

PX SERIES

DC POWER SUPPLIES



- 10 KW
- SCR BASED
- PROGRAMMABLE

MAGNA-POWER
ELECTRONICS, INC.

PX SERIES

10 KW DC POWER SUPPLIES

FAST DELIVERY
Stock to 4 Weeks

FEATURES

- 15 Models: 16 to 800 Vdc, 12 to 600 Adc
- Series and parallel master/slave operation
- High dielectric withstand: 2500 Vac
- Optional EMI suppression meets VDE 871A
- Digital control lines optically isolated
- Exclusive control loop diagnostics
- Enhanced transient response with electronic damping circuit
- Benchtop or 19" rack mountable
- Power factor corrected for low AC input current
- OVP shutdown standard, SCR crowbar optional
- Automatic V/I crossover
- Digital meters standard
- Optional IEEE488/RS232 programming
- Air exhaust in rear of cabinet

MODELS AND RATINGS

MODEL	VOLTS Vdc	AMPS Adc	RIPPLE mVrms
PX16-600*	0-16	0-600	50
PX20-500	0-20	0-500	45
PX32-300*	0-32	0-300	30
PX40-250	0-40	0-250	35
PX50-200	0-50	0-200	40
PX80-125*	0-80	0-125	50
PX100-100	0-100	0-100	55
PX125-80*	0-125	0-80	60
PX160-62	0-160	0-62	70
PX200-50	0-200	0-50	80
PX250-40*	0-250	0-40	90
PX375-27	0-375	0-27	100
PX500-20*	0-500	0-20	130
PX625-16	0-625	0-16	150
PX800-12	0-800	0-12	175

SPECIFICATIONS:

Input voltage: 208/240 Vac, 50-60 Hz, 3-phase; 380/415 Vac, 50-60 Hz, 3-phase; 440/480 Vac, 50-60 Hz, 3-phase

Regulation line and load combined: 0.10%

Stability: 0.10% for 8 hours after 30 minute warm up

Transient response: 75 ms to recover within 2% of regulated output with 50% to 100% or 100% to 50% load change; 75 ms to recover within 10% of regulated output with 0% to 50% or 50% to 0% load change with Electronic Damping Circuit

Ambient Temperature: 0 to 50°C

Programming resistors: 1K full scale for output voltage, output current, and over voltage shutdown

Temperature coefficient: 0.04%/°C of maximum output current

Size: 12¼" H x 19" W x 24" D

Weight: 260 lbs



APPLICATIONS

- Aging racks
- Battery charging
- Capacitor forming
- Cryogenic magnets
- CW lasers
- DC motors and relays
- Electroplating
- General electronics

OPTIONS

- SCR Crowbar
- EMI Filter
- Electronic Damping Circuit
- 440/480 Vac input
- Custom output voltage
- IEEE488/RS232 Interface
- Other options: consult factory

NOTES:

1. * indicate quick ship models.
2. Specifications subject to change without notice.



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81 Fulton Street, Boonton, NJ 07005
 (973) 263-0017 FAX: (973) 263-1928
 E-mail: sales@magna-power.com
<http://www.magna-power.com>

PX SERIES

SCR, DC POWER SUPPLIES

ROBUST, RELIABLE, AND PACKED WITH FEATURES

Magna-Power Electronics' SCR power supplies are the most advanced products in their class. Designed for simplicity and functionality, the **PX SERIES** supplies are suited to the most demanding applications.

PX SERIES power supplies are fully programmable via resistance, voltage, current, or optional IEEE-488/RS232. While other supplies can remotely control only output voltage and current, **PX SERIES** units also allow programming of over voltage protection. Program lines are constantly monitored for range of operation. If a line should open or if a programmable input is set beyond that anticipated, the unit safely shuts down protecting the load.

Differential feedback amplifiers allow remote load sensing at any distance from the power supply. Additional differential amplifiers are provided for master slave series or parallel operation.

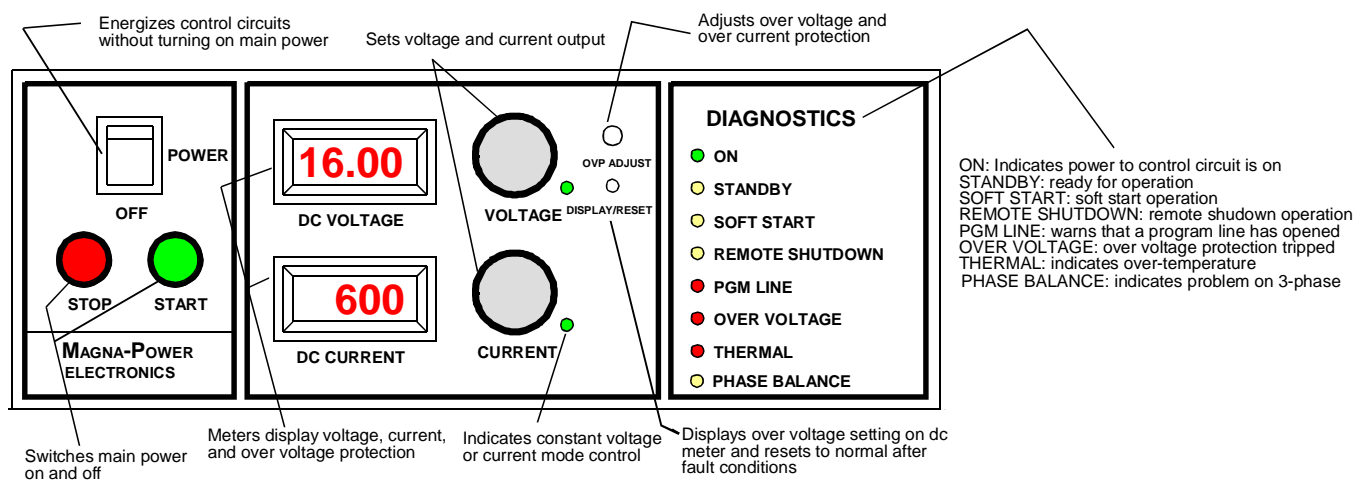
Diagnostic functions are contained directly within the supply's control loop. Exclusive circuitry eliminates guesswork about which function has control -- voltage, current, soft start, or a fault condition. If the fault condition requires user attention, main power is also disconnected. All diagnostic functions are monitored with optical isolators that can be paralleled for master/slave operation. In addition, control functions are also set through optical isolators to allow simultaneous control of one or more **PX SERIES** units.

PX SERIES supplies contain power factor correction capacitors for low input current demand — typically 20% to 30% less than competing models. Interphase reactors are used in lower voltage models to lower harmonic currents and to improve the power conditioning process. **PX SERIES** supplies operate with efficiencies in the range of 82% to 88%.

PX SERIES supplies have three levels of over voltage protection: shutdown of controlling thyristors, disconnect of main power, and optional SCR crowbar. After an over voltage condition, the supply must be reset forcing the user to observe the over voltage setting.

The transient response of **PX SERIES** supplies is enhanced by feed forward compensation and optional electronic damping. Feed forward compensation detects line changes and offsets feedback signals before being corrected with slower, error amplifiers. Optional electronic damping maintains output rectifiers with continuous current regardless of load conditions. This prevents peak charging of output capacitors and minimizes drooping under transient loading. Transient response under light load conditions is an order of magnitude better than conventional SCR supplies!

PX SERIES power supplies are forced air cooled. Unlike conventional supplies, air is channeled from top and sides to rear of the cabinet. This prevents self heating, limits restrictions to placement of other equipment in the same rack, and improves overall system reliability.



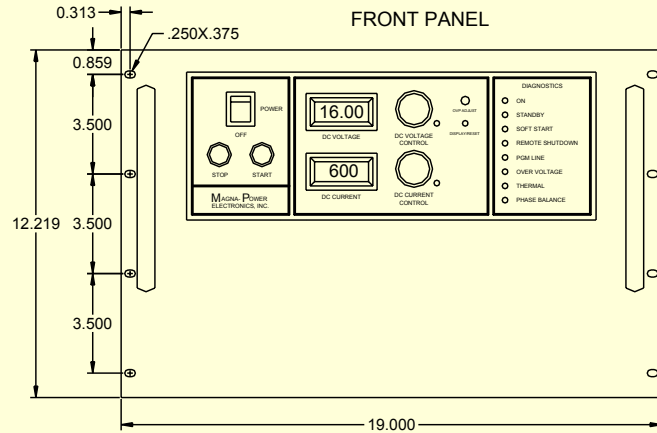
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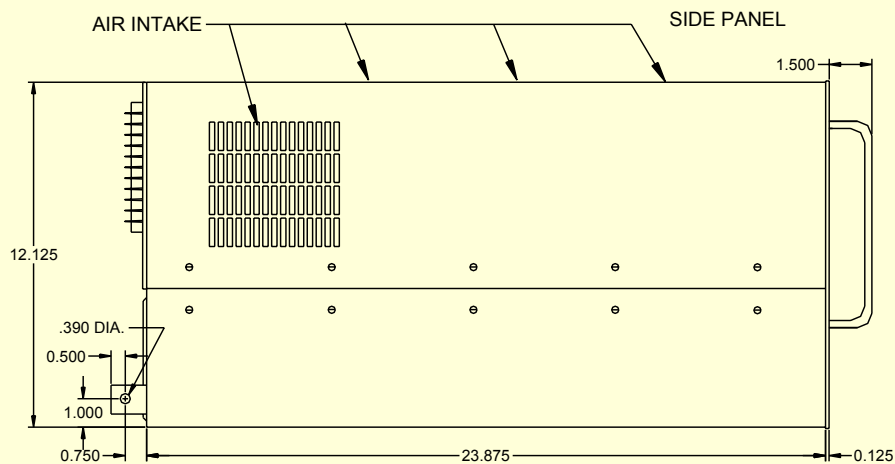
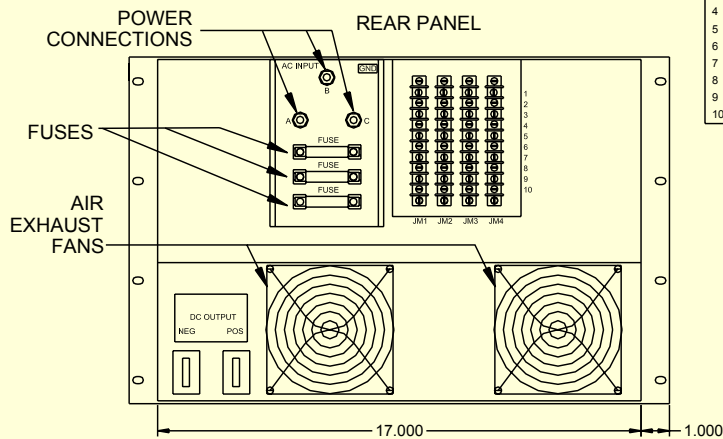
PROVEN PERFORMANCE!

OUTLINE DRAWINGS AND ELECTRICAL INTERFACE



TERMINAL DESCRIPTION		
NO	JM1	JM2
1	VO1+	REMOTE SH. DN.
2	VOS+	PHASE BAL
3	VO1REM+	PGM LINE
4	VO1-	OVER VOLTAGE
5	VS-	STANDBY
6	VO1REM-	PWR
7	VO2REM+	CUR CONTROL
8	VO2REM-	VOLT CONTROL
9	VOMS	SOFT START
10	REF GND	THERMAL

TERMINAL DESCRIPTION		
NO	JM3	JM4
1	ISOLATED RTN	VREF
2	STOP	IVREF
3	START	RV
4	RESET	IREF
5	REMOTE	IREF
6	IO2REM+	RI
7	IO2REM-	TREF
8	IOMS	ITREF
9	IO1+	RT
10	IO1-	REF GND



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