

## Product

IT-M3100 Ultra-compact Wide Range DC Power Supply

# **Grand Unveiling of IT-M series**



# **IT-M3100** Ultra-compact Wide Range DC Power Supply

## **APPLICATIONS**

- Research
- Multi-channel

- Design
- ATS

Verification

Your Power Testing Solution



# IT-M3100 Series **Ultra-compact Wide Range DC Power Supply**

Callech			
CHITECH	100	1.121-	
		100	0 0.000 0.000 0.000 0.000
Сатесн	181	1389.00	
		1101-	
CHIERCH		-	

To meet increasing test demands from various industries, ITECH newly released IT-M3100 series is not only innovative in terms of product technology, but also from the perspective of industry application to provide complete innovative solutions. Breaking through the traditional tech limits, in the ultra compact size of only 1U Half-Rack, the unit can not only output high power, but also has high performance and versatility. It supports the master-slave parallel mode. The full range of models support multiple stacking and parallel connection by handily designing "leg" plug-in. Fit with rack mount kit to achieve the perfect use. This new series will empower the engineers with innovation and implement test technology advancements more guickly and more accurately.

The IT-M3100 series consists of 12 models, providing 6 voltages grades, and can be combined to achieve a variety of output power. It has a flexible modular architecture, independent multi-channel design, and supports synchronous operation. Users can configure each channel according to the test requirements of DUT, up to max. 16\*16 channels, to meet the needs of customized solutions. It has a wide range of application values and is suitable for a variety of applications such as research and development, design verification and automatic test systems intergration.

#### FEATURE

- 1U Half-Rack, Ultra-Compact Size
- · Adjustable rising/falling speed of output current, to meet various test applications
- · High speed test, up to 10 times per second
- Up to 100 steps LIST operation, support output of various dynamic waveforms
- Support CC/CV loop speed and priority setting
- · Parallel or series operation can be easily controlled by one unit
- Independent control of multi- channels, one communication card can control up to 16 channels, max.256 channels
- · Support output of different timings of each channel, can synchronize or delay the output, and supports the output of different ratios of voltage

- Support CANOPEN, LXI, SCPI and other communication protocols
- Five optional cards for plug-and-play function, providing RS232, CAN, LAN, GPIB, USB\_TMC, USB\_VCP, RS485, external analog and IO r communication interfaces
- Support TRACE function, can draw voltage and current waveforms in real time (Supported by program)
- Battery charging test function
- Software watchdog provides more reliable and safe automatic battery test solution
- Various protection functions such as OVP, ±OCP, ±OPP, OTP, ensure secure testing
- · Provide self-locking function, when the device is self-locked, the device will not be able to output

20V			
Model	Voltage	Current	Power
IT-M3110	20V	100A	400W
IT-M3120	20V	100A	850W

1	5		1	
	J	U	v	

Model	Voltage	Current	Power
IT-M3113	150V	12A	400W
IT-M3123	150V	12A	850W

30V

Model	Voltage	Current	Power		
IT-M3111	30V	70A	400W		
IT-M3121	30V	70A	850W		

#### 300V

Model	Voltage	Current	Power		
IT-M3114	300V	6A	400W		
IT-M3124	300V	6A	850W		

80V			
Model	Voltage	Current	
IT-M3112	80V	22A	

80V

Power 400W

850W

#### 600V

IT-M3122

Model	Voltage	Current	Power		
IT-M3115	600V	3A	400W		
IT-M3125	600V	3A	850W		

22A

\* Models coming soon 20V/30V/80V/150V



**01** IT-M3100 Ultra-compact Wide Range DC Power Supply

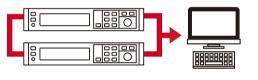
## Ultra-compacted - Only 1/2 1U

IT-M3100 series power supply is only 1/2 1U. But its maximum output power is up to 850W. It has not only high power density, but also has high precision and resolution and reliable stability. The maximum output voltage is up to 600V and maximum output current is up to 100A. Since the output voltage and current are restricted by limited power, lower current can get higher voltage and lower voltage can get higher current. One unit can be used in various applications.

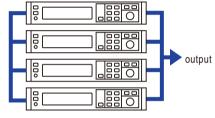


### Parallel or series operation can be easily controlled by one unit

IT-M3100 is extensible. Users can have different current or voltage by units parallel or series connection. For parallel connection, the maximum units quantity is up to 4. For series connection, the maximum units quantity is up to 2.



2 units IT-3120 series connection

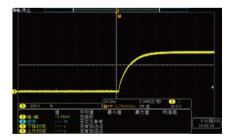


4 units IT-3120 parallel connection

## CC&CV Priority

\*The maximum voltage is not more than 1100V.

IT-M3100 series keep the function of CC/CV priority. It can make the test easier especially for the applications like high speed power supply or no overshooting current. Users can get fast voltage rising time by CV priority mode. This is helpful in the high speed voltage test. Users can also choose CC priority mode to output no overshooting current. It's good for test DUT under CC working condition. This is used in various application field such as laser test, IC test, charge and discharge test, military, transient simulation of power supply in automotive electronics and so on.



CV priority, voltage without overshoot



CC priority, current without overshoot

## Synchronism

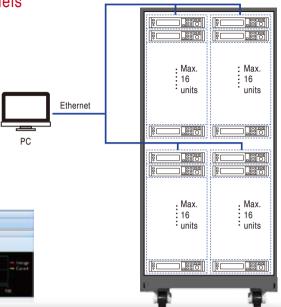
IT-M3100 has the function of synchronism between multiple channels. There are 3 options On/Off Track Duplicate. The synchronism works for On/Off, Save/Recall, Priority mode, rising or falling of voltage and current value setting and function of Protect. And the voltage change can be proportional between different units.

### Multi-channel independent control, maximum 256 channels

IT-M3100 Series is provided with independent multi-channel design. The channel sequence will be displayed when 16 units IT-M3100 combines to be a multi-channel power system. The user can control each unit independently by PC software when connecting the communication interface of one unit with PC. Each channel can be operated separately.

IT-M3100 supports maximum 16\*16 channels. One 37U rack case contains 64 channels. The user may test DUTs with different power ranges by parallel connection, making tests more flexible and device usage more efficient.

	100 0			1 4	142	ac .	- 10		inv (	a second	关闭	-	20.41		_	_		
0 0.00	v sa	1.0	8,83	0 - 1	cv.	ec	<b>.</b>	1.1	ev (	10004	- Xint	80	nн					



#### IT-M3100 multi-channel power supplies are widely used in production testing, multi-channel load aging system, integrated circuits etc. fields.

Application 1 When the product is powered by DC and need to do aging test by many channels, similar to DC-DC converter, the charge part of battery aging test, and circuit board etc., the multi-channel power supply is a must, to ensure the synchronization and output consistency. Meanwhile, the program command is much simpler for system test. The user needs to send many commands to control each power supply with traditional multiple units of power supplies. By using M3100, the user only need to synchronize multiple units, and send one command to control the master unit only.

Application 2 Nowadays, the development of integrated circuits tends to be miniaturized. Most of the AC input voltage requires multiple power supplies to realize. Normally a high-voltage main input and multiple voltage auxiliary inputs are required. The multi-channel power supply is needed to do AC input test. If adopts the traditional multiple power supply to multi-path mode physically, it will cause asynchronous control, and result in the circuit board not working. The M31 series adopts the synchronous trigger output function to ensure the synchronization of the output, effectively solve this problem.



### Modular design, flexible combination

IT-M3100 breaks through the shackles of traditional product design, with a patented design and side ventilation design. The flexible modular design makes it simple for IT-M3100 to stack directly, no need to purchase any accessories. The open structure brings users with different free combinations, just like blocks stacking, simple and convenient.



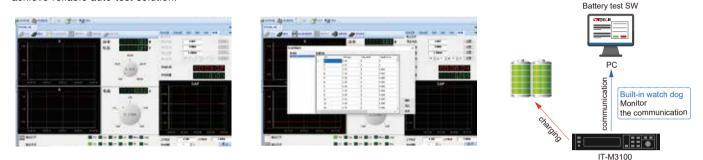


\* Stack up to 10 units without rack mount kit

**13** IT-M3100 Ultra-compact Wide Range DC Power Supply

## Battery Charging function

IT-M3100 series can test batteries with its battery charging function. The users can set different parameters as turn off conditions: voltage, current, capacity and charging time. When any of the above parameters meet the set condition, it will shut off the test automatically. During the process, the users can observe the voltage, charging time and capacity. Additionally, IT-M3100 can be operated with software, which to achieve reliable auto-test solution.



## Rack mount kit

IT-M3100 series adopts high density design with 1/2 1U space. Users may put 2-3 units on bench for initial tests at low power with less channels. When they need more power or more channels, it is convenient to use IT-E154 to gather one or multiple units IT-M3100 to install into the rack case. It is flexible for the customers to configure based on specific requirements to avoid waste.



## Optional accessory

IT-M3100 series rear panel provide below listed optional extension interfaces for users to choose. Optional rack mount kit is also available.

Pictures	Model	Interface
	IT-E1205	GPIB Interface
	IT-E1206	USB/LAN Interface
	IT-E1207	RS-232/CAN Interface
	IT-E1208	Analogue interface /RS485 Interface
	IT-E1209	USB Interface
	IT-E251	Connection Cable







Rear panel with optional interface

#### Specification

		IT-M3110	IT-M3111			
	Voltage	0~20V	0~30V			
Rated Input Value	Current	0~100A	0~70A			
(0°C-40°C)	Power	400W	400W			
Load Regulation	Voltage	≤0.01%+30mV	≤0.01%+20mV			
(% of Output+Offset)	Current	≤0.1%+100mA	≤0.1%+100mA			
Power Regulation	Voltage	≤0.01%+20mV	≤0.01%+20mV			
(% of Output+Offset)	Current	≤0.1%+100mA	≤0.1%+100mA			
	Voltage	1mV	10mV			
Setup Resolution	Current	10mA	10mA			
	Voltage	1mV	10mV			
Readback Resolution	Current	10mA	10mA			
Setting Accuracy	Voltage	≤0.03%+30mV	≤0.03%+20mV			
within 12 months 25°±5° ±(%of Output +Offset)	Current	≤0.1%+100mA	≤0.1%+70mA			
Readback Accuracy	Voltage	≤0.03%+20mV	≤0.03%+20mV			
within 12 months 25°±5°	Current	≤0.1%+100mA	≤0.1%+70mA			
±( %of Output +Offset ) Ripple	Voltage	≤80mVp-p	≤80mVp-p			
(20Hz -20MHz)	Current	≤ 00mVp-p ≤ 100mArms	≤70mArms			
Setting Temperature	Voltage	100 PPM/°C+20mV	100 PPM/°C+20mV			
Coefficient	Current	200 PPM/°C+30mA	200 PPM/°C+30mA			
± (PPM/C+Offset) Readback Temperature	Voltage	100 PPM/°C+20mV	100 PPM/°C+20mV			
Coefficient	Current	200 PPM/°C+2011V				
± (PPM/C+Offset)	Voltage		200 PPM/°C+30mA			
Rising Time (no load)	-	≤60mS	≤80mS			
Rising Time (CR full load) Falling Time (no load)	Voltage Voltage	≤150mS	≤200mS			
Falling Time (CR full load)	-	≤1S	≤4S			
	voltage	$\leq$ 300mS	≤300mS e rated output voltage (10%-90%load)≤1mS			
Dynamic Mode Working Tem.						
Dimension (mm)			10			
Net. Weight			Kg			
			meter			
	Voltage 1	176V~ 264V (400W)	176V~ 264V (400W)			
AC Input	Voltage 2	99V~ 121V (400W)	99V~ 121V (400W)			
	Frequency	47Hz~63Hz	47Hz~63Hz			
Setup Stability-30min	Voltage	100 PPM/°C+10mV	100 PPM/ <sup>°</sup> C+10mV			
(PPM+Offset)	Current	200 PPM/°C+50mA	200 PPM/°C+50mA			
Setup Stability-8h	Voltage	100 PPM/°C+10mV	100 PPM/ <sup>°</sup> C+10mV			
(PPM+Offset)	Current	200 PPM/°C+50mA	200 PPM/ <sup>°</sup> C+50mA			
Readback Stability-30min	Voltage	100 PPM/°C+10mV	100 PPM/C+10mV			
(PPM+Offset)	Current	200 PPM/°C+70mA	200 PPM/ <sup>°</sup> C+70mA			
Readback Stability-8h	Voltage	100 PPM/°C+10mV	100 PPM/°C+10mV			
(PPM+Offset)	Current		200 PPM/°C+70mA			
Efficiency			76%			
Remote Sense Compensat	ion Voltage	76% 3V	3V			
Command Response Time	-	3V 10~600mS	10~600mS			
Power Factor						
Maximum Input Current		0.9 6A	0.9			
Maximum Input Apparent F	Power		6A			
Storage Tem.		600VA	600VA			
		-10°C~70°C				
Protection		OVP/OCP/OTP	OVP/OCP/OTP			
Isolation ( output to ground	1)	500V	500V			

#### Specification

		IT-M3112	IT-M3113			
	Voltage	0~80V	0~150V			
Rated Input Value	Current	0~22A	0~12A			
(0°C-40°C)	Power	400W	400W			
Load Regulation	Voltage	≤0.01%+40mV	≤0.01%+100mV			
(% of Output+Offset)	Current	≤0.1%+20mA	≤0.1%+10mA			
	Voltage	≤0.01%+40mV	≤0.1%+20mV			
Power Regulation	Current	≤0.1%+20mA	≤0.1%+20mA			
(%of Output+Offset)	Voltage	10mV	10mV			
Setup Resolution	Current	1mA	1mA			
	Voltage	10mV	10mV			
Readback Resolution	Current	1mA	1mA			
Setting Accuracy		≤0.03%+40mV	≤0.03%+75mV			
within 12 months 25°±5°	Voltage					
±( %of Output +Offset ) Readback Accuracy	Current	≤0.1%+30mA	≤0.1%+10mA			
within 12 months 25°±5°	Voltage	≤0.03%+40mV	≤0.03%+75mV			
±( %of Output +Offset )	Current	≤0.1%+30mA	≤0.1%+10mA			
Ripple	Voltage	≤100mVp-p	≤ 150mVp-p			
(20Hz -20MHz)	Current	≤40mArms	≤20mArms			
Setting Temperature Coefficient	Voltage	100 PPM/°C+20mV	100 PPM/ C +20mV			
± (PPM/C+Offset)	Current	200 PPM/°C+30mA	200 PPM/ C +30mA			
Readback Temperature Coefficient	Voltage	100 PPM/°C+20mV	100 PPM/ C +20mV			
± (PPM/C+Offset)	Current	200 PPM/°C+30mA	200 PPM/ C +30mA			
Rising Time (no load)	Voltage	≤80mS	≤80mS			
Rising Time (CR full load)	Voltage	≤200mS	≤200mS			
Falling Time (no load)	Voltage	≤4S	≤4S			
Falling Time (CR full load)	Voltage	≤300mS	≤300mS			
Dynamic Mode		Output voltage is restored to within 0.5% of the	e rated output voltage $(10\%-90\%)$ oad) $\leq 1$ mS			
Working Tem.		0-4	0 °C			
Net. Dimension (mm)		1/2	1U			
Net. Weight		5	Kg			
	· · · · ·		ameter			
	Voltage 1	176V~ 264V (400W)	176V~ 264V (400W)			
AC Input	Voltage 2	99V~ 121V (400W)	99V~ 121V (400W)			
	Frequency	47Hz~63Hz	47Hz~63Hz			
Setup Stability-30min	Voltage	100 PPM/°C+10mV	100 PPM/ <sup>°</sup> C +10mV			
(PPM+Offset)	Current	200 PPM/°C+50mA	200 PPM/ C +50mA			
Setup Stability-8h	Voltage	100 PPM/°C+10mV	100 PPM/ C +10mV			
(PPM+Offset)	Current	200 PPM/°C+50mA	200 PPM/ C +50mA			
Readback Stability-30min	Voltage	100 PPM/°C+10mV	100 PPM/ <sup>°</sup> C +10mV			
(PPM+Offset)	Current	200 PPM/°C+70mA	200 PPM/ <sup>°</sup> C +70mA			
Readback Stability-8h	Voltage	100 PPM/°C+10mV	100 PPM/ <sup>°</sup> C +10mV			
(PPM+Offset)	Current	200 PPM/°C+70mA	200 PPM/ °C +70mA			
Efficiency		76%	76%			
Remote Sense Compensa	tion Voltage	3V	3V			
Command Response Time		10~600mS	10~600mS			
Power Factor		0.9	0.9			
Maximum Input Current		6A	64			
Maximum Input Apparent I	Power	60VA	600VA			
Storage Tem.		-10°C~70°C	-10°C ~70°C			
Protection		OVP/OCP/OTP	OVP/OCP/OTP			
		500V	500V			
Isolation ( output to ground	) (נ	900V	VUUC			

#### Specification

$\begin{tabular}{ c c c c } \hline IT-M3114 & IT-M3115 \\ \hline IT-M3116 & IT-M3116 \\ \hline IT-M3116 & IT-M3116 \\ \hline Rated Input Value (0 C + 0 C) & Voltage (0 - 300V) & 0 - 600V \\ \hline Current & 0 - 6A & 0 - 3A \\ \hline Power & 400W & 400W \\ \hline Load Regulation & Voltage (0 - 0.01\% + 100mV) & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 100mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 150mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 150mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 150mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 150mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 0.01\% + 20mA & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 10mV & 0 - 0.01\% + 150mV \\ \hline (\% of Output+Offset) & Current & 1mA & 1mA \\ \hline Readback Resolution & Voltage & 10mV & 0 - 0.01\% + 0.00W \\ \hline Current & 1mA & 10mV \\ \hline Current & 1mA & 0 - 10mV \\ \hline Current & 1mA & 0 - 10mV \\ \hline (Units 12 months 25° + 5) & Voltage & 0.03\% + 200mV & 0 - 0.03\% + 200mV \\ \hline \end{tabular}$	
Rated hight valueCurrent0~6A0~3A $(0 C-40 C)$ Power400W400WLoad RegulationVoltage $\leq 0.01\%+100mV$ $\leq 0.01\%+150mV$ $(\% of Output+Offset)$ Current $\leq 0.1\%+20mA$ $\leq 0.1\%+20mA$ Power RegulationVoltage $\leq 0.01\%+150mV$ $\leq 0.01\%+150mV$ $(\% of Output+Offset)$ Current $\leq 0.1\%+20mA$ $\leq 0.01\%+150mV$ $(\% of Output+Offset)$ Current $\leq 0.1\%+20mA$ $\leq 0.01\%+150mV$ $(\% of Output+Offset)$ Current $\leq 0.1\%+20mA$ $\leq 0.1\%+20mA$ Setup ResolutionVoltage10mV10mVReadback ResolutionVoltage10mV10mVReadback ResolutionVoltage10mV10mVSetting AccuracyVoltage $< 0.03\%+200mV$ $< 0.03\%+200mV$	
PowerPower400W400WLoad RegulationVoltage $\leq 0.01\%+100mV$ $\leq 0.01\%+150mV$ ( $\%$ of Output+Offset)Current $\leq 0.1\%+20mA$ $\leq 0.1\%+20mA$ Power RegulationVoltage $\leq 0.01\%+150mV$ $\leq 0.01\%+150mV$ ( $\%$ of Output+Offset)Current $\leq 0.01\%+150mV$ $\leq 0.01\%+20mA$ Setup ResolutionVoltage10mV10mVCurrent10mV10mV10mVReadback ResolutionVoltage10mV10mVSetting AccuracyVoltage $< 0.03\%+200mV$ $< 0.03\%+200mV$	
( $\%$ of Output+Offset)Current $\leq 0.1\%+20mA$ $\leq 0.1\%+20mA$ Power RegulationVoltage $\leq 0.01\%+150mV$ $\leq 0.01\%+150mV$ ( $\%$ of Output+Offset)Current $\leq 0.1\%+20mA$ $\leq 0.1\%+20mA$ Setup ResolutionVoltage10mV10mVCurrent1mA1mAReadback ResolutionVoltage10mVSetting AccuracyVoltage $< 0.03\%+200mV$	
$(\% of Output+Offset)$ Current $\le 0.1\%+20mA$ $\le 0.1\%+20mA$ Power RegulationVoltage $\le 0.01\%+150mV$ $\le 0.01\%+150mV$ $(\% of Output+Offset)$ Current $\le 0.1\%+20mA$ $\le 0.1\%+20mA$ Setup ResolutionVoltage10mV10mVCurrent1mA1mAReadback ResolutionVoltage10mVSetting AccuracyVoltage $< 0.03\%+200mV$	
Provide Hoggenition         Current         ≤ 0.1%+20mA         10mV         10mA         <	
(% of Output+Offset)         Current         ≤0.1%+20mA         ≤0.1%+20mA           Setup Resolution         Voltage         10mV         10mV           Current         1mA         1mA         1mA           Readback Resolution         Voltage         10mV         10mV           Setting Accuracy         Voltage         0.3%+200mV         <0.03%+200mV	
Voltage         10mV         10mV           Setup Resolution         Current         1mA         1mA           Readback Resolution         Voltage         10mV         10mV           Current         10mV         10mV         10mV           Setting Accuracy         Voltage         <0.03%+200mV	
Current         ImA         ImA           Readback Resolution         Voltage         10mV         10mV           Current         ImA         1mA         1mA           Setting Accuracy         Voltage         <0.03%+200mV	
Readback Resolution         Current         1mA         1mA           Setting Accuracy         Voltage         <0.03%+200mV	
Current         1mA         1mA           Setting Accuracy         Voltage         <0.03%+200mV	
$\begin{array}{c} \text{within 12 months 25^{+}5^{-}} \\ \pm (\ \text{\% of Output +Offset}\ ) \end{array}  \begin{array}{c} \text{Current} & \leq 0.1\% + 30 \text{mA} \end{array}$	
Readback Accuracy Voltage <0.03%+200mV <0.03%+200mV	
within 12 months $25^{\circ}\pm 5^{\circ}$ $\pm$ (% of Output +Offset ) Current $\leq 0.1\%$ +30mA $\leq 0.1\%$ +30mA	
Ripple Voltage ≤300mVp-p ≤600mVp-p	
(20Hz -20MHz) Current ≤50mArms ≤30mArms	
Setting Temperature Voltage 100 PPM/°C+100mV 100 PPM/°C+100mV	
Coefficient         Current         200 PPM/°C+10mA         200 PPM/°C+10mA	
Readback Temperature Voltage 100 PPM/°C+100mV 100 PPM/°C+100mV	
Coefficient         200 PPM/°C+10mA         200 PPM/°C+10mA	
Rising Time (no load) Voltage ≤60mS ≤60mS	
Rising Time (CR full load) Voltage ≤200mS ≤200mS	
Falling Time (no load)     Voltage     ≤6S     ≤6S	
Falling Time (CR full load)     Voltage     ≤300mS	
Dynamic Mode Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load)≤1mS	
Working Tem. 0-40°C	
Dimension (mm) ½1U	
Net. Weight 5Kg	
Parameter	
Voltage 1 176V~ 264V (400W) 176V~ 264V (400W)	
AC Input Voltage 2 99V~ 121V (400W) 99V~ 121V (400W)	
Frequency 47Hz~63Hz 47Hz~63Hz	
Setup Stability-30min Voltage 100 PPM/°C+30mV 100 PPM/°C+30mV	
(PPM+Offset)         Current         200 PPM/°C+60mA         200 PPM/°C+60mA	
Setup Stability-8h         Voltage         100 PPM/°C+30mV         100 PPM/°C+30mV	
(PPM+Offset)         Current         200 PPM/°C+60mA         200 PPM/°C+60mA	
Readback Stability-30min Voltage 100 PPM/°C+30mV 100 PPM/°C+30mV	
(PPM+Offset)         Current         200 PPM/°C+60mA         200 PPM/°C+60mA	
Readback Stability-8h Voltage 100 PPM/°C+30mV 100 PPM/°C+30mV	
(PPM+Offset)         Current         200 PPM/°C+60mA         200 PPM/°C+60mA	
Efficiency 76% 76%	
Remote Sense Compensation Voltage 3V 3V	
Command Response Time 10~600mS 10~600mS	
Power Factor 0.9 0.9	
Maximum Input Current 6A 6A	
Maximum Input Apparent Power 600VA 600VA	
Storage Tem10°C~70°C -10°C~70°C	
Protection OVP/OCP/OTP OVP/OCP/OTP	
Isolation ( output to ground) 600V 600V	

#### Specification

Rated Input Value (0 C -40 C)         Voltage Current         0-20V         0-30V           Load Regulation (2 C -40 C)         Outrent         0-100A         0-77A           Power         850W         850W           Load Regulation (2 of Output-Offset)         Current         ≤0.01%+30mV         ≤0.01%+20mV           Power Regulation (2 of Output-Offset)         Current         ≤0.01%+20mV         ≤0.01%+20mV           Power Regulation (2 of Output-Offset)         Current         ≤0.1%+100mA         ≤0.1%+100mA           Setup Resolution Current         10mA         10mA         10mA           Readback Resolution Current         Current         10mA         10mA           Setup Resolution Current         Current         ≤0.05%+20mV         ≤0.05%+20mV           Voltage         ≤0.05%+20mV         ≤0.05%+20mV         ≤0.05%+20mV			IT-M3120	IT-M3121		
Nate input value         0 - 100 A         0 - 70 A           10 C - 40 C)         Power         850W         850W           Dead Regulation         Voltage         < 0.01%+20mV	V	oltage				
(u C - 40 C)         Power         850W         850W           Load Regulation         Voltage         ≤ 0.01%+20mV         < < 0.01%+20mV		-				
Load Regulation         Votage         ≤0.01%+20mV         ≤0.01%+20mV           (% of Upup+Offset)         Current         ≤0.01%+20mA         ≤0.01%+20mV           Power Regulation         Votage         ≤0.01%+20mV         ≤0.01%+20mV           (% of Upup+Offset)         Current         ≤0.01%+20mV         ≤0.01%+20mV           (% of Upup+Offset)         Current         ≤0.01%+20mV         ≤0.01%+20mV           (% of Upup+Offset)         Current         10mA         10mA           Outage         1mV         10mA         10mA           Current         10mA         10mA         <0.03%+20mV	C-40 C)					
Power Regulation (% of Output-Offset)Voltage $\leq 0.01\%+20mV$ $\leq 0.01\%+20mV$ Setup ResolutionCurrent $\leq 0.1\%+10mA$ $\leq 0.1\%+10mA$ Setup ResolutionCurrent10mA10mACurrent10mA10mA10mAReadback ResolutionCurrent10mA $\leq 0.1\%+10mA$ Setup Accuracy within 12 months 25*25*Voltage $\leq 0.1\%+10mA$ $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Within 12 months 25*25*Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Within 12 months 25*25*Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Setting TemperatureCurrent $\leq 0.07\%+20mV$ $\leq 0.07\%+20mV$ Coefficient $\leq 0.0\%+10mPM*C+20mV$ $\leq 0.00\%+10mVC+20mV$ $\leq 0.00\%+10mVC+20mV$ Setting TemperatureVoltage $\leq 15$ $\leq 300mS$ Setting TemperatureVoltage $\leq 15$ $\leq 43$ Setting TemperatureVoltage $\leq 15$ $\leq 44$ Setting TemperatureVoltage $\leq 15$ $\leq 15$ Setting TemperatureVoltage $\leq 100$		-				
Voltage1mV10mVSetup ResolutionCurrent10mA10mAReadback ResolutionVoltage1mV10mVCurrent10mA10mASetting Accuracy within 12 monts 25*55Voltage $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Editation 12 monts 25*55Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Within 12 monts 25*55Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Within 12 monts 25*55Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Readback Accuracy within 12 monts 25*55Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Current $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ $\leq 0.03*+20mV$ Setting Tamperature CoefficientCurrent $\leq 10mPPPC$ $\leq 00mVp-p$ CoefficientCurrent200 PPMC*40mA200 PPMC *40mACoefficientCurrent200 PPMC*40mA $\leq 200mS$ Endback Temperature CoefficientVoltage $\leq 150mS$ $\leq 300mS$ Rising Time (no load)Voltage $\leq 300mS$ $\leq 300mS$ Paling Time (no load)Voltage $\leq 176V-264V$ (full load) $<44S$ Paling Time (no load)Voltage $\leq 176V-264V$ (full load) $<44S$ Setting Stating Time (Of full load)Voltage $<90V-121V$ (600W) $<90V-121V$ (600W)Paling Time (no load)Voltage $176V-264V$ (full load) $<90V-121V$ (600W)Setting Stating	-	-				
Setup ResolutionCurrent10mA10mAReadback ResolutionVoltage1mV10mASetting Accuracy within 12 monts 25'45' (CurrentVoltage $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Readback Accuracy within 12 monts 25'45' CurrentVoltage $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Readback Accuracy within 12 monts 25'5' CurrentVoltage $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Setting Temperature ContrentVoltage $\leq 0.03\%+20mV$ VoltageCurrent $\leq 0.03\%+20mV$ Setting Temperature ConficientVoltage $\leq 0.03\%+20mV$ VoltageCurrent200 PPM/C+20mV100 PPM/C+20mVSetting Temperature CoefficientVoltage $\leq 00mS$ $\leq 30mS$ VoltageSetting Temperature 						
VoltagetmV10mVReadback ResolutionCurrent10mA10mAReadback ResolutionCurrent $\leq 0.03\% + 20mV$ $\leq 0.03\% + 20mV$ t % 00 Uopt + 0ffset)Current $\leq 0.1\% + 100mA$ $\leq 0.1\% + 70mA$ Readback Accuracy within 12 months 25* 25*Voltage $\leq 0.03\% + 20mV$ $\leq 0.03\% + 20mV$ Readback Accuracy within 12 months 25* 25*Voltage $\leq 0.03\% + 20mV$ $\leq 0.03\% + 20mV$ Readback Accuracy within 12 months 25* 25*Voltage $\leq 0.03\% + 20mV$ $\leq 0.03\% + 20mV$ Readback RepresentationVoltage $\leq 0.03\% + 20mV$ $\leq 0.03\% + 20mV$ Current $\leq 0.1\% + 100mA$ $\leq 0.1\% + 70mA$ $\leq 0.03\% + 20mV$ Setting Temperature CoefficientVoltage $100 PPM'C + 20mV$ $\leq 000 PPM'C + 20mV$ CoefficientCurrent200 PPM'C + 30mA $200 PPM'C + 30mA$ Readback Temperature CoefficientCurrent $200 PPM'C + 30mA$ $200 PPM'C + 30mA$ Readback Temperature CoefficientVoltage $\leq 60mS$ $\leq 80mS$ Readback Temperature CoefficientVoltage $\leq 150mS$ $\leq 300mS$ Readback Temperature CoefficientVoltage $\leq 00tput voltage is restored to within 0.5% of the rated output voltage (10% + 90% load) < 1mS$	p Resolution	-				
Readback ResolutionCurrent10mA10mASetting Accuracy within 12 months 25*s5* ( %or logui + Oftest )Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Setting Accuracy within 12 months 25*s5* ( %or logui + Oftest )Current $\leq 0.1\%+100mA$ $\leq 0.1\%+70mA$ Readback Accuracy within 12 months 25*s5* ( %or logui + Oftest )Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Current $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Current $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Current $\leq 0.1\%+100mA$ $\leq 0.03\%+20mV$ Setting Temperature Cofficient $t (PPM C-01fset)$ Voltage $\leq 0.03\%+20mV$ Coefficient $t (PPM C-01fset)$ Voltage $100 PPM'C+20mV$ $100 PPM'C+20mV$ Coefficient $t (PPM C-01fset)$ Voltage $\leq 60mS$ $\leq 80mS$ Readback Temperature Coefficient $t (PPM C-01fset)$ Voltage $\leq 150mS$ $\leq 200mS$ Readback Temperature Coefficient $t (PPM C-01fset)$ Voltage $\leq 150mS$ $\leq 300mS$ Readback Temperature CourrentVoltage $\leq 300mS$ $\leq 300mS$ Norking Tem.Voltage $\leq 150mS$ $\leq 300mS$ Paling Time (no load)Voltage $\leq 150mS$ $\leq 300mS$ Paling Time (CR full load)Voltage $\leq 300mS$ $\leq 300mS$ Voltage 1176V-264V (full load) $176V-264V (full load)$ $\leq 150mS$ Voltage 299'-121V (600W)99'-121V (600W) $\leq 100 PPM/'C+10mV$ Verify 4176V-264V (full load)176V-264V (full load)V						
Satting Accuracy within 12 months 25's5' c1 %iol Output +Offset)Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Readback Accuracy within 12 months 25's5' c1 %iol Output +Offset)Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Woltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Woltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Current $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Solting Accuracy t1 %iol Output +Offset)Voltage $\leq 0.03\%+20mV$ Current $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Solting Accuracy t2 %iol Output +Offset)Voltage $\leq 0.03\%+20mV$ Corrent $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Solting Accuracy t2 %iol Output +Offset)Voltage $\leq 0.03\%+20mV$ Corrent $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Solting Accuracy control output +Offset)Voltage $\leq 0.03\%+20mV$ Corrent $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Solting Time (no load)Voltage $\leq 100$ PM/C+20mVCorrent $200$ PPM/C+20mV $\leq 200$ PM/C+20mVSolting Time (CR full load)Voltage $\leq 15$ SSolting Time (CR full load)Voltage $\leq 300mS$ Dynamic ModeVoltage $\leq 0.00\%$ $\leq 300mS$ Norking Tem. $\sim 0.00\%$ $\leq 0.00\%$ $\leq 0.00\%$ Dynamic ModeVoltage 1 $1.76V-264V$ (full load) $1.76V-264V$ (full load)Voltage 299V-121V (600W)99V-121V (600W) $\leq 0.00\%$ Voltage 299V-121V (600W)99V-121V (600W) $\leq 0.00\%$ Setup Stability-30m	dback Resolution	-				
within 12 months 25*:45* (\$ 300 Dupt + Offset)CurrentSOUSMENTReadback Accuracy (\$ 300 Dupt + Offset)Voltage $\leq 0.13\%+100mA$ $\leq 0.13\%+70mA$ Readback Accuracy (\$ 100 Dept / Offset)Current $\leq 0.13\%+100mA$ $\leq 0.13\%+70mA$ RippleVoltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Voltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ Setting Temperature Coefficient (CPMC C+015et)Current $\leq 0.03\%+20mV$ $\leq 30mVp$ Voltage100 PPM/*C+20mV100 PPM/*C+20mV100 PPM/*C+20mVCoefficient (CPFMC C+015et)Current200 PPM/*C+20mV200 PPM/*C+20mVCoefficient (C+015et)Voltage100 PPM/*C+20mV100 PPM/*C+20mVCurrent Rising Time (No load)Voltage $\leq 60mS$ $\leq 80mS$ Stating Time (No load)Voltage $\leq 60mS$ $\leq 200mS$ Stating Time (CR full load)Voltage $\leq 150mS$ $\leq 2300mS$ Stating Time (CR full load)Voltage $\leq 300mS$ $\leq 300mS$ Dynamic Mode Working Tem. $\sim Current$ $Voltage I 176V~264V$ (full load) $176V~264V$ (full load)Voltage 1176V~264V (full load)176V~264V (full load) $176V~264V$ (full load)Voltage 299V~121V (600V) $99V~121V$ (600W)Frequency PM/*C+50mA100 PPM/*C+50mA200 PPM/*C+50mASetup Stability-30min VoltageVoltage100 PPM/*C+10mV100 PPM/*C+50mAVoltage 100 PPM/*C+50mA200 PPM/*C+50mA200 PPM/*C+50mASetu						
Beadback Accuracy within 12 months 22*5° within 12 months 22*5° currentVoltage $\leq 0.03\%+20mV$ $\leq 0.03\%+20mV$ RippleVoltage $\leq 0.1\%+70mA$ $\leq 0.1\%+70mA$ RippleVoltage $\leq 0.1\%+70mA$ $\leq 0.1\%+70mA$ RippleVoltage $\leq 0.00Mrp.p$ $\leq 0.00Mrp.p$ Setting Temperature Coefficient $\epsilon$ (PPM C+0ffset)Voltage100 PPM/C+20mV $\leq 0.00PM/C+20mV$ Corrent200 PPM/C+20mV00 PPM/C+20mV00 PPM/C+20mVCoefficient $\epsilon$ (PPM C+0ffset)Voltage100 PPM/C+20mV00 PPM/C+20mVCoefficient $\epsilon$ (PPM C+0ffset)Voltage $\leq 0000S$ $\leq 80mS$ Rising Time (CR full load)Voltage $\leq 150mS$ $\leq 200mS$ Setting Time (CR full load)Voltage $\leq 300mS$ $\leq 300mS$ Dynamic Mode Norking Tem.Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load) $\leq 1mS$ Norking Tem. $Voltage$ $176V-264V$ (full load) $176V-264V$ (full load)Norking Tem.Voltage $209Y-121V$ (600W) $99V-121V$ (600W)ParameterVoltage $209Y-121V$ (600W) $99V-121V$ (600W)ParameterVoltage $100$ PPM/C+10mV $100$ PPM/C+10mV(PPM-0ffset)Current $200$	in 12 months 25°±5°	-				
within 12 months 25° ±5° (Mage d)Change d)Constraint (Mage d)RippleVoltage $\leq 0.1\%+T0mA$ $\leq 0.1\%+T0mA$ RippleVoltage $\leq 0.1\%+T0mA$ $\leq 0.1\%+T0mA$ Setting Temperature Coefficient ( PPM-C+20ffset)Current $\leq 100$ PPM/°C+20mV100 PPM/°C+20mVCurrent200 PPM/°C+20mA200 PPM/°C+20mV200 PPM/°C+20mVCurrent200 PPM/°C+20mA200 PPM/°C+20mVCoefficient ( PPM-C+Cffset)Current200 PPM/°C+20mA200 PPM/°C+30mACoefficient ( PPM-C+Cffset)Voltage $\leq 60mS$ $\leq 80mS$ Rising Time (no load)Voltage $\leq 60mS$ $\leq 80mS$ Voltage $\leq 150mS$ $\leq 200mS$ Staing Time (CR full load)Voltage $\leq 300mS$ Voltage $\leq 300mS$ $\leq 300mS$ Synamic ModeVoltage $\leq 300mS$ Norking Tem.Output voltage is restored to within 0.5% of the rated output voltage (10%-90%/load) $\leq 1mS$ Norking Tem.Output voltage is restored to within 0.5% of the rated output voltage (10%-90%/load) $\leq 1mS$ Norking Tem.Output voltage is restored to within 0.5% of the rated output voltage (10%-90%/load) $\leq 1mS$ Norking Tem.Voltage 1176V-264V (full load)Voltage 1176V-264V (full load)176V-264V (full load)Voltage 299V-121V (600W)99V-121V (600W)Setup Stability-30minVoltage100 PPM/°C+10mV(PPM-Offset)Current200 PPM/°C+50mASetup Stability-30minVoltage100 PPM/°C+10mV(PPM-Offset)<						
Inspile         Voltage         ≤80mVp-p           20Hz - 20MHz)         Current         ≤100mAms         ≤70mArms           20Hz - 20MHz)         Current         ≤100mPM/°C+20mV         100 PPM/°C+20mV           Setting Tamperature Coefficient ( PPM/C+0ffset)         Current         200 PPM/°C+30mA         200 PPM/°C+30mA           Setting Time (no load)         Voltage         100 PPM/°C+20mV         100 PPM/°C+20mV           Setting Time (no load)         Voltage         100 PPM/°C+20mV         200 PPM/°C+30mA           Setting Time (no load)         Voltage         ≤60mS         ≤80mS           Sising Time (No load)         Voltage         ≤150mS         ≤400mS           Setting Time (no load)         Voltage         ≤300mS         ≤400mS           Setting Time (no load)         Voltage         ≤300mS         ≤400mS           Setting Time (no load)         Voltage         ≤300mS         ≤400mS           Setting Time (no load)         Voltage         ≤100mV voltage is restored to within 0.5% of the rated output voltage (10%-90%load) ≤ 1mS           Norking Tem.         Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load) ≤ 1mS           Norking Tem.         Output voltage 116/C>-264V (full load)         176/C>-264V (full load)           Norking Tem.         0vot	in 12 months 25°±5°	-				
20Hz - 20HHz)         Current         ≤ 100 mArms         ≤ 70 mArms           Setting Temperature Softing in temperature Current         100 PPM/°C + 20mV         100 PPM/°C + 20mV           Setting Temperature Softing in t (PPM/ C + 0fiset)         Current         200 PPM/°C + 20mV         100 PPM/°C + 20mV           Voltage         100 PPM/°C + 20mV         100 PPM/°C + 20mV         100 PPM/°C + 20mV           Setting Time (no load)         Voltage         100 PPM/°C + 20mV         200 PPM/°C + 20mV           Sising Time (no load)         Voltage         ≤ 60mS         ≤ 200mS           Sating Time (CR full load)         Voltage         ≤ 15mS         ≤ 200mS           Sating Time (CR full load)         Voltage         ≤ 300mS         ≤ 300mS           Output voltage is restored to within 0.5% of the rated output voltage (10%-90% load) ≤ 1mS         S00mS           Norking Tem.         0-40°C         0-40°C           Dimension (mm)         ×         Yoltage 1         176V~ 264V (full load)         176V~ 264V (full load)           Nerking Tem.         0         4/0°C         209/0°L 21V (600W)         99/0°L 21V (600W)           Setup Stability-30min         Voltage 1         176V~ 264V (full load)         176V~ 264V (full load)           QPM-121V (600W)         100 PPM/°C+10mV         100 PPM/°C+10mV	or eulput rencot )					
Setting Temperature Coefficient ( PPM/ C + Offset)         Voltage         100 PPM/°C + 20mV           Current         200 PPM/°C + 30mA         200 PPM/°C + 30mA           Readback Temperature ( PPM/ C + Offset)         Voltage         100 PPM/°C + 20mV           Current         200 PPM/°C + 30mA         200 PPM/°C + 20mV           Setting Temperature ( PPM/ C + Offset)         Voltage         60mS         ≤80mS           Rising Time (no load)         Voltage         ≤150mS         ≤200mS           Falling Time (no load)         Voltage         ≤300mS         ≤300mS           Dynamic Mode         Voltage         ≤300mS         ≤300mS           Dynamic Mode         Voltage         ≤300mS         ≤300mS           Working Tem.         0-40°C         %1U         %1U           Dimension (mm)         Voltage 2         99V - 121V (600W)         99V - 121V (600W)           Yotage 1         176V - 264V (full load)         176V - 264V (full load)         100 PPM/°C + 10mV           AC Input         Voltage 1         176V - 264V (full load)         100 PPM/°C + 10mV           Keepency         47142 - 6314z         47142 - 6314z         47142 - 6314z           Setup Stability-30min         Voltage         100 PPM/°C + 10mV         100 PPM/°C + 10mV		-				
Conficient         Control         Control         Control           4 (PBM/C + Offset)         Current         200 PPM/C + 30mA         200 PPM/C + 30mA           Padback Temperature Coefficient 4 (PBM/C + Offset)         Current         200 PPM/C + 30mA         200 PPM/C + 30mA           Current         200 PPM/C + 30mA         200 PPM/C + 30mA         200 PPM/C + 30mA           Rising Time (no load)         Voltage         ≤ 60mS         ≤ 80mS           Rising Time (no load)         Voltage         ≤ 150mS         ≤ 200mS           Falling Time (no load)         Voltage         ≤ 300mS         ≤ 300mS           Optimic Mode         Voltage         ≤ 300mS         ≤ 300mS           Working Tem.         Output voltage is restored to within 0.5% of the rated output voltage (10%-90% load) ≤ 1mS           Working Tem.         Voltage         90% - 121V (600W)           Nortage 1         176V - 264V (full load)         176V - 264V (full load)           Notage 1         176V - 264V (full load)         176V - 264V (full load)           Voltage 1         176V - 264V (full load)         176V - 264V (full load)           Voltage 1         176V - 264V (full load)         176V - 264V (full load)           Voltage 1         176V - 264V (full load)         176V - 264V (full load)	<b>T</b> 1					
	ficient	-		100 PPM/ <sup>*</sup> C+20mV		
Coefficient         Current         200 PPM/°C + 30mA         200 PPM/°C + 30mA           Rising Time (no load)         Voltage         ≤ 60mS         ≤ 80mS           Rising Time (no load)         Voltage         ≤ 150mS         ≤ 200mS           Falling Time (no load)         Voltage         ≤ 150mS         ≤ 4S           Falling Time (no load)         Voltage         ≤ 300mS         ≤ 300mS           Dynamic Mode         Voltage         ≤ 300mS         ≤ 300mS           Dynamic Mode         Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load) ≤ 1mS           Working Tem.         0-40°C           Dimension (mm)         ✓         ✓           Net. Weight         ✓         Stap           AC Input         Voltage 1         176V~ 264V (full load)         176V~ 264V (full load)           Voltage 2         99V~ 121V (600W)         99V~ 121V (600W)         99V~ 121V (600W)           Frequency         47Hz~63Hz         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+10mV           (PPM+offset)         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV	PPM/C+Offset) C		200 PPM/°C+30mA	200 PPM/ <sup>*</sup> C+30mA		
± (PPM/C+Offset)         Current         200 PPM/C+30mA         200 PPM/C+30mA           Rising Time (no load)         Voltage         ≤ 60mS         ≤ 80mS           Rising Time (CR full load)         Voltage         ≤ 150mS         ≤ 200mS           Falling Time (no load)         Voltage         ≤ 300mS         ≤ 300mS         ≤ 300mS           Dynamic Mode         Voltage         ≤ 300mS         ≤ 300mS <t< td=""><td></td><td>oltage</td><td>100 PPM/°C+20mV</td><td>100 PPM/<sup>°</sup>C+20mV</td></t<>		oltage	100 PPM/°C+20mV	100 PPM/ <sup>°</sup> C+20mV		
Ring Time (CR full load)         Voltage         ≤ 150mS         ≤ 200mS           Falling Time (CR full load)         Voltage         ≤ 15         ≤ 45           Falling Time (CR full load)         Voltage         ≤ 300mS         ≤ 300mS           Dynamic Mode         Voltage         ≤ 300mS         ≤ 300mS           Dynamic Mode         Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load) ≤ 1mS           Working Tem.         0-40°C           Dimension (mm)         *           Net. Weight            Voltage 1         176V- 264V (full load)           Net. Weight         176V- 264V (full load)           AC Input         Yoltage 1           Yoltage 2         99V- 121V (600W)           Frequency         47Hz-63Hz           Yoltage 2         99V- 121V (600W)           Frequency         47Hz-63Hz           Yoltage 1         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA           Setup Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA           Setup Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current		urrent	200 PPM/°C+30mA	200 PPM/ <sup>°</sup> C +30mA		
Falling Time (no load)         Voltage         ≤1S         ≤4S           Falling Time (no load)         Voltage         ≤300mS         ≤300mS           Dynamic Mode         Output voltage is restored to within 0.5% of the rated output voltage (10%-90%load) ≤ 1mS         0-40°C           Working Tem.         0-40°C         104         104           Dimension (mm)         ×10         110         110           Net. Weight         ×10         110         110           AC Input         Voltage 1         176V~ 264V (full load)         176V~ 264V (full load)           AC Input         Voltage 2         99V~ 121V (600W)         99V~ 121V (600W)           Frequency         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+50mA           (PPM+Offset)         Current         200 PPM/°C+10mV         200 PPM/°C+50mA	ng Time (no load) V	oltage	≤60mS	≤80mS		
Falling Time (CR full load)Voltage $\leq 300mS$ $\leq 300mS$ Dynamic ModeOutput voltage is restored to within 0.5% of the rated output voltage (10%-90%load) $\leq 1mS$ Working Tem. $0-40^{\circ}C$ Dimension (mm) $1/76V = 0.40^{\circ}C$ Net. Weight $5Kg$ ParameterVoltage 1176V = 264V (full load)Not. WeightParameterVoltage 1Voltage 1176V = 264V (full load)ParameterVoltage 1Voltage 100 PPM/°C+10mVOO PPM/°C+50mA200 PPM/°C+50mA200 PPM/°C+10mVVoltage 100 PPM/°C+10mVCourrent200 PPM/°C+50mA200 PPM/°C+50mA200 PPM/°C+50mAVoltage 100 PPM/°C+10mVCourrentCourrent200 PPM/°C+10mVVoltag	ng Time (CR full load)	oltage	$\leq$ 150mS	≤200mS		
Dynamic ModeOutput voltage is restored to within 0.5% of the rated output voltage (10%-90%load) $\leq$ 1mSWorking Tem.0-40°CDimension (mm)1/10Net. Weight $K^1U$ ParameterVoltage 1176V~ 264V (full load)176V~ 264V	• • •	-	≤1S	≤4S		
Working Tem.         0-40°C           Dimension (mm)         ½1U           Net. Weight         5Kg           Parameter           AC Input         Voltage 1           Voltage 2         99V~ 121V (600W)           Frequency         47Hz~63Hz           Setup Stability-30min         Voltage           Voltage 1         100 PPM/°C+10mV           (PPM+Offset)         Current           Setup Stability-8h         Voltage           Voltage 1         00 PPM/°C+50mA           Setup Stability-8h         Voltage           (PPM+Offset)         Current           Setup Stability-30min         Voltage           100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV           Readback Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA	ng Time (CR full load) V	oltage	≤300mS	≤300mS		
Voltage 1         1/1000 PPM/°C +10mV           Voltage 2         99V~121V (600W)           AC Input         Voltage 2           Voltage 2         99V~121V (600W)           Frequency         47Hz~63Hz           Setup Stability-30min         Voltage           Voltage 1         00 PPM/°C+10mV           (PPM+Offset)         Current           Setup Stability-8h         Voltage           Voltage 1         00 PPM/°C+10mV           (PPM+Offset)         Current           Current         200 PPM/°C+50mA           Readback Stability-30min         Voltage           Voltage         100 PPM/°C+10mV           00 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV	amic Mode					
Net. Weight         5Kg           Parameter           Net. Weight           Net. Weight           Net. Weight           Parameter           Parameter           Not. Weight           Not. Weight           Voltage 1           Not. Weight           AC Input           Voltage 2           Optimized colspan="2">Parameter           AC Input           Voltage 1           Voltage 2           Optimized colspan="2">Parameter           Parameter           Voltage 1           Voltage 1           Parameter           Voltage 1           Optimized colspan="2">PM/°C+10mV           Current           200 PPM/°C+10mV           Voltage           100 PPM/°C+10mV           Current           200 PPM/°C+10mV           Current           200 PPM/°C+10mV           Current <td colspan<="" td=""><td>king Tem.</td><td colspan="3"></td></td>	<td>king Tem.</td> <td colspan="3"></td>	king Tem.				
Parameter           Voltage 1         176V~ 264V (full load)         176V~ 264V (full load)           AC Input         Voltage 2         99V~ 121V (600W)         99V~ 121V (600W)           Frequency         47Hz~63Hz         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+70mA           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	ension (mm)					
Voltage 1         176V~ 264V (full load)         176V~ 264V (full load)           AC Input         Voltage 2         99V~ 121V (600W)         99V~ 121V (600W)           Frequency         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+70mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         200 PPM/°C+70mA	Weight	5Kg				
AC Input         Voltage 2         99V~121V (600W)         99V~121V (600W)           Frequency         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-3h         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV         200 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+50mA           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA						
Frequency         47Hz~63Hz         47Hz~63Hz           Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h         Voltage         100 PPM/°C+10mV         200 PPM/°C+50mA           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+10mV         200 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA		oltage 1	176V~ 264V (full load)	176V~ 264V (full load)		
Setup Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+10mV           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+50mA           (PPM+Offset)         Current         200 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	nput V	oltage 2	99V~121V (600W)	99V~121V (600W)		
(PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Setup Stability-8h (PPM+Offset)         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           Readback Stability-30min (PPM+Offset)         Voltage         100 PPM/°C+10mV         200 PPM/°C+50mA           Readback Stability-30min (PPM+Offset)         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	F	requency	47Hz~63Hz	47Hz~63Hz		
Setup Stability-8h (PPM+Offset)         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           Readback Stability-30min (PPM+Offset)         Voltage         100 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min (PPM+Offset)         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	up Stability-30min V	oltage	100 PPM/°C+10mV	100 PPM/°C+10mV		
(PPM+Offset)         Current         200 PPM/°C+50mA         200 PPM/°C+50mA           Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	PM+Offset) C	urrent	200 PPM/°C+50mA	200 PPM/°C+50mA		
Readback Stability-30min         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV           (PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	ip Stability-8h V	oltage	100 PPM/°C+10mV	100 PPM/°C+10mV		
Current         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	(PPM+Offset)	urrent		200 PPM/°C+50mA		
(PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA	dback Stability-30min V	oltage	100 PPM/°C+10mV	100 PPM/°C+10mV		
		urrent				
Readback Stability-8h         Voltage         100 PPM/°C+10mV         100 PPM/°C+10mV			100 PPM/°C+10mV	100 PPM/°C+10mV		
(PPM+Offset)         Current         200 PPM/°C+70mA         200 PPM/°C+70mA		urrent				
Efficiency 82% 82%	siency					
Remote Sense Compensation Voltage 3V 3V		n Voltage				
Command Response Time 10~600mS 10~600mS						
Power Factor 0.98 0.98	•					
Maximum Input Current 11A 11A						
Maximum Input Apparent Power 1000VA 1000VA		ver				
Storage Tem.         -10°C~70°C         -10°C~70°C						
	-					
			UVF/UCF/UTF	UVF/UCF/UTF		
Protection         OVP/OCP/OTP         OVP/OCP/OTP           Isolation ( output to ground)         500V         500V			F00V/	F00)/		

#### Specification

	IT-M3122	IT-M3123
Voltage		0~150V
-		0~12A
		850W
		≤0.01%+100mV
-		≤0.1%+20mA
		≤0.01%+40mV
-		≤0.1%+20mA
		10mV
-		1mA
		10mV
-		1mA
		≤0.03%+75mV
-		≤0.1%+10mA
		≤0.03%+75mV
		≤0.1%+10mA
-		≤150mVp-p
-		100 PPM/°C+20mV
		200 PPM/°C+30mA
-		100 PPM/°C+20mV
		200 PPM/°C+30mA
-		≤80mS
		≤200mS
-		≤4S
voltage		≤ 300mS
		.1U
		Kg
Valtara 1		
-		176V~ 264V (full load)
		99V~ 121V (600W)
		47Hz~63Hz
-		100 PPM/°C+10mV
		200 PPM/°C+50mA
-		100 PPM/°C+10mV
		200 PPM/°C+50mA
		100 PPM/°C+10mV
	200 PPM/°C+70mA	200 PPM/°C+70mA
-	100 PPM/°C+10mV	100 PPM/°C+10mV
Current	200 PPM/°C+70mA	200 PPM/°C+70mA
	82%	82%
ion Voltage	3V	3V
ion Voltage	3V 10~600mS	3V 10-600mS
ion Voltage		
	10~600mS	10~600mS
ion Voltage	10~600mS 0.98	10~600mS 0.98
	10~600mS 0.98 11A	10-600mS 0.98 11A
	10~600mS 0.98 11A 1000VA	10-600mS 0.98 11A 1000VA
	VoltageCurrentPowerVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltageCurrentVoltage	Current         0-22A           Power         850W           Voltage         ≤ 0.01%+40mV           Current         ≤ 0.1%+20mA           Voltage         ≤ 0.01%+40mV           Current         ≤ 0.1%+20mA           Voltage         10mV           Current         ≤ 0.1%+20mA           Voltage         10mV           Current         1mA           Voltage         10mV           Current         1mA           Voltage         ≤ 0.03%+40mV           Current         ≤ 0.1%+30mA           Voltage         ≤ 0.03%+40mV           Current         ≤ 0.1%+30mA           Voltage         ≤ 0.03%+40mV           Current         ≤ 0.1%+30mA           Voltage         ≤ 100mVp.p           Current         ≤ 0.03%+40mV           Current         200 PPM*C+20mV           Current         200 PPM*C+20mV           Current         200 PPM*C+20mV           Current         200 PPM*C+30mA           Voltage         ≤ 300mS           Voltage         ≤ 300mS           Voltage         ≤ 48           Voltage         176V- 264V (full load)           Voltage

#### Specification

		IT-M3124	IT-M3125	
	Voltage	0~300V	0~600V	
Rated Input Value	Current	0~6A	0~3A	
(0°C-40°C) Current Power		850W	850W	
Load Regulation	Voltage	≤0.01%+100mV	≤0.01%+150mV	
(% of Output+Offset)	Current	≤0.1%+20mA	≤0.1%+20mA	
Power Regulation	Voltage	≤0.01%+150mV	≤0.01%+150mV	
(% of Output+Offset)	Current	≤0.1%+20mA	≤0.1%+20mA	
	Voltage	10mV	10mV	
Setup Resolution	Current	1mA	1mA	
	Voltage	10mV	10mV	
Readback Resolution	Current	1mA	1mA	
Setting Accuracy	Voltage	≤0.03%+200mV	≤0.03%+200mV	
within 12 months 25°±5°	Current	≤0.1%+30mA	≤0.1%+30mA	
±(%of Output +Offset) Readback Accuracy	Voltage	≤0.73%+200mV	≤0.1%+30mk	
within 12 months 25°±5°	Current	≤ 0.10 / 0720011V ≤ 0.1%+30mA	≤ 0.1%+30mA	
±( %of Output +Offset )	Voltage			
Ripple (20Hz -20MHz)	Current	≤300mVp-p	≤ 600mVp-p ≤ 30mArms	
Setting Temperature	Voltage	$\leq$ 50mArms		
Coefficient	-	100 PPM/°C+100mV	100 PPM/°C+10mV	
± (PPM/C+Offset) Readback Temperature	Current	200 PPM/°C+10mA	200 PPM/°C+10mA	
Coefficient	Voltage	100 PPM/°C+100mV	100 PPM/°C+100mV	
± (PPM/C+Offset)	Current	200 PPM/°C+10mA	200 PPM/°C+10mA	
Rising Time (no load)	Voltage	≤60mS	≤60mS	
Rising Time (CR full load)	Voltage	≤200mS	≤200mS	
Falling Time (no load) Falling Time (CR full load)	Voltage	≤6S	≤6S	
	vollage	$\leq$ 300mS	$\leq$ 300mS	
Dynamic Mode			Output voltage is restored to within 0.5% of the rated output voltage $(10\%-90\%)$ and $\leq 1$ mS 0-40°C	
Working Tem.			½1U	
Dimension (mm)	5Kg			
Net. Weight	Parameter			
	Voltage 1	176V~ 264V (full load)	176V~ 264V (full load)	
AC Input	Voltage 2	99V~ 121V (600W)	99V~ 121V (600W)	
	Frequency	47Hz~63Hz	47Hz~63Hz	
Setup Stability-30min	Voltage	100 PPM/°C+30mV	100 PPM/°C+30mV	
(PPM+Offset)	Current	200 PPM/°C+60mA	200 PPM/°C+60mA	
Setup Stability-8h	Voltage	100 PPM/°C+30mV	100 PPM/°C+30mV	
(PPM+Offset)	Current	200 PPM/°C+60mA	200 PPM/°C+60mA	
	Voltage	100 PPM/°C+30mV	100 PPM/°C+30mV	
Readback Stability-30min (PPM+Offset)	Current	200 PPM/°C+60mA	200 PPM/°C+60mA	
	Voltage	200 PPM/ C+60mA 100 PPM/°C+30mV		
Readback Stability-8h (PPM+Offset)	Current		100 PPM/°C+30mV	
· · · · · · · · · · · · · · · · · · ·		200 PPM/°C+60mA	200 PPM/°C+60mA	
Efficiency Permete Sense Componention Voltage		82%	82%	
Remote Sense Compensation Voltage Command Response Time		3V	3V	
		10~600mS	10~600mS	
Power Factor		0.98	0.98	
Maximum Input Current Maximum Input Apparent Power		11A	11A	
	OWEI	1000VA	1000VA	
Storage Tem.		-10°C~70°C	-10°C~70°C	
Protection		OVP/OCP/OTP	OVP/OCP/OTP	
Isolation ( output to ground)		600V	600V	



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.tw TEL: +886-3-6684333 E-mail: taiwan@itechate.com.tw

#### Xishan Factory

Add: No.108, XiShanqiao Nanlu, Nanjing city, 210039, China TEL: +86-25-52415098 Web: www.itechate.com

#### Meishan Factory

Add: No.150, Yaonanlu, Meishan Cun, Nanjing city, 210039, China TEL: +86-25-52415099 Web: www.itechate.com





ITECH Facebook