



FlexKraft Water-Cooled DC Power Supplies

Single & Dual Outputs with Optional Polarity Reversal

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

SEALED WATER-COOLED POWER SUPPLIES

All power modules are built-in in a sealed cabinet. The IP43 protection class allows for 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.

RIPPLE

Low ripple at ALL output currents.

FLEXIBLE PLACEMENT

Completely protected and safe guarded from extreme environments, the FlexKraft system can be placed close to the process, saving both power and energy.

INDIVIDUALLY CONTROLLED DUAL OUTPUTS

FlexKraft is also available with dual outputs up to 15 VDC 2 x 3,000A. The two outputs are controlled 0-100% completely individually and independently.

The FlexKraft power supplies are designed to give the best electrical performance in demanding industrial environments. The design is based on switch mode technology.

A complete power supply unit consists of 1-10 power modules and a control module.

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

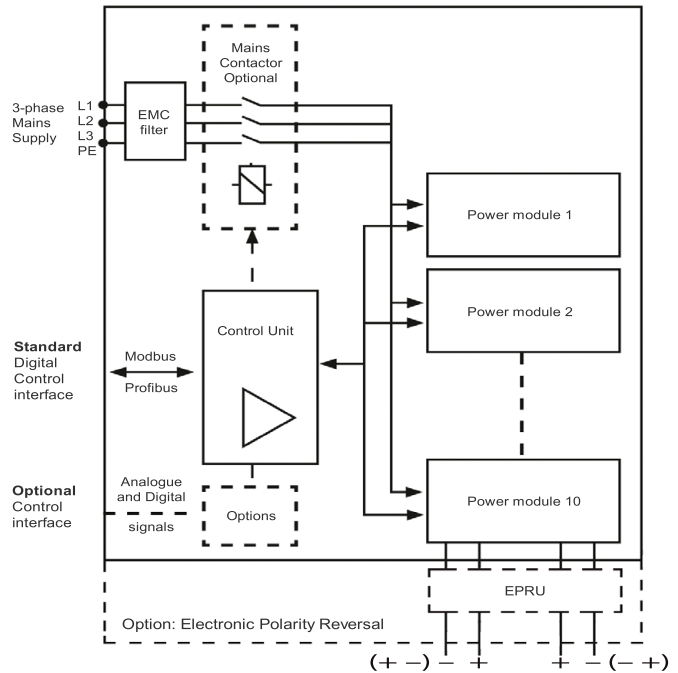
CONTROL PARAMETERS

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:	480 VAC ± 10%, 60 Hz, 3 Phase
EMC conformity:	According to IEC 61000-6-4, Emissions, and IEC 61000-6-2, Immunity
LVD conformity:	According to IEC 50178
Protection class:	IP 43
Power factor:	≥ 0.93 @ rated load
Efficiency:	Typical 0.88-0.90 @ rated output
Ambient temp.:	Max. 122°F
Cooling:	Water cooling: Water inlet temperature: not below actual dew point, but max 95°F Temperature rise: 18°F, Water pressure: 2-10 lb/ft ²
Control precision:	Voltage/current < ± 1%
DC ripple:	< 1% 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 3300 ft 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. Two control, and two status signals 0-10 VDC and two control and two status signals 24 VDC.
- 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.

STANDARD 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* (inches)	18	23	29	34	40	45	51	62	67	73
Weight* (lbs)	108	168	224	243	352	414	484	554	630	695

* Footprint of cabinet: 20" W x 24" D, including busbars on the rear side, and excluding options (20" W x 36" D with polarity reversal)

Volume Flow Rate, gallons per minute >>

gallons/min	0.8 (Δt=9°F)	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0
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