

# IT-M3100D

## Dual-channel DC Power Supply



*Your Power Testing Solution*



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 |

## 01 IT-M3100D Dual-channel DC Power Supply

# Your Power Testing Solution

IT-M3100D Dual-channel DC Power Supply

## 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.

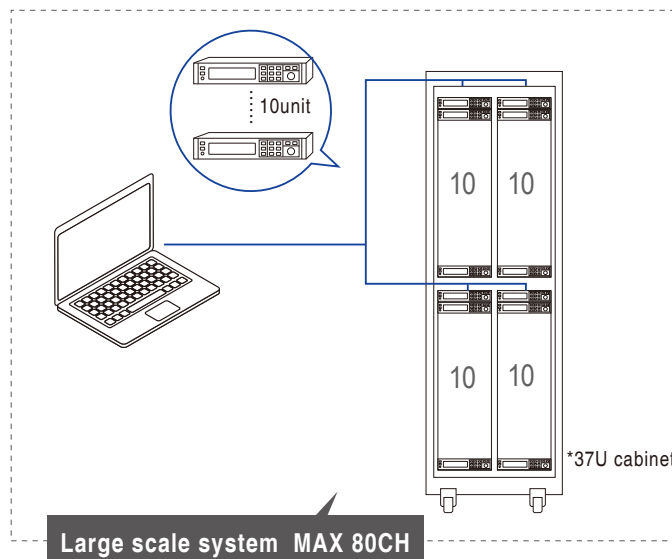
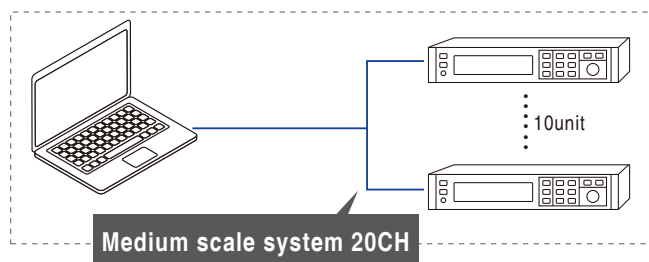
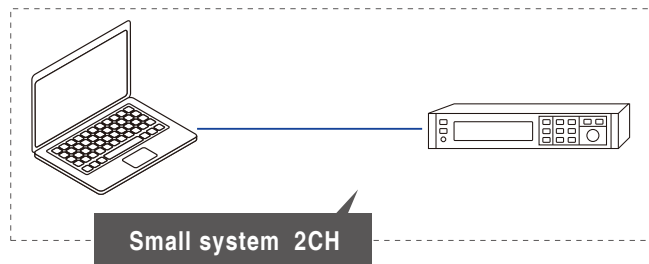
Of course, you can also use the IT-E154 rack mount kit to easily install one or more units in a standard 19-inch rack. Flexible combination can effectively help you to avoid repeated purchases of equipment.



## 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.



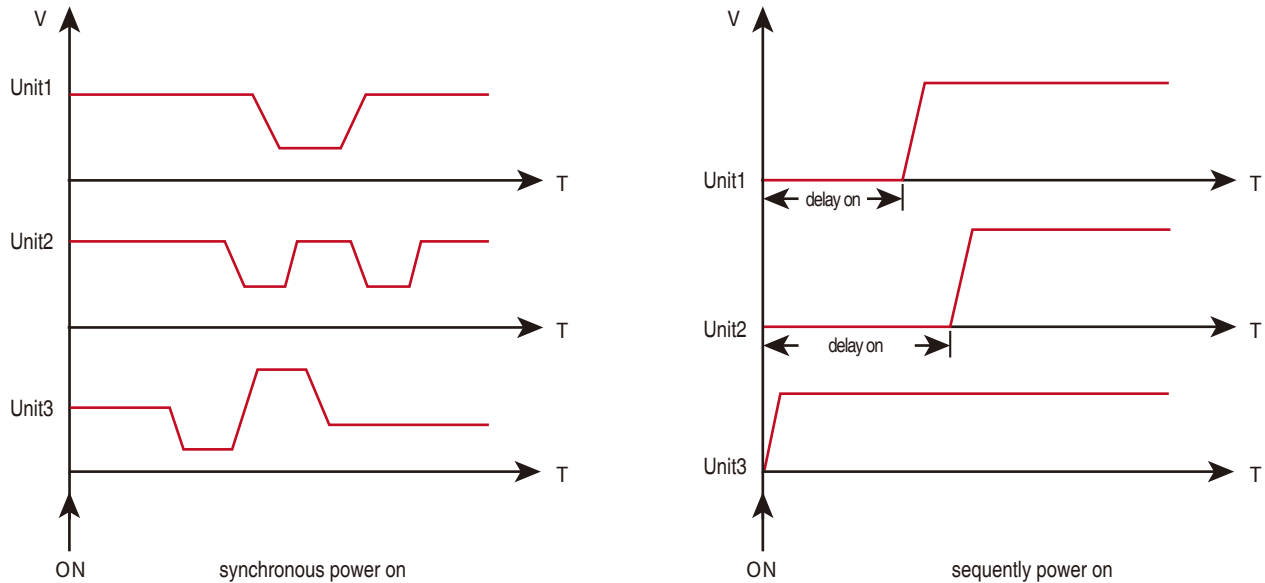
# Your Power Testing Solution

IT-M3100D Dual-channel DC Power Supply

## 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.

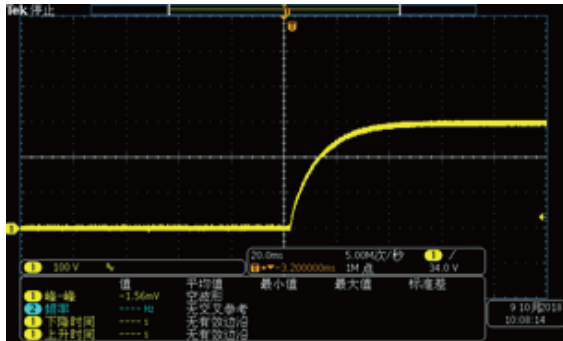


# Your Power Testing Solution

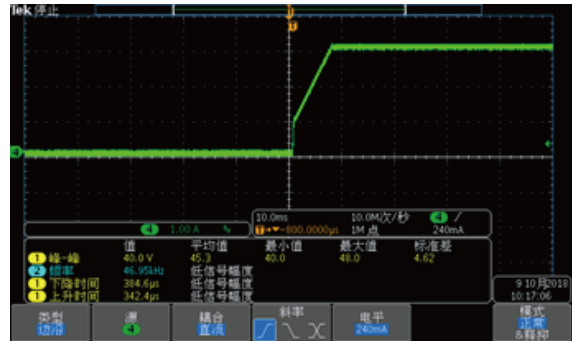
IT-M3100D Dual-channel DC Power Supply

## 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.



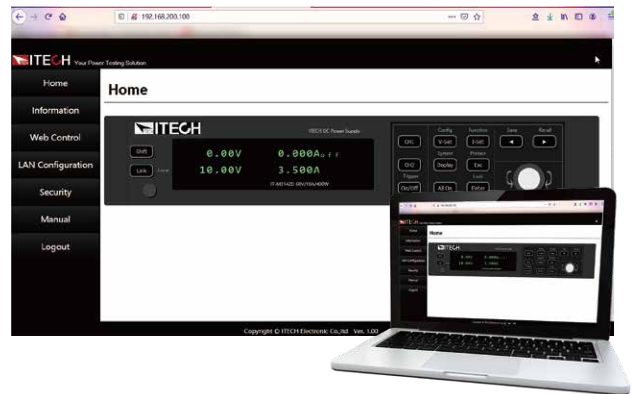
CV



CC

## Web server access

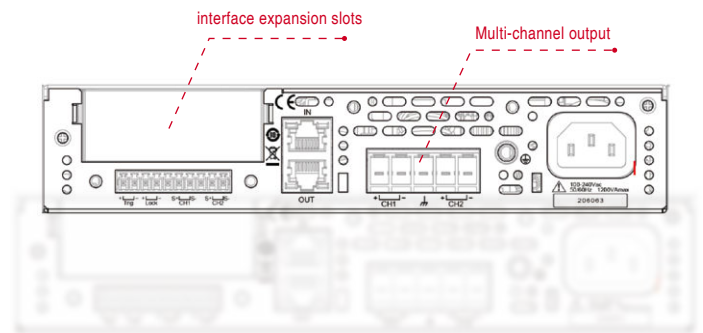
IT-M3100D has a built-in Web server. You can monitor and control it through your web browser. After the IT-M3100D and the computer are connected via LAN interface, enter the IP address of the power supply in the browser, and then you can access the front panel control functions including the LAN configuration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



# Your Power Testing Solution

## 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<br>±(% 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<br>±(% 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<br>(% of Output+Offset)/ C  | Voltage      | ≤0.005% + 0.5mV             | ≤0.005% + 0.5mV             |
|   | Current      | ≤0.005% + 0.5mA             | ≤0.005% + 0.5mA             |
| Readback Temperature Coefficient<br>(% of Output+Offset)/ C | 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<br>(% 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<br>(% 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<br>(% 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<br>(% 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.

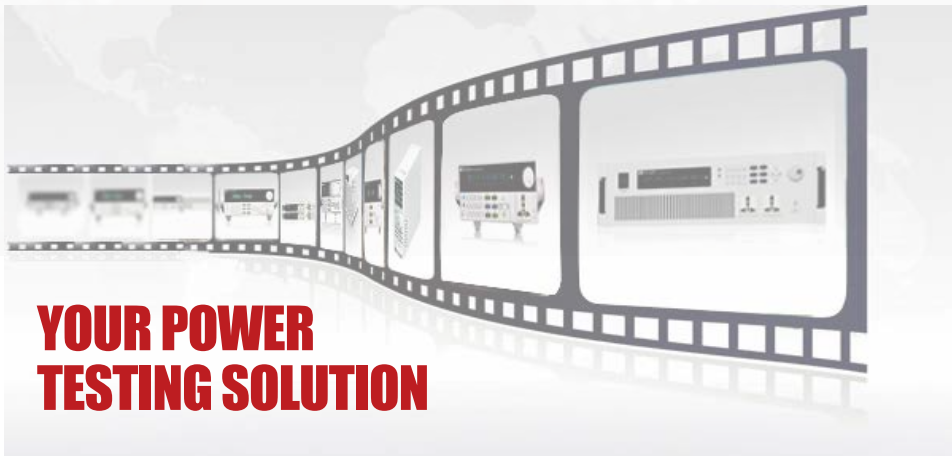
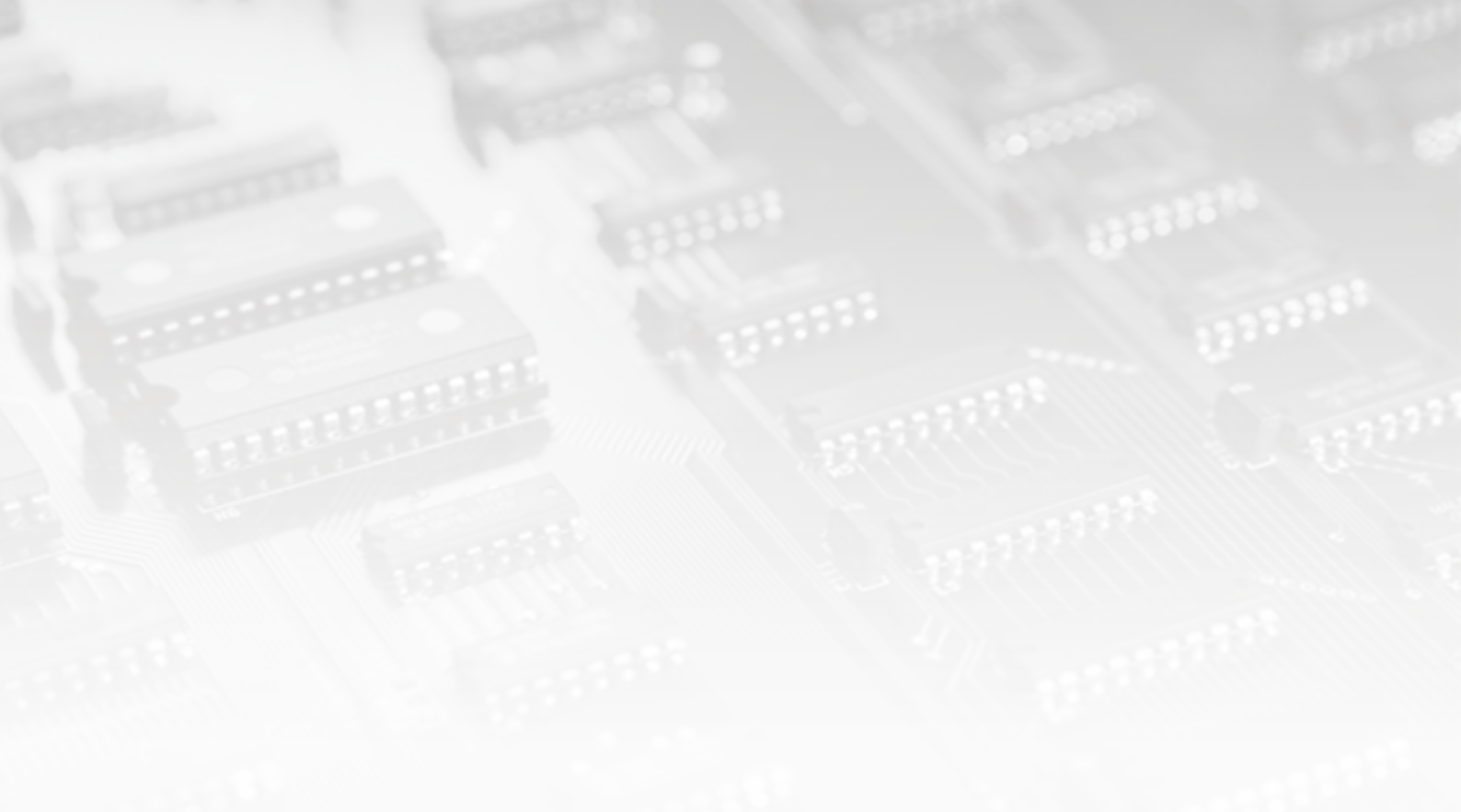
# Your Power Testing Solution

## IT-M3100D Dual-channel DC Power Supply

### 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<br>±(% 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<br>±(% 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<br>(% of Output+Offset)/ C  | Voltage      | ≤ 0.005% + 0.5mV            | ≤ 0.005% + 0.5mV            |
|   | Current      | ≤ 0.005% + 0.5mA            | ≤ 0.005% + 0.5mA            |
| Readback Temperature Coefficient<br>(% of Output+Offset)/ C | 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<br>(% 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<br>(% 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<br>(% 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<br>(% 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                  |

\*This information is subject to change without notice.



This information is subject to change without notice. For more information, please contact ITECH.

## Taipei

Add: No.918, Zhongzheng Rd., Zhonghe Dist., New Taipei City  
235, Taiwan

Web: [www.itechate.com](http://www.itechate.com)

TEL: +886-3-6684333

E-mail: [info@itechate.com](mailto:info@itechate.com)

## Factory I

Add: No.108, XiShanqiao Nanlu, Nanjing city, 210039, China

TEL: +86-25-52415098

Web: [www.itechate.com](http://www.itechate.com)

## Factory II

Add: No.150, Yaonanlu, Meishan Cun, Nanjing city, 210039, China

TEL: +86-25-52415099

Web: [www.itechate.com](http://www.itechate.com)



ITECH Web



ITECH Facebook



ITECH LinkedIn