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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
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Your Power Testing Solution

IT-M3900C Bidirectional Programmable DC Power Supply

Specification

		IT-M3905C-10-510	IT-M3906C-32-240	IT-M3906C-80-120
Rated value	Voltage	0 ~ 10V	0 ~ 32V	0 ~ 80V
	Current	-360A ~ 510A	-240A ~ 240A	-120A ~ 120A
	Power	-3600W ~ 5100W	-6000W ~ 6000W	-6000W ~ 6000W
	Series IR(CV priority)	0 ~ 0.01Ω	0 ~ 0.06Ω	0 ~ 0.3Ω
	Load resistance(CC priority mode)	0.003Ω ~ 10Ω	0.005Ω ~ 400Ω	0.01Ω ~ 800Ω
Setup Resolution	Voltage	0.001V	0.001V	0.001V
	Current	0.1A	0.01A	0.01A
	Power	1W	1W	1W
	Series IR(CV priority)	0.001Ω	0.001Ω	0.001Ω
	Load resistance(CC priority mode)	0.001Ω	0.001Ω	0.001Ω
Readback Resolution	Voltage	0.001V	0.001V	0.001V
	Current	0.1A	0.01A	0.01A
	Power	1W	1W	1W
Setup Accuracy	Voltage	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
	Series IR(CV priority)	≤ 1%FS	≤ 1%FS	≤ 1%FS
	Load resistance(CC priority mode)	Max.: $1/(1/R_{set}+(1/R_{set})^{0.1+0.008})$ Min.: $1/(1/R_{set}-(1/R_{set})^{0.1-0.008})$	Max.: $1/(1/R_{set}+(1/R_{set})^{0.05+0.0005})$ Min.: $1/(1/R_{set}-(1/R_{set})^{0.05-0.0005})$	Max.: $1/(1/R_{set}+(1/R_{set})^{0.05+0.0005})$ Min.: $1/(1/R_{set}-(1/R_{set})^{0.05-0.0005})$
Readback Accuracy	Voltage	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
Voltage Ripple ^{*1}	Peak value	≤ 65mVpp	≤ 80mVpp	≤ 200mVpp
	RMS	≤ 10mV	≤ 30mV	≤ 80mV
Rise Time (no load)	Voltage	≤ 50ms	≤ 30ms	≤ 15ms
Rise Time (full load)	Voltage	≤ 100ms	≤ 100ms	≤ 30ms
Fall Time (no load)	Voltage	≤ 100ms	≤ 60ms	≤ 30ms
Fall Time (full load)	Voltage	≤ 50ms	≤ 30ms	≤ 15ms
Power Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
Load Regulation Rate	Voltage	0.0035%*1 + 0.05%FS	≤ 0.02% + 0.02%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS
Input Protection Scope	OCP	-375A or 525A	-247.2A or 247.2A	-126A or 126A
	OVP	10.5V	33V	82V
	OPP	-3672W or 5202W	-6120W or 6120W	-6120W or 6120W
Remote Sense Compensation Voltage		≤ 2V	≤ 10V	≤ 8V
AC Input ^{*2}	Voltage	3φ 200V ~ 480V 1φ 100V ~ 240V	3φ 200V ~ 480V 1φ 100V ~ 240V	3φ 200V ~ 480V 1φ 100V ~ 240V
	Frequency	50/60Hz	50/60Hz	50/60Hz
Max. AC Apparent Power		5.55kVA	6.5kVA	6.5kVA
Max. AC Current		12.5Aac	12.5Aac	12.5Aac
Max. Efficiency		89.0%	90%	92%
Power Factor		0.99	0.99	0.99
DC Component		≤ 0.2A	≤ 0.2A	≤ 0.2A
Current Harmonic		≤ 3%	≤ 3%	≤ 3%
Program Response Time		0.1ms	0.1ms	0.1ms
Withstand Voltage (DC to ground)		200Vdc/1min	200Vdc/1min	500Vdc/1min
Withstand Voltage (AC to ground)		3000Vdc/1min	3000Vdc/1min	3000Vdc/1min
Withstand Voltage(AC to DC)		2250Vdc/1min	2250Vdc/1min	2250Vdc/1min
Isolation Voltage		200Vdc	200Vdc	300Vdc

*1 The ripple is got under three-phase AC input

*2 The AC will be limited to 12.5Aac. When the AC input is low, power will be limited. E.g:

Three-phase input, line voltage 200Vac, the power is: $P=200Vac \times 12.5Aac \times 1.732=4330VA$

Single-phase input, phase voltage 200Vac, the power is: $P=200Vac \times 12.5Aac=2500VA$

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Your Power Testing Solution

IT-M3900C Bidirectional Programmable DC Power Supply

Specification

		IT-M3906C-85-120SAS	IT-M3901C-150-25PV	IT-M3903C-150-50PV
Rated value	Voltage	0~85V	0~150V	0~150V
	Current	-120A~120A	-25A~25A	-50A~50A
	Power	-6000W~6000W	-1500W~1500W	-3000W~3000W
	Series IR(CV priority)	0~0.3Ω	0~0.5Ω	0~0.5Ω
	Load resistance(CC priority mode)	0.01Ω~800Ω	0.04Ω~1500Ω	0.02Ω~1500Ω
Setup Resolution	Voltage	0.001V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	1W	1W	1W
	Series IR(CV priority)	0.001Ω	0.001Ω	0.001Ω
	Load resistance(CC priority mode)	0.01Ω	0.01Ω	0.01Ω
Readback Resolution	Voltage	0.001V	0.01V	0.01V
	Current	0.01A	0.001A	0.001A
	Power	1W	1W	1W
Setup Accuracy	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
	Series IR(CV priority)	≤ 1%FS	≤ 1%FS	≤ 1%FS
	Load resistance(CC priority mode)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0005) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0005)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0005) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0005)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0005) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0005)
Readback Accuracy	Resolution(V-I curve)		1024	1024
	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
	Peak value	≤ 200mVpp	≤ 360mVpp	≤ 360mVpp
Voltage Ripple	RMS	≤ 80mV	≤ 100mV	≤ 100mV
Rise Time (no load)	Voltage	≤ 15ms	≤ 50ms	≤ 50ms
Rise Time (full load)	Voltage	≤ 30ms	≤ 50ms	≤ 50ms
Fall Time (no load)	Voltage	≤ 30ms	≤ 50ms	≤ 50ms
Fall Time (full load)	Voltage	≤ 15ms	≤ 50ms	≤ 50ms
Power Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
Load Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS
Input Protection Scope	OCP	-126A or 126A	-26A or 26A	-52A or 52A
	OVP	86V	160V	160V
	OPP	-6120W or 6120W	-1530W or 1530W	-3060W or 3060W
Remote Sense Compensation Voltage		≤ 8V	≤ 10V	≤ 10V
AC Input ^{*2}	Voltage	3φ 200V~480V 1φ 100V~240V	3φ 200V~480V 1φ 100V~240V	3φ 200V~480V 1φ 100V~240V
	Frequency	50/60Hz	50/60Hz	50/60Hz
Max. AC Apparent Power		6.5kVA	1.65kVA	3.3kVA
Max. AC Current		12.5Aac	12.5Aac	12.5Aac
Max. Efficiency		92%	92%	92%
Power Factor		0.99	0.99	0.99
DC Component		≤ 0.2A	≤ 0.2A	≤ 0.2A
Current Harmonic		≤ 3%	≤ 3%	≤ 3%
Program Response Time		0.1ms	0.1ms	0.1ms
Withstand Voltage (DC to ground)		2000Vdc/1min	2000Vdc/1min	2000Vdc/1min
Withstand Voltage (AC to ground)		3000Vdc/1min	3000Vdc/1min	3000Vdc/1min
Withstand Voltage(AC to DC)		2250Vdc/1min	2250Vdc/1min	2250Vdc/1min
Isolation Voltage		1000Vdc	1000Vdc	1000Vdc

*1 The ripple is got under three-phase AC input

*2 The AC will be limited to 12.5Aac. When the AC input is low, power will be limited. E.g:

Three-phase input, line voltage 200Vac, the power is: P=200Vac*12.5Aac*1.732=4330VA

Single-phase input, phase voltage 200Vac, the power is: P=200Vac*12.5Aac=2500VA

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Your Power Testing Solution

IT-M3900C Bidirectional Programmable DC Power Supply

Specification

		IT-M3906C-300-60	IT-M3906C-500-36	IT-M3906C-800-24
Rated value	Voltage	0~300V	0~500V	0~800V
	Current	-60A~60A	-36A~36A	-24A~24A
	Power	-6000W~6000W	-6000W~6000W	-6000W~6000W
	Series IR(CV priority)	0~0.4Ω	0~0.7Ω	0~1Ω
	Load resistance(CC priority mode)	0.05Ω~3000Ω	0.1Ω~5000Ω	0.15Ω~7500Ω
Setup Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.001A	0.001A
	Power	1W	1W	1W
	Series IR(CV priority)	0.001Ω	0.001Ω	0.001Ω
	Load resistance(CC priority mode)	0.001Ω	0.01Ω	0.01Ω
Readback Resolution	Voltage	0.01V	0.01V	0.01V
	Current	0.001A	0.001A	0.001A
	Power	1W	1W	1W
Setup Accuracy	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
	Series IR(CV priority)	≤ 1%FS	≤ 1%FS	≤ 1%FS
	Load resistance(CC priority mode)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0001) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0001)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0001) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0001)	Max.: 1/(1/Rset+(1/Rset)*0.05+0.0001) Min.: 1/(1/Rset-(1/Rset)*0.05-0.0001)
Readback Accuracy	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
Voltage Ripple ^{*1}	Peak value	≤ 300mVpp	≤ 500mVpp	≤ 1000mVpp
	RMS	≤ 60mV	≤ 100mV	≤ 160mV
Rise Time (no load)	Voltage	≤ 30ms	≤ 30ms	≤ 30ms
Rise Time (full load)	Voltage	≤ 60ms	≤ 60ms	≤ 60ms
Fall Time (no load)	Voltage	≤ 30ms	≤ 30ms	≤ 30ms
Fall Time (full load)	Voltage	≤ 15ms	≤ 15ms	≤ 15ms
Power Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
Load Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS
Input Protection Scope	OCP	-63A or 63A	-37.5A or 37.5A	-25.2A or 25.2A
	OVP	303V	505V	808V
	OPP	-6120W or 6120W	-6120W or 6120W	-6120W or 6120W
Remote Sense Compensation Voltage		≤ 10V	≤ 10V	≤ 16V
AC Input ^{*2}	Voltage	3φ 200V~480V 1φ 100V~240V	3φ 200V~480V 1φ 100V~240V	3φ 200V~480V 1φ 100V~240V
	Frequency	50/60Hz	50/60Hz	50/60Hz
Max. AC Apparent Power		6.5kVA	6.5kVA	6.5kVA
Max. AC Current		12.5Aac	12.5Aac	12.5Aac
Max. Efficiency		93%	93%	93%
Power Factor		0.99	0.99	0.99
DC Component		≤ 0.2A	≤ 0.2A	≤ 0.2A
Current Harmonic		≤ 3%	≤ 3%	≤ 3%
Program Response Time		0.1ms	0.1ms	0.1ms
Withstand Voltage (DC to ground)		2000Vdc/1min	2000Vdc/1min	2000Vdc/1min
Withstand Voltage (AC to ground)		3000Vdc/1min	3000Vdc/1min	3000Vdc/1min
Withstand Voltage(AC to DC)		2250Vdc/1min	2250Vdc/1min	2250Vdc/1min
Isolation Voltage		300Vdc	500Vdc	800Vdc

*1 The ripple is got under three-phase AC input

*2 The AC will be limited to 12.5Aac. When the AC input is low, power will be limited. E.g:
Three-phase input, line voltage 200Vac, the power is: $P=200Vac \times 12.5Aac \times 1.732=4330VA$
Single-phase input, phase voltage 200Vac, the power is: $P=200Vac \times 12.5Aac=2500VA$

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Specification

		IT-M3906C-1500-12	IT-M3912C-1500-24
Rated value	Voltage	0~1500V	0~1500V
	Current	-12A~12A	-24A~24A
	Power	-6000W~6000W	-12000W~12000W
	Series IR(CV priority)	0~1Ω	0~1Ω
	Load resistance(CC priority mode)	0.5Ω~7500Ω	0.25Ω~3750Ω
Setup Resolution	Voltage	0.01V	0.01V
	Current	0.001A	0.001A
	Power	1W	1W
	Series IR(CV priority)	0.001Ω	0.01Ω
	Load resistance(CC priority mode)	0.01Ω	0.01Ω
Readback Resolution	Voltage	0.01V	0.01V
	Current	0.001A	0.001A
	Power	1W	1W
Setup Accuracy	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
	Series IR(CV priority)	≤ 1%FS	≤ 1%FS
	Load resistance(CC priority mode)	Max.: $1/(1/R_{set}+(1/R_{set})^{0.05+0.0001})$ Min.: $1/(1/R_{set}-(1/R_{set})^{0.05+0.0001})$	Max.: $1/(1/R_{set}+(1/R_{set})^{0.05+0.0001})$ Min.: $1/(1/R_{set}-(1/R_{set})^{0.05+0.0001})$
Readback Accuracy	Voltage	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
	Current	≤ 0.1% + 0.1%FS	≤ 0.1% + 0.1%FS
	Power	≤ 0.5% + 0.5%FS	≤ 0.5% + 0.5%FS
Voltage Ripple ^{*1}	Peak value	≤ 1500mVpp	≤ 1500mVpp
	RMS	≤ 300mV	≤ 300mV
Rise Time (no load)	Voltage	≤ 30ms	≤ 30ms
Rise Time (full load)	Voltage	≤ 60ms	≤ 60ms
Fall Time (no load)	Voltage	≤ 30ms	≤ 30ms
Fall Time (full load)	Voltage	≤ 15ms	≤ 15ms
Power Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.03% + 0.03%FS	≤ 0.03% + 0.03%FS
Load Regulation Rate	Voltage	≤ 0.01% + 0.01%FS	≤ 0.01% + 0.01%FS
	Current	≤ 0.05% + 0.05%FS	≤ 0.05% + 0.05%FS
Input Protection Scope	OCP	-12.5A or 12.5A	-25A or 25A
	OVP	1515V	1515V
	OPP	-6120W or 6120W	-12240W or 12240W
Remote Sense Compensation Voltage		≤ 30V	≤ 30V
AC Input ^{*2}	Voltage	3φ 200V~480V 1φ 100V~240V	3φ 200V~480V
	Frequency	50/60Hz	50/60Hz
Max. AC Apparent Power		6.5kVA	13kVA
Max. AC Current		12.5Aac	25Aac
Max. Efficiency		93%	94.5%
Power Factor		0.99	0.99
DC Component		≤ 0.2A	≤ 0.2A
Current Harmonic		≤ 3%	≤ 3%
Program Response Time		0.1ms	0.1ms
Withstand Voltage (DC to ground)		2000Vdc/1min	2000Vdc/1min
Withstand Voltage (AC to ground)		3000Vdc/1min	3000Vdc/1min
Withstand Voltage(AC to DC)		2250Vdc/1min	2250Vdc/1min
Isolation Voltage		1500Vdc	1500Vdc

*1 The ripple is got under three-phase AC input

*2 The AC will be limited to 12.5Aac. When the AC input is low, power will be limited. E.g:

Three-phase input, line voltage 200Vac, the power is: $P=200Vac \times 12.5Aac \times 1.732=4330VA$

Single-phase input, phase voltage 200Vac, the power is: $P=200Vac \times 12.5Aac=2500VA$

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