE, Radius Avtomatika, Bresler or on the basis of electromechanical devices.

ADVANTAGES:
RP Cabinet build-in protection and automation devices provide, in addition to relay protection itself, the monitoring of switch mode, remote control and supervision, pushbutton switching or remote controlling via Ethernet, emergency charting, faults recordering, electrical measurement, the telemetering and data transmission to the upper control level.
The variety of RP cabinets destination and construction ensures the implementation of the RPA of any facility in accordance with the customer specifications.

Protection Cabinets

Power Line Protection and Emergency Control cabinets (35 kV; 110-220 kV; 330-500 kV);
Transformer Protection and Emergency Control cabinets (double-wound and triple-wound transformers);
Autotransformer Protection and Emergency Control cabinets;
HV-line Main and Back-up Protection cabinets (35 kV; 110 кВ-220 kV; 330 кВ-500 kV);
Bus Section Breaker Protection and emergency Control cabinets;
Busbar Protection cabinets;
Transformer Busbar Restricted Earth Fault Protection cabinets.

Secondary Switching Cabinets

Control and Measurement cabinets (power lines, voltage transformers, busbars, etc.);
Central Indication cabinets;
Voltage Transformer cabinets (110 kV, 220 kV, 500 kV);
Transformer Automatic Voltage Control cabinets;
Slave-relay cabinets;
Alarm Signal Recordering cabinets;
Disconnector Blocking feeder cabinet;
Arc Suppression Coil Control cabinets;
Fault Location cabinets;

OPERATIVE DIRECT CURRENT SYSTEM SOPT SERIES

INTENDED for DC reception, conversion, accumulation and distribution via common auxiliaries circuits to ensure uninterrupted power supply of auxiliary control, protection, automation, indication and emergency lighting circuits at the power plants, substations and power units with voltage up to 750 kV.

ADVANTAGES:
possibility to manufacture as a typical issue or upon individual request; easy adapting to the customer needs;
High reliability and continuity, easy maintenance, fast repair;
Easy monitoring and control (including via Ethernet);
The versatility of the assembly and construction, minimal installation works required;
Impeccable quality, confirmed by GOST R and Eurasian Economic Union TR certificates.

Voltage Supplying and Rectifying Unit ZVU-RES

Intended to simultaneous power supply with the DC rectified and charge (recharge) of accumulator batteries with nominal voltage of 110 V or 220 V and nominal output current from 10 to 600 A.

DC Board

DC Board as a part of Operative Direct Current System intended for reception and distribution of common auxiliaries DC with voltage of 110V, 220V. Provides uninterrupted power supply for the auxiliary control, protection, automation, indication and emergency lighting circuits.
According to the substation connection diagram, can include DC auxiliary panels, as well as outgoing feeder panels.
DC auxiliary panels intended to DC input from the Voltage Supplying and Rectifying Unit in the normal operation and from the accumulators in case of a malfunction.
Outgoing feeder panels intended to DC distribution to the medium level users.

Operating Current Distribution Cabinet ShROT series

Intended to DC distribution to the lower level users.

Operating Current Cabinets ShOT-RES series

Intended to uninterrupted power supply of responsible objects on the power plants and substations in the case of forced outage via automatic load transfer by means of accumulator bank connection.
During normal operation, provides DC power supply from the rectifiers, and accumulator battery charging.
In emergency mode, the DC powering is supplied from the battery during a time given.

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Accumulator Battery Cabinets AB series

Intended to install 12V airtight lead-acid batteries with gas recombination (Coslight, Sonnenschein, HAZE, Varta etc., in accordance with the order specifications). Batteries installed are maintenance-free, manufactured in non-flammable impact resistant ABS plastic body, and are equipped with the safety valve with the built-in flame arrester.

Reliable gas recombination technology controls the oxygen and hydrogen release during charging, eliminating the water refill.

AC COMMON AUXILIARIES BOARDS SHSN SERIES

INTENDED for the input and distribution of AC electricity from auxiliaries transformers with the capacity up to 1000 kVA on the electric grid facilities.
Uses in AC auxiliary circuits of power plants, substations and power units with the voltage up to 750 kV.

ADVANTAGES:
Possibility to manufacture as a typical issue or upon individual request, easy adapting to the customer needs;
High safety in use;
High electricity accounting precision;
Easy maintenance, fast repair.

INSTRUMENTATION CABINETS

INTENDED for control, automation, protection, process technology signaling circuits of power plants and other energy and heat and power facilities with operating DC voltage 110-220 V and AC voltage 220-380 V, frequency 50 Hz. Instrumentation boards and panels are uses in process technology automation systems as devices to install electric, pneumatic and hydraulic equipment, control and regulation of power supply units. Uses in chemical, metallurgical, oil and gas industry, power industry, in hard conditions – compressor units, steamshops and boiler plants, CHP - combined heat and power plants, etc.

ADVANTAGES:
The ability to install different types of switching devices;
Design of the cabinets provides comfortable working conditions for the equipment and devices installed.

Chart Recorders Cabinets

Intended for EMS (Energy Management System) implementation in industrial electricity consumption, as well as in the residential and office premises (designed to work with alternating current voltage from 220 to 380V at a frequency of 50 Hz). The cabinet contains direct or transformed bushing meters. Applied in residential and individual buildings, apartment houses, garages, mobile structures.
Fits to install different models of opening and accounting mechanisms. Permits a five-wire circuit connection. Protects the test boxes and metering devices from unauthorized interference. Also convenient to meters maintenance and periodical replacement.

Fire Extinguisher Cabinets

Intended to fire suppression, and provides:

- manual start of fire extinguishing;
- starting conditions control;
- pump control;
- management of stop-starting devices ;
- nearby facility automatic fire suppression locking;
- automatic validity control of communication lines with executive devices;
- automatic validity control of communication lines with the starters;
- light indication and sound alarm of commands forwarded on executive devices of fire protection systems.

Process Technology Control Boards

Intended for process technology centralized controlling and data processing, normal operating condition systems control, and for the normal operating and emergency control systems management.

ELECTRIC SHIELD EQUIPMENT — LOW VOLTAGE SWITCHGEAR

Electric Drive Controlling Devices RTZO series

Intended to power supplying and management of control valve and stop gate electric drives with capacity up to 28 kW, and auxiliary actuators with capacity up to 10 kW in electric, conventional thermal and nuclear power plants (TPP, HPP and NPP). In addition, we produce special issues of RTZO-88 for industry and utilities.

Valve Actuating Blocks BEZ series

Intended to a secondary circuits mounting and valve local control. Uses in process technology automation systems at the nuclear power plants, thermal power plants and other industrial facilities. Provides valve management, both local and remote.
Valve Actuating Blocks are uses to connect the electric valves to the control devices and as a local control units (if has planned by the connection diagram).

Distribution Panels ShO-70 series

Intended for the assembling of switchgear (switchboard) with AC voltage of 380/220 V, 50 Hz, which uses for electric energy input and distribution, and overloading and short circuiting protection.

Lead-in Distributors VRU

Intended to input, distribution and accounting of electricity in power AC circuits with voltage of 380/220 V, frequency 50 Hz, and also to overloading and short circuiting protection. Assembled with unilateral maintenance panels.

Low Voltage Switchgear RUNN series

Intended for reception and distribution of electric energy of three-phase AC 50 Hz, voltage 660/380/220 V, and for the purposes of equipment control and short-circuiting and overloading protection.
Manufactured in metal cases with the use of fixed or draw-out automatic switches and feeder disconnectors with safety devices. Constructed with various options for inner partitioning. Design flexibility allows to create boards of minimum size and of miscellaneous configuration. Makes possible to manufacture low voltage switchgear with incoming and switched busbar circuit-breakers and microprocessor based protection units. Provides the higher reliability of power supply and operation safety by the use of modern switching devices.

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SMALL-SIZE CABINETS

INTENDED for mounting of main and auxiliary circuits of control, metering, signaling, lighting, automation of the elements of power plants, substations, industrial and agricultural enterprises, utility and municipal objects, urban infrastructure units and so on.

ADVANTAGES:
The minimal time required for the installation, adjustment and commissioning due to the delivery in ready-to use state;
The possibility of individual configuration and adaptation upon customer request;
Easy to use - adapted to multi-ended cable cutting and installation of cables quantity in accordance with the connection diagram of the cabinet given;
Improved ergonomics - outdoor, attached or recessed performance, the design includes a convenient mounting of cables and wires feeding power and auxiliary circuits;
Guaranteed operation safety –a multi-level system of active and passive protections, an additional interlocks and blocking systems;
Light weight, easy to transport;
Durability - at least 30 years of lifetime, increased resistance to adverse environmental factors (dustiness, humidity, aggressive environment, etc.);
Impeccable quality, confirmed by ISO 9001 and Eurasian Economic Union TR conformity certificates and declarations of conformity.

SMALL-SIZE CABINETS AND CASES FOR THE POWER UNITS

Busbar Protection Cabinets ShZSh 1A-73, ShZSh 2-73 series

ShZSh 1-73 cabinet is intended for the differential protection of double busbar system 110-220 kV with transfer busbar, separate coupling circuit breakers and bypass switches.

ShZSh 2-73 cabinet is intended for the differential protection of double busbar system 110-220 kV, and also to protect the busbar of 330-350 kV (for substations with a " Sesquialteral" connection diagram) and 330-500 kV autotransformer bus system protection (for substations with the "autotransformer-busbar" connection diagram).

Solenoid Supplying Cabinets ShPV ¼, ShPVK series

ShPV ¼ is intended for the power supply of the circuit breaker closing solenoid with three-phase drive with one or two supply cables presenting in the ring.

ShPVK is intended for the power supply of circuit breaker closing solenoid with phase segregated drive with one or two supply cables presenting in the ring.

Disconnectors Controlling Cabinets ShUR-1, ShUR-2 series

ShUR-1 is intended for three-phase controlling of two disconnectors

ShUR-2 is intended for phase segregated controlling of one disconnector.

Slave-relay Cabinets ShRP-4M, ShRP-8M series

ShRP-4M is intended for 4 slave-relays of circuit breaker, separator and fault throwing switch block contacts in disconnectors' operative blocking diagrams.

ShRP-8M is intended for 8 slave-relays of circuit breaker, separator and fault throwing switch block contacts in disconnectors' operative blocking diagrams.

Jumper Board Cabinets ShZN series

ShZN-1A is intended for connection and distribution of secondary circuits of voltage transformers installed on lines 330-500 kV, on buses 110-500 kV, on the high voltage side of autotransformers in substations (power facilities) with the “Sesquialteral” and “Polygonal” switchgear diagram.

ShZN 1B is intended for connection and distribution of secondary circuits of voltage transformers installed on lines 330-500 kV, on buses 110-500 kV, on the high voltage side of autotransformers in substations (power facilities) with the “Sesquialteral” and “Polygonal” switchgear diagram without the automatic circuit breaker used for the meters voltage circuits protection.

ShZN 1V is intended for connection and distribution of secondary circuits of voltage transformers with three secondary windings installed on lines 330-500 kV, on buses 110-500 kV, on the high voltage side of autotransformers in substations (power facilities) with the “Sesquialteral” and “Polygonal” switchgear diagram

ShZN 2 is intended for connection and distribution of secondary circuits of voltage transformers installed on buses 35 kV, on the low voltage side of autotransformer (transformer) and Turbogenerator buses.

ShZN 3 is intended for connection and distribution of secondary circuits of voltage transformers installed on lines 35 kV, on transfers bars 110-220 kV, on the side of 35 kV of the autotransformer with high voltage 110-220 kV and other voltage transformers without complementary secondary windings.

Protections Cabinets ShZVK-1. ShZVK-2 series

ShZVK-1 is intended for the purposes of controlling electromagnets protection in a circuit breaker unbalanced condition.

ShZVK-2 is intended for the purposes of controlling electromagnets circuits switching and protection in a circuit breaker unbalanced condition

The cabinets are equipped with the knife switches, disconnector’s blocking feeder circuits automatic device and pressure control auxiliary relay (for pneumatically operated oil switch)

Switch Heating Cabinets ShOV series

ShOV-1 is intended for heating and power supplying of the switches and switch drives with heaters power up to 10 kW per phase with a simultaneous closing of the tanks and drives (4 knife switches)

ShOV-2 is intended for heating and power supplying of the switches and switch drives with heaters power up to 10 kW per phase with a simultaneous closing of the tanks and drives (2 knife switches)

ShOV-4 is intended for heating and power supplying of the switches and switch drives with heaters power above 10 kW and for power supplying of the motors of circuit breakers and disconnectors.)

Buffer Terminal Cabinets ShZV-30; ShZV-30; ShZV-60; ShZV-90; ShZV-120; ShZV-150; ShZV-200 series

Intended for connection of the secondary circuits of outdoor switchgear 35–750 kW
Buffer Terminal Cabinets are equipped with the of power supply and blocking circuits switching knife switches.
The quantity of terminals– 30; 60; 90; 120; 150; 200 units, accordingly.

GENERAL APPLICATIONS INDUSTRIAL SWITCHGEAR

Power Distribution Boards PR series

Intended for input and distribution of electric energy, overloading and short-circuiting protection, sporadic power switching and starting of asynchronous motors with voltage up to 660 V AC with the frequency 50 and 60 Hz (PR 8501, PR 8503, PR 11) and voltage up to 220 V DC (PR 8701, PR 8703).
The Power Distribution Boards (cases) can be used in all types of electrical circuits in terms of earthing at different locations of zero operating and zero protecting conductors.

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Power input and control cases YA 5000, YAE (ShE) 1400, YAUE series.

YA 5000 series cases (RUSM 5000, ShU 5000) are intended for control of asynchronous motors with squirrel-cage rotor with capacity up to 75 kW., operating in continious, short-run or intermittent operating modes. Designed for installation in industrial, residential, municipal and public facilities with a voltage of 220/380 V.

YAE (ShE) 1400 series cases are intended for control, automation and signaling of common auxiliaries apparatus of power plants and substations.

YAUE series cases are intended for electrical control and alarm systems installation.

Power cases

YAVZ series power cases are intended for protection and switching of AC power circuits with voltage up to 380 V, frequency 50 Hz, and DC circuits with voltage up to 220 V, controlling of equipment engaged in the transmission, distribution and conversion of electric energy and also for electric energy consuming equipment control.

Power case with the knife switch and socket connector YAVZSh series are intended for protection and manual switching of AC power circuits with voltage up to 380 W, frequency 50 Hz, and DC circuits with voltage up to 220 W, and also for the frequent connection and disconnection of hand-held flexible cables of the portable power receivers

YARP, YARV series power cases are intended for sporadic switching, short-circuiting and overloading protection in AC circuits in installations with voltage up to 500 V AC and 440 V DC.)

Low-voltage switchgear units YAV – RUSM 8000 series are intended to input, distribution and accounting of electricity in the places with high humidity, dust (non-explosive), in the presence of chemically aggressive environments and inside the industrial outdoor installations.

Common auxiliary cases YASN (YAV-SN) series are intended to power supply of lighting, heating and miscellaneous portable devices, as well as to connect the mobile measuring and testing equipment, protective devices, automation, etc.

Power Distribution Cabinets

Power distribution cabinets ShR 1 (ShRS 1) series
Intended to the distribution of electrical energy, used in three-phase AC power and lighting circuits, with voltage up to 500 V and frequency of 50 Hz.

Power distribution cabinets RTSA and RTSP series are general purposes devices constructed to the three-phase AC nominal current up to 630 A and voltage up to 660 V, frequency 50 Hz with the output circuit protected by the safety devices or automatic switches. Intended to power distribution from the power plants and substations.

Step-down Transformer Case YATP series

Step-down Isolation Transformer Cases YATP series uses to power supply of the local lighting circuits with voltage of 12, 24, 36 or 42 with an input voltage of 220 V, and also to connect portable lights and power tools.

0.4 kV Busbar Case ShS series

Intended for the installation in transformer substations and used for direct connection of the cable ends of various diameters to the transformer low voltage output terminals.

LOW VOLTAGE POWER AND LIGHTING SWITCHGEAR FOR RESIDENTIAL, PUBLIC AND INDUSTRIAL BUILDINGS.

Lighting Shields

Intended to input, distribution (OSh, OShV, YAOU series) and accounting of electricity (MZU series), short-circuiting and overloading protection of lightning and power AC circuits with voltage 380/220 V, and also to sporadic switching.
Lightning shields are used for the purposes of lighting of residential, public, administrative and industrial buildings.

Lighting Control Cases YAUO series

Intended to local, remote (from the control point) or automatic control of lighting networks and installations of industrial buildings, structures, territories of any objects with any light sources.
Lighting control cases can also be used in lighting and irradiation installations of agricultural enterprises to the purposes of “light of day” formation in the poultry and livestock farms, in artificial cultivation of vegetable crops, etc.

Automatic Load Transfer Cases and Shields

Automatic Load Transfer Cases YA(Sh)U-8000 series are intended to the automatic switching of lighting circuits and power equipment to stand-by supply in the case of main power supply deviations (e.g. line drop, phase fault, inadmissible voltage reduction). Switching to the normal power supply performs automatically after the recovery.

Automatic Load Transfer Shields ShAP series are intended to the automatic switching of lighting circuits and power equipment to stand-by supply in the case of main power supply forced outage. Switching to the normal power supply performs automatically after the fault conditions recovery.

Automatic load transfer cases and shields uses in industrial, manufacturing, construction and transport enterprises.

Storey Shields ShE-RES series

Intended to input, distribution and accounting of electricity, in the hallways of apartment houses, and also for short-circuiting and overloading protection of AC circuits. To avoid electric shocks and fires resulting from the leakage currents with subsequent short-circuiting, the residual current devices (RCD) are installed in the storey shields. Storey shields are divided to distributive-accounting and distributive ones.

Storey Distributive Devices UERB-RES series

Intended to input, distribution and accounting of electricity, in the hallways of apartment houses, and also for short-circuiting and overloading protection of AC circuits. Can be used for the installation of low voltage communication and signaling devices.

Cottage Electric Cabinet ShKE series

Intended for input and protection of lighting and distributive three- and single-phase power AC circuits with voltage of 380/220 V

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TELECOM HARDWARE CABINETS

INTENDED for reception, transmission and synchronization of readings, integrates wired, wireless and fiber optic transmission channels.

ADVANTAGES:
high precision, reliability and accuracy of data receipt and transmission, the ability to work with a wide range of interfaces, ease of integration into APCS as device of the lower, middle and upper levels, the ability to provide a significant crossing capacities, reliable earthing of all surfaces, unauthorized access protection, affordable price. Meet the requirements of GOST and IEC standards on electromagnetic compatibility and noise immunity.

ACS Cabinets (Automated Control System)

Intended for the automation of power plants (including thermal power plant, hydro power, gas turbine), distribution substations for power supply of industrial enterprises, units and district substations, compressor stations and other energy facilities. Uses for automation of technological processes: collection, processing, displaying, energy equipment operating control, information exchange with system control centers, construction of the information collection and transmission networks, building communication networks for the lower level devices management, alarm signaling and recordering, operation conditions registration in the power objects as well as a variety of measurements and researches.

AMRS Cabinets (Automated Meter Reading Systems)

Intended for the operational control and implementation of effective commercial and technical accounting of generated or consumed electricity and capacity, as well as allows to control the quality parameters of electricity read from the multifunction metering devices. Uses for the data collection, storage, displaying and protection, indication and control of system values changing, provides time synchronization. Able to support and use a wide range of communication channels (dedicated and switchable telephone channels, radio links, LAN, HF, satellite) and multi-function energy meters.

Telemechanics Cabinets

The telemechanics cabinets are intended for work in structure of the telematic systems that ensures the data collection. Uses to data collection, preliminary data processing, data transmission to the upper level of process management, formation of actuating signals from the upper levels commands and/or in accordance with the algorithms of local automation controllers.

Can perform the following functions:

- switch mode control;
- protection equipment operation control;
- emergency conditions controlling;
- security alarm system control;
- operating current cabinet management
- switching equipment remote control;
- lighting and heating remote control and so on.

Server Racks and Cabinets

Uses for the building and installation of telecommunication units for offices, laboratories, information and computing centers of financial institutions.

Communication Cabinets

Intended for the data transmission from the metering and Data Acquisition and Transmission Devices via physical line, dedicated and switchable telephone channels or another physical medium (fiber optics, radio links or HF communication lines, satellite and GSM communication channels).

Uses as AMRS integral part. Inapplicable for information processing. Applies XDSL and Ethernet protocols conversion, and electricity accounting data transfer via long telecommunication lines.

Cabinet Accessories – cable organizers, raised panels, lighting panels, cable collectors
Intended for installation in Telecom cabinets and racks standard 19” desktop or wall-mounted. Facilitate the installation and maintenance of dirt tanks distribution nodes, reduce the fatigue of the personnel, reduce the chance of errors when switching, improve the aesthetic perception of the whole complex.

Fan Shelves and Platforms

High density placement of active equipment in the closed volume of the cabinet complicates the heat transfer. This can lead to overheating of the equipment and, consequently, served to further instability and damage. Fan shelves and platforms are intended to create and maintain the optimal heat transfer mode in the telecommunication cabinets.

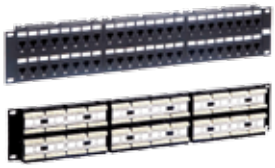
Supplied Equipment Shelves

Designed for the installation of compact telecommunication equipment weighing up to 10 kg, tools, and technical documentation. Uses as an equipment installation option in telecom cabinets and racks. Can be used as rigidly fixed and retractable on a telescopic rails. May vary in depth, can be installed at the desired height for the optimal equipment positioning.

Rails for the Heavy Equipment

Rails and shelves for the heavy equipment are intended for the installation of equipment weighing up to 100 kg in a 19” form factor cabinets and racks, with absence of standard fasteners. The rails length may vary due to the depth of the cabinet. Additional perforation of the shelves increases air circulation in the cabinet. Rigidity is achieved by attaching to the 4 perforated profiles of the cabinet or rack.

Commutation Panels



Modern human needs in more powerful information systems ultimately results in the creation of systems that require significant cross tanks. The use of 19” patch panels makes it easy to build cross as needed, provides simplicity and convenience in maintenance.

Power Supply Panels

Intended for power distribution amongst the active equipment in telecom cabinets and racks. Located in close proximity to the place of concentration of active equipment in the cabinet, makes insignificant the power cords length shortage.

LED LIGHTING DEVICES

INTENDED for the general, local, decorative and architectural lighting and illumination of the rooms, roads, sidewalks, buildings and structures of industrial, warehouse, sporting, domestic and other purposes.

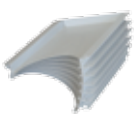
ADVANTAGES:
brightness, small power consumption, high reliability, long lifetime, beautiful appearance.

- Led lamps for housing and communal services (including items with motion detectors);
- Led floodlights for architectural and local backlighting;
- Led lamp for roads, stadiums, manufacturing facilities, etc.
- Lights for local illumination;
- House numbers with led backlight.

METAL PRODUCTS (CUSTOMIZED)

Cable trays, profiles, racks, shelves, etc.

Are performed upon the customer project or developed by the “Rosenergoservis” design bureau.
It is possible to manufacture products of any size, complex configuration, meeting the special requirements (dustproof, waterproof, resistant to aggressive environments and UV rays, etc.) The products can be made of corrosion-resistant materials – stainless steel, aluminum, etc. The finished products can be plated with hot-dip galvanizing and/or powder coating. The color of the finished product – upon the customer’s request.



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