

EKRA

Research and
Production
Enterprise





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ABOUT EKRA

Our main values are sustained improvement of produced equipment and breakthrough innovations. Built on decades of experience and knowledge, we offer our customers the safety of their power systems. Always being proactive, offering innovative solutions that use the most advanced technologies we provide a wide range of products for the protection, monitoring, control, automation, and metering of electric power systems.

EKRA was founded in 1991 with the goal of making electric power safer, more innovative and affordable. From the beginning, our products were designed for special requirements of the Russian power system, such as long transmission lines due to huge territory of the country and different climatic categories from severe cold to tropical heat. Today our products are by far the most used product of its kind in the world.

All our digital equipment conforms to IEC 61850. Using RTDS Simulator, EKRA performs real time electromagnetic transient simulations and tests all protections algorithms of developed equipment.

EKRA's Quality management system meets the requirements of international standard ISO 9001:2015. The produced equipment is certified for application at power network facilities of the largest electric companies in the world.

“Our road was not straight and wide, there were mistakes that we were correcting sometimes successfully, sometimes not that good, there were failures that made us truly upset, there were real successes and victories to be proud of. And we are proud of them. EKRA is up to the mark. EKRA Group is deservedly respected among our Customers.”

— Konstantin Doni
General Director



Innovations since 1969



1969 1987 1991 1995 2000 2004 2007 2009 2010 2012 2013 2017

Specialists from the main Research Institute of Relay protection in USSR revolutionized the power protection industry by providing semiconductor protective relay instead of traditional electromechanical relays. Later, these specialists founded EKRA

The first microprocessor protective relay developed by the Research Institute specialists

EKRA was founded

We offered the first digital comprehensive intelligent electronic devices (hereinafter IEDs) to protect primary equipment of power plants

We introduced the full set of IEDs to protect primary equipment of substations up to 220 kV, including distance line protection

EKRA offers comprehensive protections that are perfect for substation applications up to 750 kV

The first supply of motor soft start system

EKRA extended their products by digital line differential relays

We developed comprehensive substation automation solution based on EKRA software and hardware

EKRA supplied the first insulation monitoring system of own production

Installation of the first medium voltage frequency converter

Our products were conformed to IEC 61850 - the global communication standard - by KEMA Laboratories (DNV GL)

Launch of the first fully digital substation in Russia

We introduced our line of uninterruptible power supply solutions

- Protection, monitoring and control
- Automation solutions
- Drive equipment
- Low-voltage systems and equipment

2019 7 fully digital substations are in use, 6 more are under construction

Our turnkey solutions set the benchmark when it comes to performance, interoperability, and availability. They make the entire workflow easier, deliver a safety and security advantage, and ultimately save real money. Feel free to ask your questions - we provide technical support at all illustrated below stages.

From your idea to our complete solution

TURNKEY SOLUTIONS



1 Your quote request
— our proposal



3 Production



5 Factory testing



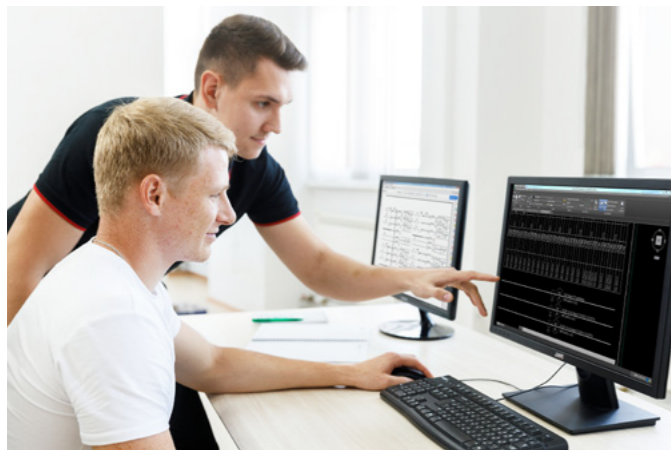
7 Works on site

2 Design, Research
& Development

4 Assembly

6 Training of Customer
personnel

8 Service and
warranty support



Free technical support for the life of every product 24 hours a day is available thanks to support centers network.



PROTECTION, MONITORING AND CONTROL

Our highly reliable protections cover a complete set of applications from power generation and transmission up to distribution and industrial systems. Our protection devices are successfully applied in numerous facilities worldwide, including nuclear power plants. With EKRA's breakthrough innovations, advanced technologies, and expert technical support, you can be confident that your system performs safely – in any situation. We ensure that our products will operate at least 20 years.





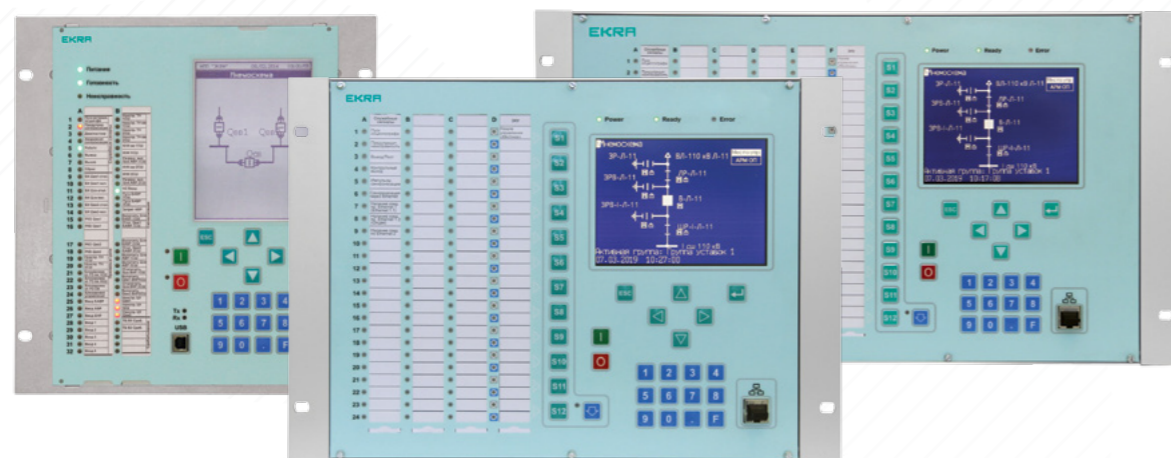
GENERATION



TRANSMISSION



DISTRIBUTION



EKRA 200

►► The EKRA 200 series IEDs provide versatile functionality, as well as maximum flexibility and performance to meet the highest requirements of any application in generation protection systems. Built on extensive experience and strong application knowledge, the EKRA 200 offers our customers more than just the confidence that their systems are performing reliably, it offers them a sense of calmness about primary equipment protection.

EKRA 21x protection function

FUNCTION	ANSI	EKRA21xV
GENERATOR PROTECTION		
Generator differential protection	87G	o
Negative Phase Sequence / Unbalanced-load protection	46	o
Overload protection	49	o
Distance protection	21	o
Voltage Controlled Overcurrent protection	50G/27G	o
Excitation Loss protection	40	o
Pole slip protection	78	o
Overexcitation protection	24	o
Overvoltage protection	59	o
Over-/Under Frequency protection	81	o
Directional overpower protection	32	o
Overcurrent protection	50G	o
Sensitive ground fault protection	64	o
GENERATOR STATOR PROTECTION		
Earth-fault protection	50N	o
Directional earth-fault protection	67N	o
95% Earth-fault protection	59N	o
100% Earth-fault protection (with 25 Hz signal injection)	64S	o
100% Earth-fault protection (with current and voltage harmonics control)	64S	o
GENERATOR ROTOR PROTECTION (EXCITATION SYSTEM PROTECTION)		
Rotor overload protection (current depended characteristic)	49R	o
Rotor overload protection (with rotor current converter)	49R	o
Rotor overload protection (with rotor 4..20mA sensor)	49R	o
Rotor overcurrent earth-fault protection (with 17 Hz signal injection)	64R	o
Generator rotor unlimited forcing current protection	50R	o
Generator rotor unlimited forcing current protection (with rotor 4..20mA sensor)	50R	o
Generator rotor unlimited forcing time protection	50R	o
Generator rotor unlimited forcing time protection (with rotor 4..20mA sensor)	50R	o
Generator unsuccessful inverting protection	50R	o
Reserve excitation system forcing	27	o

+ base functions
o optional functions

FUNCTION	ANSI	EKRA21xV
UNIT TRANSFORMER PROTECTION / UNIT AUXILIARY TRANSFORMER PROTECTION		
Transformer differential protection	87T	o
Buchholz relay	63T	o
High voltage bushing insulation monitoring	98	o
Earth-fault protection (for HV side)	50N/51N	o
Residual overvoltage protection (for HV side)	59N	o
Insulation monitoring (Generator voltage side)	59N	o
Transformer distance protection	21T	o
Transformer Voltage Controlled Overcurrent protection	50T/27T	o
Transformer overcurrent protection	50T	o
Inrush current blocking	68T	o
Transformer overexcitation protection	24T	o
Protection against symmetric overload of the transformer	49T	o
VT circuits control	60T	o
Undervoltage protection	27T	o
AUXILIARY & GENERATOR BUS-BAR 10-33KV PROTECTION		
Distance protection	21	o
Busbar differential protection	87B	o
CT circuits supervision	87CT	o
CONTROL AND SUPERVISION		
Tripping logic	94	o
Trip circuit supervision	74TC	o
Breaker failure protection	50BF	o
Synchrocheck and synchronizing	25	o
Autocloser (3 phase)	79	o
Lockout	86	o
Fuse Failure/ VT Supervision	60	o
Circuit breaker control / Supervision	52	o
Open Pole Detector	-	o
Switchgear interlocking	-	o
MONITORING, MEASUREMENT AND METERING		
Frequency	-	o
Synchroscope	-	o
Digital voltmeter	-	o
Three-phase Measurement	-	+
One-phase Measurement	-	+
RECORDING AND REPORTING		
Disturbance recorder	-	+
Event recorder	-	+
Self-test function	-	+

EKRA 21x IEDs are produced on an individual project on the basis of customer requirements, manufacturers of core equipment and for a particular object.



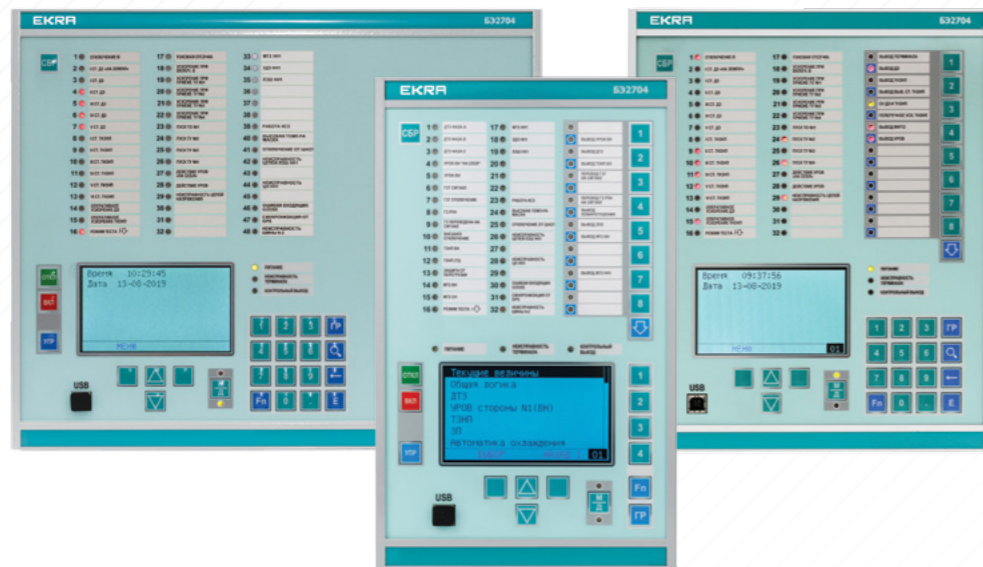
GENERATION



TRANSMISSION



DISTRIBUTION



BE2704

►► The BE2704 series IEDs provide one integrated platform for the protection, control and monitoring of transformer assets, busbars and transmission lines up to 750 kV with the latest in communication technologies. The IEDs are based on long-term field experience and focusing on the challenges our customers face.

BE2704 protection function (ANSI)

FUNCTION	ANSI	V01	V02	V04	V05	V06	V07	Vx8	Vx9	V41	V52	V58	V59
PROTECTION													
Line differential protection	87L								+				+
Line phase-comparison	87PC							+				+	
(Auto-)Transformer differential protection	87T			+									
Restricted earth fault protection	87N			o									
Busbar differential protection	87B				4	12-24							
Distance protection	21	+	+				o	+	+		+	+	+
Power swing blocking	68	+	+				o	+	+		+	+	+
Remote tripping	85	+	+					+	+		+	+	+
Earth-fault protection	50N/51N/67N	+	+				+	+	+		+	+	+
Overcurrent protection	50/51	+	+	+			+	+	+		+	+	+
Directional overcurrent protection	67	o	o	+			o	+	+		+	+	+
Inrush detector	68	+	+	+			+	+	+		+	+	+
Automatic switch onto fault logic	SOTF	+	+	+				+	+		+	+	+
Undervoltage protection	27	+	+	+	+	+	+	+	+		+	+	+
Residual overvoltage protection	59N	+	+	+			+	+	+		+	+	+
Overvoltage protection	59	+	+	+	+	+	+	+	+		+	+	+
Negative sequence overvoltage protection	47	+	+				+	+	+		+	+	+
Phase Discontinuity Protection	46BC	+	+	+			+	+	+	+	+	+	+
Built-in communication interface for protections		o	o						+		o		+
CONTROL AND SUPERVISION													
Tripping logic	94	+	+	+	+	+	+	+	+	+	+	+	+
Trip circuit supervision	74TC	+					o	o	o	+			
Breaker failure protection	50BF	+			+	+	+	+	+	+	+	+	+
Synchrocheck, energizing check and synchronizing	25	+					o	o	o	+			
Autorecloser (3 Phase)	79	+					o	o	o	+			
Autorecloser (1 Phase)	79SP									o	+	+	+
Lockout	86	+					o	o	o	+			
Fuse Failure/ VT Supervision	60	+	+	o			+	+	+	+	+	+	+
Circuit breaker control / Supervision	52	+						o	o	+			
CT Supervision	-	o	o	+	+	+	o	o	+	+	o	o	+
Open-phase protection		+					o	o	o	+			
Switchgear interlocking										+			
MONITORING, MEASUREMENT AND METERING													
Three-phase Measurement	-	+	+	+	+	+	+	+	+	+	+	+	+
One-phase Measurement	-	+	+	+	+	+	+	+	+	+	+	+	+
Fault locator	21 FL	+	+					+	+		+	+	+
RECORDING AND REPORTING													
Disturbance recorder	-	+	+	+	+	+	+	+	+	+	+	+	+
Event recorder	-	+	+	+	+	+	+	+	+	+	+	+	+
Self-test function	-	+	+	+	+	+	+	+	+	+	+	+	+

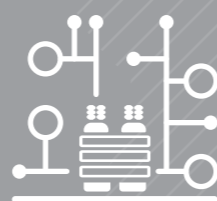
+ base functions
o optional functions



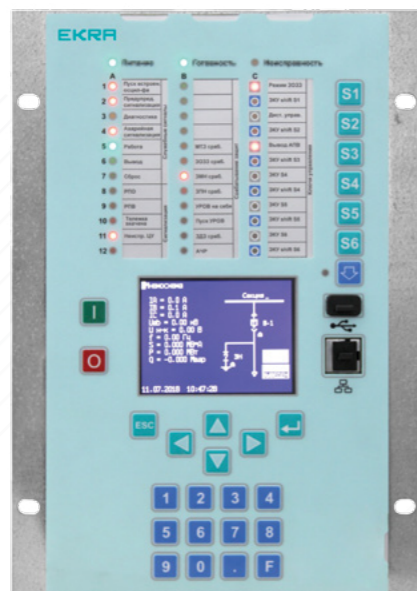
GENERATION



TRANSMISSION



DISTRIBUTION



EKRA217

►► The EKRA217 IED is the right solution for electrical distribution and machine protection. The EKRA217 series provides advanced protection with flexibility, programmability and communications for maximum system reliability. Our highly skilled engineers and technicians applied all their knowledge to the design and manufacture of these innovative protection IEDs.

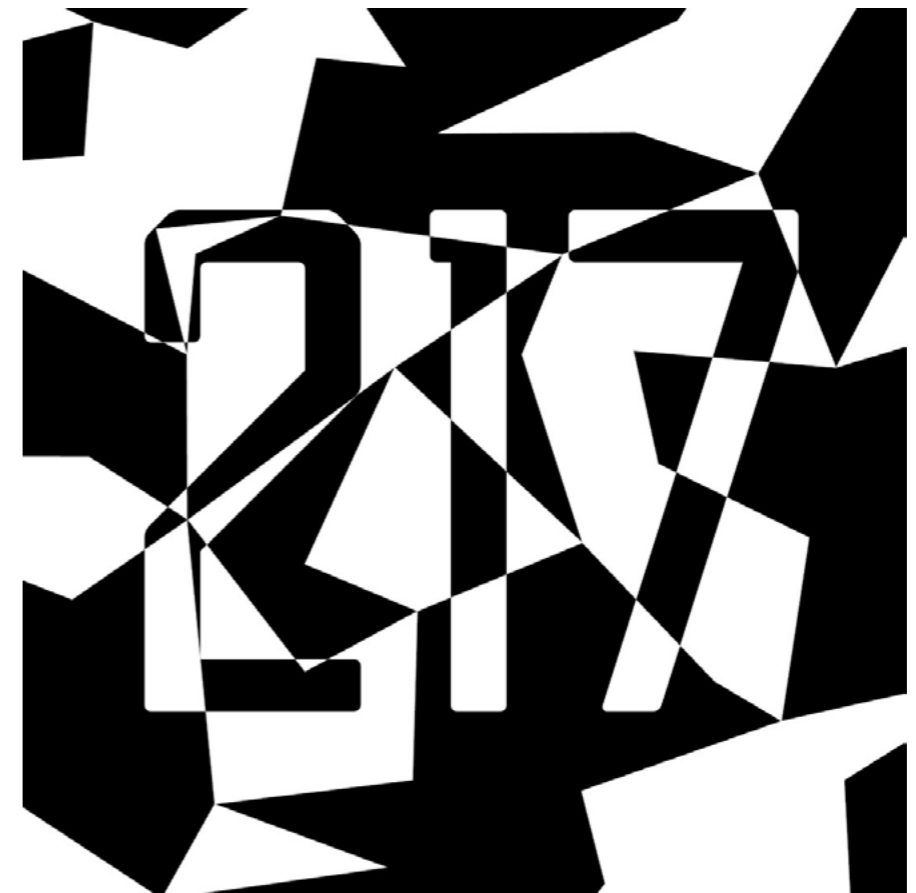
EKRA 217 protection function (ANSI)

EKRA 217 FUNCTION	ANSI	GENERATOR		TRANSFORMER		MOTOR	FEEDER			BUS BAR			VT
		01XX	1302	02XX	1301	05XX	03XX	04XX	06XX	16XX	07XX	14XX	15XX
PROTECTION													
Generator differential protection	87G	+											
Busbar differential protection	87B										+	+	
Motor differential protection	87M					o							
Transformer differential protection	87T			o									
Differential protection	87						o						
Distance protection	21						o		o		+		
Overcurrent protection	50/ 51/ 67	3	2	3		3	3	3	3	3	3	o	
Low excitation protection		+											
Buchholz relay tripping scheme				+			o						
Earth-fault overcurrent protection	50N/ 51N/ 59N	+				+	+		+		+		+
Positive-sequence overload		+		o		o					+		
Negative-sequence overload	46	+											
Undervoltage protection	27	+		o		+	+		+	+	+		+
Negative Phase Sequence / Unbalanced-load protection	46	+	+	o		+	+	+	+	+	+	o	
Reverse power protection	32	+				+							
Oversvoltage protection	59	+		o		+	+		+	+	+		+
Busbar protection (Logic Scheme)		+						+	+			o	
Arc flash protection		+	+	+		+	+	+	+	+	+	o	
Earth-fault protection	50N/51N			+							+		
Fuse-failure/VT supervision	60	+	+	+		+	+	+	+	+	+		+
Underfrequency protection	81L					+							
Undercurrent protection	37					+							
Frequency rate-of-change protection	81	+											
Unbalance current protection	51NB										+		
CONTROL AND SUPERVISION													
Tripping logic	94	+		o		+	+	+	+	+	+		
Trip circuit supervision	74TC	+		o		+	+	+	+	+	+		
Breaker failure protection	50BF	+	+	+		+	+	+	+	+	+	+	
Synchrocheck and synchronizing	25		+					+	+				
Autoreclosure	79						+		+				
Lockout	86	+	+	o		+	+	+	+	+	+		
Automatic load transfer								+	+		+	o	
Automatic load shedding	81L					+	+				+		+
Autoreclosure (by frequency)	79FR					+	+				+		+
Circuit breaker control / Supervision	52	+		o		+	+	+	+	+	+		
Automatic Voltage Control	90				+								
Circuit Breaker Condition Monitoring	-	+	+	+		+	+	+	+	+	+	+	+
MONITORING, MEASUREMENT AND METERING													
Three-phase Measurement	-	+	+	+	+	+	+	+	+	+	+	+	+
One-phase Measurement	-	+	+	+	+	+	+	+	+	+	+	+	+
Fault locator	21 FL						+						
RECORDING AND REPORTING													
Disturbance recorder	-	+	+	+	+	+	+	+	+	+	+	+	+
Event recorder	-	+	+	+	+	+	+	+	+	+	+	+	+
Self-test function	-	+	+	+	+	+	+	+	+	+	+	+	+

+ base functions
o optional functions



Scan QR code and install AR App (augmented reality application)
Simply turn your device into a AR viewer focusing the camera on the
marker and enjoy the functions of our IED





PROTECTION, MONITORING AND CONTROL

You can combine different IEDs in one cabinet so it will meet requirements of your facility in the most optimum way - save costs and acquire the functionality you need. Using the existing cabinet solutions you will save money for design works.



We develop tailor-made innovative solutions which will perfectly cover your requirements and support your ambitions in a reliable and profit-oriented manner. For that purpose, we rely on our engineering experts – and, convince with a technically sophisticated, customized solution

Our ability to provide customized solutions is your strength

CUSTOMIZED SOLUTIONS



EKRA217 in enhanced S36 enclosure that is ideal for retrofit SEPAM 2000 legacy relays. Our pin-to-pin retrofit solution shortens time for replacement to maximum fifteen minutes. Use our IED to decrease the cost of installation and minimize the time to update drawings after installation since no changes in wiring are required



EKRA is the first company providing **electronic ink display technology in relay protection IEDs**. The data are retained on the display even when all power sources are removed. This technology reduces power consumption thanks to consuming power only whenever the displayed image changes



Our **bushing monitoring system** increases transformer reliability by providing real-time insulation detection in bushings, so that corrective actions can be taken before any failure occurs in order to minimize maintenance costs and downtime. The system can be used as a standalone device, or in combination with relay protection equipment, integrating multiple measurement results into an overall picture



Apply our **disturbance and fault recorder** to collect, archive and manage all facility activity and disturbance information. Clearly organized documentation and focused analysis of power system processes and failures will definitely simplify the operator work thanks to a friendly-user design



Our **central failure alarm system** directs the attention of an operator towards the facility abnormal conditions that need timely assessment or timely corrective actions. Apply the alarm system to assist the operator in monitoring and controlling the facility equipment and processes within safe and normal operating conditions



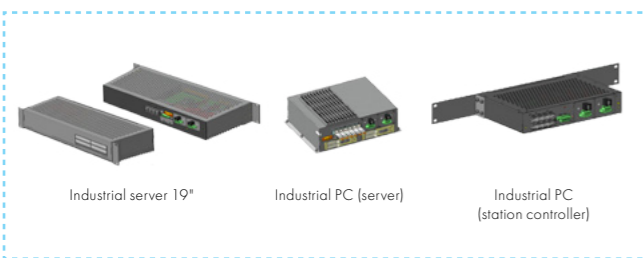
SUBSTATION AUTOMATION

EKRA designs, develops, and puts into operation power automation systems for real-time monitoring and control of primary and secondary equipment. We have experience providing various system sizes, ranging from simple standalone to complex networked systems according to the customer's needs and budget dictate.

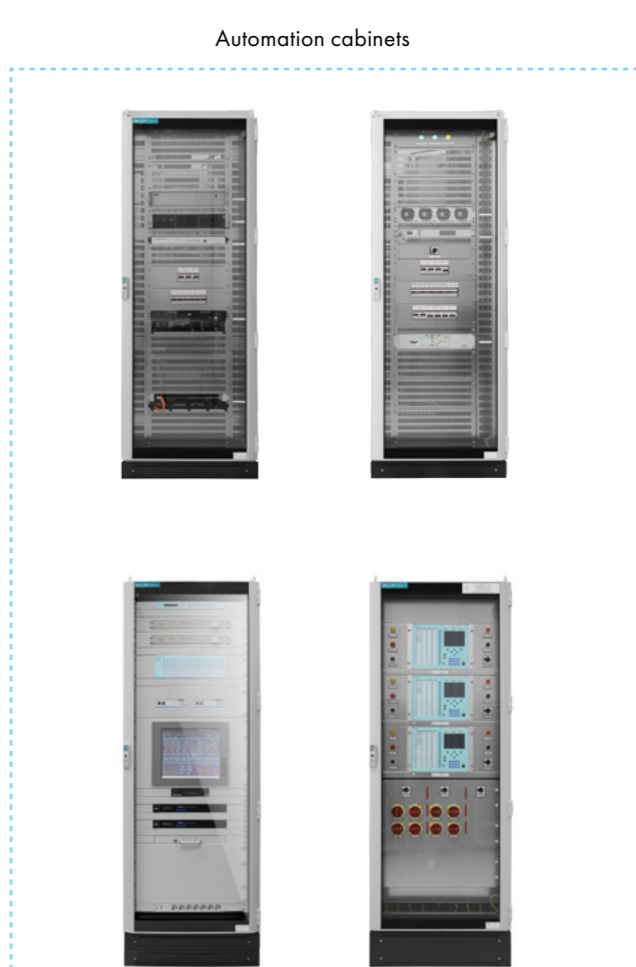
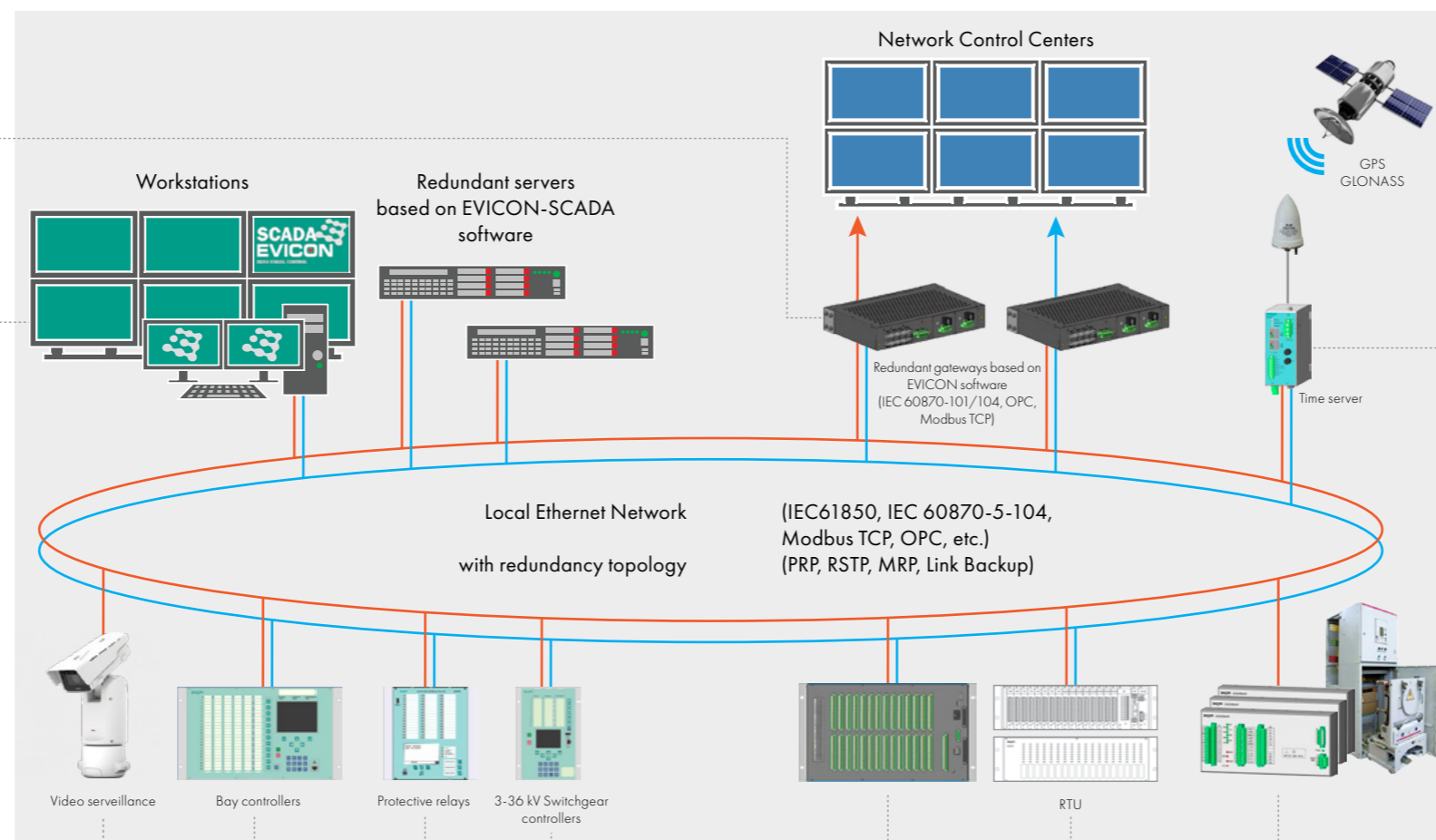
Our solutions

- solutions for substation automation SCADA and industrial power management
- relay protection monitoring system including software of own production to control IEDs
- distribution management system (DMS)

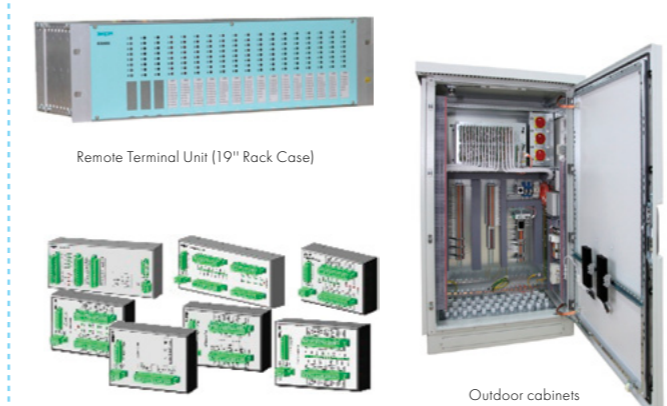
SCADA-level hardware produced by EKRA



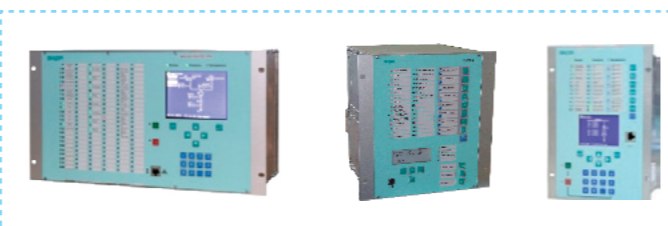
SCADA EVICON (EKRASCADA) Software



- the cameras are equipped with a variety of intelligent features and can move between pre-set positions and zoom in automatically in response to detected events
- use pan, tilt and zoom to provide both wide-area coverage and great detail
- high performing edge storage solution optimized for alarms video surveillance

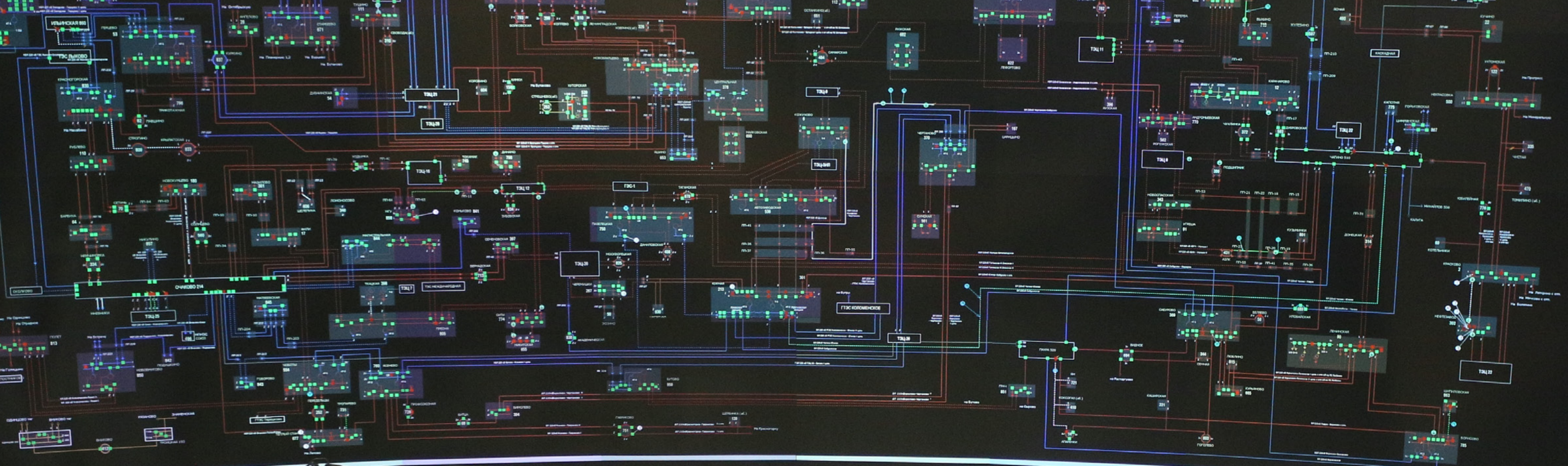


Distributed System for cubicles 6...35 kV



- extensive range of protection and control functionality
- ready-made standard configurations for fast and easy setup
- HMI for local control and monitoring of disconnectors and circuit breakers
- supports IEC 61850, Modbus, IEC 60870-5-101/104 and other communication protocols

- Analog and binary inputs/outputs
- RS-485 and Ethernet interfaces
- IEC 60870-5-101/104 Slave Protocols
- IEC 61850 and others
- Interlocking and additional logic
- HMI



DISTRIBUTION MANAGEMENT SYSTEM

Our distribution management system provides clear and consistent real-time, forecasted, and historical views of your distribution network. Common situational awareness provides high safety, enhanced security, efficient and reliable management of grid operations in the face of rapidly changing environment. Use our DMS to encompass a comprehensive and integrated set of powerful, electric and distribution system management solutions accessible through a common user interface.



DRIVE EQUIPMENT

Our drive solutions deliver high-performance, safe operations and energy savings for different industries no matter how strict are critical regulations, climatic categories, and business requirements. EKRA delivers complete drive systems that maximize production and minimize risk. Our enthusiastic teams, with specific drive system knowledge and industry expertise, help you create optimized systems to meet your goals. Our testing laboratory is assembled for full test of manufactured drive systems to perform load tests with adjustable load.



Control cabinet has been designed for system solutions in the fields of manufacturing and process automation. Apply our cabinet for automation of your pumps, fans, compressors and other drive components.



Our medium voltage drives are suitable for high power applications such as large pumps, fans and compressors in multiple segments. Industry-specific functions and unique features ensure reliable performance of your processes and systems, even in demanding environmental conditions.



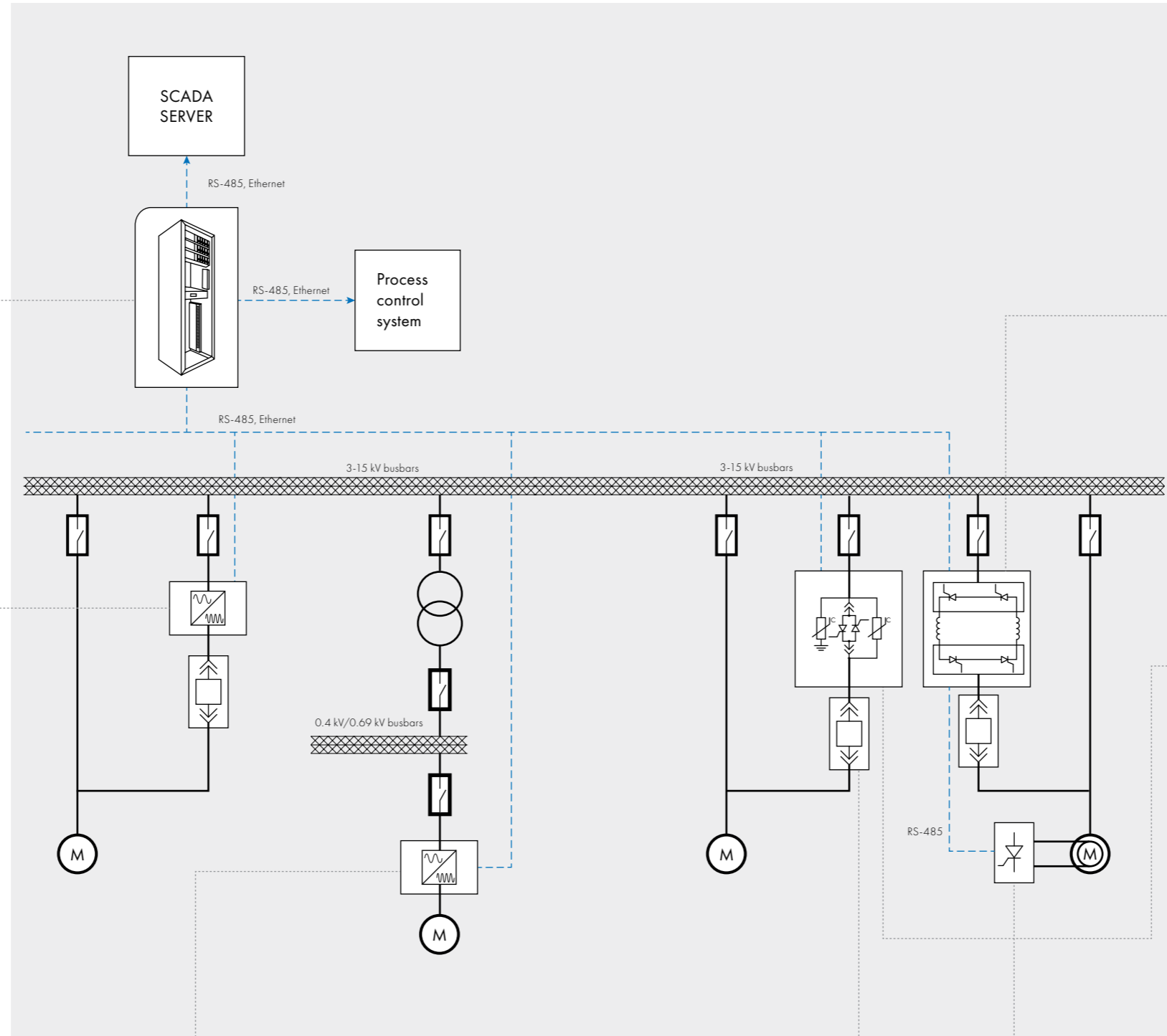
Type of converter: Cascade H-Bridge Multilevel Voltage Source Inverter
 Motor type: synchronous/induction
 Voltage class: 3-10 kV
 Power range: up to 12.5 MW



Type of converter: Voltage Source Inverter with Modular Multilevel Converter (MMC) technology
 Motor type: synchronous/induction
 Voltage class: 3-10 kV
 Power range: up to 2 MW



Type of converter: Current Source Inverter with Load Commutated inverter (LCI) technology
 Application: synchronous machines
 Voltage class: 3-15 kV
 Power range: up to 100 MW



Use our medium voltage soft starters to provide enhanced motor soft starting and stopping, limit the inrush current, and reduce the effects of water hammer in pumping systems. EKRA offers a variety of soft starter solutions to satisfy your most demanding applications.



Medium voltage soft starters
 Type of soft starter: Current Source Inverter with Load Commutated inverter (LCI) technology
 Voltage class: 3-15 kV
 Power range: up to 220 MW



Type of soft starter: thyristor voltage regulator
 Motor type: synchronous/ induction
 Voltage class: 3-15 kV
 Power range: up to 17 MW



Voltage class: 0.4-0.69 kV
 Power range: 100 kW and more

Apply our low voltage drive systems with a high level of flexibility, functionality and engineering comfort.



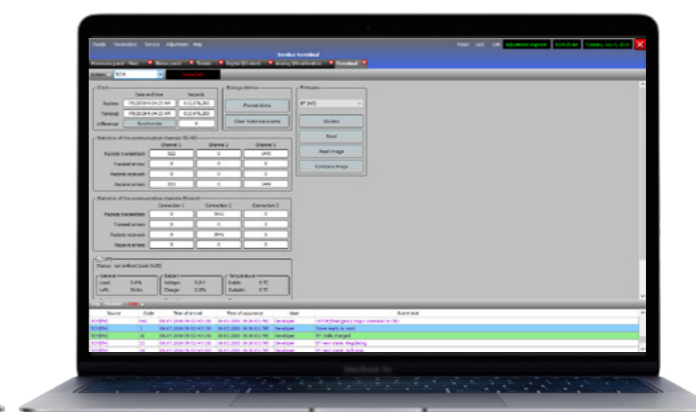
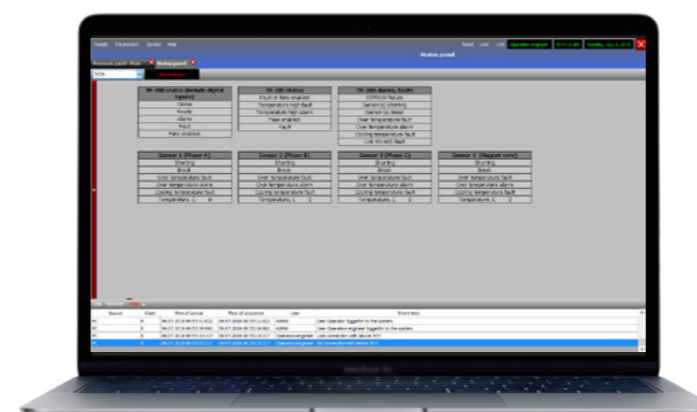
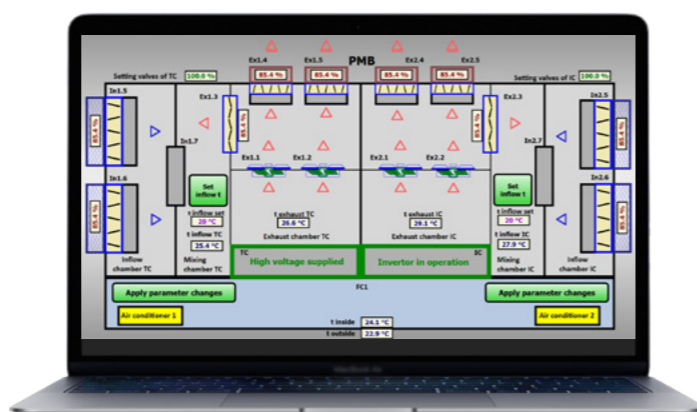
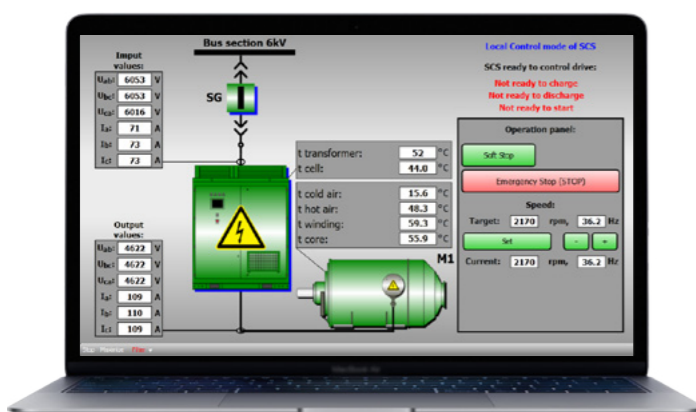
Use our factory-assembled metal-enclosed switchgear cubicle for indoor installation to connect a motor to a frequency converter or soft start system. Our switchgear cubicle is equipped with one or two withdrawable circuit-breakers.



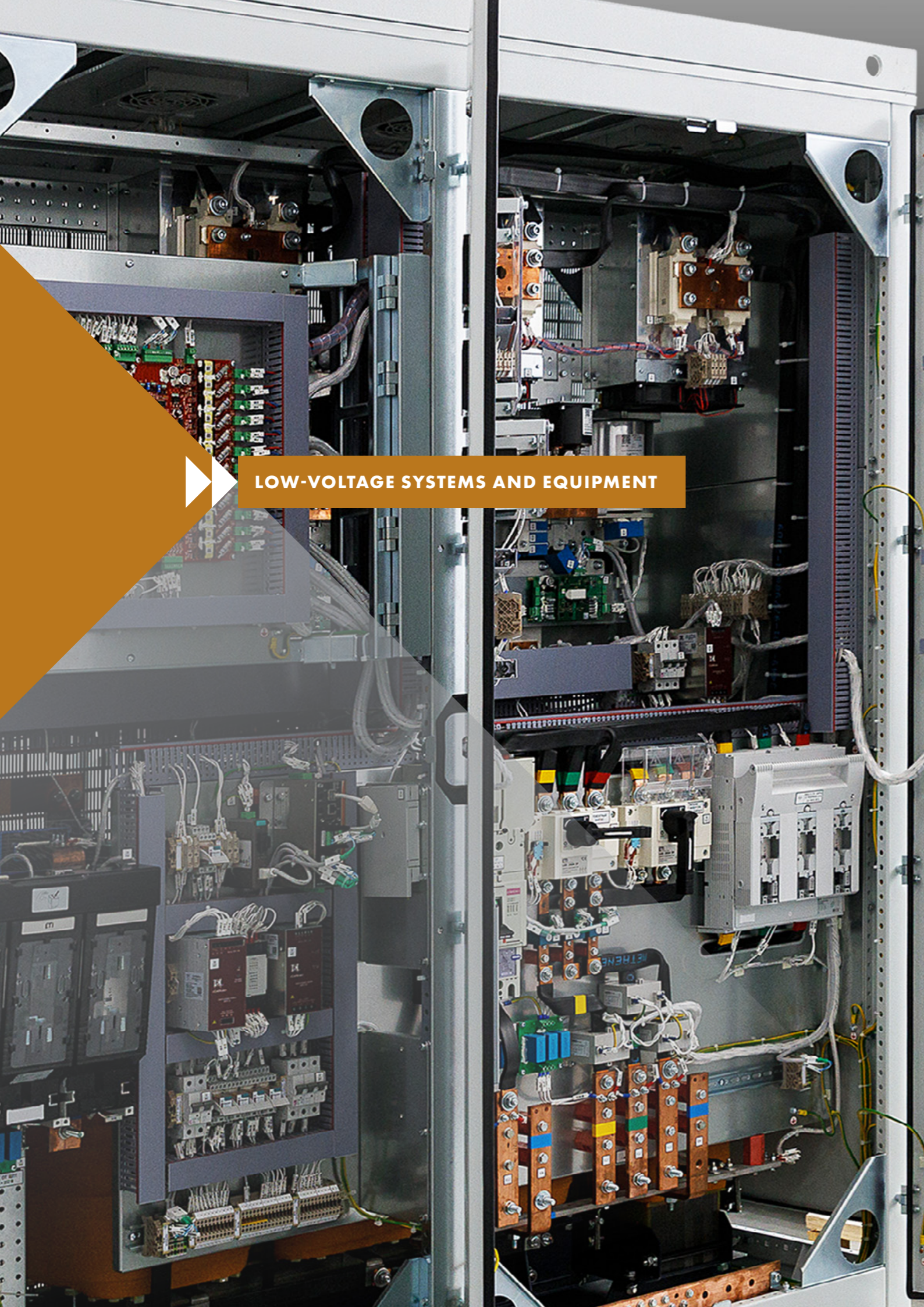
Our digital static thyristor excitation system is designed for up to 12.5 MW brush type synchronous motor applications and brings a new benchmark in flexibility, reliability and connectivity.



DRIVE EQUIPMENT



▶▶ You can simply boost the efficiency and get the most out of your drives thanks to our innovative automation concepts. EKRA drive equipment features built-in LCD display and flexible communications providing advanced performance, diagnostics and protection. Our drive automation system is the ideal solution for continuously running processes demanding high speed and torque precision. With our drive automation system, it is very easy to specify converter speeds, control the starting and stopping and adjust the parameters, which can be saved and stored to ensure reliable archiving.



LOW-VOLTAGE SYSTEMS AND EQUIPMENT

We are the innovative, reliable and friendly partner for low voltage equipment and systems, bringing electrical power to buildings and industry worldwide. The design of any new product starts with a key focus on customer needs. A comprehensive range of safe, reliable solutions for low-voltage electrical distribution applications makes us a trusted single-source provider.





EKRA insulation monitoring continuously monitors the insulation resistance of **DC network** including high-capacitance networks (200µF and more) and issues an alarm if the value falls below a response value. This makes the systems more reliable and prevents interruptions caused by severe secondary insulation faults. Using additional current sensors will help you to automatically detect a damaged feeder without a necessity to switch off the circuits. The system is able to detect not only asymmetrical insulation damage and its polarity, but also symmetrical insulation damage.



The **insulation monitoring relay** is intended to monitor **DC network** pole insulation value and signal of insulation resistance lowering below the set value. Our relays detect deteriorations of the insulation level at an early stage and in a reliable way.



Make your monitoring more secure and your maintenance smarter with our **insulation monitoring for AC networks**. EKRA's ground-fault detectors can provide early indication of both immediate and trending ground faults before leakage current may be present regarding continuously monitoring the system's insulation resistance.



EKRA-MIC is a measuring unit with special clamps. Use our **portable device** to promptly detect the bay with damaged insulation by measuring feeders one by one.



EKRA's **portable insulation monitoring kit for DC networks** is a valuable tool in the search for insulation faults and as it allows easy determination of the fault feeder. The carrying case provides convenient portability while protecting the device.

REFERENCE

2,150

substations
35-110-220 kV



18
nuclear power
plants

550

substations
330-750 kV



302
thermal power
plants

410

power stations,
including:



90
hydropower
plants
up to 6,400 MW

total spaces

54,800 sqm 1,365 employees

KEY EXPORT PROJECTS

Armenia

- Purak SS 35 kV
- Haghianak SS 220 kV
- Shaumyan-2 SS 220 kV
- Armenian Nuclear Power Plant
- Aterk SS 110 kV
- Agarak SS 110 kV

Afghanistan

- Naghlu Hydropower Plant

Bangladesh

- Siddhirganj Power Plant
- Ghorashal Power Plant

Republic of Belarus

- Belarusian Nuclear Power Plant

Georgia

- Avshniani SS 110 kV
- Bachebi SS 110 kV
- Navluchi-2 SS 110 kV

Iraq

- Yusufiyah Thermal Power Plant

Lebanon

- Supply of power equipment for Electricité du Liban (EDL)

Kazakhstan

- Ekibastuz State Regional Power Plant
- Zapadnaya SS 110 kV
- Ust Kamenogorsk Hydroelectric Power Plant
- Zhanazholsky Gas-turbine Thermal Power Plant
- Karaganda Thermal Power Plant-3
- Kostenko SS 35
- Novaya Dubovka SS 35kV
- Aksu Thermal Power Plant
- Jarykh SS 220kV
- Pavlodarsk Thermal Power Plant-3
- Novyj Gorod SS 110 kV
- Zhanazhol Gas-turbine Power Plant
- Shulbinsk Hydroelectric Power Plant
- Petropavlovsk Thermal Power Plant-2
- Bozaryk SS 220 kV
- Shiyeli SS 110 kV

Kyrgyzstan

- Kambaratinskaya 2 Hydroelectric Power Plant

Myanmar

- Main Stepdown SS 132 kV

Syria

- Alzakhera SS 66 kV

Tadzhikistan

- Sangtuda 1 Hydroelectric Power Plant
- Rogun SS 35 kV

Uzbekistan

- Sogdiana SS 500 kV
- Syrdaryinskaya Thermal power Plant
- Guzar SS 500 kV
- Karakul SS 220 kV
- Lochin SS 500 kV
- Novo-Angrenskaya Thermal Power Plant
- Surkhan SS 500 kV
- Uzbekistanskaya SS 500kV
- Talimarjon Thermal Power Plant
- Novo-Angrenskaya Thermal Power Plant
- Tashkent Thermal Power Plant
- Andizhan Hydropower Plant
- Tuyamuyunskaya Hydroelectric Power Plant
- Gissaraksaya Hydroelectric Power Plant
- Navoysk Thermal Power Plant

Ukraine

- Donbasskaya SS 750 kV
- Zaporozhskaya SS 750 kV
- Kiev Thermal Power Plant-6
- Zaporozhskaya Nuclear Power Plant
- Dneprovskaya SS 750 kV

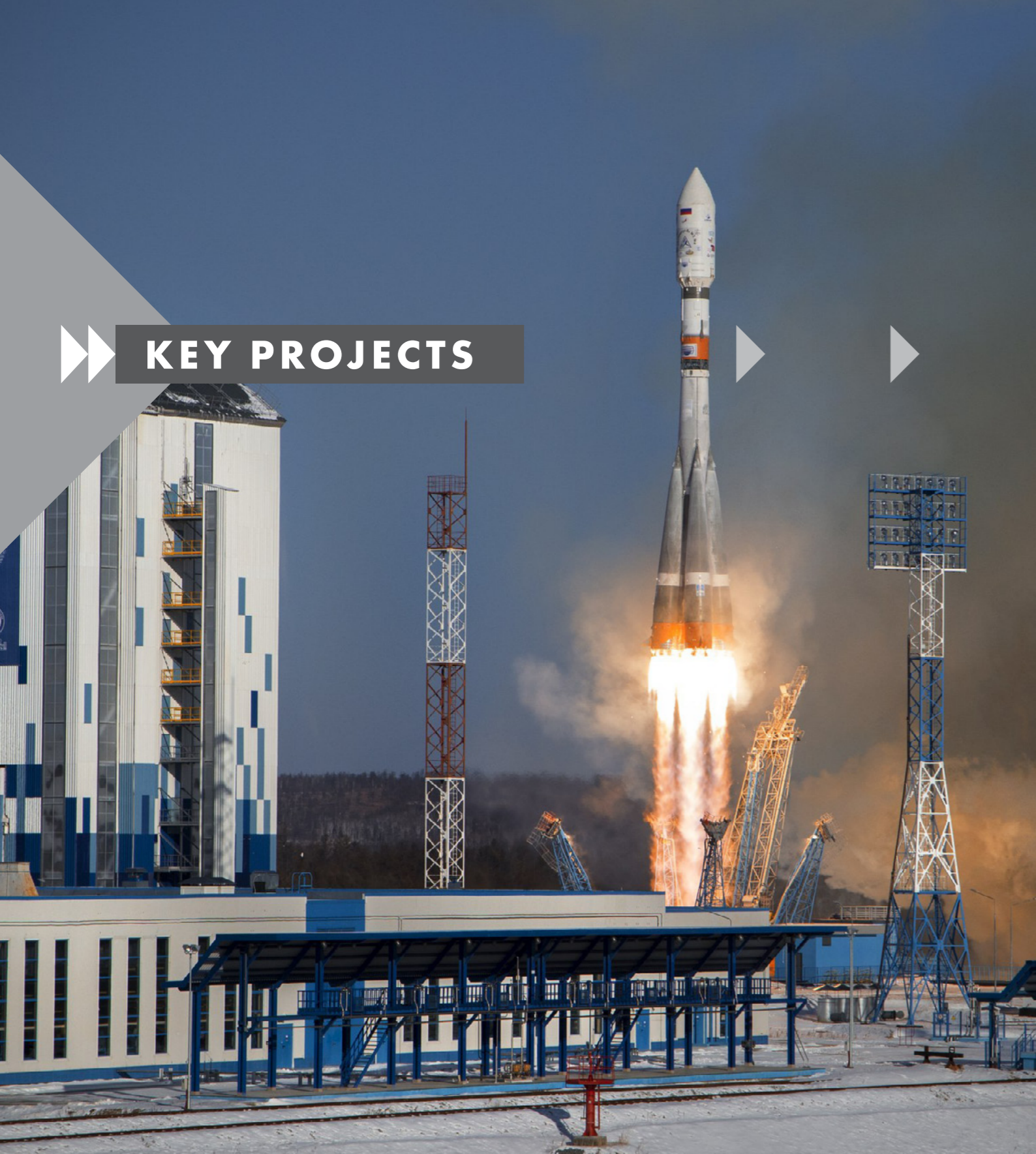
Croatia

- Sisak-S Thermal Power Plant

Vietnam

- Sesan Hydropower plant
- Uong Bi thermal power

▶▶ **KEY PROJECTS**



EKRA ensures a reliable power supply of Russia's newest space launch facility, the Vostochny Cosmodrome



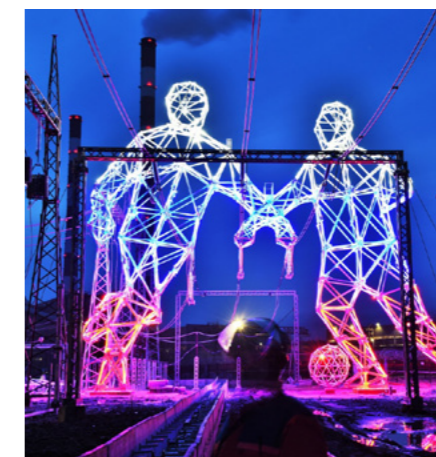
Advanced protection systems from EKRA protect 18 nuclear power plants worldwide from potential disruption



Our company has proven its worth in drive systems, where it is the indisputable industry standard. Through very competitive tendering - EKRA was again chosen as the preferred supplier for drive system between leading Russian oil & gas companies.



EKRA introduces the first fully digital substation Medvedevskaya in Russia



Our protection and automation solutions to strengthen power infrastructure at 2018 FIFA World Cup facilities



Powering the XXII Olympic Winter Games in Sochi 2014, the International Olympic Committee turns to EKRA to keep the games running for global audience

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