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TECHNICAL PRODUCT INFORMATION

Test & measurement instruments

- high - quality
- moderate prices
- excellent precision

Your contact:

Technical support, services, demo & rental equipment, price information
& quotes, consulting:

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High resolution, up to 10nA

Low ripple and low noise

Four ranges of current measurement

CC/CV priority



IT-M3200 high-precision programmable DC power supply adopts a mixed modes design, which not only takes into account high power and low ripple output, but also has dynamic load response, switching between multiple current measurement ranges. It meets various current measurement requirement from ampere level to micro-ampere level.

IT-M3200 has a flexible modular architecture, independent multi-channel design with synchronous operation function. Users can configure each channel arbitrarily according to the test requirements of the DUT. The maximum channels is up to 16*16 which can meet various customized test requirements. It is widely used in the test fields of 3C products, semiconductor devices, 5G, IoT and medical electronic equipment, etc.

FEATURE

- 1U Half-rack, maximum power is up to 360W
- Wide range measurement
- Low ripple and noise
- High resolution, high accuracy and high stability
- Current readback is up to 10nA
- Four current measurement ranges Low/Middle/High/Auto
- CC/CV priority setting
- Foldback
- Adjustable rise/fall time, soft start / stop
- Multi-channel independent control, one communication card can control 16 channels, up to 256 channels
- Different timing output of each channel to achieve synchronization or proportional tracking
- List
- Support multiple communication protocol, CANOPEN, SCPI
- Five optional cards, supporting RS232, CAN, LAN, GPIB, USB_TMC, USB_VCP, RS485, analog and IO
- Multiple protection, OVP/OCV/OTP/OPP/UVP/UCP

Model	Voltage	Current	Power
IT-M3223	60V	10A	100W
IT-M3233	60V	10A	200W
IT-M3243	60V	10A	360W
IT-M3253	20V	20A	100W
IT-M3263	20V	20A	200W
IT-M3273	20V	20A	360W



01 IT-M3200 high-precision programmable DC power supply

Your Power Testing Solution

IT-M3200 high-precision programmable DC power supply

Specification

		IT-M3223	IT-M3233	IT-M3243
Rated Value (0 ℃-40 ℃)	Voltage	0~60V	0~60V	0~60V
	Current	0~10A	0~10A	0~10A
	Power	100W	200W	360W
Load Regulation (% of Output+Offset)	Voltage	$\leq 0.01\% + 5\text{mV}^3$	$\leq 0.01\% + 5\text{mV}^3$	$\leq 0.01\% + 5\text{mV}^3$
	Current	$\leq 0.05\% + 2\text{mA}$	$\leq 0.05\% + 2\text{mA}$	$\leq 0.05\% + 2\text{mA}$
Line Regulation (% of Output+Offset)	Voltage	$\leq 0.02\% + 3\text{mV}$	$\leq 0.02\% + 3\text{mV}$	$\leq 0.02\% + 3\text{mV}$
	Current	$\leq 0.05\% + 1\text{mA}$	$\leq 0.05\% + 1\text{mA}$	$\leq 0.05\% + 1\text{mA}$
Setup Resolution	Voltage	1mV	1mV	1mV
	Current	1mA	1mA	1mA
Readback Resolution	Voltage	1mV	1mV	1mV
	Current	10A Range	1mA	1mA
		20mA Range	1uA ⁴	1uA ⁴
		100uA Range	10nA ⁴	10nA ⁴
Setup accuracy within 12 months, 23 ℃±5 ℃ ±(% of Output + Offset)	Voltage	$\leq 0.03\% + 12\text{mV}^5$	$\leq 0.03\% + 12\text{mV}^5$	$\leq 0.03\% + 12\text{mV}^5$
	Current	$\leq 0.05\% + 5\text{mA}$	$\leq 0.05\% + 5\text{mA}$	$\leq 0.05\% + 5\text{mA}$
Readback accuracy within 12 months, 23 ℃±5 ℃ ±(% of Output + Offset)	Voltage	$\leq 0.03\% + 8\text{mV}$	$\leq 0.03\% + 8\text{mV}$	$\leq 0.03\% + 8\text{mV}$
	Current	10A Range	$\leq 0.05\% + 5\text{mA}$	$\leq 0.05\% + 5\text{mA}$
		20mA Range	$\leq 0.05\% + 20\text{uA}^1$	$\leq 0.05\% + 20\text{uA}^1$
		100uA Range	$\leq 0.05\% + 100\text{nA}^1$	$\leq 0.05\% + 100\text{nA}^1$
Ripple (20Hz ~20MHz)	Voltage	Typical $\leq 8\text{mVp-p}$, $\leq 1\text{mV rms}$		
	Current	$\leq 3\text{mA}_{\text{rms}}$	$\leq 3\text{mA}_{\text{rms}}$	$\leq 3\text{mA}_{\text{rms}}$
Rise Time (Fast mode under no load)	Voltage	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$
Rise Time (Fast mode under full load)	Voltage	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$
Fall Time(Fast mode under no load)	Voltage	$\leq 50\text{ms}^2$	$\leq 50\text{ms}^2$	$\leq 50\text{ms}^2$
Fall Time(Fast mode under full load)	Voltage	$\leq 10\text{ms}^2$	$\leq 10\text{ms}^2$	$\leq 10\text{ms}^2$
Rise Time (Full load)	Current	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$	$\leq 30\text{ms}^2$
Dynamic Response	from 50%-100% LOAD to 75 mV $\leq 50\mu\text{S}$			
Sense	1V per each lead			
Programming Reaction(typic value)	5ms			
Stability of setup value-30min (% of Output +Offset)	Voltage	0.01% + 1mV	0.01% + 1mV	0.01% + 1mV
	Current	0.02% + 2mA	0.02% + 2mA	0.02% + 2mA
Stability of setup value-8h (% of Output +Offset)	Voltage	0.01% + 3mV	0.01% + 3mV	0.01% + 3mV
	Current	0.05% + 3mA	0.05% + 3mA	0.05% + 3mA
Stability of readback value-30min (% of Output +Offset)	Voltage	0.01% + 1mV	0.01% + 1mV	0.01% + 1mV
	Current	10A Range	0.02% + 3mA	0.02% + 3mA
		20mA Range	0.01% + 3uA ¹	0.01% + 3uA ¹
		100uA Range	0.01% + 20nA ¹	0.01% + 20nA ¹
Stability of readback value-8h (% of Output +Offset)	Voltage	0.01% + 5mV	0.01% + 5mV	0.01% + 5mV
	Current	10A Range	0.05% + 3mA	0.05% + 3mA
		20mA Range	0.01% + 4uA ¹	0.01% + 4uA ¹
		100uA Range	0.01% + 30nA ¹	0.01% + 30nA ¹
AC Input	Voltag1	110V ± 10%	110V ± 10%	110V ± 10%
	Voltag2	220V ± 10%	220V ± 10%	220V ± 10%
	Frequency	47HZ ~ 63Hz	47HZ ~ 63Hz	47HZ ~ 63Hz
Working Temperature	0 ~ 40℃			
Storage Temperature	-20℃ ~ 70℃			
Working humidity	15% ~ 85% @40℃			
Dimension(mm)	234±1mm(W)*57±1mm(H)*477±1mm(D)		234±1mm(W)*57±1mm(H)*477±1mm(D)	234±1mm(W)*57±1mm(H)*477±1mm(D)
N.W.	4.5kg			

*1 The accuracy of the small range current (20mA and 100uA range) is measured under CV mode of the power supply output

*2 10%-90% dynamic time *3 Measurement under sense

*4 When the current measurement range is in the range of 20mA and 100uA, the capacitive load of the power supply cannot exceed 47uF

*This information is subjected to change without notice.

Your Power Testing Solution

IT-M3200 high-precision programmable DC power supply

Specification

		IT-M3253		IT-M3263		IT-M3273	
Rated Value (0℃~40℃)	Voltage	0~20V		0~20V		0~20V	
	Current	0~20 A		0~20 A		0~20 A	
	Power	100 W		200 W		360 W	
Load Regulation (%of Output+Offset)	Voltage	≤0.01% + 3mV ³		≤0.01% + 3mV ³		≤0.01% + 3mV ³	
	Current	≤0.05% + 2mA		≤0.05% + 2mA		≤0.05% + 2mA	
Line Regulation (%of Output+Offset)	Voltage	≤0.02% + 3mV		≤0.02% + 3mV		≤0.02% + 3mV	
	Current	≤0.05% + 1mA		≤0.05% + 1mA		≤0.05% + 1mA	
Setup Resolution	Voltage	1mV		1mV		1mV	
	Current	1mA		1mA		1mA	
Readback Resolution	Voltage	0.1V		1mV		1mV	
	Current	20A Range	1mA	1mA		1mA	
		20mA Range	1uA ⁴	1uA ⁴		1uA ⁴	
		100uA Range	10nA ⁴	10nA ⁴		10nA ⁴	
Setup accuracy within 12 months, 23℃±5℃ ±(%of Output + Offset)	Voltage	≤0.03% + 5mV ⁵		≤0.03% + 5mV ⁵		≤0.03% + 5mV ⁵	
	Current	≤0.05% + 10mA		≤0.05% + 10mA		≤0.05% + 10mA	
Readback accuracy within 12 months, 23℃±5℃ ±(%of Output + Offset)	Voltage	≤0.03% + 5mV		≤0.03% + 5mV		≤0.03% + 5mV	
	Current	20A Range	≤0.03% + 5mV	≤0.05% + 10mA		≤0.05% + 10mA	
		20mA Range	≤0.05% + 20uA ¹	≤0.05% + 20uA ¹		≤0.05% + 20uA ¹	
		100uA Range	≤0.05% + 100nA ¹	≤0.05% + 100nA ¹		≤0.05% + 100nA ¹	
Ripple (20Hz ~20MHz)	Voltage	Typical ≤ 8mVp-p , ≤ 1mV rms					
	Current	≤ 5mA rms		≤ 5mA rms		≤ 5mA rms	
Rise Time (Fast mode under no load)	Voltage	≤ 30ms ²		≤ 30ms ²		≤ 30ms ²	
Rise Time (Fast mode under full load)	Voltage	≤ 30ms ²		≤ 30ms ²		≤ 30ms ²	
Fall Time(Fast mode under no load)	Voltage	≤ 50ms ²		≤ 50ms ²		≤ 50ms ²	
Fall Time(Fast mode under full load)	Voltage	≤ 10ms ²		≤ 10ms ²		≤ 10ms ²	
Rise Time (Full load)	Current	≤ 30ms ²		≤ 30ms ²		≤ 30ms ²	
Dynamic Response	from 50%~100% LOAD to 75 mV ≤ 50uS						
Sense	2V max						
Programming Reaction(typic value)	5ms						
Stability of setup value-30min (%of Output +Offset)	Voltage	0.01% + 1mV		0.01% + 1mV		0.01% + 1mV	
	Current	0.02% + 5mA		0.02% + 5mA		0.02% + 5mA	
Stability of setup value-8h (%of Output +Offset)	Voltage	0.01% + 3mV		0.01% + 3mV		0.01% + 3mV	
	Current	0.05% + 10mA		0.05% + 10mA		0.05% + 10mA	
Stability of readback value-30min (%of Output +Offset)	Voltage	0.01% + 1mV		0.01% + 1mV		0.01% + 1mV	
	Current	20A Range	0.02% + 5mA	0.02% + 5mA		0.02% + 5mA	
		20mA Range	0.01% + 3uA ¹	0.01% + 3uA ¹		0.01% + 3uA ¹	
		100uA Range	0.01% + 20nA ¹	0.01% + 20nA ¹		0.01% + 20nA ¹	
Stability of readback value-8h (%of Output +Offset)	Voltage	0.01% + 5mV		0.01% + 5mV		0.01% + 5mV	
	Current	20A Range	0.05% + 10mA	0.05% + 10mA		0.05% + 10mA	
		20mA Range	0.01% + 4uA ¹	0.01% + 4uA ¹		0.01% + 4uA ¹	
		100uA Range	0.01% + 30nA ¹	0.01% + 30nA ¹		0.01% + 30nA ¹	
AC Input	Voltage1	110V ± 10%		110V ± 10%		110V ± 10%	
	Voltage2	220V ± 10%		220V ± 10%		220V ± 10%	
	Frequency	47Hz ~ 63Hz		47Hz ~ 63Hz		47Hz ~ 63Hz	
Working Temperature	0 ~ 40℃						
Storage Temperature	-20℃ ~ 70℃						
Working humidity	15% ~ 85% @40℃						
Dimension(mm)	234±1mm(W)*57±1mm(H)*477±1mm(D)			234±1mm(W)*57±1mm(H)*477±1mm(D)		234±1mm(W)*57±1mm(H)*477±1mm(D)	
N.W.	4.5Kg						

*1 The accuracy of the small range current (20mA and 100uA range) is measured under CV mode of the power supply output

*2 10%-90% dynamic time *3 Measurement under sense

*4 When the current measurement range is in the range of 20mA and 100uA, the capacitive load of the power supply cannot exceed 47uF

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