ITECH

YOUR POWER TESTING SOLUTION

IT-M3100D

Dual-channel DC Power Supply

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IT-M3100D dual-channel programmable DC power supply, only 1U half rack, provides fully isolated dual-channel output. The automatic wide-range design can provide you with higher voltage and current output, so one unit can cover a wide range of applications. Its flexible modular design, independent multi-channel design and simultaneous operation function allow you to configure each channel freely. IT-3100D dual-channel programmable DC power supply is especially suitable for production line aging test and building automated test system. At the same time, it can also be widely used in experiments and evaluation, quality management and so on.

FEATURE

- High power density, 1U Half-Rack only Isolated dual-channel design
- Different timing output of each channel, synchronous or delayed output, output with different voltage ratios
- Adjustable rise/fall time
- Up to 100 steps LIST operation, support output of various dynamic waveforms
- CC/CV loop speed and priority setting
- Independent control of multi- channels, one communication card can control up to 16 channels
- Series/parallel connection between two channels is available*1 new
- Support CW
- Support CANOPEN, LXI, SCPI
- Five optional cards , providing RS232, CAN, LAN, GPIB,USB_TMC, USB_VCP, RS485, external analog and IO communication interfaces
- Support TRACE function, can draw voltage and current waveforms in real time (Supported by program)
- Various protection functions such as Sense, OVP, OCP, OPP, OTP, Foldback
- Provide self-locking function, when the device is self-locked, the device will not be able to output

*1 Max.100V can be output after series/parallel connection

Model	CH1	CH2
IT-M3131D	30V/15A/200W	30V/15A/200W
IT-M3141D	30V/15A/400W	30V/15A/400W
IT-M3132D	60V/10A/200W	60V/10A/200W
IT-M3142D	60V/10A/400W	60V/10A/400W

Ultra-compacted - Only 1U Half-Rack

IT-M3100D dual-channel DC power supply is only 1U half rack, but it can output 400W per channel. In addition to high power density, it also features as high resolution, high precision and stability. The automatic wide-range design brings more combinations of voltages and currents, which means that one unit can cover a variety of testing requirement.

Modular design, flexible combination

Thanks to the modular design, several units of IT-M3100D dual-channel DC power supply can be freely stacked, no additional accessories needed, as easy as building blocks.

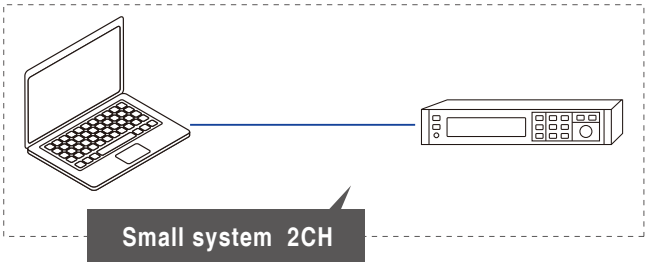
* Max.10 units can be stacked without rack mount kit.

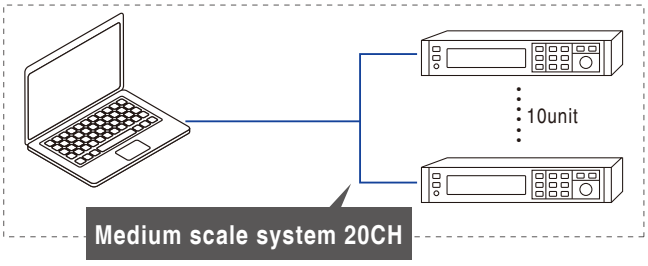
Of course, you can also use the IT-E154 rack mount kit to easily install one or more units in a standard 19-inch rack. Flexible combination can effectively help you to avoid repeated purchases of equipment.

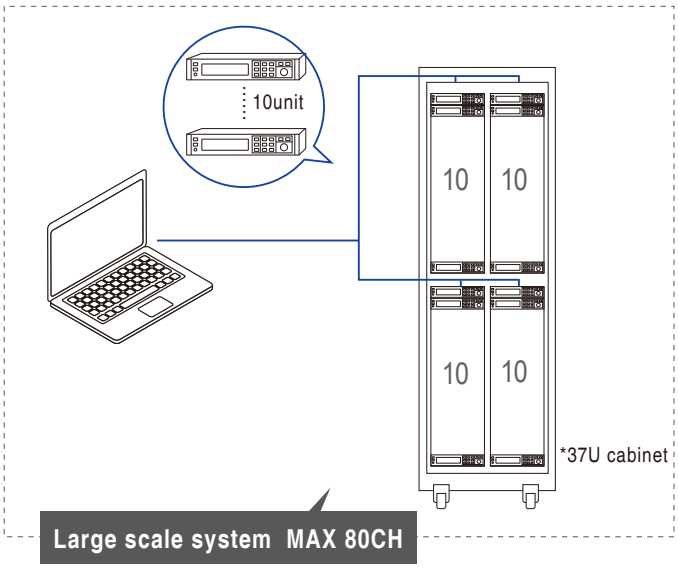
Multi-channel independent control

The IT-M3100D dual-channel DC power supply adopts an independent multi-channel design, which makes it easy to connect between the power supply and the computer. When a multi-channel power supply system is formed, the channel number will be displayed on the interface of each power supply. If the communication interface of one of the units is connected to the computer, you can independently control each power supply in the system by software. Each channel can be operated independently. A 37U cabinet can include up to 40 units/80 channels, which greatly increases the utilization rate of the equipment.

* For details, pls. contact ITECH.







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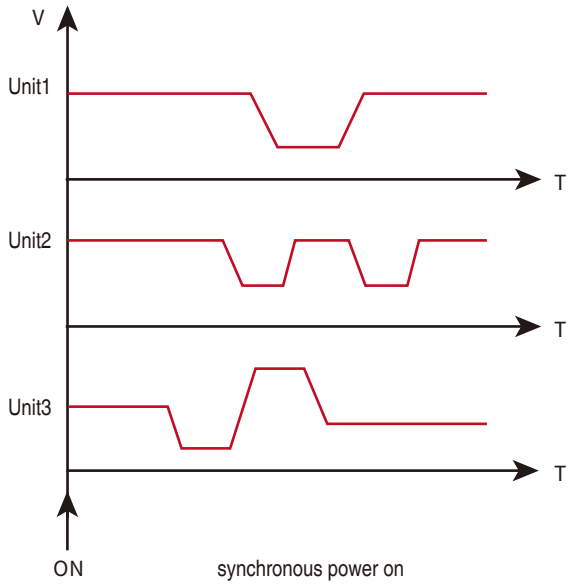
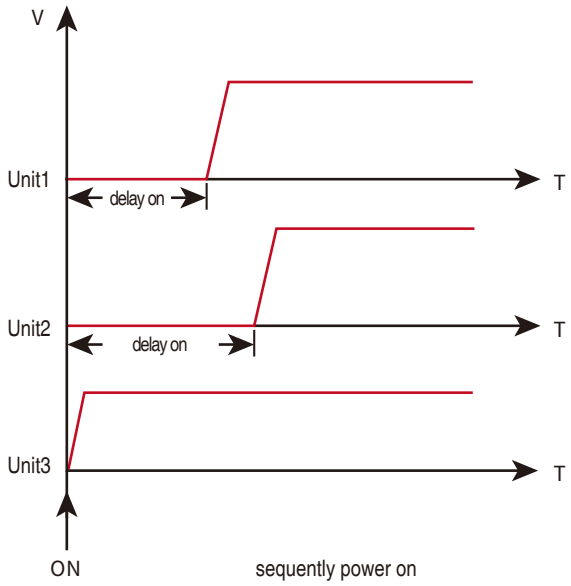
Synchronism (Link)

IT-M3100D supports synchronization function whether it is a single unit or in a multi-channel power supply system. It is suitable for the simultaneous testing of multiple DUTs, or the application scenarios where the DUT is multi-channel power input. There are three synchronization modes for you, On/Off, Track, Duplicate. You just need to configure parameters on one power supply, and the parameters can be automatically replicated or synced proportionally to other power supplies in the loop.

When the ON/OFF function is used with the ON/OFF delay function in the menu, synchronous power-on or sequential power-on can be realized.



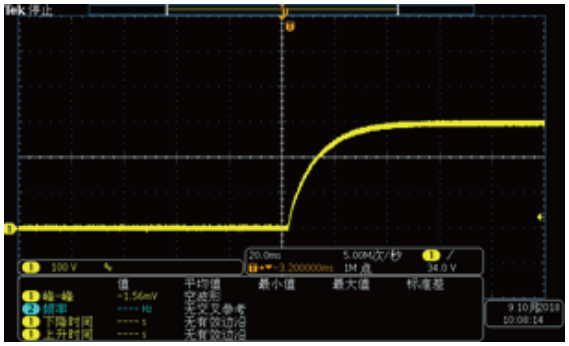


Multi-Protection Function

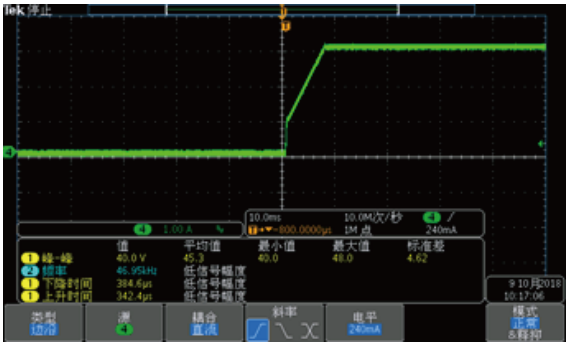
IT-M3100D dual-channel DC power supply has various protection functions such as OCP / OVP / OTP / OPP / U-Max/U-Min/Sense/Foldback. The Sense function helps to pop up a warning in time and switch the power supply to the Local output when the output terminal fails. The Foldback function is used to turn off the output when the power CV / CC is switched, so as to protect DUT that are sensitive to voltage overshoot and current overshoot.

CC & CV priority function

The CC / CV priority function helps to solve a variety of severe problems in long-term testing. For test that require high-speed voltage or no overshoot, you can select the CV priority mode to obtain a faster voltage rising speed. Or you can choose CC priority mode to output current without overshoot, which is used to test DUTs with constant current operating characteristics. This function is good for laser testing, IC testing, charge and discharge testing, power transient simulation and characterization of automotive electronics, etc.



CV



CC

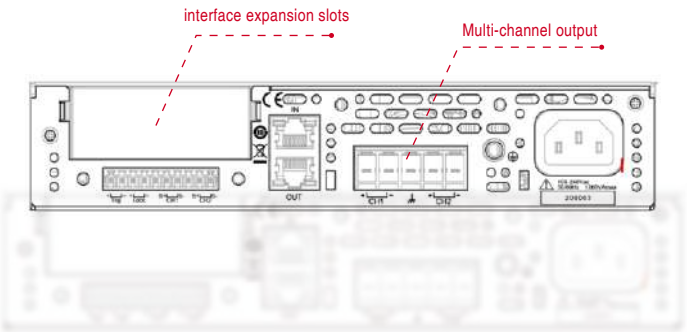
Web server access

IT-M3100D has a built-in Web server. You can monitor and control it through your web browser. After the IT-M3100D and the computer are connected via LAN interface, enter the IP address of the power supply in the browser, and then you can access the front panel control functions including the LAN configuration parameters.

Optional accessory

The rear panel of the IT-M3100D series provides interface expansion slots. You can choose different interfaces to achieve different functions, such as communication interfaces, external analog interfaces and rack mount kit.

Pictures	Model	Interface
	IT-E1205	GPIB interface
	IT-E1206	USB/LAN interface
	IT-E1207	RS–232/CAN interface
	IT-E1208	Analog interface/RS485 interface
	IT-E1208D	Double channel analog /RS485 interface
	IT-E1209	USB interface



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IT-M3100D Dual-channel DC Power Supply

Specification

		IT-M3131D	IT-M3132D
		CH1 & CH2	
Rated Output Value	Voltage	0～30V	0～60V
	Current	0～15A	0～10A
	Power	0～200W	0～200W
	Resistance	\	\
Power Regulation ±(%of Output+Offset)	Voltage	≤0.02%+0.005%FS	≤0.02%+0.005%FS
	Current	≤0.05%+0.01%FS	≤0.05%+0.01%FS
Load Regulation ±(%of Output+Offset)	Voltage	≤0.01%+0.008%FS	≤0.01%+0.008%FS
	Current	≤0.05%+0.05%FS	≤0.05%+0.05%FS
Setup Resolution	Voltage	1mV	1mV
	Current	1mA	1mA
	Power	1W	1W
	Resistance	\	\
Readback Resolution	Voltage	1mV	1mV
	Current	1mA	1mA
	Power	1W	1W
Setting Accuracy	Voltage	≤0.03% + 0.02%FS	≤0.03% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.05%FS
	Power	≤1% + 1%FS	≤1% + 1%FS
	Resistance	\	\
Readback Accuracy	Voltage	≤0.03% + 0.02%FS	≤0.03% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.05%FS
	Power	≤1% + 1%FS	≤1% + 1%FS
Ripple （20hz-20Mhz）	Peak value	≤60mVpp	≤60mVpp
Ripple （20hz-300Khz）	Voltage(RMS)	≤10mV	≤10mV
	Current(RMS)	≤10mA	≤8mA
Setting Temperature Coefficient (%of Output+Offset)/℃	Voltage	≤0.005% + 0.5mV	≤0.005% + 0.5mV
	Current	≤0.005% + 0.5mA	≤0.005% + 0.5mA
Readback Temperature Coefficient (%of Output+Offset)/℃	Voltage	≤0.005% + 0.5mV	≤0.005% + 0.5mV
	Current	≤0.005% + 0.5mA	≤0.005% + 0.5mA
Rising Time (no load)	Voltage	≤30ms	≤30ms
Rising Time (full load)	Voltage	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤50ms	≤110ms
Falling Time (full load)	Voltage	≤10ms	≤30ms
Dynamic Mode	Voltage	≤1ms	≤1ms
AC Input	Voltage	100Vac～240Vac （rated power）	100Vac～240Vac （rated power）
		\	\
	Frequency	50/60Hz	50/60Hz
Setup Stability-30min (%of Output +Offset)	Voltage	≤0.01% + 0.01%FS	≤0.01% + 0.01%FS
	Current	≤0.05% + 0.03%FS	≤0.05% + 0.03%FS
Setup Stability-8h (%of Output +Offset)	Voltage	≤0.01% + 0.015%FS	≤0.01% + 0.015%FS
	Current	≤0.05% + 0.05%FS	≤0.05% + 0.05%FS
Readback Stability-30min (%of Output +Offset)	Voltage	≤0.01% + 0.01%FS	≤0.01% + 0.01%FS
	Current	≤0.05% + 0.05%FS	≤0.05% + 0.03%FS
Readback Stability-8h (%of Output +Offset)	Voltage	≤0.01% + 0.015%FS	≤0.01% + 0.015%FS
	Current	≤0.05% + 0.05%FS	≤0.05% + 0.05%FS
Efficiency		72%	75%
Remote Sense Compensation Voltage		≤2V	≤2V
Command Response Time		5ms	5ms
Power Factor		0.98	0.98
Maximum Input Current		6A	6A
Maximum Input Apparent Power		600VA	600VA
Net. Weight		（5±0.5） kg	（5±0.5） kg

*This information is subject to change without notice.

Specification

		IT-M3141D	IT-M3142D
		CH1 & CH2	
Rated Output Value	Voltage	0～30V	0～60V
	Current	0～15A	0～10A
	Power	0～400W	0～400W
	Resistance	\	\
Power Regulation ±(%of Output+Offset)	Voltage	≤0.02%+0.005%FS	≤0.02%+0.005%FS
	Current	≤0.05%+0.01%FS	≤0.05%+0.01%FS
Load Regulation ±(%of Output+Offset)	Voltage	≤0.01%+0.008%FS	≤0.01%+0.008%FS
	Current	≤0.05%+0.05%FS	≤0.05%+0.05%FS
Setup Resolution	Voltage	1mV	1mV
	Current	1mA	1mA
	Power	1W	1W
	Resistance	\	\
Readback Resolution	Voltage	1mV	1mV
	Current	1mA	1mA
	Power	1W	1W
Setting Accuracy	Voltage	≤0.03% + 0.02%FS	≤0.03% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤1% + 1%FS	≤1% + 1%FS
	Resistance	\	\
Readback Accuracy	Voltage	≤0.03% + 0.02%FS	≤0.03% + 0.02%FS
	Current	≤0.1% + 0.1%FS	≤0.1% + 0.1%FS
	Power	≤1% + 1%FS	≤1% + 1%FS
Ripple （20hz-20Mhz）	Peak value	≤60mVpp	≤60mVpp
Ripple （20hz-300Khz）	Voltage(RMS)	≤15mV	≤15mV
	Current(RMS)	≤15mA	≤8mA
Setting Temperature Coefficient (%of Output+Offset)/℃	Voltage	≤0.005% + 0.5mV	≤0.005% + 0.5mV
	Current	≤0.005% + 0.5mA	≤0.005% + 0.5mA
Readback Temperature Coefficient (%of Output+Offset)/℃	Voltage	≤0.005% + 0.5mV	≤0.005% + 0.5mV
	Current	≤0.005% + 0.5mA	≤0.005% + 0.5mA
Rising Time (no load)	Voltage	≤30ms	≤30ms
Rising Time (full load)	Voltage	≤30ms	≤30ms
Falling Time (no load)	Voltage	≤50ms	≤110ms
Falling Time (full load)	Voltage	≤10ms	≤30ms
Dynamic Mode	Voltage	≤1ms	≤1ms
AC Input	Voltage	100Vac～240Vac（rated power）	100Vac～240Vac（rated power）
		\	\
	Frequency	50/60Hz	50/60Hz
Setup Stability-30min (%of Output +Offset)	Voltage	≤0.01% + 0.01%FS	≤0.01% + 0.01%FS
	Current	≤0.05% + 0.03%FS	≤0.05% + 0.03%FS
Setup Stability-8h (%of Output +Offset)	Voltage	≤0.01% + 0.015%FS	≤0.01% + 0.015%FS
	Current	≤0.05% + 0.05%FS	≤0.05% + 0.05%FS
Readback Stability-30min (%of Output +Offset)	Voltage	≤0.01% + 0.01%FS	≤0.01% + 0.01%FS
	Current	≤0.05% + 0.03%FS	≤0.05% + 0.03%FS
Readback Stability-8h (%of Output +Offset)	Voltage	≤0.01% + 0.015%FS	≤0.01% + 0.015%FS
	Current	≤0.05% + 0.05%FS	≤0.05% + 0.05%FS
Efficiency		85%	85%
Remote Sense Compensation Voltage		≤2V	≤2V
Command Response Time		5ms	5ms
Power Factor		0.98	0.98
Maximum Input Current		10A	10A
Maximum Input Apparent Power		1kVA	1kVA
Net. Weight		（5±0.5） kg	（5±0.5） kg

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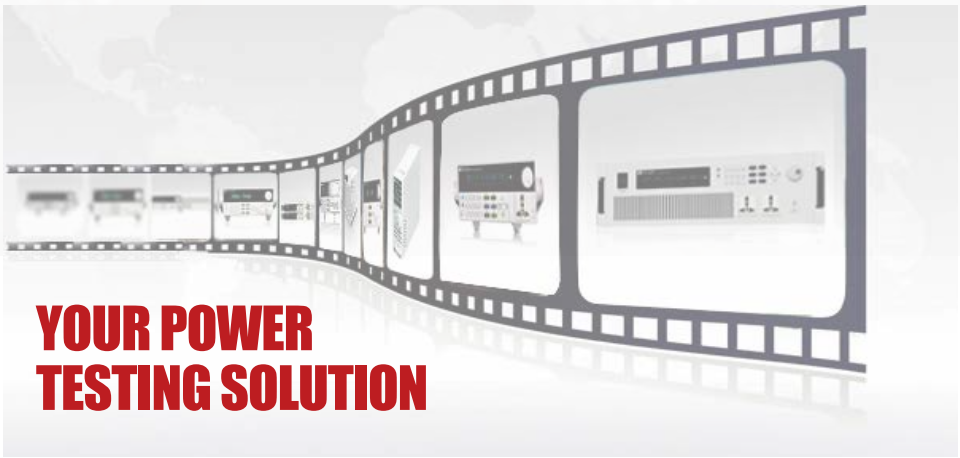

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