

# KONCAR

ELECTRONICS AND  
INFORMATICS

## DC power supply system KONIS-C

**KONIS-C is a robust and reliable DC power supply system designed to maintain continuous power for the most critical and essential equipment necessary for the operation of energy infrastructure, including power plants, transmission and distribution substations, as well as oil and gas production plants.**

### KEY FEATURES:

- High power density rectifier modules.
- Maximum power supply reliability.
- Redundant parallel operation of rectifiers.
- Scalability of the system – supports up to 8 rectifier modules.
- Selective disconnection of faulty rectifier module without system disruption.
- Configurable power supply – adaptable to facility's specific requirements and applications.
- Parallel operation of two systems for continuous delivery of electrical power from two power sources to a connected load.
- Integrated insulation monitoring and ground fault detection in ungrounded DC systems.
- Comprehensive protection of the power distribution – selectivity ensures safety across all outputs and operating conditions by clearing the fault without power disruption.
- User-friendly local and remote monitoring & control – intuitive interface for real-time status tracking, measurement review, and event logging.
- Direct access to all circuit breakers.
- Natural convection cooling – no fans required.
- Modular design facilitates easy maintenance and servicing.

Ensuring both efficiency and reliability, the system autonomously manages battery charging and maintenance while consistently powering critical loads.

Rectifier modules operate in a redundant parallel configuration, ensuring balanced load distribution. In the event of a module failure, the affected unit is selectively disconnected, while the remaining modules continue supplying power to both the load and the batteries. This redundancy principle maximizes the system's reliability. The parallel rectifier architecture allows for scalable power output, while the modular design facilitates rapid and efficient module replacement - minimizing downtime and simplifying maintenance. Engineered for durability, the rectifiers utilize natural convection cooling, eliminating the need for fans and further enhancing system reliability and availability.

*KONIS-C DC  
Power supply  
system – 220 V,  
80 A*



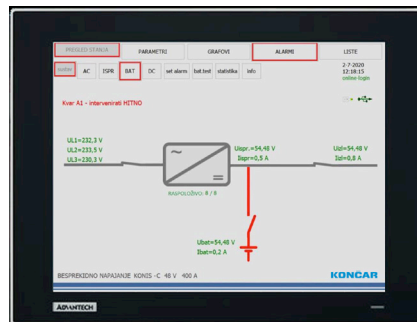
*High-frequency CFS  
rectifiers – 110 V, 20 A*

As a critical element of the system, the battery bank is kept fully charged at optimal voltage level. The system provides precise regulation of the float voltage to ensure required battery autonomy at a specified load level. In case of a mains power failure, the battery seamlessly takes over, ensuring continuous power to connected loads. The possibility of installing inverter modules simultaneously provides power for AC loads.

# KONIS-C DC power supply system

## The KONLOG microprocessor-based control unit

continuously monitors and manages the power supply system in real time, offering full parameter customization, remote diagnostics, and status alerts. Its robust communication interface supports integration with station computers, dispatch centers, and specialized service centers, minimizing maintenance costs and enhancing overall system resilience.



KONLOG  
control unit  
user interface

TECHNICAL SPECIFICATIONS			
	KONIS-C 48	KONIS-C 110	KONIS-C 220
<b>Input</b>			
<b>Voltage</b>	3x400 VAC + 10 % , - 15 %		
<b>Nominal frequency</b>	50 Hz		
<b>Frequency tolerance</b>	± 5 %		
<b>Power factor at nominal load</b>	≥ 0.99		
<b>Output</b>			
<b>Nominal voltage</b>	48 V	110 V	220 V
<b>Static voltage accuracy</b>	± 1 %	± 1 %	± 1 %
<b>Dynamic voltage accuracy</b>	± 1 %	± 1 %	± 1 %
<b>Voltage adjustment range</b>	41 to 57 V	108 to 135 V	216 to 270 V
<b>Voltage ripple</b>	< 100 mV RMS	< 150 mV RMS	< 220 mV RMS
<b>Regulation characteristic</b>	IU		
<b>Voltage compensation:</b>	Temperature-based battery voltage adjustment		
<b>Nominal current (dependent on number of rectifiers)</b>	n x 50 A	n x 20 A	n x 10 A
<b>Current limit, adjustment range</b>	from 50 to 110%	from 50 to 110%	from 50 to 110%
<b>Power (dependent on number of rectifiers)</b>	n x 2500 W	n x 2500 W	n x 2500 W
<b>Efficiency</b>	≥ 0.95	≥ 0.94	≥ 0.95
<b>Battery specifications</b>			
<b>Type</b>	Sealed, maintenance-free lead-acid (open lead-acid and NiCd options available)		
<b>Nominal block voltage (for lead-acid batteries)</b>	2, 4, 6 ili 12 V		
<b>Charging/float voltage (at 20°C)</b>	2,28 V per cell (configurable based on battery type)		
<b>Design life</b>	≥ 12 years		
<b>Battery protection:</b>	Short-circuit, deep discharge, and high charging voltage		
<b>General data</b>			
<b>Remote communication</b>	MODBUS protocol via RS485 or optical interface Optional: IEC 60870-5-104 protocol via Ethernet interface		
<b>Cooling method</b>	Natural convection (fanless)		
<b>Operating temperature</b>	0°C to +40°C		
<b>Storage temperature</b>	-20°C to +70°C		
<b>Relative humidity (non-condensing)</b>	Up to 90%		
<b>Compliance with standards</b>	IEC 60950, IEC 60529, IEC 60478, IEC 60439-1, IEC 60146, EN 55022		
<b>Ingress protection</b>	IP 21		
<b>Color</b>	Light gray, RAL 7035		
<b>Mounting</b>	Indoor installation		
<b>Touch voltage protection</b>	TN and IT network compatibility		
<b>Dimensions: Width</b>	Dependent on system configuration		
<b>Depth</b>	600 mm		
<b>Height</b>	2100 mm		