








LABORATORY DC POWER SUPPLIES

SHORTFORM CATALOGUE

aimtti.com

A TECHNOLOGY LEADER

Aim-TTi is one of the world's major producers of laboratory power supplies (PSUs). It has been a major technology innovator in PSUs since 1979 and offers products ranging from 30 watts up to 1200 watts. Hundreds of thousands of Aim-TTi power supplies are in everyday use around the world.

POWER TECHNOLOGIES

Aim-TTi laboratory power supplies use both linear and switch-mode technologies in order to optimize performance and value for money.

LINEAR REGULATION

Pure linear regulation still provides the lowest output noise and best transient response. The disadvantage is greater physical size and weight for a given power, together with higher heat output.

MIXED-MODE REGULATION

For higher power levels, Aim-TTi have developed a technology that uses switch-mode pre-regulation and linear final regulation. This technique combines exceptional efficiency with noise levels that are close to that of pure linears.

POWERFLEX & POWERFLEX+ REGULATION

The Aim-TTi PowerFlex system uses a modified form of mixed-mode regulation to provide higher levels of current when the voltage is set to lower values. PowerFlex+ uses a multi-phase conversion technique to eliminate the need for a linear final stage and offers an even wider range of voltage/current combinations.

SILENT COOLING

Many Aim-TTi power supplies use convection cooling thus removing the need for a fan and providing silent operation. Other models incorporate a fan to assist cooling, but use smart control techniques to minimise noise.

RACK MOUNTING

Many Aim-TTi PSU series, both bus programmable and manual, have a rack-modular casing size. Rack mounts are available for the PL, QL, TSX, MX, CPX and QPX series.

SAFETY BINDING-POST TERMINALS

In response to changing customer requirements, Aim-TTi has introduced a new terminal design to most of the power supply range. The new terminals accept a 4mm safety plug with rigid insulating sleeve; a requirement specified by an increasing number of laboratories for safety reasons. However, unlike the usual 4mm safety sockets, the new Aim-TTi terminals can also accept fork connectors or bare wires, giving maximum flexibility.

3 YEAR WARRANTY

For all Aim-TTi products you can extend the standard one year warranty to three years by registering within three months of purchase. To register a product for extended warranty, visit www.aimtti.com/3-year-warranty

- Single, dual or triple outputs
- 30W to 130W power range
- Output noise: < 1mV rms
- 4 digit voltage and current meters on each output

EL SERIES

Linear Regulation | DC Output Switches | Safety terminals | switchable Remote sense | Silent Cooling

COMPACT BENCH POWER SUPPLIES

The EL series is the ideal solution for users requiring a good quality manual control, linear regulated bench power supply of low to medium power. The series offers dual displays, high resolution control and metering, remote sensing, dc output switches and silent fan-free operation. The EL302RT triple has a variable voltage auxiliary output which can be set using the digital displays. For those requiring a basic bus controllable power supply, versions with an RS-232 interface (EL302P) or a USB interface (EL302P-USB) are available.

Model	Outputs	Voltage / Current	Power	Interfaces
EL301R	One	0 to 30V / 0 to 1A	30W	-
EL183R	One	0 to 18V / 0 to 3.3A	60W	-
EL302R	One	0 to 30V / 0 to 2A	60W	-
EL302P	One	0 to 30V / 0 to 2A	60W	RS232
EL302P-USB	One	0 to 30V / 0 to 2A	60W	USB
EL561R	One	0 to 56V / 0 to 1.1A	60W	-
EL155R	One	0 to 15V / 0 to 5A	75W	-
EL303R	One	0 to 30V / 0 to 3A	90W	-
EL302RD	Two	2 x (0 to 30V / 0 to 2A)	120W	-
EL302RT	Three	2 x (0 to 30V / 0 to 2A) plus 1.5 to 5V @ 2A	130W	-

P-MODELS

RS-232 USB

Line & load regulation: <0.01%
Output noise: < 1mV rms. Meter accuracies:
Voltage- 0.3% ± 3 digits
Current- 0.5% ± 3 digits Size: (WxHxD)
Single - 140 x 160 x 295mm
Dual/triple - 260 x 160 x 295mm

- Single, dual or triple outputs
- 175W to 305W power range
- Output noise: < 2mV rms.
- Switched remote sense terminals

EX SERIES

COMPACT BENCH POWER SUPPLIES

Mixed mode Regulation | Silent Cooling | Higher current up to 20A | Higher voltage up to 150V | DC Output Switches

The EX-R series combines high frequency switch-mode pre-regulation with linear post-regulation to provide performance that comes close to that of an all-linear design. Excellent line and load regulation is matched by low noise and good transient response. From 175W to 420W Single, Dual and multi-range models are available with USB programmable single EX355P. The EX752M is a dual output 300 watt PSU with Multi-Mode capability up to 150V. Most EX-R series models use convection cooling and are entirely free of fan noise. EX2020R and EX4210R use an intelligent fan for cooling.

Model	Outputs	Voltage / Current	Power	Interfaces
EX355R	One	0 to 35V / 0 to 5A	175W	-
EX355P	One	0 to 35V / 0 to 5A	175W	RS232
EX355P-USB	One	0 to 35V / 0 to 5A	175W	USB
EX1810R	One	0 to 18V / 0 to 10A	180W	-
EX2020R	One	0 to 20V / 0 to 20A	400W	-
EX4210R	One	0 to 42V / 0 to 10A	420W	-
EX354RD	Two	2 x (0 to 35V / 0 to 4A)	280W	-
EX354RT	Three	2 x (0 to 35V / 0 to 4A) plus 1.5 to 5.0V @ 5A	305W	
EX752M	Two	2 x (0 to 75V / 0 to 2A) or 0 to 75V / 0 to 4A or 0 to 150V / 0 to 2A	300W	

P-MODELS

RS-232 USB

Line & load regulation: <0.01%
Output noise: < 2mV rms.
Meter accuracies:
Voltage- 0.3% ± 3 digits
Current- 0.5% ± 3 digits
Size: (WxHxD)
Single - 140 x 160 x 295mm
Dual/triple - 260 x 160 x 295mm

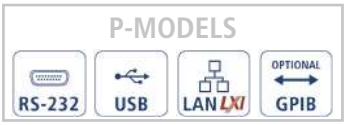
- Single, dual and triple outputs
- 48W to 228W power range
- Output noise: < 0.4mV rms

PL SERIES

HIGH PERFORMANCE POWER SUPPLIES

The PL series is for users requiring an advanced linear regulated precision bench power supply that retains conventional analog controls. Facilities including S-Lock Locks your settings at the touch of a button and V-Span to choose a voltage range that suits your task. A low current range provides metering with 0.1mA resolution and enables lower currents to be set with more precision. It's ultra-compact design uses minimal space on the bench or rack. The PLH series adds voltages of 120V or 250V with electrical isolation of the analog interface inputs.

Model	Outputs	Voltage / Current	Power	Interfaces
PL068	One	0 to 6V / 0 to 8A	48W	
PL155	One	0 to 15V / 0 to 5A	75W	-
PL303	One	0 to 30V / 0 to 3A	90W	-
PL601	One	0 to 60V / 0 to 1.5A	90W	-
PL303QMD	Two	2 x (0 to 30V / 0 to 3A)	180W	-
PL303QMT	Three	2 x (0 to 30V / 0 to 3A) + 0 to 6V / 0 to 8A	228W	
PL068P	One	0 to 6V / 0 to 8A	48W	RS232/USB/LAN
PL155P	One	0 to 15V / 0 to 5A	75W	RS232/USB/LAN
PL303P	One	0 to 30V / 0 to 3A	90W	RS232/USB/LAN
PL601P	One	0 to 60V / 0 to 1.5A	90W	RS232/USB/LAN
PL303QMDP	Two	2 x (0 to 30V / 0 to 3A)	180W	RS232/USB/LAN
PL303QMTP	Three	2 x (0 to 30V / 0 to 3A) + 0 to 6V / 0 to 8A	228W	RS232/USB/LAN
PLH120	One	0 to 120V / 0 to 0.75A	90W	-
PLH250	One	0 to 250V / 0 to 0.375A	94W	-
PLH120-P	One	0 to 120V / 0 to 0.75A	90W	RS232/USB/LAN
PLH250-P	One	0 to 250V / 0 to 0.375A	94W	RS232/USB/LAN



Line & load regulation: <0.01%
Output noise:
PL < 0.4mV rms.
PLH < 2mV rms.
Meter accuracies:
Voltage- 0.1% ± 1digit
Current- 0.3% ± 3 digits
Size: (WxHxD)
Single- 105 x 130 x 290/315mm
Dual- 210 x 130 x 290mm
Triple- 315 x 130 x 290mm

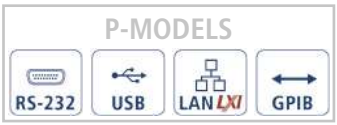
- Single or triple outputs
- 105W to 242W power range
- Output noise: < 0.35mV rms.

QL SERIES II

HIGH PRECISION POWER SUPPLIES

The QL Series represents the state-of-the-art in a linear regulated laboratory PSU. Very high precision is matched by very low output noise. The digital user interface combines speed with safety. Power is in excess of 100 watts per output, and multiple ranges provide higher current at lower voltages. The triple output models incorporate two single output units plus an auxiliary low voltage output. The two main outputs can be put into a linked mode for simultaneous or tracking control. A master on/off system enables all three outputs to be switched synchronously. The auxiliary output can be set and monitored at the touch of a button.

Model	Outputs	Voltage / Current	Power	Interfaces
QL355	One	0 to 35V / 0 to 3A or 0 to 15V / 0 to 5A	105W	-
QL564	One	0 to 56V / 0 to 2A or 0 to 25V / 0 to 4A	112W	-
QL355T	Three	2 x (0 to 35V / 0 to 3A or 0 to 15V / 0 to 5A) plus 1 to 6V @ 3A	228W	-
QL564T	Three	2 x (0 to 56V / 0 to 2A or 0 to 25V / 0 to 4A) plus 1 to 6V @ 3A	242W	-
QL355P	One	0 to 35V / 0 to 3A or 0 to 15V / 0 to 5A	105W	RS232/USB/LAN/GPIB
QL564P	One	0 to 56V / 0 to 2A or 0 to 25V / 0 to 4A	112W	RS232/USB/LAN/GPIB
QL355TP	Three	2 x (0 to 35V / 0 to 3A or 0 to 15V / 0 to 5A) plus 2.7/3.3/5.0 @ 1A	215W	RS232/USB/LAN/GPIB
QL564TP	Three	2 x (0 to 56V / 0 to 2A or 0 to 25V / 0 to 4A) plus 1 to 6V @ 3A	242W	RS232/USB/LAN/GPIB



Line & load regulation: <0.01%
Output noise: < 0.35mV rms.
Setting accuracies:
Voltage- 0.03% ± 5mV
Current- 0.2% ± 5mA
Size: (WxHxD)
Single- 141 x 172 x 300mm
Triple- 282 x 172 x 300mm

- 350W to 360W power range
- Output noise: < 1mV rms.
- Front and rear terminals

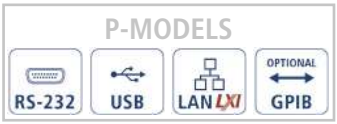
TSX SERIES II

HIGH PERFORMANCE POWER SUPPLIES

Mixed mode Regulation | Constant voltage Constant current | Safety Terminals | Higher current up to 20A | 5 6.00 4 digit Meters

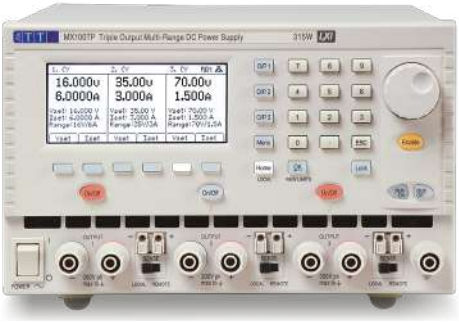
The TSX series offers exceptionally good noise and transient performance. The switch-mode pre-regulation uses ultra low capacitance components to minimise common mode noise, while the linear final regulator minimises differential output noise. It uses silent convection cooling for the quietest possible working environment. Local operation convenience features of the TSX-P series include an auxiliary display for displaying other data such as increment values, OVP level, or watts. The display is also used to preview entry from the keyboard in order to prevent errors. Twenty five non-volatile memories are provided for storing frequently used settings. Each store holds a voltage, current and OVP setting.

Model	Outputs	Voltage / Current	Power	Interfaces
TSX1820	One	0 to 18V / 0 to 20A	360W	-
TSX3510	One	0 to 35V / 0 to 10A	350W	-
TSX1820P	One	0 to 18V / 0 to 20A	360W	RS232, USB, LAN, GPIB*
TSX3510P	One	0 to 35V / 0 to 10A	350W	RS232, USB, LAN, GPIB*



Line and load regulation: <0.01%
Output noise: < 1mV rms.
Meter accuracies:
Voltage- 0.2% ± 1digit
Current- 0.5% ± 1digit
Size: (WxHxD)
210 x 130 x 350mm

*GPIB Optional



- 3 or 4 full-performance outputs
- 315W to 420W power range
- Output noise: < 3mV rms.
- Multiple voltage/current ranges

MX SERIES

Mixed mode Regulation | Higher current up to 20A | High Resolution 1mV 0.1mA | Settings Memories 50 per output | Isolated tracking

MULTI OUTPUT POWER SUPPLIES

The MX series are compact multi-output power supplies using mixed-mode regulation with the added flexibility of range switching. The MX series has three or four full function outputs with fully variable voltage and current along with OVP and OCP trips. Each output features CV or CI operation, simultaneous high resolution metering, switchable remote sensing, and an individual output switch. To increase its ability to match the widest range of applications, each output has more than one range giving the choice of higher voltage or higher current. When higher power is required, two outputs can be combined internally to provide twice the power from a single output- up to 210 watts for the MX100T/MX100Q and up to 360 watts for the MX180T.

Model	Outputs	Power	Interfaces
MX100Q	Four	420W	-
MX100QP	Four	420W	RS232, USB, LAN, GPIB*
MX100T	Three	315W	-
MX100TP	Three	315W	RS232, USB, LAN, GPIB
MX180T	Three	378W	-
MX180TP	Three	378W	RS232, USB, LAN, GPIB

Voltage / Current Ranges

Range	Output 1	Output 2	Output 3	Output 4
MX100Q/P				
1	35V/3A	35V/3A	35V/3A	35V/3A
2	16V/6A	16V/6A	70V/1.5A	70V/1.5A
3	35V/6A**	35V/6A**	70V/3A**	70V/3A**
MX100T/P				
1	35V/3A	35V/3A	35V/3A	--
2	16V/6A	16V/6A	70V/1.5A	--
3	--	35V/6A**	70V/3A**	--
MX180T/P				
1	30V/6A	30V/6A	5.5V/3A	--
2	15V/10A	15V/10A	12V/1.5A	--
3	60V/3A	60V/3A	--	--
4	30V/12A**	--	--	--
5	15V/20A**	--	--	--
6	60V/6A**	--	--	--
7	120V/3A**	--	--	--

Line & Load regulation: <0.01%
Output noise: < 3mV rms.
Setting accuracy:
Voltage- 0.05% ± 3mV,
Current- 0.3% ± 3mA.
Size: (WxHxD)
Triple- 211 x 130 x 380mm
Quad- 320 x 130 x 380mm

P-MODELS

RS-232 | USB | LAN LXI | GPIB | OPTIONAL GPIB

* GPIB Optional
** = subject to disabling another output.

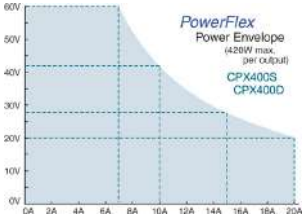
- Single or dual outputs
- 360W to 840W power range
- Output noise: < 3mV rms.
- Higher current at lower voltage

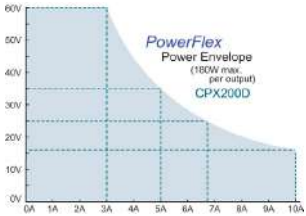
CPX SERIES

POWERFLEX POWER SUPPLIES

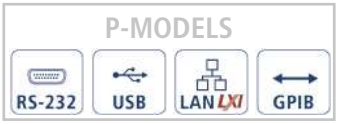
The CPX series is designed to meet the need for flexibility in the choice of voltage and current. Today's engineers often need a wide voltage range capability and a high current capability. Normally, however, the maximum voltage and maximum current are not required simultaneously. A conventional PSU has a fixed current limit giving a power capability that reduces directly with the output voltage. The Aim-TTi PowerFlex design enables higher currents to be generated at lower voltages within an overall power limit envelope. The CPX400S is a single output version of the best-selling CPX400D with a full 420W of power from a ¼ rack width casing.

Model	Outputs	Voltage / Current	Power	Interfaces
CPX200D	Two	2 x (0 to 60V / 0 to 10A*)	360W	-
CPX200DP	Two	2 x (0 to 60V / 0 to 10A*)	360W	RS232, USB, LAN, GPIB
CPX400S	One	0 to 60V / 0 to 20A*	420W	-
CPX400SA	One	0 to 60V / 0 to 20A*	420W	Isolated Analog
CPX400SP	One	0 to 60V / 0 to 20A*	420W	RS232, USB, LAN, GPIB
CPX400D	Two	2 x (0 to 60V / 0 to 20A*)	840W	-
CPX400DP	Two	2 x (0 to 60V / 0 to 20A*)	840W	RS232, USB, LAN, GPIB





Line & load regulation: <0.01%
Output noise: < 3mV rms.
Meter accuracies:
Voltage- 0.1% ± 2 digits
Current- 0.3% ± 2 digits
Size: (WxHxD)
Single- 107 x 130 x 398mm
Dual- 210 x 130 x 350mm



* Note: maximum current is not available with maximum voltage see PowerFlex power envelope.

- Single or dual outputs
- 600W to 1200W power range
- Output noise: < 3mV rms.
- Higher currents at lower voltages

QPX SERIES

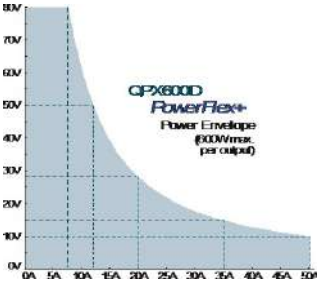
PowerFlex Regulation | Higher current up to 50A | up to 80V up to 50A | Single Output 1200W | Isolated tracking

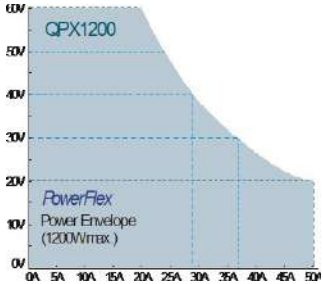
POWERFLEX POWER SUPPLIES

The QPX series offers users a level of flexibility that cannot be achieved with conventional laboratory power supplies. A conventional PSU has a fixed current limit giving a power capability that reduces directly with the output voltage. The Aim-TTi PowerFlex design enables higher currents to be generated at lower voltages within an overall power limit envelope. They can therefore perform the task of many different power supplies. These power supplies are suited to both bench-top and system applications with front and rear terminals and a wide range of interfaces.

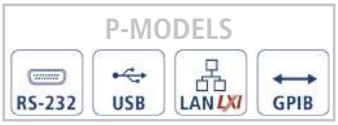
QPX1200S & SP offer a current capability of 20 amps at the maximum output of 60 volts, the PowerFlex design offers increasing output current with reducing output voltage, see the PowerFlex diagram for more details. QPX600D & DP offer 1200 watts of maximum power, arranged as two isolated outputs of 600 watts each with PowerFlex+, offering a much wider flexing range of more than 6½:1. The QPX600D can be operated as two entirely independent power supplies, each with its own display. Alternatively, multiple tracking modes are available including series and parallel operation which provide metering of total voltage or total current respectively.

Model	Outputs	Voltage / Current	Power	Interfaces
QPX1200S	One	0 to 60V / 0 to 50A*	1200W	Analog only
QPX1200SP	One	0 to 60V / 0 to 50A*	1200W	RS232/USB/LAN/GPIB
QPX600D	Two	0 to 80V / 0 to 50A *	2 x 600W	Analog only
QPX600DP	Two	0 to 80V / 0 to 50A *	2 x 600W	RS232/USB/LAN/GPIB





Line & load regulation: <0.01%.
Output noise: < 3mV rms.
Setting accuracies:
Voltage- 0.1% ± 2mV
Current- 0.3% ± 20mA.
Size: (WxHxD) 350 x 130 x 415mm



* Note: maximum current is not available with maximum voltage see PowerFlex power envelope.

OTHER RANGES AVAILABLE

WAVEFORM GENERATORS

PULSE GENERATORS

ANALOG FUNCTION GENERATORS

DIGITAL FUNCTION GENERATORS

ARBITRARY GENERATORS

- Analog and Digital (DDS) function generators with frequency capability up to 240MHz.
- Dedicated pulse generators with true pulse capability.
- True variable-clock arbitrary generators with up to four channels.

RF & EMC TEST EQUIPMENT

SIGNAL GENERATORS

SPECTRUM ANALYSERS

HARMONICS ANALYSERS

LOW-DISTORTION SOURCE

- RF signal generators with frequency capability up to 6GHz.
- Handheld RF spectrum analyzers with frequency up to 6GHz.
- EMC analyzers for power Harmonics and Flicker.

PRECISION MEASUREMENT

MULTIMETERS

POSITIONAL CURRENT PROBES

FREQUENCY MEASUREMENT

COMPONENT MEASUREMENT

- Bench-top digital multimeters for dual display, system and logging.
- Innovative DC to 5MHz current probes for PCB tracks.
- Handheld and bench-top frequency counters up to 6GHz.
- Precision component measurements.

Visit www.aimtti.com for full ranges and further information.

EXCELLENCE THROUGH EXPERIENCE

Aim-TTi is the trading name of Thurlby Thandar Instruments Ltd. (TTi), one of Europe's leading manufacturers of test and measurement instruments.

The company has wide experience in the design and manufacture of advanced test instruments and power supplies built up over more than thirty years.

The company is based in the United Kingdom, and all products are built at the main facility in Huntingdon, close to the famous university city of Cambridge.

TRACEABLE QUALITY SYSTEMS

TTi is an ISO9001 registered company operating fully traceable quality systems for all processes from design through to final calibration.

ISO9001:2015

Certificate number FM 20695

WHERE TO BUY AIM-TTI PRODUCTS

Aim-TTi products are widely available from a network of distributors and agents in more than sixty countries across the world.

To find your local distributor, please visit our website which provides full contact details.

www.aimtti.com

Designed and built in Europe by:

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