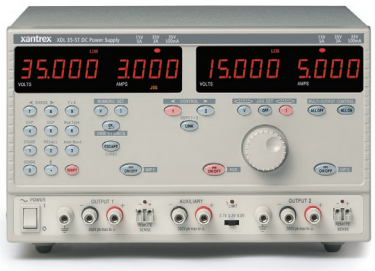
XDL Series

105 to 215 W Programmable Linear DC Power Supply

XDL 35-5
Single Output



XDL 35-5T
Triple Output

Precision laboratory linear DC power

The Xantrex XDL series represents the 'next generation' of high performance laboratory power supplies. The XDL provides multiple ranges for increased current capability at lower voltages and uses pure linear technology. Unlike other digitally controlled units, the XDL series provides both numeric and rotary control while the illuminated keys and display legends provide instant confirmation of settings and status.

For added convenience the Xantrex XDL series provides storage of up to 10 power supply set-ups in non-volatile memory (30 set-ups for a triple). There are also fully adjustable over-voltage and over-current trips.The XDL series also provides full remote sense capability via dedicated sense terminals.

The XDL triple output model features link and copy mode for convenience. When linked, keyboard and jog wheel control operates both outputs simultaneously. The copy function copies all settings for output 1 to output 2.

Product Features

- Multiple voltage/current ranges
- Direct numeric entry and incremental rotary control of voltage and current
- Remote or local sense
- Illuminated keys and display legends
- Up to ten store/recall set-ups (30 set-ups for triple output)
- Power output display
- Link and copy mode

Protection Features

- Over voltage protection
- Over current protection
- Over temperature protection
- Sense protection

Options

- GPIB, RS-232 or USB interface (P models)

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XDL Series

105 to 215 W Programmable Linear DC Power Supply

Electrical Specifications

Models		35-5	35-5T	35-5P	35-5TP	56-4	56-4P
Output Ranges:	Range 1	0-35 V, 0-3A	0-35V, 0-3A	0-35V, 0-3A	0-35V, 0-3A	0-56V, 0-2A	0-56V, 0-2A
	Range 2	0-15V, 0-5 A	0-15V, 0-5A	0-15V, 0-5A	0-15V, 0-5A	0-25V,0-4A	0-25V, 0-4A
	Range 3	0-35V,0-500.0 mA	0-35V,0-500.0 mA	0-35V,0-500.0 mA	0-35V,0-500.0 mA	0-56V,0-500.0 mA	0-56V,0-500.0 mA
Outputs		1	3	1	3	1	1
Output Power		105 W	215 W	105 W	215 W	112 W	112 W
Interface (GPIB/RS-232/USB)		No	No	Yes	Yes	No	Yes
Voltage Setting		By floating point numeric entry or rotary jog wheel; resolution 1mV					
Current Setting		By floating point numeric entry or rotary jog wheel; resolution 1mA or 0.1mA depending on range					
Setting Accuracy		Voltage - 0.03% ± 5 mV. Current 0.2% ± 5mA, 0.5mA					
Output mode		Operation in constant voltage or constant current modes with automatic cross-over and mode indication by LEDs.					
DC Output Switch		Sets output voltage and current levels to zero when Off.					
Output Terminals		4mm terminals on 19mm (0.75") spacing					
Load Regulation		Voltage: <0.01% + 2mV Current: <0.01% + 250µA; <0.01% + 50µA on 500mA range (measured at output terminals using remote sense)					
Line Regulation		Voltage: <0.01% + 2mV for 10% line change Current: <0.01% + 250µA; <0.01% + 50µA on 500mA range					
Ripple and Noise		Typically <0.35%Vrms 2mVp-p CV mode, and <0.2mArms, <20µArms (500 mA range) CI mode					
Transient Response		50µs to within 15mV of set level for a change in load current from full load to half load or vice versa					
Temperature Coeffcient		<±(50ppm+0.5mV)/ °C (voltage)					
Remote Sense		Eliminates up to 0.5V drop per lead. Remote sense operation selected from front panel and indicated by LED					
Sense Terminals		Recessed sprung sockets for direct insertion of wires. Duplicated on rear terminal block (P versions only)					

General Specifications[1]

Operational AC Input Voltage	115V or 230V ± 10% (adjustable internally, option HV for factory set 230 VAC input), 50/60 Hz. Installation Category II
Operating Temperature Range	5 °C to 40 °C, 20% to 80% RH
Storage Temperature Range	-40 °C to 70 °C
Dimensions (HxWxD)	6.3 x 5.5 x 11.4"/160 x 140 x 290 mm (XDL 35-5, XDL 35-5P, XDL 56-4, XDL 56-4P), 6.3 x 11.0 x 11.4"/160 x 280 x 290 mm (XDL 35-5T, XDL 35-5TP)
Weight	11.9 lb/5.4 kg (XDL 35-5, XDL 56-4), 12.1 lb/5.5 kg (XDL 35-5P, XDL 56-4P), 23.1 lb/10.5 kg (XDL 35-5T), 23.3 lb/10.6 kg (XDL 35-5TP)
Benchtop Operation	Folding legs are incorporated that can be used to angle the front panel upwards when required
Rack Mount Operation	19 inch 4U mount for up to three single output units or one triple plus one single Blanking plates available for un-used sections
Warranty	3 years
Approvals	CE-marked units meet: EN61010-1 and EN61326

Output Protection and Metering

Output Protection	Output will withstand forward voltages of up to 20V above rated output voltage. Reverse protection by diode clamp for current upto 3A
Fault Condition Trip	The output will be shut down if any of the four trip conditions listed below occur. In addtion to the output being set Off, an isolated rear panel signal is also activated.
Over Voltage (OVP)	Settable 1V to 40V (XDL 35-5) or 62V (XDL 56-4) in 0.1V steps
Over Current (OCP)	Settable 0.1A to 5.5A (XDL 35-5) or 4,4A (XDL 56-4) in 0.01A steps
Over Temperature	Monitors internal temperature rise to protect against excess ambient temperature or blocked ventilation slots.
Sense Error	Monitors the voltage between the remote sense terminals and output terminals to protect against mis-wiring
Trip Output Signal	Isolated open-collector output signal on rear panel
Meter Resolution and Accuracy	
Voltage (CI mode):	Resolution 10mV
	Accuracy ± (0.1% of reading + 10mV)
Current (CV mode):	Resolution 0.001A; 0.1A on 500mA range
	Accuracy ± (0.2% + 0.005A); ± (0.2% + 0.5mA) on 500mA range
V x A:	Resolution 0.01W; 0.001W on 500mA range
	Accuracy ± (0.3% + 0.05W); ± (0.3% + 0.005W) on 500mA range

Store/Recall Settings

Number of Stores	10 (30 total on XDL 35-5T) plus power-down store
Memory Type	Non-volatile using EEPROM
Parameters Stored	Range, Set volts, Set current, OVP, OCP
Recall System	Settings are previewed onto the displays before being actioned

[1] General Specifications apply for 5 to 40°C temperature range. Accuracy specifications apply for 18 to 28°C temperature range after 1 hour warm-up with no load and calibration at 23°C. Typical specifications are determined by design and not guaranteed.

Bus Interfaces (P Suffix versions)

USB	Standard USB hardware connection Supplied with device driver for Win 98 or above. Operates as a virtual COM port.
RS-232	Variable baud rate 19,200 max. Single instrument or Addressable RS232
GPIB	Conforming with IEEE-488.1 and IEEE-488.2 (N.B. All three interfaces incorporate full control, readback and status reporting)
BUS Type Selection	From front panel (GPIB/RS232/USB)
Address Selection	From front panel (1 to 31)
Baud Selection	RS-232 only. From front panel (600 to 19200 baud)
Setting Resolution	Voltage - 1mV, Current 0.1mA (0.1 mA on 500 mA range[e])
Accuracy	See specifications under Outputs and Metering
Remote Control Response Time	
Interface	Typically <80 ms
Output Voltage	Response time varies with range and load conditions. Typical time to settle to within 1% of the total excursion on a 35V/3A range with full load is <25ms. With no load it is <7 ms for an upward charge and <600ms for downward.

Auxiliary Output-XDL 35-5T and TP

Output Voltage	Switchable 2.7V, 3.3V or 5.0V. Accuracy better than ± 5%
Output Current	>1.0A maximum. LED indication of over-current.
DC Ouput Switch	Sets output voltage level to zero when Off.
Output Terminals	4mm terminals on 19mm (0.75") spacing. Duplicate terminals at rear (P versions only)
Output Protection	Output will withstand up to 16 V forward voltage. Diode clamped for reverse voltages and 3 Amps reverse current.
Load Regulation	<1% for 90% load change
Line Regulation	<0.1% for 10% line change

Note: Specifications are subject to change without notice.