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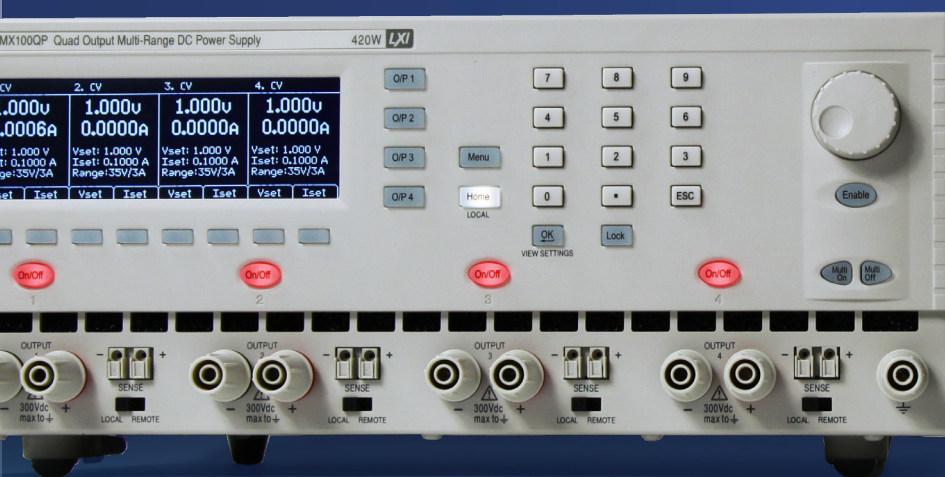


Advanced features

Three or four high performance outputs

Wide choice of voltage/current combinations

Graphic LCD with simultaneous display of outputs



# MX SERIES

315W to 420W

Multi output dc power supplies

[aimtti.com](http://aimtti.com) | [aimtti.us](http://aimtti.us)

# KEY FEATURES

Three or four independent and full performance outputs

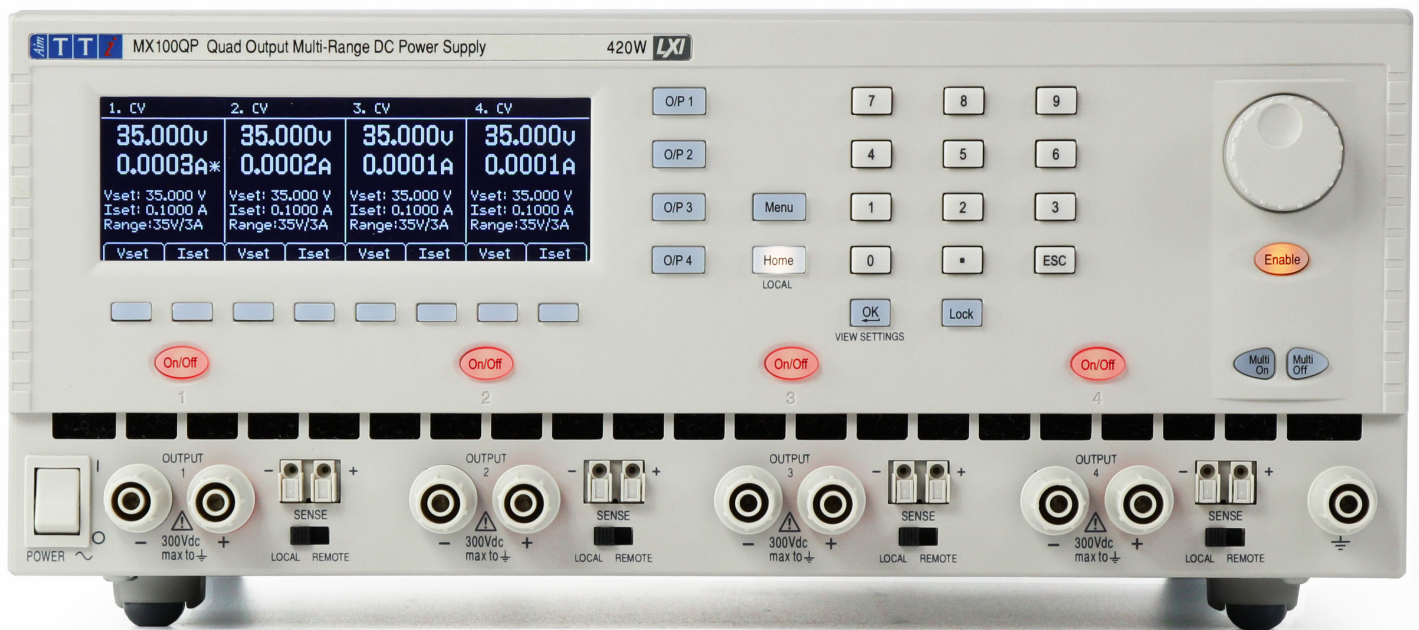
Simultaneous display of meters and settings for all outputs

Instant access to voltage/current setting for any output

Multiple ranges on each output for wider voltage/current choice

Instant individual on/off control plus sequencable multi on/off

Up to 250 settings memories for individual or multiple outputs



The MX series uses mixed mode regulation to provide up to 420W of power split across up to four outputs, this series differs from most other multi-output power supplies in offering full capabilities on all outputs.

Each output features CV or CI operation, simultaneous high resolution metering, switchable remote sensing, OVP and OCP trips, 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, up to two outputs can be disabled to provide twice the power from one or two outputs- up to 210 watts for the MX100T/MX100Q and up to 360 watts for the MX180T.

- ▶ Three or four high performance outputs each with full functionality
- ▶ Range switching gives variable voltage/current combinations
- ▶ Shared power mode provides double power from a single output
- ▶ Low output noise and ripple via linear final regulation
- ▶ High setting resolution of up to 1mV and 0.1mA
- ▶ Variable OVP and OCP trips on all outputs
- ▶ 50 setting memories per output plus 50 linked memories
- ▶ Selectable voltage tracking (isolated tracking)
- ▶ Selectable current meter averaging
- ▶ Switchable remote sense capability
- ▶ Graphic LCD provides simultaneous output metering
- ▶ Numeric or spin-wheel control of all parameters
- ▶ Individual or combined output on/off control with programmable delay sequencing
- ▶ 3U ½ rack or ¾ rack case for bench or rack mounting
- ▶ GPIB\*\*, RS-232, USB and LAN (LXI) interfaces (P models)
- ▶ Duplicate power and sense terminals at rear (P models)

Model Comparison	MX100T/TP (page 4)	MX100Q/QP (page 4)	MX180T/TP (page 5)
<b>No. of outputs</b>	<b>3</b>	<b>4</b>	<b>3</b>
<b>Max. total power</b>	315 watts	420 watts	378 watts
<b>Max. power per output</b>	105W + 105W + 105W or 105W + 210W	105W + 105W + 105W + 105W or 105W + 105W + 210W or 210W + 210W	180W + 180W + 18W or 360W + 18W
<b>Max. Volts/Amps from a single output</b>	70V or 6A	70V or 6A	120V or 20A
<b>Output 1 ranges</b>	16V/6A, 35V/3A	16V/6A, 35V/3A, 35V/6A*	15V/10A, 30V/6A, 60V/3A, 15V/20A*, 30V/12A*, 60V/6A*, 120V/3A*
<b>Output 2 ranges</b>	16V/6A, 35V/3A, 35V/6A*	16V/6A, 35V/3A, 35V/6A*	15V/10A, 30V/6A, 60V/3A
<b>Output 3 ranges</b>	35V/3A, 70V/1.5A, 70V/3A*	35V/3A, 70V/1.5A, 70V/3A*	5.5V/3A, 12V/1.5A
<b>Output 4 ranges</b>	--	35V/3A, 70V/1.5A, 70V/3A*	--
<b>Case Size</b>	212 x 130 x 375mm (WxHxD) (½ rack x 3U height)	317 x 130 x 375mm (WxHxD) (¾ rack x 3U height)	212 x 130 x 375mm (WxHxD) (½ rack x 3U height)

\* range available subject to another output being disabled (shared power mode). \*\*GPIB Optional, see specification



# MX SERIES - CAPABILITIES AND APPLICATIONS



## TYPICAL APPLICATION AREAS INCLUDE:

- ▶ Medium to high power bench-top applications requiring multiple outputs
- ▶ Situations where voltage and current requirements may vary widely between projects
- ▶ Powering rail sensitive circuits using the on/off synchronism and sequencing.
- ▶ Repetitive testing applications requiring multi-output settings memories
- ▶ High density system applications requiring multiple outputs from limited rack space
- ▶ Remote control applications where bus interface requirements may change

## MIXED-MODE REGULATION

To provide its impressive power density the MX series combines high frequency switch-mode pre-regulation with linear post-regulation to offer 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.

## DOUBLE POWER FROM A SINGLE OUTPUT

When a higher power level is needed, up to two outputs can be disabled to provide 210 watts (MX100T/ MX100Q) or 360 watts (MX180T) from a single output.

1. CV	2. SET	3. CV	REM
35.000V 3.0000A Vset: 35.000 V Iset: 3.0000 A Range: 35V/3A	Output 2 is not available when output 3 range is 70W/3A	70.00V 3.000A Vset: 70.00 V Iset: 3.000 A Range: 70V/3A	
Vset Iset		Vset Iset	

## HIGH SETTING RESOLUTION

For applications requiring the highest accuracy and resolution, up to 5 digit setting and metering is provided for voltage and current. Best resolution is 1mV/0.1mA (MX100T/ MX100Q) and 1mV/1mA (MX180T).

## UP TO 250 SETTING STORES

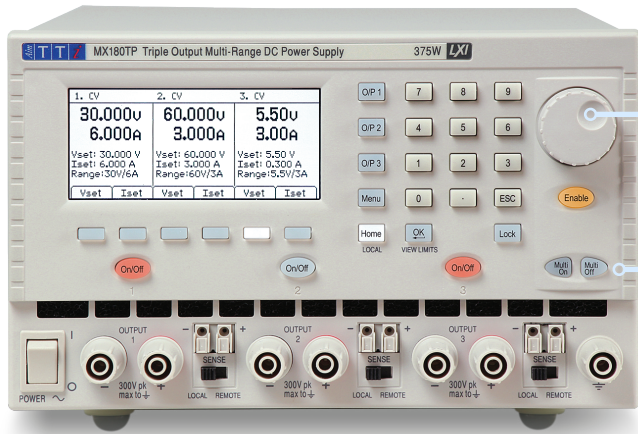
Non-volatile stores are incorporated for rapid recall of voltage and current settings (along with Range, OVP and OCP). Each output has its own set of 50 setting stores.

## MULTI-OUTPUT LINKED MEMORIES

In addition to the individual memories for each output, 50 further memories are provided that store settings for all outputs together.

Display illustrations are representative of the MX100T model





## CLARITY AND EASE-OF-USE

Unlike some other multi-output power supplies, the MX Series displays voltage, current and other essential information for all outputs simultaneously.

The illuminated keypad includes soft keys via which voltage or current can be instantly set for any output, or which can be used to set up other functions using a menu system.

Values can be set numerically direct from the keypad or can be adjusted in a quasi-analog manner using the control knob.

## ON/OFF SYNCHRONISM AND SEQUENCING

A unique capability of the products is synchronous on/off switching and programmable on/off sequencing.

Many circuits can be damaged if one voltage rail is present without the other, or if voltage rails are not applied in the correct order. In addition to the individual output on/off buttons there are further buttons for Multi-On and Multi-Off.

By default these turn all of the outputs on or off simultaneously. They can also be set to operate any combination of outputs in a user defined sequence with delays between 10 milliseconds and 20 seconds.



## OVP AND OCP TRIPS

Variable trips for over-voltage and over-current are provided on each output. Unlike a limit setting, the trip setting turns the output off and provides a different level of protection.

For example, when repetitively testing a unit which normally takes a peak current of 4A; the current limit could be set to 5A and the OCP to 4.1A to ensure that a faulty unit will trip the supply off and not be damaged by over dissipation.

## CURRENT METER AVERAGING

When measuring rapidly varying loads it can become difficult to get useful readings from a digital current meter.

By selecting meter averaging, the reading is stabilised by displaying the average of several readings to reduce the speed and extent of the variation.

## INDIVIDUAL OUTPUT DISPLAY

Each output also has an individual display mode which provides larger digits and enables OVP, OCP, current meter averaging and range to be viewed and changed. Access to 50 memory stores for the output is also available from this screen

SET PROGRAMMED ON/OFF		
	MultiOn Action	MultiOff Action
Output 1	Quick	Off after 250ms
Output 2	On after 400ms	Off after 500ms
Output 3	On after 880ms	Quick
<div style="display: flex; justify-content: space-between; border-top: 1px solid black; border-bottom: 1px solid black; padding: 2px;"> <span>Tab &lt;</span> <span>Tab &gt;</span> <span>Quick</span> <span>None</span> <span>Delay</span> <span>OK/Exit</span> </div>		

## FRONT PANEL LOCKING

An illuminated front panel key locks out the keypad to guard against accidental mis-setting.

For even greater security, as might be required when the PSU is incorporated into a fixed system, the keypad can optionally be locked using a pass code chosen by the user.

## VOLTAGE TRACKING

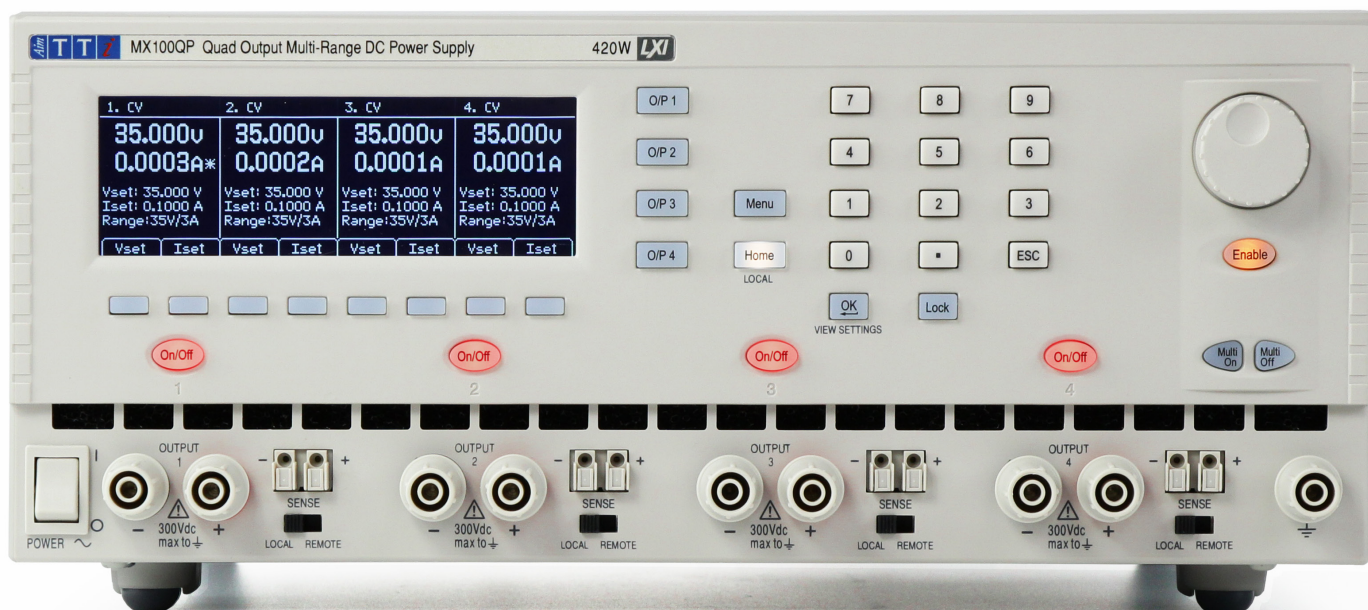
All outputs are completely independent and isolated. However, it is possible to configure the power supply so that the voltage on an output automatically tracks the voltage on another output.

Because the outputs are isolated, tracking can be used to set equal voltage of the same polarity or opposite polarities. It can be particularly useful when outputs have been wired in parallel or series where control can be made by adjusting a single output voltage.

## VOLTAGE TRACKING OPTIONS

	Option 1	Option 2	Option 3
<b>MX180T</b>	V2 tracks V1	-	-
<b>MX100T</b>	V2 tracks V1	V3 tracks V2	V2 & V3 track V1
<b>MX100Q</b>	V2 tracks V1	V4 tracks V3	V2 tracks V1 & V4 tracks V3

# MX100T AND MX100Q - TRIPLE AND QUAD OUTPUTS



- ▶ Three or four high performance outputs of 105 watts each 3 x (0 to 35V at 0 to 3A) or 4 x (0 to 35V at 0 to 3A)
- ▶ Total power of 315 or 420 watts in a compact package
- ▶ Range switching gives up to 70 volts and up to 6 amps
- ▶ Many range combinations for maximum flexibility
- ▶ Up to 210 watts from a single output
- ▶ High setting resolution of up to 1mV and 0.1mA

## FULL PERFORMANCE OUTPUTS - 105W EACH

The MX100T and MX100Q differ from most other multi output power supplies in having three or four outputs of equal power, each with the ability to provide 35V at 3A.

Each output features CV or CI operation, simultaneous high resolution metering, switchable remote sense, and an individual output switch.

## MULTIPLE RANGES | POWER SHARING

Outputs can also be combined internally to provide up to 210 watts of power as either 35V/6A or 70V/3A from a single output.

### MX100T RANGE CHOICES

	Output 1	Output 2	Output 3
<b>Range 1</b>	35V/3A	35V/3A	35V/3A
<b>Range 2</b>	16V/6A	16V/6A	70V/1.5A
<b>Range 3</b>	-	35V/6A*	70V/3A*

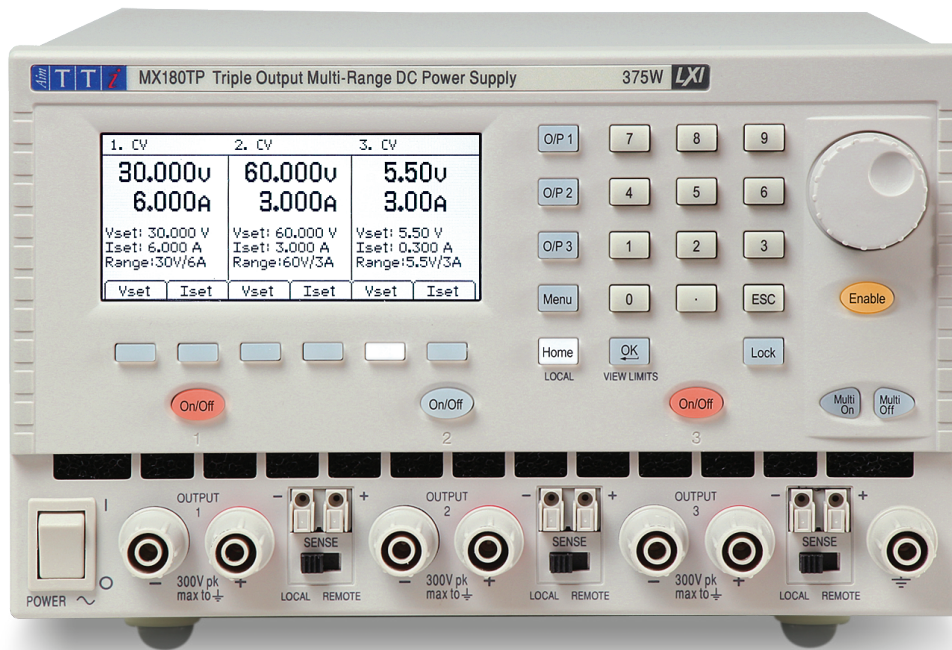
\* = subject to another output being disabled (shared power mode)

### MX100Q RANGE CHOICES

	Output 1	Output 2	Output 3	Output 4
<b>Range 1</b>	35V/3A	35V/3A	35V/3A	35V/3A
<b>Range 2</b>	16V/6A	16V/6A	70V/1.5A	70V/1.5A
<b>Range 3</b>	35V/6A*	35V/6A*	70V/3A*	70V/3A*

\* = subject to another output being disabled (shared power mode)

# MX180T - TRIPLE OUTPUT WITH HIGHER POWER



- ▶ Two high power outputs plus one low power output  
2 x 180 watts plus 1 x 18 watts
- ▶ Total power of over 375 watts in a highly compact package
- ▶ Range switching gives up to 120 volts and up to 20 amps
- ▶ Twenty six range combinations for maximum flexibility
- ▶ Up to 360 watts from a single output
- ▶ High setting resolution of 1mV and 1mA

## HIGH POWER MAIN OUTPUTS - 180W EACH

The MX180T offers significantly higher power than most triple output supplies with two identical outputs that can be set as 30V/6A, 15V/10A or 60V/3A.

The third lower power output is fully variable from 0 to 12V with both CV and CI operation, OVP/OCV trips, remote sensing other facilities as per the main outputs.

## MULTIPLE RANGES | POWER SHARING

Outputs one and two can also be combined internally to provide up to 360 watts of power as either 15V/20A, 30V/12A, 60V/6A or 120V/3A from a single output.

### MX180T RANGE CHOICES

	Output 1	Output 2	Output 3
<b>Range 1</b>	30V/6A	30V/6A	5.5V/3A
<b>Range 2</b>	15V/10A	15V/10A	12V/1.5A
<b>Range 3</b>	60V/3A	60V/3A	-
<b>Range 4</b>	30V/12A*	-	-
<b>Range 5</b>	15V/20A*	-	-
<b>Range 6</b>	60V/6A*	-	-
<b>Range 7</b>	120V/3A*	-	-

\* = output 2 disabled (shared power mode)



# P-MODELS - REMOTE CONTROL INTERFACES



USB provides a simple and convenient means of connection to a PC and is particularly appropriate for small system use.

The interface uses a standard USB 2.0 hardware connection and is implemented as virtual-COM port. A Windows\* USB driver is provided.



The LAN interface uses a standard 100/10 base-T Ethernet hardware connection with ICMP and TCP/IP Protocol for connection to a Local Area Network or direct connection to a single PC.

This interface supports LXI and is the most appropriate for larger system use because of its scalable nature.

## REAR OUTPUT TERMINALS

On the-P versions of each product, output and remote sense terminals are mounted both on the front and rear panels.

## LOW NOISE COOLING

The MX series uses an intelligent fan controller which monitors both ambient temperature and power loading.

## BENCH OR RACK MOUNTING

The MX Series power supplies are housed in compact cases that use minimum bench space. For triple output units, the case is half-rack width by 3U high and a rack kit capable of mounting one or two units is available as an option. For quad output units, the case is three quarter rack width by 3U high. Front input ventilation ensures that no additional space is needed top or bottom.



An RS-232 interface is also provided for use with legacy systems.



The LAN interface is compliant with LXI (LAN eXtensions for Instrumentation).

LXI is the next-generation, LAN-based modular architecture standard for automated test systems managed by the LXI Consortium, and is expected to become the successor to GPIB in many systems.



The GPIB interface is compliant with IEEE-488.1 and IEEE-488.2. GPIB remains one of the most widely used interfaces for system applications.

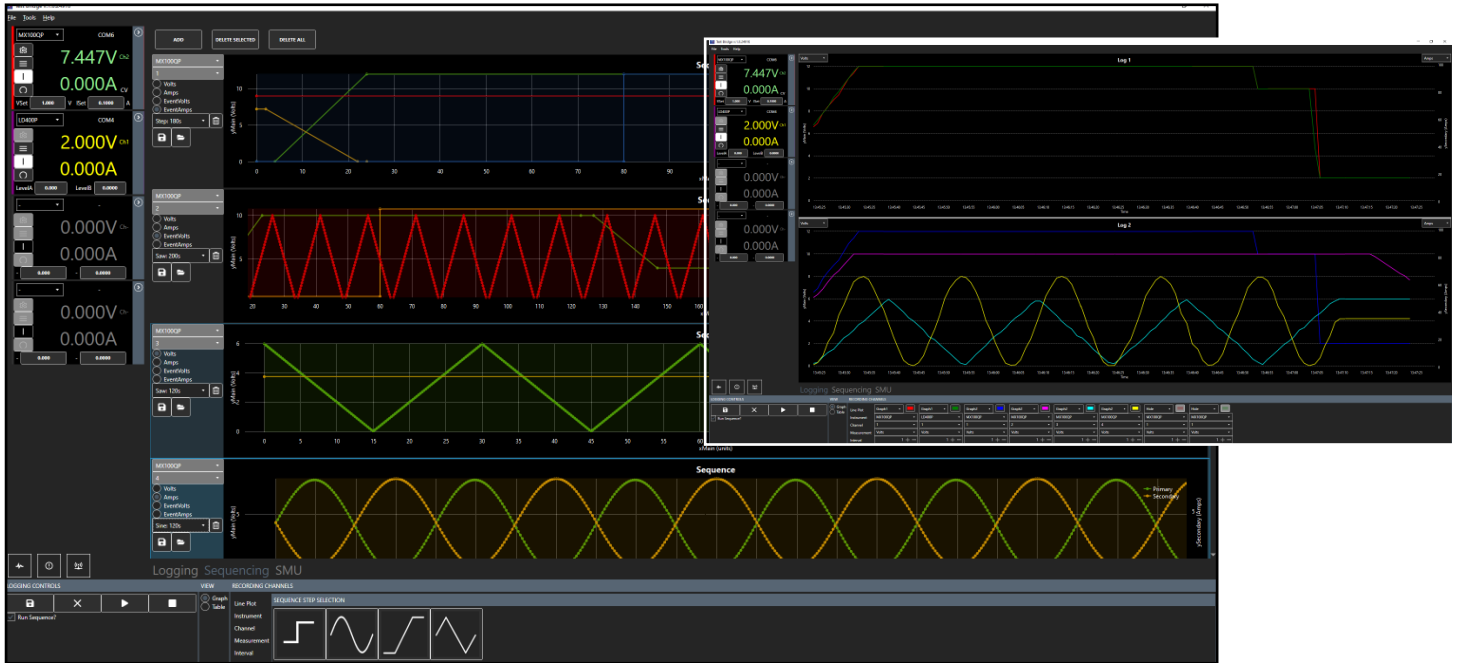
## LABVIEW & IVI DRIVER

An IVI driver for Windows\* is included. This provides support for common high-level applications such as LabView\*, LabWindows\*, and Keysight VEE\*.

\*LabView and LabWindows are trademarks of National Instruments, \*HPVee (Keysight VEE) is a trademark of Keysight Technologies. \* Windows is a trademark of Microsoft. \*\*GPIB optional, see specification

# TEST BRIDGE SOFTWARE

- ▶ MULTI INSTRUMENT CONTROL
- ▶ LOGGING TO TABLE AND GRAPH FORMAT
- ▶ TIMED SEQUENCE CONTROL ACROSS ALL INSTRUMENTS AND CHANNELS
- ▶ USB, LAN AND RS232 COMPATIBLE



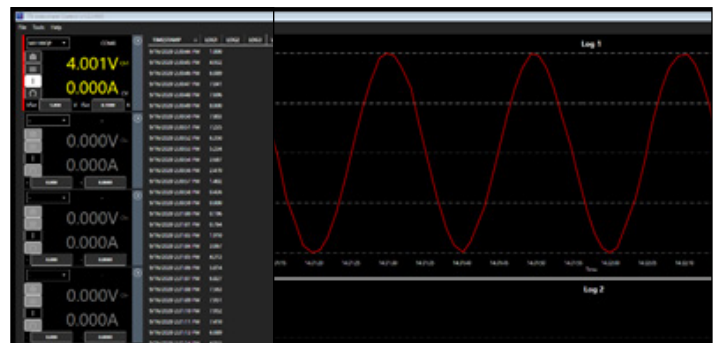
## MULTI INSTRUMENT CONTROL

Up to four instruments can be connected at one time, each one can be controlled by the instrument panel; settings and limits can be viewed and amended in the settings menu. Live and set data can be displayed for all channels on a multiple channel instrument, each one colour coded for ease of identification.

Compatible with Aim-TTi PSU and Loads: PL, QL, MX, CPX, TSX, QPX, and LD.

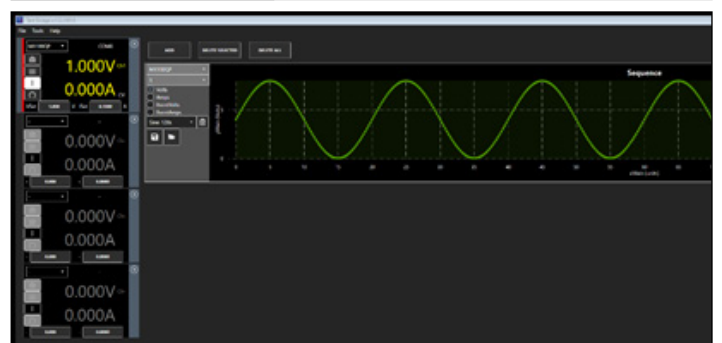
## LOGGING TO TABLE AND GRAPH

Logging channels capture live data, they can be set to record values from any output on an active instrument at specified time intervals. Varying measurement intervals can be set alongside units and plot line colour. The results are plotted on one of the two available graphs and can also be viewed in a table. The graph provides advanced zooming and panning functions, allowing efficient data analysis. The data can be exported as a .TSV file.



## TIMED SEQUENCE CONTROL

Each sequence is allocated to a specified channel on an instrument. Two different units can be added to each sequence, along with two events. A range of built in step options are available including: sine, triangle, ramp and step.



Test Bridge software can be downloaded from:  
<https://www.aimtti.com/support>

# TECHNICAL SPECIFICATIONS

MODEL	MX100T & MX100TP		MX100Q & MX100QP	MX180T & MX180TP
<b>OUTPUT SPECIFICATIONS</b>				
<b>OUTPUT 1</b>				
Range 1:	0V to 35V at 0.1mA to 3A		0V to 15V at 1mA to 10A	
Range 2:	0V to 16V at 0.1mA to 6A		0V to 30V at 1mA to 6A	
Range 3:	-	0V to 35V at 0.1mA to 6A*	0V to 60V at 1mA to 3A	
Range 4:	-	-	0V to 15V at 1mA to 20A*	
Range 5:	-	-	0V to 30V at 1mA to 12A*	
Range 6:	-	-	0V to 60V at 1mA to 6A*	
Range 7:	-	-	0V to 120V at 1mA to 3A*	
<b>OUTPUT 2</b>				
Range 1:	0V to 35V at 1mA to 3A	0V to 35V at 0.1mA to 3A	0V to 15V at 1mA to 10A	
Range 2:	0V to 16V at 1mA to 6A	0V to 16V at 0.1mA to 6A	0V to 30V at 1mA to 6A	
Range 3:	0V to 35V at 1mA to 6A*	0V to 35V at 0.1mA to 6A*	0V to 60V at 1mA to 3A	
<b>OUTPUT 3</b>				
Range 1:	0V- 35V at 1mA to 3A	0V- 35V at 0.1mA to 3A	0V to 5.5V at 10mA to 3A	
Range 2:	0V- 70V at 1mA to 1.5A	0V- 70V at 0.1mA to 1.5A	0V to 12V at 10mA to 1.5A	
Range 3:	0V- 70V at 1mA to 3A*	0V- 70V at 0.1mA to 3A*	-	
<b>OUTPUT 4</b>				
Range 1:	-	0V to 35V at 0.1mA to 3A	-	
Range 2:	-	0V to 70V at 0.1mA to 1.5A	-	
Range 3:	-	0V to 70V at 0.1mA to 3A*	-	
* Available with at least one other output disabled.				
<b>ALL OUTPUTS</b>				
Operating mode:	Constant voltage or constant current with automatic cross over and mode indication.			
Voltage setting:	By direct numeric entry or quasi-analog rotary wheel		Resolution 1mV , (Resolution 10mV: 70V range outputs 3 & 4)	
Current setting:	By direct numeric entry or quasi-analog rotary wheel		Resolution 1mV , (Resolution 10mV: Output 3)	
	Resolution 0.1mA	Resolution 0.1mA	Resolution 0.1mA	
	Resolution 1mA (Outputs 2 & 3)		Resolution 10mA (Output 3 only)	
Setting stores:	Up to 50 set-ups can be saved and recalled via the keyboard (or the digital interfaces on the p-versions)			
Load regulation:	<0.01% +5mV (CV mode) for any load change using remote sense			
Line regulation:	<0.01% +5mV (CV mode) for a 10% line voltage change			
Sensing:	Selectable local or remote sensing			
<b>OUTPUT 1 &amp; 2</b>				
Setting accuracy:	Voltage: $\pm(0.05\%$ of reading + 3mV)		Voltage: $\pm(0.05\%$ of reading + 3mV) ( $\pm 30\text{mV}$ on 120V range)	
	Current: $\pm(0.3\%$ of reading $\pm 3\text{mA}$ to 3A) $\pm(0.5\%$ of reading $\pm 3\text{mA}$ to 6A)		Current: $\pm(0.3\%$ of reading + 3mA to 3A) $\pm(0.5\%$ of reading + 3mA to 10A) $\pm(0.5\%$ of reading + 4mA to 20A)	
Ripple and noise: (20MHz bandwidth)	Typically <0.5mV rms, <5mV pk-pk, 1mV rms max.		Typically <2mV rms, <15mV pk-pk, 3mV rms max. 120V range: <4mV rms, <30mV pk-pk, 6mV rms max.	
		Rear terminals 10mV pk-pk max		
Transient response: (To within 50mV of set level for 5% to 95% load change)	Front terminals: <100 $\mu\text{s}$	Front terminals: <150 $\mu\text{s}$	Front terminals: <150 $\mu\text{s}$ (ranges 4,5 & 6 <400 $\mu\text{s}$ )	
		Rear terminals: <175 $\mu\text{s}$ <500 $\mu\text{s}$ (range 3)		
Over voltage trip:	Settable 1V- 40V in 0.1V steps		Output 1 Settable 1V to 130V in 0.1V steps Output 2 Settable 1V to 70V in 0.1V steps	
Over current trip:	Settable 0.1A- 7A in 0.01A steps		Output 1 Settable 0.1A to 21A in 0.01A steps Output 2 Settable 0.1A to 11A in 0.01A steps	



MODEL	MX100T & MX100TP	MX100Q & MX100QP	MX180T & MX180TP
<b>OUTPUT 3 &amp; 4 ( OUTPUT 4 MX100Q &amp; MX100QP ONLY)</b>			
Setting accuracy:	Voltage: $\pm(0.1\%$ of reading + 10mV)	Voltage: $\pm(0.3\%$ of reading $\pm$ 20mV)	
	Current: $\pm(0.3\%$ of reading + 3mA to 3A)	Current: $\pm(0.3\%$ of reading $\pm$ 20mA)	
Ripple and noise: (20MHz bandwidth)	Front terminals: Typically <0.5mV rms, <5mV pk-pk, 1mV rms max. 70V range: typically <1mV rms, <10mV pk-pk, 1.5mV rms max.	Front terminals: Typically <2mV rms, <15mV pk-pk, 3mV rms max.	
		Rear terminals: <15mV pk-pk max.	
Transient response: (of set level for 5% to 95% load change)	Front Terminals: <100 $\mu$ s to within 50mV	Front terminals:<150 $\mu$ s to within 50mV	Front Terminals: <150 $\mu$ s to within 50mV
		Rear Terminals:<175 $\mu$ s to within 50mV	
Over voltage trip:	Settable 1V to 80V in 0.1V steps		Settable 1V to 14V in 0.1V steps
Over current trip:	Settable 0.1A to 3.5A in 0.01A steps		Settable 0.1A to 3.5A in 0.01A steps
<b>OUTPUT PROTECTION</b>			
External voltage:	Output will withstand forward voltages of up to 50V (O/P1 & O/P2), or 80V (O/P3, O/P4). Reverse protection by diode clamp, 3A max.	Output will withstand forward voltages of up to 140V (O/P 1), 70V (O/P 2) or 20V (O/P 3)	
Fault trip:	The output will be shut down if a trip condition listed below occurs.		
OVP or OCP:	Exceeding the over-voltage or over-current settings for the output.		
Over temperature:	Monitors internal temperature rise to protect against excess ambient temperature or blocked ventilation slots.		
<b>CONNECTIONS</b>			
Output terminals:	Universal 4mm safety binding posts on 19mm (0.75") at front. Screw terminals at rear (P-models only) Terminals can accept fixed shroud 4mm plugs, standard 4mm plugs, fork terminals and bare wires.		
Sense terminals:	Sprung loaded screw-less terminals at front. Screw terminals at rear (P-models only)		
<b>OUTPUT ON/OFF SWITCHING</b>			
Individual on/off:	Individual keys for each output. On state indicated by key illumination.		
Multi-on/ multi-off:	Separate keys enable any combination of outputs to be turned on or off either simultaneously (default) or with timed delays from 10ms to 20s. Delayed operation indicated by flashing key illumination.		
<b>VOLTAGE TRACKING</b>			
The power supply can be set so that the voltage of an output is automatically set equal to that of another output and tracks any changes.			
Tracking modes:	V2 tracks V1 V3 tracks V2 V2 & 3 both track V1	V2 tracks V1 V4 tracks V3 V2 tracks V1 & V4 tracks V3	V2 tracks V1
<b>SETTING MEMORIES</b>			
<b>INDIVIDUAL OUTPUT MEMORIES</b>			
No. of stores:	50 per output		
Parameters stored:	Range, set volts, set current , OVP, OCP		
<b>LINKED OUTPUT MEMORIES</b>			
No. of stores:	50		
Parameters stored:	Range, set volts, set current, OVP, OCP, output on/off status (for all outputs)		
<b>METERING (EACH OUTPUT)</b>			
Meter function:	Output 1: 5 digit voltage and current meters Output 2 & 3: 4 digit voltage and current meters	All outputs: 5 digit voltage and current meters Output 3 & 4 at 70V: 4 digit voltage meters	Output 1 & 2: 5 digit voltage and 4 digit current meters Output 3: 3.5 digit voltage and current meters
	Simultaneous display of actual and set values.		
Meter resolution:	1mV/0.1mA (O/P 1) 10mV/1mA (O/P 2 & 3)	1mV/0.1mA 10mV/0.1mA (O/P 3 & 4: 70V range)	1mV/1mA (O/P 1 & O/P 2) 10mV/10mA (O/P 3)
Meter accuracy:	As per setting accuracy (CV mode)		
<b>ADDITIONAL METERING FUNCTIONS</b>			
V x A:	Calculated power in watts, resolution 0.01w, accuracy 0.5% $\pm$ 3 digits.		

MODEL	MX100T & MX100TP	MX100Q & MX100QP	MX180T & MX180TP
<b>DIGITAL BUS INTERFACES ( P-MODELS ONLY )</b>			
The P-models in the MX series offer full remote control and read back using USB, RS-232, GPIB or LAN (compliant with LXI). All interfaces are at ground potential and opto-isolated from the output terminals.			
RS-232	Standard 9 pin D connector		
USB	USB 2.0 connection ( backwards compatible with USB 1.x ) Operates as a virtual COM port.		
GPIB (IEEE-488)	The interface conforms with IEEE-488.1 and IEEE-488.2 (MX100Q GPIB optional)		
LAN:	Standard 10/100 base- T hardware connection. ICMP and TCP/IP protocol for connection to local area network or direct connection to a single PC.		
LXI compliance:	LAN interface is compliant with LXI core 2011. (LXI is the abbreviation for Lan eXtensions for instrumentation) For more information visit: <a href="http://www.aimtti.com/go/lxi">www.aimtti.com/go/lxi</a>		
<b>DIGITAL PROGRAMMING PERFORMANCE ( P-MODELS ONLY )</b>			
<b>PROGRAMMING SPEED</b>			
Command delay:	Typically <120ms between receiving the command terminator for a step voltage change at the instrument and the output beginning to change.		
<b>DRIVER SOFTWARE SUPPLIED (P-MODELS ONLY)</b>			
IVI driver:	An IVI driver for Windows* is supplied. This provides support for common applications such as LabView* LabWindows* KeysightVEE* ect		
USB driver:	An installation file is supplied which calls a standard Windows * USB driver		
<small>*LabView and LabWindows are trademarks of National Instrauments, *Keysight VEE is a trademark of Keysight Technologies. * Windows is a trademark of Microsoft.</small>			
<b>GENERAL SPECIFICATIONS</b>			
<b>INPUT:</b>			
AC input:	110V to 240V AC ± 10%, 50/60Hz. Installation category II		
Input power:	500VA max.	650VA max.	600VA max.
<b>TEMPERATURE &amp; ENVIRONMENTAL</b>			
Operating range:	+5°C to +40°C, 20% to 80% RH		
Storage range:	-40°C to +70°C		
Environmental:	Indoor use at altitudes up to 2000m, Pollution degree 2		
Cooling:	Intelligent variable speed fan.		
<b>SAFETY &amp; EMC</b>			
Safety:	Complies with EN61010-1		
EMC:	Complies with EN61326		
<b>PHYSICAL</b>			
Size: (Excludes feet, knob & terminals)	212 x 130 x 375mm* (WxHxD) Half rack x 3U height.	320 x 130 x 375mm* (WxHxD) Three quarter rack x 3U height	212 x 130 x 375mm* (WxHxD) Half rack x 3U height.
Weight:	4.8kg (MX100T) 4.9kg (MX100TP)	7.3kg (MX100Q) 7.5kg (MX100QP)	5.0kg (MX180T) 5.1kg (MX180TP)
<b>OPTIONS</b>			
Rack mount:	19" rack mount (RM460) for one or two units	19" rack mount (RM460) for one unit	19" rack mount (RM460) for one or two units
Thurlby Thandar Instruments Ltd. Operates a policy of continuous development and reserves the right to alter specifications without prior notice . General specifications apply for the temperature range 5°C to 40°C. Accuracy specification apply for the temperature range 18°C to 28°C after 1 hour warm up.			

# POWER SUPPLY RANGE



**EL SERIES**

**30 - 130 WATTS**

**LINEAR REGULATION**

**ANALOG CONTROLS**

**1, 2 & 3 OUTPUTS**

**RS232 & USB**



**PL SERIES**

**48 - 228 WATTS**

**LINEAR REGULATION**

**SMART ANALOG CONTROLS**

**1, 2 & 3 OUTPUTS**

**RS232, USB, LAN, GPIB\***



**PLH SERIES**

**90 - 94 WATTS**

**LINEAR REGULATION**

**SMART ANALOG CONTROLS**

**1 OUTPUT**

**RS232, USB, LAN, GPIB\***



**QL SERIES**

**105 - 242 WATTS**

**LINEAR REGULATION**

**DIGITAL CONTROLS**

**1 & 3 OUTPUTS**

**RS232, USB, LAN, GPIB**



**EX SERIES**

**175 - 420 WATTS**

**MIXED-MODE REGULATION**

**ANALOG CONTROLS**

**1, 2 & 3 OUTPUTS**

**RS232 & USB**



**TSX SERIES**

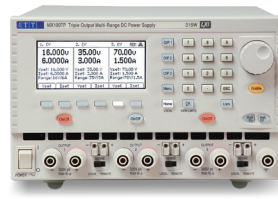
**350 - 360 WATTS**

**MIXED-MODE REGULATION**

**ANALOG & DIGITAL CONTROLS**

**1 OUTPUT**

**RS232, USB, LAN, GPIB\***



**MX SERIES**

**315 - 420 WATTS**

**MIXED-MODE REGULATION**

**DIGITAL CONTROLS**

**3 & 4 OUTPUTS**

**RS232, USB, LAN, GPIB\***



**CPX SERIES**

**360 - 840 WATTS**

**POWERFLEX**

**SMART ANALOG CONTROLS**

**1 & 2 OUTPUTS**

**RS232, USB, LAN, GPIB**



**QPX SERIES**

**750 - 1200 WATTS**

**POWERFLEX & POWERFLEX+**

**DIGITAL CONTROLS**

**1 & 2 OUTPUTS**

**RS232, USB, LAN, GPIB**

\* GPIB OPTIONAL



# 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.

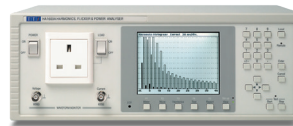
## ○ RF & EMC TEST EQUIPMENT



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.

## 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](http://www.aimtti.com)

[www.aimtti.us](http://www.aimtti.us)

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PE29 7DR United Kingdom

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