

DC power supply system KONIS-F

Is a robust DC power supply system designed to maintain continuous power for critical energy infrastructure, including hydro and thermal power plants, as well as transmission and distribution substations.

KEY FEATURES:

- Maximum power supply reliability
- Redundant parallel rectifier operation
- Modular design – facilitates easy maintenance and servicing. Insulation monitoring and ground fault detection. Temperature-controlled forced-air cooling
- Scalability – supports up to 8 rectifier modules. Automatic fault isolation – selective disconnection of faulty rectifiers without system disruption
- User-friendly monitoring & control – intuitive interface for real-time status tracking, measurement review, and event logging
- Comprehensive protection selectivity – ensuring safety across all outputs and operating conditions

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

The 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 loads and batteries. This redundancy principle maximizes system 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.

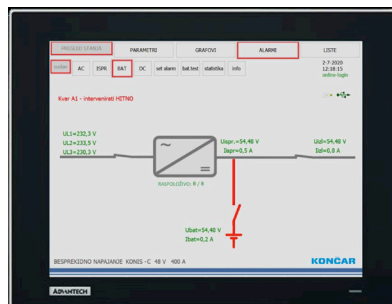


*KONIS-F DC Power supply
system – 48 V*

As a critical element of uninterrupted power supply, the battery bank is maintained at optimal charge by the KONIS-F system, ensuring precise DC voltage regulation.

KONIS-F 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 teams, minimizing maintenance costs and enhancing overall system resilience.



KONLOG
control unit
user interface

TECHNICAL SPECIFICATIONS				
	KONIS-F 24	KONIS-F 48	KONIS-F 110	KONIS-F 220
Input				
Voltage	400 VAC (+10%, -15%)			
Nominal frequency	50/60 Hz			
Frequency tolerance	± 6%			
Power factor at nominal load	≥ 0.99			
Output				
Nominal voltage	24 V	48 V	110 V	220 V
Static voltage accuracy	± 1%	± 1%	± 1%	± 1%
Dynamic voltage accuracy	< 3%	< 3%	< 3%	< 3%
Voltage adjustment range	21 to 28 V	43 to 57 V	90 do 137 V	200 do 264 V
Voltage ripple	< 250 mVpp	< 150 mVpp	< 500 mVpp	< 1000 mVpp
Regulation characteristic	IU			
Voltage compensation:	Temperature-based battery voltage adjustment			
Nominal current (dependent on no. of rectifiers)	n x 75 A	n x 60 A	n x 20 A	n x 10 A
Current limit, adjustment range	from 50 to 110%	from 50 to 110%	from 50 to 110%	from 50 to 110%
Power (dependent on no. of rectifiers)	n x 1800 W	n x 3000 W	n x 3000 W	n x 2640 W
Efficiency	≥ 0.95	≥ 0.96	≥ 0.94	≥ 0.95
Battery specifications				
Type	Sealed, maintenance-free lead-acid (open lead-acid and NiCd options available)			
Nominal block voltage (for lead-acid batteries)	2, 4, 6 or 12 V			
Charging/maintenance voltage (at 20°C)	2.28 V per cell (configurable based on battery type)			
Service life	≥ 12 years			
Battery protection:	Short-circuit, deep discharge, and overvoltage protection			
General data				
Remote communication	MODBUS protocol via RS485 or optical interface			
Cooling method	Optional: IEC 60870-5-104 protocol via Ethernet			
Operating temperature	Natural convection cooling			
Storage temperature	0°C to +40°C			
Humidity (non-condensing)	-20°C to +70°C			
Compliance with international standards	up to 90%			
Mechanical protection rating	IEC 60950, IEC 60529, IEC 60478, IEC 60439-1, IEC 60146, EN 55022			
Colour	IP 20			
Touch voltage protection	Light gray (RAL 7035)			
Dimensions: Width	Dependent on system configuration			
Depth	600 mm			
Height	2100 mm			