XFR 1.2 kW

XFR 1.2 kW Programmable DC Power Supply with Zero Voltage "Soft Switching"

Provides 1.2 kW of DC Power for OEM Applications

The Xantrex XFR 1.2 kW programmable DC power supply provides clean, reliable power for research, product development, production test applications, and OEM applications where high power and a wide adjustment of output voltage or current are required in a 19-inch rack package. The XFR 1.2 kW is packaged in a 1.75-inch (1 U) high chassis and offers twenty percent more power than any competitive product in a similar package.

The supplies have excellent thermal management allowing for units to be stacked in rack mounts without any ventilation space required between each unit. They also offer high reliability with zero voltage, or "soft switching", which virtually eliminates switching transients for high efficiency, decreased heat generation, and reduced stress on the switching transistors.

Product Features

- Zero voltage "Soft Switching"
- Simultaneous front panel display of output voltage and current
- Constant voltage or constant current operation
- Remote sense with 5 V line loss compensation
- LabVIEW® and LabWindows® drivers

Protection Features

- Over voltage protection
- Over temperature protection

Options

- Isolated analog control (ISOL)
- RS-232 interface card
- GPIB interface card
- GPIB-multichannel

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Electrical Specifications [1]

Models	6-200	7.5-140	12-100	20-60	35-35	40-30	60-20	100-12	150-8	300-4	600-2
Output ratings											
Output Voltage	0-6 V	0-7.5 V	0-12 V	0-20 V	0-35 V	0-40 V	0-60 V	0-100 V	0-150 V	0-300 V	0-600 V
Output Current	0-200 A [9]	0-140 A	0-100 A	0-60 A	0-35 A	0-30 A	0-20 A	0-12 A	0-8 A	0-4 A	0-2 A
Output Power	1200 W	1050 W	1200 W	1200 W	1225 W	1200 W	1200 W	1200 W	1200 W	1200 W	1200 W
Line regulation [2]											
Voltage (0.01% of Vmax + 2 mV)	2.6 mV	2.75 mV	3.2 mV	4 mV	5.5 mV	6 mV	8 mV	12 mV	17 mV	32 mV	62 mV
Current (0.01% of Imax + 2 mA)	22 mA	16 mA	12 mA	8 mA	5.5 mA	5 mA	4 mA	3.2 mA	2.8 mA	2.4 mA	2.2 mA
Load regulation [3]											
Voltage (0.02% of Vmax +5 mV)	6.2 mV	6.5 mV	7.4 mV	9 mV	12 mV	13 mV	17 mV	27 mV	35 mV	65 mV	125 mV
Current (0.02% of Imax +5 mA)	45 mA	33 mA	25 mA	17 mA	12 mA	11 mA	9 mA	7.4 mA	6.6 mA	5.8 mA	5.4 mA
Meter accuracy											
Voltage (0.5% of Vmax + 1 count).	0.04 V	0.05 V	0.07 V	0.2 V	0.3 V	0.3 V	0.4 V	0.6 V	0.9 V	3 V	4 V
Current (0.5% of Imax + 1 count)	2 A	0.8 A	0.6 A	0.4 A	0.3 A	0.3 A	0.2 A	0.07 A	0.05 A	0.03 A	0.02 A
Output noise and ripple											
Voltage rms	10 mV	5 mV	5 mV	5 mV	5 mV	5 mV	5 mV	5 mV	7 mV	10 mV	25 mV
Voltage p-p (0-20 mHz)	75 mV	40 mV	40 mV	60 mV	60 mV	60 mV	60 mV	60 mV	60 mV	80 mV	140 mV
Current rms	750 mA	175 mA	100 mA	85 mA	25 mA	25 mA	10 mA	5 mA	3 mA	2 mA	1 mA
Drift (8 hours) [4]											
Voltage (0.05% of Vmax)	3 mV	3.8 mV	6 mV	10 mV	17.5 mV	20 mV	30 mV	50 mV	75 mV	150 mV	300 mV
Current (0.05% of Imax)	100 mA	30 mA	50 mA	30 mA	17.5 mA	15 mA	16 mA	6 mA	4 mA	2 mA	1 mA
Temperature coefficient [5]											
Voltage (0.02% of Vmax/°C)	1.2 mV	1.5 mV	2.4 mV	4 mV	7 mV	8 mV	12 mV	20 mV	30 mV	60 mV	120 mV
Current (0.03% of Imax/°C)	60 mA	42 mA	30 mA	18 mA	10.5 mA	9 mA	6 mA	3.6 mA	2.4 mA	1.2 mA	0.6 mA
Program slew rate [6]											
Rise time	100 ms	100 ms	100 ms	100 ms	100 ms	100 ms	170 ms	170 ms	170 ms	170 ms	170 ms
Fall Time	100 ms	100 ms	100 ms	100 ms	100 ms	100 ms	170 ms	170 ms	170 ms	170 ms	170 ms
OVP adjustment range (5% to 110% of Vmax)	0.3-6.6 V	0.375-8.25 V	0.6-13.2 V	1-22 V	1.75-38.5 V	2-44 V	3-66 V	5-110 V	7.5-165 V	15-330 V	30-660 V
Efficiency:[7]	75%	80%	82%	84%	84%	84%	84%	84%	87%	86%	85%

1 Specifications indicate typical performance at 25° C ±5°C, nominal line input of 120 VAC.
2 For input voltage variation over the AC input voltage range, with constant rated load.
3 For 0-100% load variation, with constant nominal line voltage.
4 Measured at full rated output with a resistive load.
5 Maximum drift over 8 hours with constant line, load, and temperature, after 30-minute warm-up.
6 Change in output per °C change in ambient temperature, with constant line and load.
7 Measured with stepped 0-10 V analog programming source and a resistive load.
8 Typical efficiency at 100 VAC input and rated output power.
9 Derate output current on 6 V model by 1.5 A per °C for operating temperatures 30-50°C.

General Specifications

Operational AC input voltage	190-264 VAC, 1-phase (22.6 A at 208 VAC; 20.5 A at 230 VAC typical), 47-63 Hz
Switching frequency	Nominal 78 kHz (156 kHz output ripple)
Remote analog programming	Voltage and current programming inputs: 0-5 k, 0-10 k (2%) resistances; 0-5 V, 0-10 V (1%) voltage sources (10 V default)
Remote analog monitoring	Voltage and current monitor outputs 0-5 V, 0-10 V (default) ranges for 0-100% of output (1%)
Dimensions (HxWxD)	1.7 x 19.0 x 20.0" (43.2 x 429.4 x 508.1 mm)
Weight	18 lb (8.2 kg)
Warranty	Five years
Regulatory approvals	CE, CSA, UL

Note: Specifications are subject to change without notice.