



**THE LARGEST MANUFACTURER
OF 0.4-220 KV DISTRIBUTION
EQUIPMENT IN THE REPUBLIC
OF KAZAKHSTAN**





TIME-TESTED QUALITY



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Established in
1949

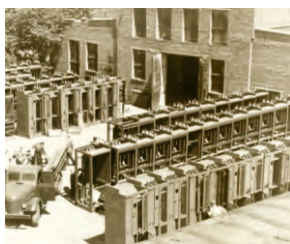
JSC “KEMONT” is the largest manufacturer
of power distribution equipment
of 0.4 kV - 220 kV voltage in the Republic of Kazakhstan.

COMPANY HISTORY



1949

Establishment of the Ust-Kamenogorsk
Construction Department on the basis of the
Ust-Kamenogorsk section of the Barnaul
Design and Construction Department of the
“Sibelektromontazh” Trust



1956

Renaming to the Ust-Kamenogorsk
Construction Department of the
“Kazelektromontazh” Trust



1999

Formation of CJSC “KEMONT”



2004

Registration of JSC “KEMONT”



COMPANY STRATEGY

- Investment in the development of existing production;
- Development and implementation of new technologies;
- Flexible pricing policy;
- Building of long-term and mutually beneficial relationships;
- Active access to the world markets;



ACTIVITIES OF THE COMPANY

- Construction and start-up of turnkey projects;
- Design and engineering works;
- Manufacture of electrical products of 0.4-220 kV voltage;
- Construction and erection works and commissioning works;
- Construction and modernization of electric power transmission lines and power supply networks up to 110kV;
- Arrangement of engineering and communication infrastructure;
- Internal electric supply of ZDiS;
- Construction of transmission networks and in-site engineering lines, gas and water supply networks for urban districts;
- Construction and erection works on arrangement of street lighting and external power supply of facilities;
- Mounting and maintenance of Electricity Commercial
- Metering Automated System, SCADA, FOCL and Telemechanics systems.

FEATURES OF WORK WITH US ▶▶▶▶▶



**UNINTERRUPTED, ON-TIME,
RELIABLE DELIVERY OF**

HIGH VOLTAGE EQUIPMENT



**GREAT WORK EXPERIENCE
IN MOUNTING OF**

**EQUIPMENT AT SUBSTATIONS OF
110-220-500 KV VOLTAGE**



**HIGH
QUALITY OF**

**OUTPUT PRODUCTS DUE
TO THE INCOMING/FINAL QUALITY CONTROL
AND DECLARED CHARACTERISTICS OF
COMPONENTS.**



**SAFE OPERATION
WITHOUT INCIDENTS**

**WITHOUT ACCIDENTS; EMERGENCIES AND
FATALITIES**



**AVAILABILITY OF SERVICE CENTERS
IN COUNTRIES OF**

SALE THAT CARRY OUT:



Technical consultations including assistance
in the selection of equipment types, design and
coordination (including specialists on-site visit);



Delivery of equipment using own account transport;



Assembly, mounting and commissioning works
using own tools;



Continuous availability of all components in stock;



**EXTENDED
WARRANTY**

**AT LEAST 5 YEARS OWING TO THE USE OF HIGH-
RELIABILITY COMPONENTS OF INTERNATIONAL
MANUFACTURERS**



**COMPULSORY
COMPLETE SET OF**

**MANUFACTURED EQUIPMENT WITH
NECESSARY SPARE TOOLS AND
ACCESSORIES**



CERTIFICATES, PATENTS

The specialists of JSC “KEMONT” are certified to work with equipment: **Siemens, ABB, Schneider Electric, LSIS.**

All products that are in conformity with the international standards in the field of quality and patented assure safety and reliability during mounting and operation. The products undergo mandatory technical final quality control before shipping to the customer.

In 2019, the Company was among the first to receive the industrial certificate in Kazakhstan.

Research and Production Enterprise of the Republic of Kazakhstan

	
ИНДУСТРИАЛЬНЫЙ СЕРТИФИКАТ № 107 9 00015	
1. Дата регистрации в реестре отечественных производителей товаров, работ, услуг: 11.09.2019	
2. Наименование заявителя: АО КЭМОНТ	
3. ИНН/БИН: 9906 40000421	
4. Вид деятельности: Производство электрооборудования и регулирующей аппаратуры	
5. Юридический адрес: г. Усть-Каменогорск, Самарское шоссе 7	
6. Почтовый (фактический) адрес: г. Усть-Каменогорск, Самарское шоссе 7	
7. Почтовый (фактический) адрес материально-технической базы: г. Усть-Каменогорск, Самарское шоссе 7	
8. Телефон: +772324926 28	9. Электронный адрес: t_galinzhanova@kemont.kz
10. Web – сайт: www.kemont.com	
11. Региональная палата предпринимателей Восточно-Казахстанской области подтверждает, что АО КЭМОНТ является отечественным производителем товара, работ, услуг по наименованию, указанному в Реестре отечественных производителей товаров, работ, услуг.	
12. Дата обновления сведений в реестр отечественных производителей товаров, работ, услуг:	
13. Дата выдачи:	
13. Удостоверение:	
	

Industrial certificate



Certificate

- Certificate ISO 9001:2015
- Certificate ISO 14001:2015
- Certificate ISO 18001:2007
- Industrial Safety Certification



Patents

- Patents for output products выпускаемую продукцию



Licenses

- State License for design, mounting and repair of electric equipment including fire alarm system
- License for project activities
- License for engineering survey works
- License for construction and erection works

TYPES OF WORK AND SERVICES OFFERED



1

DESIGN

- Performance of a full range of engineering surveys for facilities of electric power networks of 0.4-500 kV voltage;
- Feasibility study design, development of power supply schemes, electric networks of 0.4-500 kV voltage in cities and rural areas;
- Development of power supply schemes for enterprises, cities and regional schemes in rural areas in Kazakhstan;
- Development of schemes and work projects for alternative sources of power supply (solar and wind power stations);
- Development of standard and regulatory documentation;
- Design supervision for construction of the projected facilities.

2

PRODUCTION

- Preparation and approval of technical documentation for production;
- Manufacture and assembly of 0.4-220 kV electrical equipment;
- Acceptance, storage and completeness of commodities and materials as well as components;
- Check assembly, overvoltage test according to the EIC, adjustment of relay protection and automation devices of electrical installations;
- Packing and loading of electrical equipment in motor and railway vehicles;
- Delivery of electrical equipment by road to any available point in Kazakhstan;

3

CONSTRUCTION AND ERECTION WORKS

- Construction of 6 kV-550 kV substations and turnkey commissioning;
- Construction and modernization of power lines up to 110 kV and power supply networks;
- Arrangement of engineering and communication infrastructure;
- Construction of transmission networks and in-site engineering lines for urban districts;
- Construction of external networks and off-site water and gas supply networks;
- Construction and erection work on arrangement of street lighting and external power supply;

4

COMMISSIONING WORKS

- Checking windings insulation of electrical machinery, transformers and other electrical apparatus;
- Measurement of the impedance of “phase-zero” loop and the resistance of the grounding devices;
- Performance of full range of commissioning works on newly installed, restored electrical equipment including all types of modern microprocessor protection units, automation, remote control and alarm devices;
- Performance of the necessary organizational and technical measures related to commissioning in electrical installations and 6-220 kV substations.
- Performance of acceptance tests and testing of electrical equipment according to EIC in the Republic of Kazakhstan, provision of executive documentation.
- Checking the presence of a circuit between ground terminals and grounded elements;
- Finding places of failure in power cables of voltage up to 10 kV.

KEMONT JOINT-STOCK COMPANY INVENTIONS

LOW VOLTAGE EQUIPMENT



MINING-TYPE CUBICLES VRN, PRN, VARP



CUBICLES FOR CURRENT CONTROL UP TO 80A



NKU (LOW VOLTAGE DISTRIBUTION SWITCHBOARD) BASED ON A MODULAR SYSTEM

MEDIUM VOLTAGE EQUIPMENT



KRU CUBICLES (CUBICLE SWITCHBOARD) WITH SWITCH IN CASSETTE UP TO 3150A/40KA

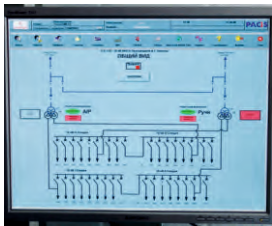


KRU CUBICLES **IN SOLID INSULATION** UP TO 1250A/25KA



KSO (SINGLE-END SERVICE) CUBICLES OF A REDUCED SIZE WITH ELECTROGAS DISCONNECTORS

PROTECTION CUBICLES SCAD, ASKUE (AUTOMATIC SYSTEM FOR COMMERCIAL ACCOUNTING OF POWER CONSUMPTION)



DESIGN, INSTALLATION AND ADJUSTMENT OF SCADA SYSTEMS



TELEMETRY DATA COLLECTION CUBICLES



RELAY PROTECTION CUBICLES, SCADA, ALARM AND CONTROL

EQUIPMENT FOR ORU (OPEN SWITCHGEAR) AND OPU (PRIMARY BOARD)



PROTECTION AND TELEMECHANIC CUBICLES IN THE OPU WITH 35-220 KV



INSTALLATION UNITS FOR ORU WITH 35-220 KV



SWITCHES, DISCONNECTORS, GROUNDERS WITH 35-220 KV

1

INDOOR CUBICLE SWITCHBOARDS



- Cubicle switchboards KAT-10-KEM/kz cabinets of 6;10 kV voltage
- Cubicle switchboards KMY-1-KEM/kz cabinets of 6, 10, 20 kV voltage
- Cubicle switchboards KM-1KΦ-KEM/kz cabinets of 6;10 kV voltage
- High voltage distribution 2KBЭ-KEM/kz cabinets of 6 kV voltage
- Cubicle switchboards KPY2-10-KEM/kz cabinets of 6;10 kV voltage
- Cubicle switchboards K-XXVI-KEM/kz cabinets of 6;10 kV voltage
- Cubicle switchboards K104-KΦ-KEM/kz cabinets of 6;10 kV voltage
- Single-end service assembled KCO-3M-KEM/kz chambers of 6;10 kV voltage
- Single-end service assembled KCO-292-KEM/kz chambers of 6;10 kV voltage
- Single-end service assembled KCO-2-10-KEM/kz chambers of 6, 10, 20 kV voltage
- Assembled KCO2-20-KEM/kz chambers of 20 kV voltage
- Assembled KCO-M-KEM/kz chambers of 6;10 kV voltage
- Retrofitting of cabinets, chambers, switchboard draw-out elements of 6(10) kV



Cubicle switchboards KAT-10-KEM/kz cabinets of 6;10 kV voltage

FEATURES

- Expandability and upgradability;
- On site assembly and mounting;
- Spring-motor or electromagnetic drive of switching module;
- Reduction of time for repair works;
- Absence of open current-carrying parts, individual insulation of each phase;
- Elimination of interphase breakdowns due to external factors;
- Presence of block systems to prevent false staff operation;
- Remote control, monitoring and analysis using automation tools;
- Self-diagnostics test and prohibition to operate faulty devices;
- Switching devices resource accounting;
- The ability to analyze the development of an emergency in case of failure of the cells;
- Mechanical durability is 20,000 cycles;
- All live parts are sealed;
- Working mechanism is completely sealed, maintenance is not required;
- Minimum dimensions and weight of cabinets for use in restricted areas;
- Absence of SF6gas;
- Use of environmentally safe components;

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current and 50 Hz and 60 Hz frequency and (6)10 kV nominal voltage in networks with insulated or earthed neutral, when used in new construction of the switchboards, expansion, reconstruction and technical re-equipment of distribution points, transforming substations for urban electric networks and industrial enterprises; traction substations for urban electric transport and tube railroads.

SPECIFICATIONS

- Nominal voltage - 6; 10 kV;
- Nominal current of the main circuits of cabinets is 630 -1250 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 25 kA;
- Conventional thermal current during 3 s - up to 25 kA;
- Overall dimensions (WxDxH): (400; 500) x (750; 870) x 2200 mm;
- Weight of one cabinet is 390 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254;
- Protection level of high-voltage current-carrying parts is not less than IP54 according to GOST 14254;

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ 8 107 00820 dated 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: TYCHINSKII ALEKSEI IUREVICH

Cubicle switchboards

KMY-1-KEM/kz

cabinets of

6, 10, 20 kV voltage

FEATURES

- Single-end/double-end service;
- Vacuum/SF6 circuit breaker in the middle part for quick replacement with rolling out on a mobile trolley;
- Fully galvanized frame;
- Modular structure, selective shutdown in case of possible arc striking, type tests of relay protection and switching device as part of distribution equipment, ensure uninterrupted and reliable operation;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- High safety level of operating personnel.

DESIGNATION

They are intended for use in transforming and distribution substations, mainly at the primary level of distribution of electric energy of three-phase alternating current of 50 and 60 Hz frequency and 6-10 (20) kV voltage in networks with isolated neutral which is grounded using a ground-fault neutralizer or resistor.

SPECIFICATIONS

- Nominal operating voltage - 6; 10; 20 kV;
- Nominal current of cabinet main circuits - 630-4000A;
- Nominal breaking current of the circuit breaker built into the cubicle switchboards - up to 40kA;
- Nominal peak withstand current of main circuits - up to 102 kA;
- Overall dimensions (WxDxH) are (650; 750; 900) x1400x2360 mm;
- Weight of one cabinet is 650 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254.

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ 8 107 00820 dated 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: IVANOV ROMAN ALEKSANDROVICH

Cubicle switchboards KM-1KΦ-KEM/kz cabinets of 6;10 kV voltage

FEATURES

- Double-end service;
- Vacuum/SF6 circuit breaker at the bottom of draw-out element for quick replacement;
- Position of busbar is at the top, cable connection is at the bottom;
- Delivery of ready-to-operate and type tested cabinets;
- Rigid welded frame made of rolled steel

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current of 6 kV, 10 kV voltage and 50 Hz industrial frequency in networks with isolated neutral which is grounded using a ground-fault neutralizer or resistor.

SPECIFICATIONS

- Nominal operating voltage - 6; 10 kV;
 - Nominal current of cabinet main circuits - 630 - 3150 A;
 - Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 40 kA;
 - Nominal peak withstand current of main circuits - up to 102 kA;
 - Overall dimensions (WxDxH) are (750; 1000; 1125)x1360x1720 mm;
 - Weight of one cabinet is 650 kg min;
 - Operating conditions: from minus 10°C to plus 40 °C,
 - Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254;

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ 8 107 00820 dated 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KOZLOV IURII NIKIFOROVICH

High voltage distribution 2KB3-KEM/kz cabinets of 6 kV voltage

FEATURES

- Quick turn on and turn off;
- Protection against short circuit, overload and low voltage;
- Indication of switch position and protection operation;
- Double-end service;
- Vacuum switch is at the bottom;
- Production of cabinets with low-voltage distribution cabinet and leakage relay is accessible;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Rigid welded frame made of rolled steel

DESIGNATION

It is designed for installation on a turntable platform of mine excavators in a closed, unheated body. It is used for reception and distribution of electric energy of three-phase alternating current and 50 Hz frequency to receive a nominal voltage of 6 kV.

SPECIFICATIONS

- Nominal operating voltage - 6 kV;
- Nominal current of cabinet main circuits - up to 630A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 25 kA;
- Nominal peak withstand current of main circuits - up to 51 kA;
- Overall dimensions (WxDxH) are 770x880x1950 mm;
- Weight of one cabinet is 500 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP32 according to GOST 14254-96;
- Resistance to shaking, corresponding to normal operation of the excavator, rolling and listing up to 15 degrees.

APPLICATION

- Mining, chemical, timber and woodworking industries.



CTKZ No. KZ 9 107 00567 dated 13/07/2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KARTOLISETS ALEKSANDR SERGEEVICH

Cubicle switchboards KPY2-10-KEM/kz cabinets of 6;10 kV voltage

FEATURES

- Vacuum/SF6 circuit breaker at the bottom of draw-out element
- for quick replacement;
- Structural design of cabinets allows connecting to existing and operating KPY2-10 cabinets without the use of transient cabinets;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies,
- high reliability and long service life as a result of this;
- Rigid welded frame made of rolled steel

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current voltage of 6;10 kV and 50 Hz industrial frequency in networks with isolated neutral which is grounded using a ground-fault neutralizer or resistor. They are used in switchboards in severe operating conditions where the short-circuit current is above 31.5 kA.

SPECIFICATIONS

- Nominal current of cabinet main circuits - 630-3150 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 40 kA;
- Nominal peak withstand current of main circuits - up to 102 kA;
- Overall dimensions (WxDxH) are (900;1350)x1610x(2350;2380) mm;
- Weight of one cabinet is 800 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96.

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ 8 107 00820 dated 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SHUPIKOV IVAN OLEGOVICH

Cubicle switchboards K-XXVI-KEM/kz cabinets of 6;10 kV voltage

FEATURES

- Single-end service;
- Vacuum/SF6 circuit breaker at the bottom of draw-out element for quick replacement;
- Structural design of cabinets allows connecting to existing K-26 (XXVI) cabinets without the use of transient cabinets;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Rigid welded frame made of rolled steel

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current and industrial frequency in networks with isolated neutral which is grounded using a ground-fault neutralizer. They are used in closed switchboards and electrical installations with private switching operations in large enterprises.

SPECIFICATIONS

- Nominal operating voltage - 6;10 kV;
- Nominal current of cabinet main circuits - 630-3150 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 40 kA;
- Nominal peak withstand current of main circuits - up to 102 kA;
- Overall dimensions (WxDxH) are 900x1660x2365 mm;
- Weight of one cabinet is 750 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96.

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ KZ 8 107 00987 dated 12/12/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PERMINOV ALEKSANDR SERGEEVICH

Cubicle switchboards K104-KΦ-KEM/kz cabinets of 6; 10 kV voltage

FEATURES

- Double-end service;
- Vacuum/SF6 circuit breaker at the bottom of draw-out element for quick replacement;
- Position of busbar is at the bottom, cable connection is at the top. Various input options are provided: with a top input (from cable shelves on the switchboard wall), with a bottom input (from the cable duct), with a top input (the combined cable busbar entry). Other options of both cable input and bus input can be made by order;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Rigid welded frame made of rolled steel.

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current voltage of 6;10 kV and 50 Hz industrial frequency in networks with isolated neutral which is grounded using a ground-fault neutralizer or active resistance.

SPECIFICATIONS

- Nominal current of cabinet main circuits - 630-3150 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 40 kA;
- Nominal peak withstand current of main circuits - up to 102 kA;
- Overall dimensions (WxDxH) are (900;1350)x1610x(2350;2380) mm;
- Weight of one cabinet is 800 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96;

APPLICATION

- Mining, chemical, timber and woodworking industries.
- Electric power and metallurgy industries.
- Light and food industry.
- Metal fabrication industries.



CTKZ No. KZ 8 107 00820 dated 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KUZMENKO ANDREI ANATOLEVICH

Single-end service assembled KCO-3M-KEM/kz chambers of 6;10 kV voltage

FEATURES

- Single-end service;
- Installation of a simple and reliable load interrupter switch;
- Structural design of chambers allows connecting to existing and operating KCO-366 chambers without the use of transient cabinets;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Visual control of the disconnect device position;
- Mechanical interlocks of disconnect devices;
- Availability of a voltage indicator for monitoring;
- Ability to install limit switches for interfacing with a supervisory system.

DESIGNATION

They are designed for package of indoor switchboards in electrical networks of three-phase alternating current voltage of 6; 10 kV and a frequency of 50 Hz for the systems with isolated neutral which is grounded using a ground-fault neutralizer.

SPECIFICATIONS

- Nominal operating voltage - 6;10 kV;
- Nominal current of cabinet main circuits - up to 630 A;
- Nominal operating current of chambers with fuses - 20; 32; 40; 50; 80; 100; 160 A;
- Overall dimensions (WxDxH) are (650;800)x800x2100 mm;
- Weight of one cabinet is 200 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96;

APPLICATION

- Electric power industry;
- Electrical complex of iron and steel enterprises;
- Electrical complex of civilian objects;
- Machine-building industry;
- Light and food industry.



CTKZ No. KZ KZ 8 107 00987 dated 12/12/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SHEVLIKOV ANDREI IUREVICH



Single-end service assembled KCO-292-KEM/kz chambers of 6, 10 kV voltage

FEATURES

- Single-end service;
- The fixed vacuum circuit breaker of middle arrangement;
- Structural design of chambers allows connecting to existing and operating KCO-285, KCO-272 chambers without the use of transient cabinets;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Visual control of the disconnect device position;
- Mechanical interlocks of disconnect device;
- Convenient cable connection;

DESIGNATION

They are designed for reception and distribution of electric energy of three-phase alternating current voltage of 6;10 kV and 50 Hz industrial frequency in networks with isolated neutral which is grounded using a ground-fault neutralizer or active resistance

SPECIFICATIONS

- Nominal operating voltage - 6; 10 kV;
- Nominal current of cabinet main circuits - 630-1250 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 25 kA;
- Nominal peak withstand current of main circuits - up to 51 kA;
- Overall dimensions (WxDxH) - (1000;1200)x1100x2780 mm;
- Weight of one cabinet is 560 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96.

APPLICATION

- Electric power industry;
- Electrical complex of iron and steel enterprises;
- Electrical complex of civilian objects;
- Machine-building industry;
- Light and food industry.



CTKZ No. KZ KZ 8 107 00987 dated 12/12/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: GUSEV EGOR ALEKSANDROVICH

Single-end service assembled KCO-2-10-KEM/kz chambers of 6, 10, 20 kV voltage

FEATURES

- Single-end/double end service;
- The fixed vacuum/SF6 circuit breaker of middle arrangement;
- The installation dimension of the chambers allows to install them instead of KSO-272, 285, 292 and other chambers without additional work;
- Delivery of ready-to-operate and type tested cabinets;
- Use of advanced materials, components and technologies, high reliability and long service life as a result of this;
- Visual control of the disconnect device position;
- Repair barriers to ensure safety during work.

DESIGNATION

They are designed for package of indoor switchboards with frequent switching operations in electrical networks of three-phase alternating current of 6;10 kV voltage and 50 Hz frequency for the systems with isolated neutral which is grounded using a ground-fault neutralizer.

SPECIFICATIONS

- Nominal operating voltage - 6;10;20 kV;
- Nominal current of cabinet main circuits - 630-2000 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 25 kA;
- Nominal peak withstand current of main circuits - up to 51 kA;
- Overall dimensions (WxDxH) 6(10)kV: (750;900;1100)x1000x2300 mm; 20kV: 950x1300x2500 mm;
- Weight of one cabinet is 450 kg min;
- Operating conditions: from minus 10 °C to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP30 according to GOST 14254-96.

APPLICATION

- Electric power industry;
- Electrical complex of iron and steel enterprises;
- Electrical complex of civilian objects;
- Machine-building industry;
- Light and food industry.



CTKZ NO. KZ 8 107 00820 DATED 12/10/2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: MEDVEDEV DMITRII GENNADEVICH



Assembled chambers KC02-20-KEM/kz for 20 kV voltage

FEATURES

- Double-end service;
- Vacuum/SF6 circuit breaker on a draw-out element at the bottom for hot replacement possibility;
- Collecting bar is located at the top and the cable connection is at the bottom;
- Ready-to-operate and type tested delivery;
- Rigid welded frame made of profiled iron.

DESIGNATION

Are to be used in distribution circuits of electric energy of alternate current at the rate of 50 Hz with maximum operating current up to 24 kV.

SPECIFICATIONS

- Nominal operating voltage - 6; 10 kV;
- Nominal current of cabinet main circuits - 630-3150 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards – up to 40 kA;
- Nominal peak withstand current of main circuits – up to 102 kA;
- Overall dimensions (WxDxH) - (750;1000;1125)x1360x1720 mm;
- Weight of one cabinet is 650 kg min;
- Operating conditions: from minus 5 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP31 according to GOST 14254-96.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry; Machine engineering and metal working industries.



CTKZ N° KZ 9 107 00063 DATED 22.01.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: MEDVEDEV DMITRII GENNADEVICH

Assembled chambers KCO-M-KEM/kz for 6, 10 kV voltage

FEATURES

- Single-end service;
- Middle located fixed vacuum breaker;
Contact connections are galvanized for preventing contact ability performance degradation during operating, and the quantity of demountable contact connections is decreased for energy efficiency ensuring;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
Visual inspection of disconnect switch position;
Disconnect switches mechanical blocking;
Comfortable connection of the cable;

DESIGNATION

Designed for completing closed switchgears with 10 kV voltage of three-phase alternating current with 50 Hz frequency, preferably city power distribution stations that energize the apartment buildings, shopping malls, administrative complexes and small enterprises.

SPECIFICATIONS

- Nominal operating voltage - 6; 10 kV;
- Nominal current of chamber main circuits - 630-1000 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards – up to 20 kA;
- Nominal peak withstand current of main circuits – up to 51 kA;
- Overall dimensions (WxDxH) 6(10) kW: (300;500;650;750)x840x2100 mm;
- Weight of one cabinet is 195 kg min;
- Operating conditions: from minus 10 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage is not less than IP31 according to GOST 14254-96.

APPLICATION

- Electric power industry;
- Iron and steel enterprises electrical facilities;
- Civil objects electrical equipment;
- Machine engineering industry;
- Light and food industries.



CTKZ N° KZ 9 107 00987 DATED 12.12.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: MEDVEDEV DMITRII GENNADEVICH

Cabinets, chambers, draw-out elements retrofitting PY 6(10) kV

FEATURES

- Minimum expenses;
- Low time and capacity for mounting operations;
- Basic scheme change not required;
- Operation algorithm saving;
- Safe maintenance.

DESIGNATION

Are to be used for modernization and/or reconstructions of existing distribution equipment of internal installation 6, 10 kV that were produced serially by domestic and foreign manufacturers and now are discontinued.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.

OPERATING CHARACTERISTICS

- Modernization/replacement of power breakers/contactors – replacement of breakers/contactors, of fixed or pullout trim without major design change of the cabinet or the chamber, operation algorithm saving of mechanical blockings without change of basic schemes operation.
- Relay cabinets modernization – electromechanical relay substitution for protective microprocessor relay that are designated for relay, automatics, control, alarm protection functions.
- Relay cabinets replacement means that exterior installation dimensions, new relay cabinet design are identic with replaceable relay cabinet. The cabinet is integrated in an existing chamber or a cabinet with installed control, signal and relay equipment that is secondary mounted according to reconstruction project schemes.
- Discount devices control hand gears replacement, power breakers, earthing blades – hand gears substitution for present days analogs without major changes of the design of chambers and cabinets and saving the operational algorithm of all mechanical/electrical blockers.



2 CUBICLE SWITCHBOARDS OF EXTERNAL INSTALLING

- Cubicle switchboards of external installing K-59-KEM/kz for 6,10 kV voltage
- Blocked modules КРУ-БМ-KEM/kz with distribution equipment for up to 35 kV voltage
- Open-pit cells of external installing ЯКНО-KEM/kz for 6;10 kV voltage
- Cubicle switchboards cabinets KPH-10-KEM/kz for 6,10 kV voltage
- Auxiliary transformer TCH-KEM/kz for 6,10 kV voltage



Cubicle switchboards of external installing K-59-KEM/kz for 6,10 kV voltage

FEATURES

- Double-end service (outside access from the back);
- Vacuum/SF6 circuit breaker on a draw-out element at the bottom for hot replacement possibility;
- Collecting bar is located at the bottom and the cable connection is at the top, there are different input variants (from the air line), with bottom input (from the cable channel).
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
- Rigid welded frame made of profiled iron.

DESIGNATION

To be used for acceptance and distribution of alternating three-phase current electrical energy with 50 Hz commercial frequency for 6 and 10 kV nominal voltage and packaging of distribution equipment with 6,10 kV voltage substations, including cubicle transforming substations 35/6-10 kV, 110/6-10 kV and 110/35/6-10 kV.
For KPYH batching K-104KΦ series cabinets are applied.

OPERATING CHARACTERISTICS

- Nominal operating voltage - 6; 10 kV;
- Nominal current of cabinet main circuits - 630-3150 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards – up to 40 kA;
- Nominal peak withstand current of main circuits – up to 102 kA;
- Overall dimensions (WxDxH) - (750;1000;1125)x3220x2800 mm;
- Weight per block (made of 6 cabinets) is up to 6500 kg;
- Operating conditions: from minus 60 to plus 40 °C, XJ1 according to GOST 15150-69;
- Protection level of enclosure of electric equipment in KPYH is not less than IP30 according to GOST 14254-96.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.



CTKZ N° KZ 9 107 00918 DATED 13.11.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KUZMENKO ANDREI ANATOLEVICH

Blocked modules КРУ-БМ-KEM/kz with distribution equipment for up to 35 kV voltage

DESIGNATION

To be used for organization of distribution points 0, 4-10 kV (up to 35 kV) of acceptance and distribution alternating three-phase current electrical energy with 50 Hz commercial frequency and transformer substations of middle current.

Different variants of КРУ and electrical equipment of different designation is allowed in the premises, duty rooms organization is also allowed.

APPLICATION

- Any industry line

SPECIFICATIONS

- Overall dimensions (WxDxH): КРУ-БМ «standard» - (4300;6750)x2250x3245 mm; Extra high КРУ-БМ - (4300;6750)x2250x(3890;4096;4321) mm; КРУ-БМ for РУ-35 kV - (1200;1600)x2250x3245 mm;
- Operating conditions: from minus 60 to plus 40 °C, ХЛ1 according to GOST 15150-69;
- Annual average relative humidity is 75% at +15°C;
- Above sea level installing height is not above 1000 m;
- Ambient atmosphere (GOST 15150-69) - II type (commercial);
- Seismic stability (GOST 17516.1-90) – no more than magnitude 9 according to М5-64;
- Wind/snow load (СНП 2.01.07-85) - МП/ МУ regions;
- Fire resistance level (СНП РК 2.02-05-2009) - 45 min (E145);
- Weight per block (without equipment) - 3000 kg.



CTKZ N° KZ 9 107 00550 DATED 05.07.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KRAPIVIN KONSTANTIN NIKOLAEVICH

Open-pit cells of external installing ЯКНО-KEM/kz for 6,10 kV voltage

FEATURES

- Reliable blockers for operational staff protection;
- Vacuum breaker, self-contained supply, electric power metering, mounted heating;
- Can be produced at saddles for tracked vehicle transporting; Cable linking in the bottom or on the top of the traversers;
- Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing.

DESIGNATION

To be used in branching and transmission networks of open-cuts, and in connection points to intra-open-cut transmission lines of networks with 6 (10) kV voltage and 50 Hz frequency.

OPERATING CHARACTERISTICS

- Nominal operating voltage - 6; 10 kV;
- Nominal current of cabinets main circuits is up to 630 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards – up to 25 kA;
- Nominal peak withstand current of main circuits - up to 81 kA;
- Overall dimensions (without saddles) (WxDxH) - 900x1050x2455 mm;
- Weight per cell (without saddles) - 750 kg;
- Operating conditions: from minus 45 to plus 50 °C, Y1 according to GOST 15150-69;
- Protection level of enclosure - not less than IP34 according to GOST 14254-96;
- Mechanical impact (GOST 17516.1-90) - M18;
- Environmental air dusting – not higher than 100 mg/m³.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Machine engineering and metal working industries.



CTKZ № KZ 9 107 00820 DATED 12.10.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: ALEKSEEV VIKTOR VALENTINOVICH



Cubicle switchboards cabinets KPH-10-KEM/kz for 6,10 kV voltage

FEATURES

- Reliable blockers for operational staff protection;
- Vacuum breaker, self-contained supply, electric power metering, mounted heating;
- Can be produced at saddles for tracked vehicle transporting;
- Cable linking in the bottom or on the top of the traversers: outputs – bars made of aluminum;
- Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing.

DESIGNATION

To be used for acceptance and distribution of alternating three-phase current electrical energy with 50 Hz frequency for 6,10 kV voltage.



CTKZ N° KZ 9 107 00820 DATED 12.10.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: ALEKSEEV VIKTOR VALENTINOVICH

SPECIFICATIONS

- Nominal operating voltage - 6;10 kV;
- Nominal current of cabinet main circuits is up to 630 A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards – up to 25 kA;
- Nominal peak withstand current of main circuits - up to 51kA;
- Overall dimensions of 1 cell (without saddles) (WxDxH) - 1000x1150x2805 mm;
- Weight per cell (without saddles) - 750 kg;
- Operating conditions: from minus 45 to plus 50 °C, Y1 according to GOST 15150-69;
- Protection level of enclosure - not less than IP34 according to GOST 14254-96;
- Mechanical impact (GOST 17516.1-90) - M18;
- Environmental air dusting – not higher than mg/m^3 .

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Machine engineering and metal working industries.



Auxiliary transformer TCH-KEM/kz for 6, 10 kV voltage

FEATURES

- Cable/bar connection;
- Completing with automatic breakers and metering instruments for electrical energy protection and flow metering;
- Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
- Rigid welded frame made of profiled iron;

DESIGNATION

Designed for continuous uninterruptible electrical service for essential consumers by control alternative and constant current in the substations. Short break of electrical supply can lead to total outage of the substation, or can cause big problems in future when its remanufacturing and bringing into operation.

OPERATING CHARACTERISTICS

- Nominal voltage, kV - 6 (10)/0,4 (0,23 on request);
- Transformer power, kVA: 25; 40; 63; 100; 160; 250;
- PYBH equipment - (6)10 kV: - Electric switchgears (disconnect devices); PY-0,4 kV: - distribution cabinet;
- Overall dimensions (overhead entry) (WxDxH) - 980x1550x3882 mm;
- Operating conditions: from minus 60 to plus 40 °C, X/II according to GOST 15150-69;

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.



CTKZ № KZ 9 107 00918 DATED 13.11.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KUZMENKO ANDREI ANATOLEVICH

3 CUBICLE TRANSFORMING SUBSTATIONS



- Cubicle transforming substations of external installation
КТПН-КЕМ/к2 for 6(10)/0,4kV voltage Moveable ПТПН-КЕМ/кz
- Mast cubicle transforming substations of external installation
КТПН-КЕМ/zg for 6(10)/0,4kV voltage
- Universal cubicle transforming substations of external installation
КТПН-У-КЕМ/кz for 6(10)/0,4kV voltage
- Column type mast cubicle transforming substations of external installation
МТП-КЕМ/кz for 6(10)/0,4kV voltage
- Cubicle transforming substations of external installation
КТПВ-КЕМ/кz for 6(10)/0,4kV voltage



Cubicle transforming substations КТП

DESIGNATION

Cubicle transforming substations are to be used for acceptance, conversion and distribution of alternating three-phase current electrical energy with 50 Hz frequency for 6(10)/0,4 kV nominal voltage. Cubicle transforming substations are used as for permanent electrical power supply to a consumer of small industrial objects and individual settlements, so for temporary electrical power supply to building sites and other objects.

Cubicle transforming substations of external installation КТПН-КЕМ/кз for 6(10)/0,4kV voltage Moveable ПТПН-КЕМ/кг

FEATURES

- Reliable blockers for operational staff protection;
- Can be produced at saddles for tracked vehicle transporting;
- Rigid welded frame (КТПН), polymer paint coating, signing by using lasting UV printing;



CTKZ № KZ 9 107 00125 DATED 04.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KRAPIVIN IGOR NIKOLAEVICH

SPECIFICATIONS

- Nominal voltage, kV - 6 (10)/0,4 (0,23 on request);
- Number of transformers: 1 or 2;
- Transformer power, kVA 63; 100; 160; 250; 400; 630;
- PYBH equipment - (6)10 kV: - Electric switchgears (load breakers, disconnect devices);
- Chambers KCO-3M; PY-0,4 kV: - Щ070 type distribution panels;
- Overall dimensions of 1 transformer КТПН (cable inlet)(WxDxH): up to 63 kVa - 1700x1500x2307 mm; 100-250 kVa - 2000x3400x2540 mm; 400-630 kVa - 2600x4000x2800 mm;
- Operating conditions: from minus 40 to plus 45 °C, Y3 according to GOST 15150-69;

Mast cubicle transforming substations of external installation КТПН-КЕМ/кз for 6(10)/0,4kV voltage

FEATURES

- Polymer paint coating, signing by using lasting UV printing;
- Reliable blockers for operational staff protection;

SPECIFICATIONS

- Nominal voltage, kV - 6 (10)/0,4 (0,23 on request);
- Number of transformers: 1 or 2;
- Transformer power, kVA 63; 100; 160; 250; 400; 630;
- PYBH equipment - (6)10 kV: - Electric switchgears (load breakers, disconnect devices); chambers KCO-3M; PY-0,4 kV: - Щ070 type distribution panels;
- Overall dimensions of 1 transformer КТПН (cable inlet)(WxDxH): up to 63 kVa - 1700x1500x2307 mm; 100-250 kVa - 2000x3400x2540 mm; 400-630 kVa - 2600x4000x2800 mm;
- Operating conditions: from minus 40 to plus 45 °C, Y3 according to GOST 15150-69;

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.



CTKZ № KZ 9 107 00125 DATED 04.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PAVLOV PAVEL VLADIMIROVICH



Universal cubicle transforming substations of external installation КТНН-У-KEM/kz for 6(10)/0,4kV voltage

FEATURES

- Can be produced at saddles for tracked vehicle transporting;
- Signing by using UV printing;
- Usage of fireproof sandwich-panel with basalt warmth keeper;

DESIGNATION

- Transformer power: from 25 to 1000 kVA;
- Nominal current of BH side; 6;10 kV;
- Nominal current of HH side: 0,4 kV;
- Climatic version- according to GOST15150-69: УХЛ1;
- PY equipment 6(10) kV - from 1 to 3 chambers KCO-3M;
- PY equipment 0,4 kV - from 1 to 3 ЩО-70 panels;
- Overall dimensions (WxDxH) - 2600x4300x2750 mm;



CTKZ № KZ 9 107 00063 DATED 22.01.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SNEGIREV SERGEI VIKTOROVICH

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.
- Electric equipment of civil objects

Column type mast cubicle transforming substations of external installation МТП-KEM/kz for 6(10)/0,4kV voltage

FEATURES

- Polymer paint coating, signing by using lasting UV printing;
- only cooper busbar;

FEATURES

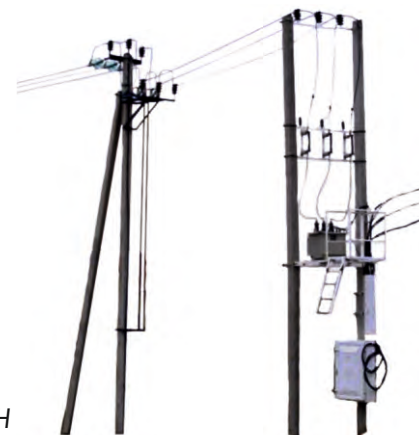
- Nominal operating voltage - 6(10)/0,4 (0,23 on request) kV;
- Number and type of installed transformers -1; oil;
- Power of installed transformers - 25-250 kVA;
- PY equipment 6(10)kV – disconnect device, surge arrestors, ОПН, protection device;
- PY equipment 0,4kV – low-current cabinet 0,4 kV;
- Operating conditions: from minus 45 to plus 45 °C, У3 according to GOST 15150-69;

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power and electric equipment of civil objects



CTKZ № KZ 9 107 00829 DATED 15.10.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: TIMOFEEV MAKSIM VIKTOROVICH



Cubicle transforming substations of external installation КТПБ-КЕМ/kz for 6(10)/0,4kV voltage

FEATURES

- Movable air automatic 630-6300 A breakers in in-lead cabinets and CB;
- Movable/clip-on/stationary automatic 100-6300 A breakers in lines;
- Microprocessor relay for control and protection (КТПЧ), typical protection schemes, including protection from one-phase short circuits (КТПБ);
- Reliable blockers for operational staff protection; only copper busbar;
- Rigid welded frame, polymer paint coating, writing signs and mnemonic schemes by using lasting UV printing.

APPLICATION

Cubicle transforming substations of internal installation are to be used for acceptance, conversion and distribution of alternating three-phase current electrical energy with 50 Hz frequency for 6-10/0,4-0,66 kV voltage in mild climate conditions for electrical power supply of electrical receivers for different industries. КТПБ is to be installed directly in the premise (floor), nearby the consumers and processing plants.

DESIGNATION

- Nominal operating voltage - 6(10)/0,4(0,66 on request) kV;
- Number and type of installed transformers - 1 or 2; dry/oil;
- Power of installed transformers - 63-4000 kVa;
- PY equipment 6(10) kV: 63-1600 kVa - KCO-3M; 2000-4000 kVa - KCO-2-Ю or KCO-292;
- Overall dimensions (WxDxH)- (600;800; 1100)x1100(1500)x2200 mm;
- Weight of one cabinet is 380 kg min;
- Operating conditions: from minus 5 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure from frontage - not less than IP31 according to GOST 14254-96;



CTKZ № KZ 9 107 00125 DATED 04.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PASHKOV SERGEI IVANOVICH

4

▶▶▶▶▶ LOW-CURRENT DISTRIBUTION DEVICES



- ▶ Cubicle switchboard ULBA-KEM/kz for up to 1 kV voltage
- ▶ Distribution panels ЩО-70-KEM/kz for up to 1kV voltage
- ▶ Operative current cabinets ЩУОТ-Б-KEM/kz for up to 1 kV voltage
- ▶ Distribution current moveable equipment РТ30-KEM/kz for up to 1 kV voltage
- ▶ Control and distribution panels ЩСУ-KEM/kz for up to 1 kV voltage
- ▶ Low-current cabinets ШНН-KEM/kz for up to 1 kV voltage
- ▶ Floor-standing cabinets ШНИ-KEM/kz for up to 1 kV voltage
- ▶ Universal wall cabinets ШНУ-KEM/kz for up to 1 kV voltage
- ▶ In-house cabinets ШСН-KEM/kz for up to 1 kV voltage
- ▶ Data collecting cabinets ЛУСОД-KEM/kz for up to 1 kV voltage
- ▶ Relay protection and automatics cabinets ШРЗА-KEM/kz for up to 1 kV voltage
- ▶ Distribution points ПР-KEM/kz for up to 1 kV voltage
- ▶ Fire cabinets ШПК-KEM/kz



Cubicle switchboard ULBA-KEM/kz for up to 1 kV voltage

FEATURES

- Single-end/double-end service; single/double-row arrangement;
- A lot of movable models combinations for electric switchgear packaging and hot replacement and repair possibility;
- Air automatic 630-6300 A breakers in in-lead cabinets and CB;
- Hardware and conductors in positions in HKY allows necessary staff, ease of their maintenance and operation;
- Only cooper busbar;
- Rigid frame made of galvanized steel, polymer paints coating of doors and side panels, signing by using lasting UV printing.

DESIGNATION

Designed for acceptance, control, distribution protection and metering of electrical power and protection of electrical networks of current up to 690 V with 50 Hz frequency. To be used in electric supply, control and automatics systems in capacity of distributing panels, power distribution points, panels and control and automatics cabinets.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.

SPECIFICATIONS

- Nominal operating voltage - 380 V;
- Nominal current of collecting bars -630-6300 A;
- Nominal current of circuit breaker opening, that is mounted in panels - up to 65 kA;
- Overall dimensions (WxDxH)-(400;600;800; 1000; 1200;1400)x(600-1200)x2075 mm;
- Types of internal dividing (IEC60439-1) – 2b, 3b, 4b;
- Overall dimensions (WxDxH)- (400;600;800; 1000;1200)x (500-1200)x(2000;2600) mm;
- Weight of one cabinet is 340 kg min;
- Operating conditions: from minus 5 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP41 according to GOST 14254-96; IP54 for ventilated;



CTKZ N° KZ 9 107 00171 DATED 19.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: BERDIUGIN VIACHESLAV VLADIMIROVICH

Distribution panels ЩО-70-KEM/kz for up to 1kV voltage

FEATURES

- Single-end service;
- Moveable bir automatic 630-6300 A breakers in in-lead cabinets CB;
- Microprocessor relay for control and protection;
- Design of the cabinets allows to connect to existing panels ЩО70-1, ЩО70-2, ЩО70-3; ЩО70-4 without using transition cabinets; only cooper busbar;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing;
- Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;

DESIGNATION

Designed for completing distribution devices of three-phase alternating current of 380/220 V current with Hz frequency of networks with solid grounded and isolated neutral.

SPECIFICATIONS

- Nominal current of collecting bars - 600-5000 A (6300 A – version for special request);
- Nominal current of circuit breakers opening, that are mounted in panels - up to 65 kA;
- Rated current of main circuits electrodynamic withstand - up to 50 kA;
- Overall dimensions (WxDxH) - (300;600;800; 1000; 1100; 1200)x600x2075 mm;
- Weight per panel - from 350 kg;
- Operating conditions: from minus 5 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP20 according to GOST 14254-96;

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.
- Electric equipment of civil objects



CTKZ N° KZ 9 107 00171 DATED 19.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: TIMOSHIN VADIM IGOREVICH

Operative current cabinets ШУОТ-Б-KEM/kz for up to 1kV voltage

FEATURES

- High overload capability: a possibility to exceed during a short term (up to 2 s) the maximal power current by 3 times;
- Non-spillable batteries (NSB) of 15 years lifetime;
- Inertialless (without current failures) NSB switching; operability assurance of NSB by algorithms that are recommended by producers of NSB;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing;
- Ready-to-operate and type tested delivery;

DESIGNATION

Designed for electrical power supply and protection from electric power supply breakdown of equipment running on constant current in conditions of available breaking of supply network. After reconnection with primary power supply the cabinet ШУОТ provides automatically battery charging with parallel consumer supply. To be used in electric supply systems of industrial and civil construction enterprises, communication and transport objects for electric power supply the 1st and 2nd categories consumers.

APPLICATION

- Electric power industry and metallurgy;
- Machine engineering and metal working industries.

SPECIFICATIONS

- Current/frequency of supply net - 380/220 B; 45-66 Hz;
- Nominal output current - 230 V DO;
- Nominal output current - 5-160 A;
- Number of NSB – 17 pcs. (for output current 5-30 A), 34 pcs. (for output current 35-160A);
- NSB capacity - 45...200 A/h;
- Operational lifetime NSB - 8... 16 years;
- Overall dimensions (WxDxH)-(1500;2350)x500x1820 mm;
- Weight per ШУОТ assembly with NSB - from 650 kg;
- Operating conditions: from minus 5 to plus 45 °C, УХЛ4 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP32 according to GOST 14254-96;



CTKZ N° KZ 9 107 00219 DATED 06.03.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: IURKOVSKII EVGENII SERGEEVICH

Distribution current moveable equipment PT30-KEM/kz for up to 1kV voltage

FEATURES

- Single-end/double-end service;
- Block method of packaging;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing; Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;

SPECIFICATIONS

- Lead-in cabinet and control blocks power circuits current - 380 V;
- Lead-in cabinet and control blocks control circuits current - 380/220 V;
- Overall dimensions (WxDxH) - 800x(400;800)x(2000;2200) mm;
- Mechanical performance group (GOST 17516.1-90) - M1;
- Weight per PT30 cabinet - or 110 kg;
- Operating conditions: from minus 5 to plus 40 °C, YX/14 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP40 according to GOST 14254-96;

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.



CTKZ N° KZ 9 107 00171 DATED 19.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KOTLIAROVA TATIANA NIKOLAEVNA



Control and distribution panels ЩСУ-KEM/kz for up to 1kV voltage

FEATURES

- Single-end service;
- Moveable air automatic 630-6300 A breakers in in-lead cabinets and CB;
- only cooper busbar;
- Размещение аппаратуры в виде функциональных блоков;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing; Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;

DESIGNATION

Designed for local, distance and automatic control of different operating processes of electric power supply of oil, energy, industries and housing and communal sector, etc.

APPLICATION

- Extractive, chemical, timber and woodworking industries;
- Electric power industry and metallurgy;
- Light and food industry;
- Machine engineering and metal working industries.

SPECIFICATIONS

- Nominal operating voltage - 380/220 V;
- Nominal current of collecting bars -100-3200 A;
- Nominal current of circuit breakers opening, that are mounted in panels - up to 65 kA;
- Nominal peak withstand current of main circuits - up to 50 kA;
- Overall dimensions (WxDxH) - (600-1000)x(400-800)x(1800-2200) mm;
- Weight per ЩСУ cabinet - from 380 kg;
- Operating conditions: from minus 40 to plus 45 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP54 according to GOST 14254-96;



CTKZ N° KZ 9 107 00171 DATED 19.02.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: DIUBANOV MAKSIM VIKTOROVICH

Low-current cabinets ШНН-KEM/kz for up to 1kV voltage

FEATURES

- Rigid welded frame, polymer paint coating, signing by using lasting UV printing;
- Ready-to-operate and type tested delivery;

DESIGNATION

Designed for creating distribution devices of alternating three-phase current with 50,60 Hz frequency in networks with solid grounded neutral of 0,4 kV voltage, to be used for acceptance and distribution of electric energy, protection from overloads and fault current. The unit in distribution networks as four-wire so five-wire performance with operative neutral (N1) and protective grounding conductors;

SPECIFICATIONS

- Current/frequency of supply net - 380/220 V;
- Nominal current of main circuits - up to 5000 A;
- Overall dimensions (WxDxH) - (600-1400)x600x2200 mm;
- Weight per ШЧН - from 350 kg;
- Operating conditions: from minus 40 to plus 45 °C, YX/14 according to GOST 15150-69;
- Protection level of enclosure - not less than IP30 according to GOST 14254-96;

APPLICATION

- Any industry line
- Civil objects electrical equipment



CTKZ N° KZ 9 107 00705 DATED 23.08.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PLOTNIKOV ALEKSEI VLADIMIROVICH

Floor-standing cabinets ШНН-KEM/kz for up to 1kV voltage

FEATURES

- Metallic case with polymer coating;
- Doors design - external; Door installing in the front or on the back of the cabinet (including simultaneously) is available;
- Door opening angle - 120°;
- There are several performances of equipment mounting in the:
 - a) at perforated board;
 - б) at solid board;
 - в) on the ledges (combo board);
- The cabinet is installed on the base (supplied with the set);

DESIGNATION

Designed for electrical equipment installing according to customer schemes or according to type solutions of producing plant.

SPECIFICATIONS

- Overall dimensions ШНН (WxDxH) - (600-1200)x(400-800)x(2000-2200) mm;
- Weight per ШНН - from 50 kg;
- Protection level of enclosure - up to IP54 according to GOST 14254-96;

APPLICATION

- Electric energy industry
- Extractive industry



CTKZ N° KZ 9 107 00705 DATED 23.08.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: EGORIN IGOR ALEKSANDROVICH

Universal wall cabinets ШНУ-KEM/kz for up to 1kV voltage

FEATURES

- Metallic case with polymer coating;
- Doors design - external;
- Door opening angle - 120°;
- There are several performances of equipment mounting in the:
 - a) at perforated board;
 - б) at solid board (for drilling);
 - в) on the ledges;
- The cabinet is mounted on the wall by mounting brackets of the cabinet;
- Cable lead-in through the board of cable lead-in in the bottom or by special order – on the top;

DESIGNATION

Designed for electrical equipment installing according to customer schemes or according to type solutions of producing plant.

SPECIFICATIONS

- Cable lead-in through the board of cable lead-in in the bottom or by special order – on the top;
- Overall dimensions ШНУ (WxDxH) - (200-800)x(150-350)x(300-1200) mm;
- Weight per ШНУ - from 25 kg;
- Protection level of enclosure - up to IP54 according to GOST 14254-96;

APPLICATION

- Electric energy industry



CTKZ N° KZ 9 107 00705 DATED 23.08.18

UTILITY MODEL PATENT IS AVAILABLE

AUTHOR: EGORIN IGOR ALEKSANDROVICH

In-house cabinets ЩCH-KEM/kz for up to 1kV voltage

FEATURES

- Reserve power supply automatic infeed support;
- 220 V socket outlet and 220 V external sockets outline feed line are fitted by Y30;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing;
- Ready-to-operate and type tested delivery;

DESIGNATION

Designed for current supply -36 V and -220/380 V, lighting, heating, teleautomatics, wall support outlets, spring-wind motors of vacuum breakers of high current chambers, testing equipment, and information systems metering instruments in areas of high current distribution devices based on KPY and KCO chambers.

SPECIFICATIONS

- Current/frequency of supply net - 380/220 V;
- Nominal output current - 230 V;
- Overall dimensions (WxDxH) - 750x375x1600 mm;
- Weight per ЩCH - from 300 kg;
- Operating conditions: from minus 5 to plus 40 °C, Y3 according to GOST 15150-69;
- Protection level of enclosure with closed doors - not less than IP30 according to GOST 14254-96;

APPLICATION

- Electric energy industry



CTKZ N° KZ 9 107 00063 DATED 22.01.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: EGORIN IGOR ALEKSANDROVICH

Data collecting cabinets ЛУСОД-КЕМ/kz for up to 1kV voltage

FEATURES

- Allows the possibility of multifunction junction of meters without mounted GSM/GPRS data sets;
- Basic completing allows the access to commercial data of electric energy meters according to CSD (GSM) and TCP/IP (GPRS) technologies; There is a possibility of distance setting of parameters required for
- ЛУСОД functioning so as types of connected instruments, poll periodicity and type of data from the counter that are required for storage and transfer to the central base.

DESIGNATION

Designed for acceptance, storage, processing and passing the parameters of metering (indicated value, energy as per tariff, load and flow diagrams, network momentary parameters and other parameters that are metered by metering instruments).

The cabinet allows the possibility of junction of multifunction electric energy meters without possibility of usage of mounted GSM/GPRS data sets; Basic completing allows the access to commercial data of multifunction electric energy meters according to CSD (GSM) and TCP/IP (GPRS) technologies

SPECIFICATIONS

- Input power – no more than 500VA;
- Nominal current - 220/380V;
- Input power frequency – 50Hz;
- Overall dimensions (WxDxH) - 600x300x800 mm;
- Weight of one cabinet is 50 kg min;
- Operating conditions: from minus 5 to plus 40 °C, YX/J4 according to GOST 15150-69;
- Protection level of enclosure - not less than IP30 according to GOST 14254-96;

APPLICATION

- Electric energy industry



CTKZ N° KZ 9 107 00705 DATED 23.08.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: EGORIN IGOR ALEKSANDROVICH

Relay protection and automatics cabinets ШП3А-KEM/kz for up to 1kV voltage

FEATURES

- Single-end/double-end service;
- Performed with inspection viewers and without them;
- Reliable and long life locks;
- Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;
- Polymer paint coating, signing by using lasting UV printing.

DESIGNATION

Designed for performing the functions of automatics, control, protection, alarming, metering and connection control at electric stations and substations of 35-500 kV voltage.

SPECIFICATIONS

- Names of cabinets depending on application;
 - Cabinet for lines protection and automatics 35-500 kV;
 - Cabinet for breakers protection and automatics 35-500 kV;
 - Cabinet for current transformers protection and automatics 35-500 kV;
 - Cabinet for bars differential protection 35-500 kV;
 - Cabinet for autotransformers protection 35-500 kV;
 - Cabinet for central alarm.
- Nominal operative current - 0,4 kV;
- Overall dimensions (WxDxH) - (600-1200)x(600-900)x2000 mm;
- Weight of one cabinet (without equipment) is 170 kg min;
- Operating conditions: from minus 5 to plus 40 °C, УХЛ4 according to GOST 15150-69;
- Protection level of enclosure from frontage - not less than IP30 according to GOST 14254-96.

APPLICATION

- Electric energy industry



CTKZ № KZ 9 107 00705 DATED 23.08.18
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KUZMENKO ANDREI ANATOLEVICH

Distribution points ΠΡ-KEM/kz for up to 1kV voltage

FEATURES

- Only cooper busbar;
- Rigid welded frame, polymer paint coating, signing by using lasting UV printing; Ready-to-operate and type tested delivery;
- Usage of modern materials, components and technologies leads to high reliability and long lifetime;

DESIGNATION

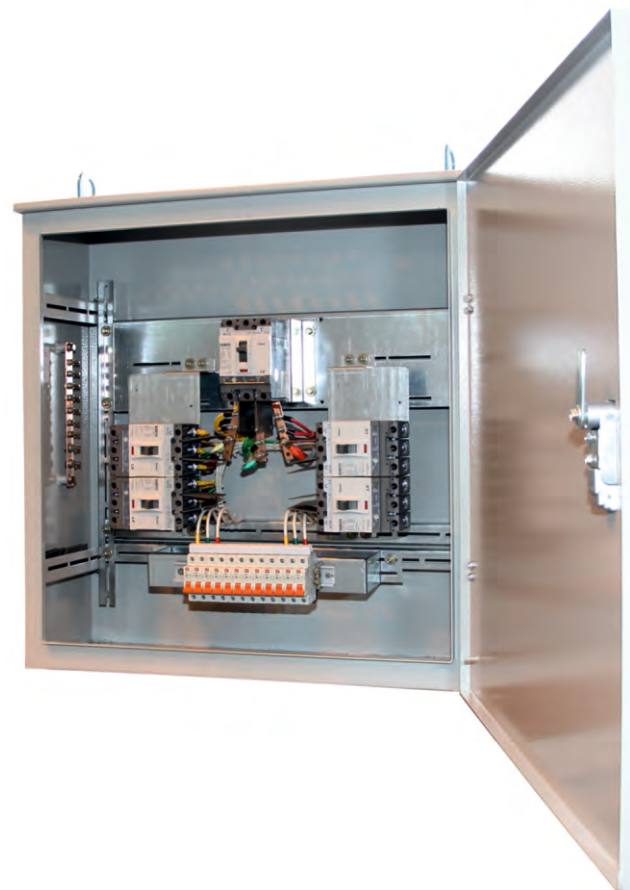
Designed for acceptance and distribution of electric energy in power and lightning circuits of alternate current with current up to 660 V inclusive, for outgoing lines protection from overload and short faults current, for not often commutations of electric circuits (up to six times per hour). The cabinets are produced instead of the cabinets of popular series ΠΡ11, ΠΡ22 in floor and hind performances.

SPECIFICATIONS

- Nominal current - up to 660V;
- Input power frequency – 50Hz;
- Performance - hinged/floor;
- Overall dimensions (WxDxH) - (600;800)x250x(600;800;1000;1200;1700) mm;
- Weight of one cabinet is 48-110 kg;
- Operating conditions: from minus 5 to plus 40 °C, YX/14 according to GOST 15150-69;
- Protection level of enclosure - not less than IP30 according to GOST 14254-96;

APPLICATION

- Electric energy industry



CTKZ N° KZ 9 107 00063 DATED 22.01.19
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: DIUBANOV MAKSIM VIKTOROVICH

Fire cabinets ШПК-KEM/kz

DESIGNATION

Designed for allocating of fire cock equipment package on manufacturing objects, in domestic and public premises.

FEATURES

- Rotating cassette for allocating the fire cock;

SPECIFICATIONS

- Overall dimensions (WxDxH) - 540x250x650 mm;
- Weight per ШПК - 21 kg;

APPLICATION

- Any industry line;



CTKZ N° KZ 8 107 00705 DATED 23.08.18

Metallic clothes cabinets ШООСВ-KEMЛа

DESIGNATION

Designed for storing replaceable clothes, hats, shoes and other personal items. Used for indoor installation.

FEATURES

- There are separations for clean and work clothes storage and also for padlock hasp. There is a storing shave for headwear and also coat hooks inside every separation;

SPECIFICATIONS

- Overall dimensions ШООСВ (WxDxH) - 730x400x1700 mm;
- ШООСВ-2000-П (WxDxH) - 1200x450x2000 mm;
- Weight per ШОСВ – 37 kg;

APPLICATION

- Any industry line;



CTKZ N° KZ 8 107 00705 DATED 23.08.18

5

DISTRIBUTION EQUIPMENT FOR MINING INDUSTRY



- High-voltage reversing switch PBB-6-KEM/kz for voltage of 6 kV
- Distribution switchgear cabinets of mine standard version KPY-PH-KEM/kz for voltage of 6 kV
- Cabinets with starter of mine standard version ПPH-A(Б)-KEM/kz for voltage of up to 1 kV
- Cabinets with automatic circuit breaker of mine standard version BPH-KEM/kz for voltage of up to 1 kV
- Cabinets with automatic direct-current circuit breaker of mine standard version BAPП-KEM/kz for voltage of up to 1 kV
- Cabinets with vacuum starter of mine standard version ПBPH-KEM/kz for voltage of up to 1 kV



High-voltage reversing switch PBB-6-KEM/kz for voltage of 6 kV

FEATURES

- Double-end service;
- ABB or SIEMENS vacuum contactors, which have a long mechanical and commutation life, significantly increasing the reliability of the reversing switch;
- Mechanical locking between the contactors;
- Supplied as a complete factory package with the standard tests performed;
- Use of the modern materials, components and technologies results in the high reliability and long-term service;
- The polymer coating of the framing and labels applied by the UV printer is a guarantee of the continuous service.

DESIGNATION

It is designed for the control of the electric drive of the winding (including mine) plants with a voltage of 6 kV of a three-phase current of a frequency of 50 Hz, unexposed to the atmospheric overvoltage or of the plants that have the appropriate lightning-discharge protectors. It is not intended for installation directly in the mine and not qualifies as the “mining machinery”.

APPLICATION

- Mining industry.
- Electric power industry and metallurgical industry.

SPECIFICATIONS

- Nominal operational voltage - 6 kV;
- Nominal current of cabinet main circuits - up to 400 A;
- Nominal breaking/making current - 4/15 kA;
- Mode of operation - intermittent continuous or intermittent periodic;
- Control-circuits and dynamic braking circuit voltage - 220 V OS;
- Overall dimensions (W×D×H) - 900x800x2060 mm;
- Weight of one cabinet - 450 kg min;
- Operating conditions: from - 25°C to + 40°C, Y3 according to GOST 15150-69; relative humidity at + 25°C and lower temperatures without condensation up to 98%;
- Operational environment - non-explosive, dust free of more than 5 mg / m³, corrosive gases in concentrations that reduce the parameters to unacceptable values;
- Vibration loads in the range of 1-35 Hz, with a maximum overdrive of 0.5 and 1 severity level;
- Protection level of enclosure - not less than IP32 according to GOST 14254-96.



CTKZ NO. KZ 9 107 00 171 DATED 19.02.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: BURNASHOV ALEKSANDR IUREVICH

Distribution switchgear cabinets of mine standard version KPY-PH-KEM/kz for voltage of 6 kV

FEATURES

- Double-end service;
- Fireproof design;
- Vacuum circuit breaker on the draw-out element in the lower section for the quick replacement, providing the ability to roll out onto the side-hinged rails;
- Placement of the auxiliary circuits devices in a separate removable relay cabinet, which is hermetically sealed from the power current-carrying circuits
- Supplied as a complete factory package with the standard tests performed;
- Use of the modern materials, components and technologies results in the high reliability and long-term service;
- Possibility to connect the technological automatic equipment, remote control, teleautomatics and additional protection installed outside the cabinets.

DESIGNATION

Designed for the distribution of electricity with a voltage of 6 kV and a frequency of 50 Hz, in the conditions of the shafts and mines that are gas and dust explosion proof.

APPLICATION

- Mining industry.



CTKZ NO. KZ 9 107 00567 DATED 13.07.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: KARTOLISETS ALEKSANDR SERGEEVICH

SPECIFICATIONS

- Nominal operational voltage - 6 kV;
- Nominal current of cabinet main circuits - up to 1250A;
- Nominal breaking current of circuit breaker built into the cubicle switchboards - up to 25 kA;
- Nominal current of electrodynamic withstand of the main circuits - up to 40 kA;
- Overall dimensions (W×D×H) - 800x1400x1700 mm;
- Weight of one cabinet - 600 kg min;
- Operating conditions: from - 10°C to + 35°C, Y3 according to GOST 15150-69; relative humidity at + 35°C up to 95%;
- The ore dust content in the environment is not more than 8 mg/m³, dust is non-explosive, the environment does not contain acrid vapors and gases in concentrations that fracture the metal;
- Protection level of enclosure from frontage - not less than IP 54 according to GOST 14254-96.



Cabinets with starter of mine standard version ПРH-A(Б)-KEM/kz for voltage of up to 1 kV

DESIGNATION

Designed for operation in the three-phase AC mains with an insulated transformer neutral in the conditions of the shafts and mines that are dust-explosion proof, both for stationary installation and for mobile facilities of the metal mining enterprises.

FEATURES

- Rigid welded frame, polymer paints coating, labeling using the long-term UV printing;
- The use of the electric switchgears of the leading global producers.

SPECIFICATIONS

- Nominal current - 63,100 A, (125 A for ПРH-Б);
- Switching wear resistance of the main contact elements of the starter - not less than 300 000 cycles;
- Overall dimensions of ПРH with the slides (W×D×H) - 610x290x810 mm;
- Weight of one ПРH-A - 50 kg, ПРH-Б - 70 kg;
- Protection level of enclosure - not less than IP54.



Cabinets with automatic circuit breaker of mine standard version БРH-KEM/kz for voltage of up to 1 kV

DESIGNATION

Designed for operation in the three-phase AC mains with an insulated transformer neutral in the conditions of the shafts and mines that are dust-explosion proof, both for stationary installation and for mobile facilities of the metal mining enterprises.

FEATURES

- Rigid welded frame, polymer paints coating, labeling using the long-term UV printing;
- The use of the electric switchgears of the leading global producers;

SPECIFICATIONS

- Nominal voltage – 380 V;
- Nominal current – 100...200 A;
- Switching wear resistance of the main contact elements of the starter - not less than 25 000 cycles;
- Overall dimensions of БРH with the slides (W×D×H) - 610x290x290 mm;
- Weight of one БРH - 50 kg;
- Protection level of enclosure - not less than IP54 according to GOST 14254-96.

APPLICATION

- Electric power industry.
- Mining industry.



CTKZ NO. KZ 8 107 00950 DATED 26.11.2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: VODOPIANOV PAVEL SERGEEVICH

Cabinets with automatic direct-current circuit breaker of mine standard version BAPΠ-KEM/kz for voltage of up to 1 kV

DESIGNATION

Designed for operation in the direct-current mains in the conditions of the shafts and mines, which are dust-explosion proof, of the metal mining enterprises.

FEATURES

- Rigid welded frame, polymer paints coating, labeling using the long-term UV printing;
- The use of the electric switchgears of the leading global producers;
- It is allowed to connect the multi-core cables with copper cores, as well as armored cables (power).

SPECIFICATIONS

- Nominal voltage – 440 V DC;
- Nominal current - 250 A, (BAPΠ-250), 500 A (BAPΠ-500);
- Switching wear resistance of the circuit breaker - not less than 8 000 cycles;
- Overall dimensions of BAPΠ (W×D×H): BAPΠ -250 - 400x160x400 mm;
- BAPΠ-500 - 600x200x600 mm;
- Weight of one BAPΠ –50 kg max;
- Protection level of enclosure - not less than IP54 according to GOST 14254-96.



CTKZ NO. KZ 8 107 00950 DATED 26.11.2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: VODOPIANOV PAVEL SERGEEVICH

Cabinets with vacuum starter of mine standard version ПВРΗ-KEM/kz for voltage of up to 1 kV

DESIGNATION

Designed for operation in the three-phase AC mains with an insulated transformer neutral in the conditions of the shafts and mines that are dust-explosion proof, both for stationary installation and for mobile facilities of the metal mining enterprises.

FEATURES

- Rigid welded frame, polymer paints coating, labeling using the long-term UV printing;
- The use of the electric switchgears of the leading global producers.

SPECIFICATIONS

- Nominal voltage – 380, 660 V;
- Nominal current – 63, 100 A;
- Control-circuit voltage - ~24 V;
- Switching wear resistance of the main contact elements of the starter at the operational current equal to the nominal and U=380 V - not less than 300 000 cycles;
- Overall dimensions of ПВРΗ with the slides (W×D×H) - 610x290x590 mm;
- Nominal current – 63, 100 A;
- Weight of one ПВРΗ –70 kg min;
- Protection level of enclosure - not less than IP54 according to GOST 14254-96.



Mine lighting cabinets

АОШ-KEM/kz

for voltage up to 1kV

FEATURES

- Rigid welded frame, polymer paints coating, labeling using the long-term UV printing;
- The use of the electric switchgears of the leading global producers;

DESIGNATION

Designed to supply the lighting networks, signaling networks and other power-consuming units with voltage of 220/127 V and 36 V in the conditions of the shafts, mines and other enterprises that are dust-explosion proof, where it is allowed to use the electric equipment of PH1 series.

They are used in the three-phase AC mains with an insulated transformer neutral voltage of 660V or 380V, frequency 50Hz. 127/220V cabinets have the built-in elements for the protection against the electrical leakage in the secondary circuits of the power transformer.

APPLICATION

- Electric power industry.
- Mining industry.

SPECIFICATIONS

- Continuous power capacity – 2.5; 4; 5 kVA;
- Nominal voltage of a system - 660/380 V;
- Nominal output voltage- 220/127 (36) V;
- Primary current of the transformer at:
660 V – 2.3A (2.5 kVA); 3.6 A (4 kVA); 4.6 A (5 kVA);
380 V - 4.0 A (2.5 kVA); 6.4 A (4 kVA); 8.0 A (5 kVA);
- Nominal current of the automatic circuit breakers - 6-10 A (2.5 kVA);
- Resistance of operation at three-phase leakage - not less than 3.3 kOhm/phase;
- Resistance of operation at a single-phase leakage - no more than $2 \div 5$ kOhm/phase;
- Ground leakage current - not more than 0.03 A;
- Breaking time at the single-phase leakage - not more than 0.1 s;
- Version – PH-1;
- Climatic manufacture and placement category- U5, UHL5;
- Overall dimensions of АОШ with the slides (W×D×H) - 500x390x600 mm;
- Weight of one АОШ - 50 kg, ПРН-Б - 70 kg;
- Protection level of enclosure - not less than IP54.



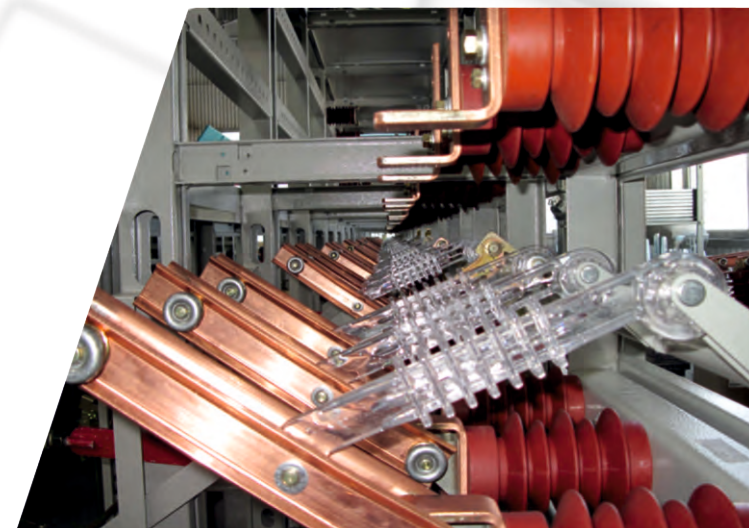
6

ELECTRIC SWITCHGEAR

6-220KV



- High-voltage indoor disconnect devices PB3-KEM/kz and PBΦ3-KEM/kz for voltage of 6, 10 kV;
- Self-generated indoor load-break switches BHA-KEM/kz for voltage of 6, 10 kV;
- High-voltage three-pole horizontal center break disconnect devices PГП-KEM/kz for voltage of 35, 110, 220 kV;
- High-voltage three-pole horizontal center break disconnect devices with two breaks PГП2-KEM/kz for voltage of 110, 220 kV;
- Vacuum circuit breakers VL-KEM/kz for voltage of 6, 10 kV
- Vacuum outdoor circuit breakers BBH-KEM/kz for voltage of 35 kV;
- Sulfur hexafluoride spring-driven outdoor circuit breakers BГH-KEM/kz for voltage of 35, 110, 220 kV;
- Sulfur hexafluoride spring-driven outdoor dead-tank circuit breakers BГHБ-KEM/kz for voltage of 110, 220 kV;
- Single-pole ground terminal 3OH-KEM/kz for voltage of 110 kV.



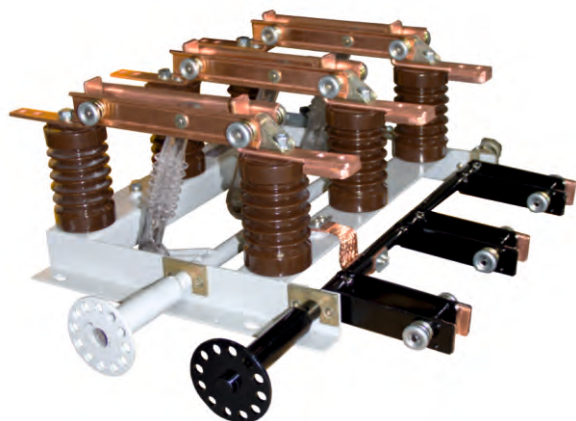
High-voltage indoor disconnect devices PB3-KEM/kz and PBΦ3-KEM/kz for voltage of 6, 10 kV

DESIGNATION

Designed for:
switching and breaking the dead sections of the electrical circuit that are energized; circuit diagram change; grounding of the disconnected sections using the ground terminals; switching and breaking the charging currents of the aerial and cable lines, no-load currents of the transformers and of light load currents; providing the visible disconnecting gap in the disconnected position; safe working practices on the disconnected section.

FEATURES

- Use only copper alloy as power cores;
- The ability to install the terminal switches for interfacing with the supervisory control system;
- Rigid welded frame made of the rolled steel;
- Reliable locking devices, ease of switching;
- High-quality polymer paints coating.

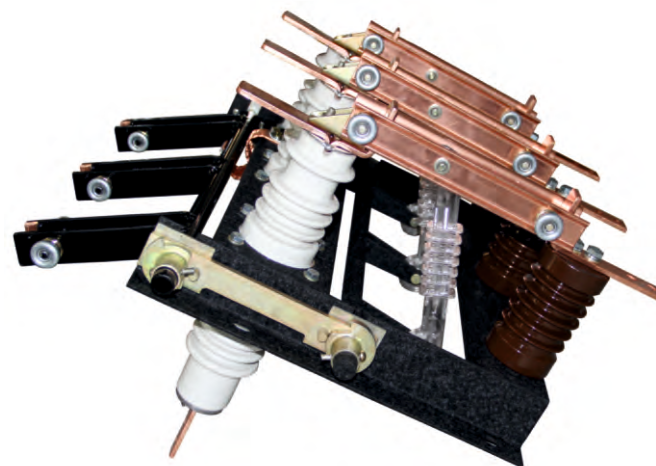


SPECIFICATIONS

- Maximum operating voltage – 12 kV;
- Nominal current - 630-2500A;
- Limiting current of the thermal stability – 20, 31, 5 kA;
- Short time electrodynamic current- 20; 31.5 kA;
- Control mode - hand drive;
- Degree of insulation pollution in accordance with GOST 9920-89 - II;
- Overall dimensions (W×H×D): PB3 - 620x670x470 mm;
- PBΦ3 - 500x670x590 mm;
- Weight of disconnect device: PB3 - 43 kg; PBΦ3 - 45 kg;
- Operating conditions: from - 60°C to + 45°C, according to GOST 15150-69.

APPLICATION

- Electric power industry.



CTKZ NO. KZ 8 107 00919 DATED 13.11.2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PAVLOV PAVEL VLADIMIROVICH

Self-generated indoor load-break switches BHA-KEM/kz for voltage of 6, 10 kV

FEATURES

- Use only copper alloy as power cores;
- The ability to install the terminal switches for interfacing with the supervisory control system;
- Rigid welded frame made of the rolled steel;
- High-quality polymer paints coating.

DESIGNATION

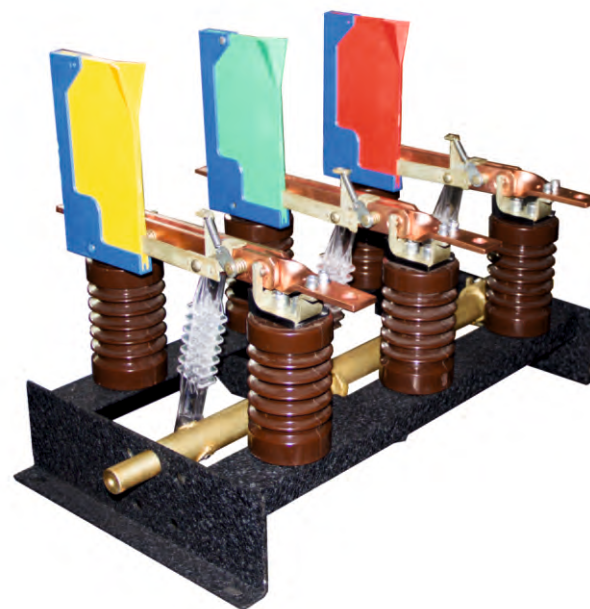
Designed for switching under load of the three-phase circuits with a frequency of 50 Hz and a voltage of 6 or 10 kV in the cabinets of the cubicle switchboards (KPY) and package transformer substation (KTP).

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Maximum operating voltage - 12kV;
- Nominal current - 630A;
- Peak breaking current at power $\cos \phi$ 0.7 – 800 A;
- Short time electrodynamic current - 51 kA;
- Reference value of the cyclical component - 20 kA;
- Current flow time (short circuit time) - 1s;
- Closing time - not more than 0.05 s;
- Breaking time - no more than 0.12 s;
- Mechanical durability before heavy overhaul - 2000 operations;
- Control mode - hand drive;
- Degree of insulation pollution in accordance with GOST 9920-89 - II;
- Overall dimensions (W×H×D) - 684x393x422 mm;
- Weight of the disconnect device - 52 kg;
- Operating conditions: from - 45°C to + 40°C, according to GOST 15150-69.



CTKZ NO. KZ 8 107 00919 DATED 13.11.2018
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: PAVLOV PAVEL VLADIMIROVICH

High-voltage three-pole horizontal center break disconnect devices

РГП-KEM/kz for voltage of 35, 110, 220 kV

FEATURES

- Simple design, high reliability, high commutation life;
- The ability to install the terminal switches for interfacing with the supervisory control system;
- Corrosion-resistant coatings of the steel parts of the disconnect device and supporting metal frames;
- Reliable locking devices, ease of switching.

DESIGNATION

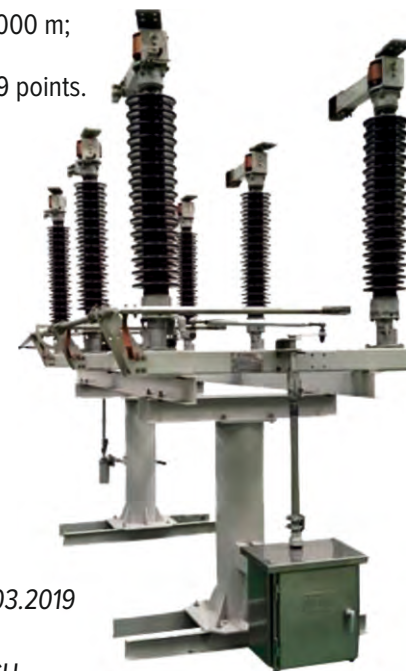
Designed for making and breaking the dead sections of the high-voltage electrical circuit, no-load currents of the transformers, charging currents of the aerial lines, providing the safe working practices on the disconnected section, grounding of the disconnected sections using the built-in ground terminals.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal / maximum voltage - 35/40.5; 110/126; 220/252 kV;
- Nominal current -1250-5000 A;
- Resistance of the main circuit -130 $\mu\Omega$ m;
- Nominal short-time / peak withstand current - 31.5; 40; 50 kA;
- Nominal peak withstand current - 80; 100; 125 kA;
- Static load of the clamp: longitudinal/transverse/vertical - 1250/750/1000 N;
- Disconnect device making / breaking time - no more than 7 s;
- Ground terminal breaking time - no more than 3 s;
- Material of the insulators - porcelain;
- Interfacial center-to-center distance - 1200 mm (35 kV); 2000 (110kV); 4000 (220kV);
- Mechanical lifetime of the disconnect device and ground terminal – 10 000 cycles;
- Nominal voltage of the electric driving motor of the disconnect device - AC220; 380/DC 110; 220 V;
- Nominal control voltage of the disconnect device - DC 220V;
- Overall dimensions (W×H×D) - 3240x2050x3850 mm (35 kV); 4310x1570x4105 mm (110 kV); 9050x3480x5480 mm (220 kV);
- Weight of the circuit breaker - 235 kg (35 kV), 940 kg (110 kV), 1350 kg (220 kV);
- Operating conditions: from -60°C to + 55°C, YX/13 according to GOST 15150-69;
- Radio interference voltage - < 2500 μ V;
- Ice wall thickness - 20 mm (111 district);
- Noise level - <110 dB;
- Altitude elevation - not more than 1000 m;
- Wind speed - no more than 34m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00294 DATED 29.03.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: GARBUZ ALEKSEI SERGEEVICH

High-voltage three-pole horizontal center break disconnect devices with two breaks РГП2-KEM/kz for voltage of 110, 220 kV

FEATURES

- Simple design, high reliability, long commutation life;
- The ability to install the terminal switches for interfacing with the supervisory control system;
- Corrosion-resistant coatings of the steel parts of the disconnect device and supporting metal frames;
- Reliable locking devices, ease of switching.

DESIGNATION

Designed for switching and breaking the dead sections of the high-voltage electrical circuit, no-load currents of the transformers, charging currents of the aerial lines, providing the safe working practices on the disconnected section, grounding of the disconnected sections using the built-in ground terminals.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal / maximum voltage - 35/40.5; 110/126; 220/252 kV;
- Nominal current -1250-5000 A;
- Resistance of the main circuit -130 μOhm ;
- Nominal short-time withstand current - 31.5; 40; 50 kA;
- Nominal peak withstand current - 80; 100; 125 kA;
- Static load of the clamping unit: longitudinal/transverse/vertical - 1250/750/1000 N;
- Disconnect device connect / breaking time - no more than 7 s;
- Ground terminal breaking time - no more than 3 s;
- Material of the insulators – porcelain / polymer;
- Interfacial center-to-center distance - 1200 mm (110 kV); 2400 (220kV);
- Mechanical lifetime of the disconnect device and ground terminal – 10 000 cycles;
- Nominal voltage of the electric driving motor of the disconnect device - AC220; 380/DC 110; 220 V;
- Nominal control voltage of the disconnect device - DC 220 V;
- Overall dimensions (W×H×D) - 4560x1980x4660 mm (110 kV); 8100x2780x5740 mm (220 kV);
- Weight of the circuit breaker - 1300 kg (110 kV), 1890 kg (220 kV);
- Operating conditions: from -60°C to + 55°C, УХЛ3 according to GOST 15150-69;
- Radio interference voltage - S 2500 μV ;
- Ice wall thickness - 20 mm (111 district);
- Noise level - S110 dB;
- Altitude elevation - not more than 1000 m;
- Wind speed - no more than 34m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00294 DATED 29.03.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: GARBUZ ALEKSEI SERGEEVICH



Vacuum circuit breakers

VL-KEM/kz for voltage of 6, 10 kV

FEATURES

- They are the analogue of the South Korean vacuum circuit breaker Susol VL-12 of the company "LS IS";
- Meet standard international requirements of ISO/IEC 62271-100 [M2, C2, E2];
- Possess high reliability;
- Have the long commutation life without service for about 30 years;

DESIGNATION

Designed for the electrical switching in the three-phase alternating current networks with a frequency of 50 Hz, a nominal voltage of 6.10 kV, and a nominal current of up to 1250 A for the systems with a neutral, insulated, compensated, resistance or arcing ground suppressor grounded.

They are installed in the new and altered cubicle switchboards of the stations, substations and other devices that distribute and consume electric energy in all sectors of the national economy.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal voltage -10 kV;
- Maximum operating voltage -12 kV;
- Nominal current -1250 A;
- Nominal short circuit current - up to 31.5 kA;
- Nominal short-time withstand current for 3s - 25 kA;
- Nominal breaking time (cycle) - 0.3 s;
- Operation mode: O - 0.3 s - OB -15 s - OB;
- Standard auxiliary contacts - 4a4b, 10a10b;
- Nominal trip time - < 0.04 s;
- On-time without load - < 0.06 s;
- Motor control current - < 2 A;
- Control circuit switch-on current - <2 A;
- Control circuit switch-off current - <2A;
- Drive charging - < 5 s;
- Pole separation - 150 mm;
- Circuit breaker installation type - fixed / draw-out;
- Circuit breaker weight - 105 kg;
- Switching wear resistance - 20,000 operations;
- Operating conditions: from - 5°C to + 40°C, YX/13 according to GOST 15150-69.



CTKZ NO. KZ 9 107 00310 DATED 04.04.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: IURKOVSKII EVGENII SERGEEVICH

Vacuum outdoor circuit breakers BBH-KEM/kz for voltage of 35 kV

FEATURES

- The ability of the manual springs charging to switch on the circuit breaker under load in the absence of the control current;
- Simple design, high reliability, long commutation life;
- Insensitivity to the undertensions, in case of the disconnection of the short-circuited line;
- Use of the natural convection effect in the field structure, for better heat dissipation.

DESIGNATION

Designed for the electrical switching of the high power circuits of the three-phase alternating current under the nominal operation conditions of the device, as well as for automatic breaking of these circuits in event of the faults and overloads that occur at emergency modes. They are used in AC electric energy systems at a nominal frequency of 50 Hz, a nominal voltage of 35 kV, and are the control and protective equipment.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal voltage - 35 kV;
- Maximum voltage - 40.5 kV;
- Nominal withstand voltage (1t1p):
 - line-to-ground voltage - 95 kV; between open contacts -118 kV;
- Nominal lightning withstanding voltage:
 - line-to-ground voltage -185 kV; between open contacts - 215 kV;
- Nominal current -1250 ... 2500 A;
- Nominal short-time withstand current - 25; 31.5 kA;
- Nominal peak withstand current - 63; 80 kA;
- Nominal operational sequence - 0-0.3s-c0-180s-c0;
- Contact disengaging time - <5 ms;
- Making time at min/max operating voltage - < 120 ms;
- Breaking time at min/max operating voltage - < 40 ms;
- Interfacial center-to-center distance - 770 mm;
- Mechanical lifetime – 10 000 cycles;
- Nominal voltage of the spring charging motor –AC/DC 110; 220 V;
- Nominal voltage of the on/off coil - DC 110; 220 V;
- Overall dimensions (W×H×D) - 1755x1190x3546 mm;
- Circuit breaker weight - up to 1100 kg;
- Operating conditions: from - 60 °C to + 55°C, УХЛ3 according to GOST 15150-69;
- Altitude elevation - not more than 1000 m;
- Wind speed - no more than 34 m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00310 DATED 04.04.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SNEGIREV SERGEI VIKTOROVICH

Sulfur hexafluoride spring-driven outdoor circuit breakers БГН-КЕМ/кз for voltage of 35, 110, 220 kV

FEATURES

- The ability of the manual springs charging to switch on the circuit breaker under load in the absence of the control current;
- Simple design, high reliability, long commutation life; Corrosion-resistant coatings of the steel parts of the disconnect device and supporting metal frames;
- Simplified operating of the circuit breaker due to the special design of gas flow control assemblies.

DESIGNATION

Designed for the electrical switching of the high power circuits of the three-phase alternating current under the nominal operation conditions of the device, as well as for automatic breaking of these circuits in event of the faults and overloads that occur at emergency modes. They are used in AC electric energy systems at a nominal frequency of 50 Hz, a nominal voltage of 35 kV, and are the control and protective equipment.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal voltage – 35, 110, 220 kV;
- Maximum voltage - 40.5; 126; 252 kV;
- Nominal current - 630...4000 A;
- Nominal short-time withstand current - 25; 31.5; 40; 50 kA;
- Nominal peak withstand current - 63; 80; 100; 125 kA;
- Nominal operational sequence - 0-0.3s-C0-180s-C0;
- Contact disengaging time - <5 ms;
- Making time at min/max operating voltage - < 24 ms;
- Breaking time at min/max operating voltage - < 60 ms;
- Interfacial center-to-center distance - 770 mm (35 kV), 1700 (110 kV), 4000 (220 kV);
- Mechanical lifetime – 10 000 cycles;
- Nominal voltage of the spring charging motor –AC/DC 110; 220 V;
- Nominal voltage of the on/off coil - DC 110; 220 V;
- Overall dimensions (W×H×D) - 2000x560x2410 mm (35 kV); 3080x1100x1200 mm (110 kV); 5420x684x834 mm(220 kV);
- Circuit breaker weight - up to 1100 kg (35 kV), 1700 kg (110 kV), 4500 kg (220 kV);
- Operating conditions: from - 50°C to + 55°C, YX/13 according to GOST 15150-69;
- Altitude elevation - not more than 34 m;
- Seismic resistance - not more than 9 points;
- Wind speed - no more than 34 m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00310 DATED 04.04.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SNEGIREV SERGEI VIKTOROVICH

Sulfur hexafluoride spring-driven outdoor dead-tank circuit breakers

ВГНБ-КЕМ/kz for voltage of 110, 220 Kv

FEATURES

- The ability of the manual springs charging to switch on the circuit breaker under load in the absence of the control current;
- Simple design, high reliability, long commutation life;
- Corrosion-resistant coatings of the steel parts of the disconnect device and supporting metal frames;
- Explosion and fire safety.

DESIGNATION

Designed for the effective making and braking of the individual circuits or electrical equipment in the electric energy system, in normal and emergency modes with manual, remote, or automatic control.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal voltage – 110, 220 kV;
- Maximum voltage - 126; 252 kV;
- Nominal current - 630...4000 A;
- Nominal short-time withstand current - 31.5; 40; 50 kA;
- Nominal peak withstand current - 80; 100; 125 kA;
- Nominal operational sequence - 0-0.3s-C0-180s-C0;
- Nominal sulfur hexafluoride (SF6) pressure – 0.62 MPa;
- Partial discharge (up to 80% of nominal withstand voltage) – 25pC
- Interfacial center-to-center distance - 1817 (110 kV), 3500 (220 kV);
- Mechanical lifetime – 10 000 cycles;
- Nominal voltage of the spring charging motor –AC/DC 110; 220 V;
- Nominal voltage of the on/off coil - DC 110; 220 V;
- Overall dimensions (W×H×D) - 2782x2300x4338 mm (110 kV); 4230x3200x4248 mm (220 kV);
- Circuit breaker weight - 2700 kg (110 kV), 5300 kg (220 kV);
- Operating conditions: from - 50°C to + 55°C, YX/13 according to GOST 15150-69;
- Altitude elevation - not more than 1000 m;
- Wind speed - no more than 34 m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00310 DATED 04.04.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: SNEGIREV SERGEI VIKTOROVICH



Single-pole ground terminal 30H-KEM/kz for voltage of 110 kV

FEATURES

- High corrosion resistance due to galvanized coating of all metal parts;
- The power units are made of the stainless steel;
- Maintenance-free rotatable part, as well as the hermetically sealed base ensures the long-term and uninterrupted operation;
- Simple design, high reliability, long commutation life.

DESIGNATION

Designed for grounding of the power transformer neutrals that do not have the earth-fault protection.
It is installed on stationary transformer substations in the AC mains for a nominal voltage of 110 kV.

APPLICATION

- Electric power industry.

SPECIFICATIONS

- Nominal voltage – 110 kV;
- Maximum voltage – 126 kV;
- Nominal current -1250 A;
- Short time electrodynamic current -100 kA;
- Short-circuit time - 3 ms;
- Nominal mechanical load of the clamp:
 - horizontal longitudinal -1000 N;
 - horizontal transverse - 750 N;
 - vertical – 750 N;
- Nominal lightning impulse voltage - 550 kV;
- Main loop resistance - 20 $\mu\Omega$;
- Mechanical durability -10 000 cycles;
- Overall dimensions (W×H×D) - 850x160x1613 mm;
- Ground terminal weight - up to 210 kg;
- Operating conditions: from - 60°C to + 40°C, YX/13 according to GOST 15150-69;
- Altitude elevation - not more than 2000 m;
- Wind speed - no more than 34m/s;
- Seismic resistance - not more than 9 points.



CTKZ NO. KZ 9 107 00294 DATED 29.03.2019
UTILITY MODEL PATENT IS AVAILABLE
AUTHOR: TIMOFEEV MAKSIM NIKOLAEVICH

CUSTOMERS



PARTNERS



SIEMENS



NOTES





JSC "KEMONT"

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