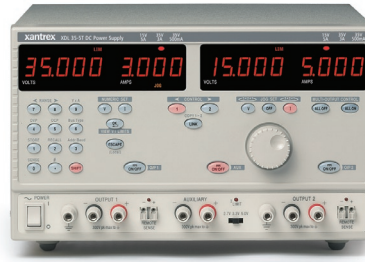


# XDL Series

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

### General Specifications<sup>1</sup>

<b>Operational AC Input Voltage</b>	115V or 230V ± 10% (adjustable internally, option HV for factory set 230 VAC input), 50/60 Hz. Installation Category II
<b>Operating Temperature Range</b>	5 °C to 40 °C, 20% to 80% RH
<b>Storage Temperature Range</b>	-40 °C to 70 °C
<b>Dimensions (HxWxD)</b>	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)
<b>Weight</b>	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)
<b>Benchtop Operation</b>	Folding legs are incorporated that can be used to angle the front panel upwards when required
<b>Rack Mount Operation</b>	19 inch 4U mount for up to three single output units or one triple plus one single Blanking plates available for un-used sections
<b>Warranty</b>	3 years
<b>Approvals</b>	CE-marked units meet: EN61010-1 and EN61326

### Output Protection and Metering

<b>Output Protection</b>	Output will withstand forward voltages of up to 20V above rated output voltage. Reverse protection by diode clamp for current upto 3A
<b>Fault Condition Trip</b>	The output will be shut down if any of the four trip conditions listed below occur. In addition to the output being set Off, an isolated rear panel signal is also activated.
<b>Over Voltage (OVP)</b>	Settable 1V to 40V (XDL 35-5) or 62V (XDL 56-4) in 0.1V steps
<b>Over Current (OCP)</b>	Settable 0.1A to 5.5A (XDL 35-5) or 4,4A (XDL 56-4) in 0.01A steps
<b>Over Temperature</b>	Monitors internal temperature rise to protect against excess ambient temperature or blocked ventilation slots.
<b>Sense Error</b>	Monitors the voltage between the remote sense terminals and output terminals to protect against mis-wiring
<b>Trip Output Signal</b>	Isolated open-collector output signal on rear panel
<b>Meter Resolution and Accuracy</b>	
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

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

<sup>1</sup> 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.

Note: Specifications are subject to change without notice.

### Bus Interfaces (P Suffix versions)

<b>USB</b>	Standard USB hardware connection Supplied with device driver for Win 98 or above. Operates as a virtual COM port.
<b>RS-232</b>	Variable baud rate 19,200 max. Single instrument or Addressable RS232
<b>GPIB</b>	Conforming with IEEE-488.1 and IEEE-488.2 (N.B. All three interfaces incorporate full control, readback and status reporting)
<b>BUS Type Selection</b>	From front panel (GPIB/RS232/USB)
<b>Address Selection</b>	From front panel (1 to 31)
<b>Baud Selection</b>	RS-232 only. From front panel (600 to 19200 baud)
<b>Setting Resolution</b>	Voltage - 1mV, Current 0.1mA (0.1 mA on 500 mA range <sup>e</sup> )
<b>Accuracy</b>	See specifications under Outputs and Metering
<b>Remote Control Response Time</b>	
<b>Interface</b>	Typically <80 ms
<b>Output Voltage</b>	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

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