Measurably better value

PowerFlex up to 42V /6A /105W

Two or three outputs

4.3”screen with simultaneous display of outputs

Control by touch, dual rotary or remote USB

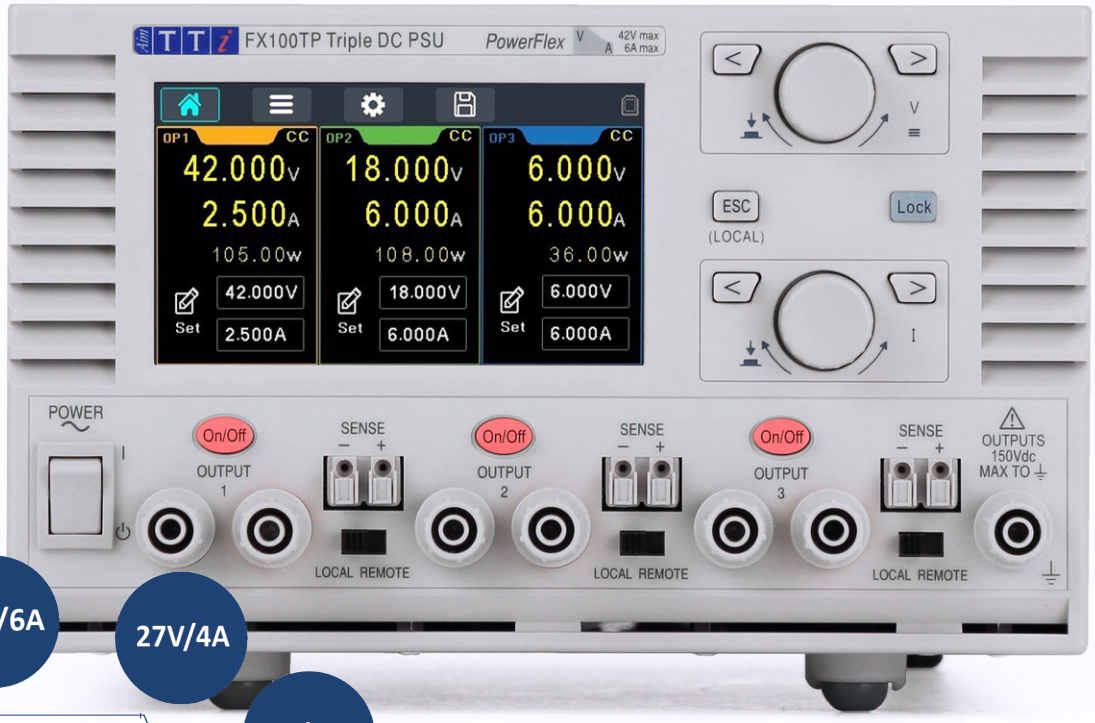


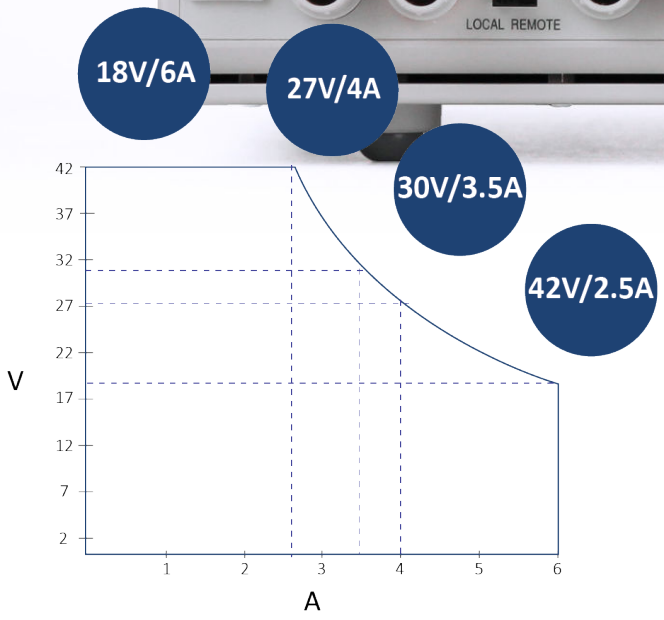
FX100DP & FX100TP

105W PowerFlex

Multi Output DC Laboratory Power Supplies

aimtti.com





TOUCH CONTROL

SELV

USB UNIVERSAL SERIAL BUS

TEST BRIDGE

FX SERIES

The all-new FX series of power supplies seamlessly combines versatility, and safety within a compact design. SELV compliant with the efficiency of PowerFlex, it's the ultimate choice for test and laboratory use.

Model	Output 1	Output 2	Output 3	Total Power
FX100DP	42V / 6A 105W	42V / 6A 105W	-	210W
FX100TP			6V / 6A	246W

- Two or three outputs
- Up to 105W per output*
- Control by rotary, touch or remote USB
- Simultaneous live control of voltage and current
- Instant access to voltage/current setting per output
- Voltage tracking V2 = V1
- Individual output on/off control plus Multi-on/off
- Low output ripple and noise, typically <2mV
- High setting resolution of 1mV and 1mA
- Variable OVP and OCP trips on all outputs
- 25 setting memories
- Voltage tracking (isolated tracking)
- Selectable current meter averaging
- Switchable remote sense capability
- Intelligent fan, low noise
- Compact footprint (214 x 140 x 300mm (WxHxD))
- USB remote interface, SCPI compatible
- Free Test Bridge logging and control software

*OP1&2 only

FEATURES

FLEXIBLE POWER

At the heart of the FX Series is Aim-TTi's advanced PowerFlex technology, offering an intelligent auto-ranging capability that dynamically adjusts the operating range within the 105W channel power envelope. This ensures optimal efficiency and performance, allowing users to precisely tailor the output to meet the demands of the application.

HIGH SETTING RESOLUTION

For applications requiring the highest accuracy and resolution, up to 5 digit setting and metering is provided for voltage and current. Resolution is 1mV/1mA.

COMPACT AND LIGHTWEIGHT DESIGN

The FX models are designed with your workspace in mind. Their compact footprint (200 x 140 x 300mm (WxHxD)) ensures they won't take up unnecessary space on your bench or shelf. The low-pressure fan-assisted cooling system keeps things cool without adding to the audible noise.



VOLTAGE TRACKING

All outputs are completely independent and isolated. However, it is possible to configure the power supply so that the voltage on output 2 automatically tracks the voltage on output 1.

MULTI-ON/OFF

Many circuits can be damaged if one voltage rail is present without the other. In addition to the individual output on/off buttons, a Multi-On/Off feature is provided to allow one output on/off key to switch one or more outputs on or off with a single press.

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.

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.

UNMATCHED VERSATILITY AND CONTROL

The FX Series redefines user interaction with its intuitive 4.3-inch colour touch screen, enabling precise adjustments with a simple tap. For those who prefer a tactile experience, the series also features live adjustment via rotary controls for a hands-on feel.





REMOTE CONNECTIVITY

Free Test Bridge software enhances USB connectivity; it enables logging and sequencing for multiple products and is compatible with many instruments from the Aim-TTi range.



TECHNICAL SPECIFICATIONS

Aim & Thurlby Thandar Instruments Ltd. operates a policy of continuous development and reserves the right to alter specifications without prior notice. Accuracy specifications apply for the temperature range 18°C to 28°C after 1 hour warm-up.

OUTPUT SPECIFICATIONS

	FX100DP	FX100TP
Number of outputs	2	3
VOLTAGE/CURRENT/POWER LEVELS		
Voltage Range	O/P 1&2: 0V to 42V	O/P 1&2: 0V to 42V O/P 3: 0V to 6V
Current Range	1mA to 6A	
Power per output	O/P 1&2: 105W (see PowerFlex curve)	O/P 1&2: 105W (see PowerFlex curve) O/P 3: 36W
Total Power	Up to 210W	Up to 246W
OUTPUT SETTING & CONTROL		
Output Setting	Direct entry of output voltage or current via touch control with on screen numeric keypad. Individual V & I rotary knobs for simultaneous adjustment of output voltage and current settings.	
Operating Mode	Constant voltage (CV) or constant current (CC) or constant power (CP) with automatic crossover	
Output Switch	Independent electronic switching with LED ON indication. In addition, each output key actions Multi-On and Multi-Off (if enabled from instrument menu). Output discharge by weak internal pull-down.	
Output sense	Selectable local or remote sensing.	
Setting Resolution	1mV, 1mA	
Setting Accuracy	Voltage: ± (0.1% of setting + 5mV) Current: ± (0.1% of setting + 5mA)	
Instrument Control	Instrument settings can be set using touch or V rotary knob to navigate, and press knob to confirm.	
Status Indication	Indicators for Output ON, constant voltage mode, constant current mode, remote operation, trip & error messages on display.	
OUTPUT CONNECTIONS		
Output Terminals	Front panel: Universal 4mm safety binding posts on 19mm (0.75”) spacing.	
OUTPUT PERFORMANCE		
Ripple & Noise (20MHz bandwidth)	Typically <2mV rms, <10mV pk-pk. 22mV pk-pk max for maximum load CV mode Typically<2mA rms, <10mA pk-pk. 15mA pk-pk max for maximum load CC mode	
HF Common Mode Noise (20MHz bandwidth)	Typically <4mV rms, <30mV pk-pk , 50mV pk-pk max (Into 560ohm)	
Load Regulation	For any load change within the PowerFlex envelope, using remote sense: Constant voltage (CV): <0.01% ± 5mV Constant current (CC): <0.01% ±0.5mA	
Line Regulation	For a 10% line voltage change: Constant voltage (CV): <0.01% ± 5mV Constant current (CC): <0.01% ± 0.5mA	
Transient Response	To within 100mV of setting for a 5% to 95% load change: Typically <350µsec. Maximum 375µsec.	

Voltage programming speeds			100% Resistive Load	No Load		100% Resistive Load	No Load
	17.5V/6A	UP	10ms	10ms	DOWN	10ms	160ms
	42V/2.5A	UP	10ms	10ms	DOWN	60ms	220ms
	6V/6A (O/P 3 only)	UP	6ms	6ms	DOWN	6ms	25ms

OUTPUT PROTECTION

Protection Functions		Over voltage trip (OVP), Over current trip (OCP), Over temperature trip (OTP), sense miswiring trip.
OVP	Range	O/P 1&2: 1V to 47V O/P 3: 1V to 8V
	Resolution	100mV
	Accuracy	0.5% ± 300mV
	Response time	10ms

OCP	Range	100mA to 6.6A
	Resolution	100mA
	Accuracy	0.5% ± 300mA
	Response time	50ms
Sense trip		Monitors the voltage between the remote sense terminals and output terminals to protect against mis-wiring. Maximum drop allowed is +1.5V and -1.5V (total of 3V drop).
Over Temperature protection		Monitors internal temperature rise to protect against excess ambient temperature or blocked ventilation slots.
Output Protection		Output will withstand an applied forward voltage of up to 60V. Reverse protection by diode clamp for reverse currents up to 3A.
Temp. Coefficient		Typically <100 ppm + 0.3 (mV or mA)/°C. Maximum <200ppm/°C.

METER SPECIFICATIONS

Display Type	4.3” colour touchscreen
Voltage	Resolution: 1mV, 5 digits Accuracy: 0.1% of reading ± 5 digits
Current	Resolution: 1mA, 4 digits Accuracy: 0.1% of reading ± 5 digits
Power	Resolution: 10mW, 5 digits Accuracy: 0.2% of reading ± 7 digits
Current averaging (I avg)	User settable, sets current meter damping ON or OFF

SETTING MEMORY STORES

Store/Recall:	Store and recall voltage, current and all other output parameters from non-volatile memory (up to 25 memories).

REMOTE INTERFACES

Operational Functions	Full digital remote control facilities are available through the USB interface. Setting and readback resolutions are the same as for the Output and Meter specifications respectively.
USB Interface	Standard USB 2.0 hardware connection. Implemented as a Virtual COM Port
Remote Command Processing Time	Typically, <50ms between receiving the command terminator for a step voltage change at the instrument and the output voltage beginning to change.

GENERAL

AC Input	110V to 240V AC +/- 10%, 50/60Hz. Installation Category II
Power Consumption	360VA maximum
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
Safety & EMC	Complies with EN61010-1 & EN61326-1. For details, request the EU Declaration of Conformity for this instrument via http://www.aimtti.com/support (serial number needed).
Output Isolation	150V pk to Ground
Size	214 x 140 x 300mm (WxHxD)
Weight	<4 kg

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.

bsi. ISO 9001 Quality Management

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 IN THE UK · MANUFACTURED IN THE UK ·

Designed and built in Europe by:

TTi ltd

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