KRAFT POWERCON

S 107.051 GB

FlexKraft Water-Cooled Rectifiers

Single & Dual Outputs with optional Polarity Reversal

The sealed cabinet of the water-cooled FlexKraft is designed for industrial applications in demanding environments.

SEALED WATER-COOLED RECTIFIERS
All power modules are built-in in a sealed cabinet. The IP44 protection class allows FlexKraft to be used under very demanding conditions.

MODULAR DESIGN
Any combination of power modules up to 60 VDC or 24 000A can be supplied.

SERVICEABLE
Easy access for module repair or replacement.

HIGH POWER FACTOR
Low reactive power consumption throughout the entire range.

RIPPLE
Low ripple at ALL output currents.

FLEXIBLE PLACEMENT
There is no longer any need to worry about the air flow since the system is completely closed. Save power and energy by placing the FlexKraft close to the process.

INDIVIDUALLY CONTROLLED DUAL OUTPUTS
FlexKraft is also available with dual outputs up to 30 VDC or 2 x 3000A. The two outputs are controlled 0-100% totally individually and independently.

CE ISO 9001

The FlexKraft rectifiers are designed to give the best electrical performance in demanding industrial environments. The design is based on primary switching technology.

The rectifiers consist of 1–10 power modules. Together with a control module, they form a complete power supply.

POWER SUPPLY CONTROLS

Standard control interfaces:
Digital Display and Keypad integrated into unit
Modbus RTU/RS-485 computer interface
Profibus DP/RS-485 computer interface

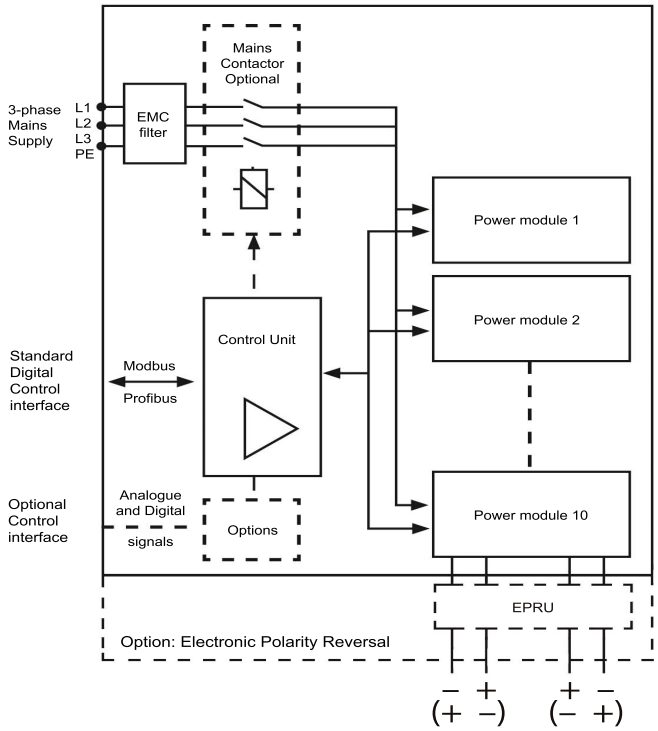
CONTROL PARAMETERS

Setting:	Outputs:
Set current	Actual current
Set voltage	Actual voltage
On / Off	On signal
Start / Stop	Run signal
Stand by / Run	Actual Amp hours
Amp hours	Actual run time
Run time	Alarm (general alarm)
Clear counters	Alarm status (cause of alarm)
	End of process

TECHNICAL DATA

Supply voltage:	380 - 480 VAC ± 10%, 50 - 60 Hz, 3 Phase 220 VAC ± 10%, 50 - 60 Hz, 3 Phase for maximum 2x7 VDC / 300A per module
EMC conformity:	According to EN 61000-6-4, Emissions, and EN 61000-6-2, Immunity
LVD conformity:	According to EN 50178
Protection class:	IP 44
Power factor:	≥ 0.93 @ rated load
Efficiency:	Typically 0.9 @ rated output
Ambient temp.:	Max. 50°C
Cooling:	Water cooling: Water inlet temperature: 20 - 35°C but not below condensation point Temperature rise: 10°C Water pressure: 1 - 6 bar Pressure drop: 1 bar
Control precision:	Voltage/current < ± 1%
DC ripple:	< 2% of rated output current at constant current mode in the entire range of regulation
Regulation range:	Stepless at constant voltage or current 0–100%
Duty ratio:	Designed for continuous operation at rated load up to 1000 m altitude
Protection:	Over-current, Over-voltage, Overtemperature, Short circuit, Open circuit, Module failure

BLOCK SCHEMATIC DIAGRAM



OPTIONS

- Remote control box 'basic version' with analogue or digital display, potentiometers etc.
- RS-232C interface for control of one power supply.
- Analogue/Digital interface. Four analogue inputs and four analogue outputs 0-10VDC and 4 digital in and 4 digital out 24VDC.
- Standard configuration: Iset, Uset, Iact and Uact: 0–10 VDC. On/Off, Block/Run, Power On and Alarm as digital signals: 24 VDC.
- Analogue interface with four inputs and four outputs
- Galvanically isolated. Control and status signals 0/4–20 mA. Standard configuration: Iset, Uset, Iact and Uact: 4–20 mA
- Digital interface with four inputs and four outputs. Control signals 24 VDC. Status signals via voltage free relay contacts; contact data 24 VDC or 24 VAC. Standard configuration: On/Off, Block/Run, Power On and Alarm.
- Raise / Lower function.
- External reference shunt, 60 mV.
- Electrically controlled AC breaker.
- Polarity Reversal.

OUTPUT RANGES

DC output voltage	Number of power modules									
	1	2	3	4	5	6	7	8	9	10
	Output Current (A)									
0–12 V	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
0–12 V Dual	2x300	2x600	2x900	2x1200	2x1500	2x1800	2x2100	2x2400	2x2700	2x3000
0–15 V	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
0–15 V Dual	2x250	2x500	2x750	2x1000	2x1250	2x1500	2x1750	2x2000	2x2250	2x2500
0–24 V	300	600	900	1200	1500	1800	2100	2400	2700	3000
0–30 V	250	500	750	1000	1250	1500	1750	2000	2250	2500
0–48 V	–	300	–	600	–	900	–	1200	–	1500
0–60 V	–	250	–	500	–	750	–	1000	–	1250
Height* (mm)	450	590	730	870	1010	1150	1290	1570	1710	1850
Weight* (kg)	49	76	102	110	160	188	220	251	286	315

* Footprint of cabinet: 500 x 610 mm, including busbars on the rear side, and excluding options (500 x 910 mm D with polarity reversal)

Volume Flow Rate, liters per minute >>

l/min	3,0 (Δt=5°C)	3,0	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15

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