

Product Datasheet - Technical Specifications



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11 Technical Specification

This chapter will introduce the main technical parameters of this instrument, such as rated voltage/current/power and so on. Besides, we will introduce the working environment and storage temperature.

- ◆ IT-M3412
- ◆ IT-M3422
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- ◆ IT-M3435

11.1 IT-M3412

Source Parameter		
Rated value(0 °C-40 °C)	Output Voltage	0-60V
	Output Current	-30A~30A
	Output Power	-200W~200W
	Min. operating voltage	3.6V at -30A
CC	Range	-30A~30A
	Setup Resolution	10mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-60V
	Setup Resolution	1mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-200W~200W

	Setup Resolution	0.1W
	Accuracy	<1.0% Pmax
Output Read-back		
Read-back current	Range	-30A~30A
	Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0-60V
	Resolution	1mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-200W~200W
	Resolution	0.1W
	Accuracy	<1% Pmax
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Battery Test		
AH Measurement	AH Range	0AH-300AH
	Accuracy	0.20%
	Resolution	0.001AH
Regulation		
Load Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Line Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Ripple		
Ripple	Voltage	≤100mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	5ms
Rise time	Voltage(Full load)	10ms
Fall time	Voltage(No load)	5ms
Fall time	Voltage(Full load)	5ms

Output Protection range	
OCP	-31A or 31A
OVP	61V
OPP	-210W or 210W
External analog (optional)	
Voltage programming	External 0V~10V is 0~60V
Voltage monitoring	External 0V~10V is 0~60V
Current programming	External -10V~10V is -30A~30A
Current monitoring	External -10V~10V is -30A~30A
AC parameters	
Voltage range	100VAC -240VAC
OVP	264VAC
UVP	90VAC
Frequency	47Hz~63Hz
Max. current (rms)	1Aac (AC220V)
DC Offset	-0.1A~+0.1A
Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	86%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.2 IT-M3422

Source Parameter		
Rated value (0-40 °C)	Output Voltage	0-60V
	Output Current	-30A~30A
	Output Power	-400W~400W
	Min. operating voltage	3.6V at -30A
CC	Range	-30A~30A
	Setup Resolution	10mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}
CV	Range	0-60V
	Setup Resolution	1mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-400W~400W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-30A~30A
	Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}
Read-back Voltage	Range	0-60V
	Resolution	1mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-400W~400W
	Resolution	0.1W
	Accuracy	<1% P _{max}
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C

Battery Test		
AH Measurement	AH Range	0AH-300AH
	Accuracy	0.20%
	Resolution	0.001AH
Regulation		
Load Regulation	Voltage	$\leq 0.05\%$ U _{max}
	Current	$\leq 0.05\%$ I _{max}
Line Regulation	Voltage	$\leq 0.05\%$ U _{max}
	Current	$\leq 0.05\%$ I _{max}
Ripple		
Ripple	Voltage	$\leq 100\text{mVp-p}$
	Current	$\leq 30\text{mArms}$
value voltage rise/fall time		
Rise time	Voltage(No load)	5ms
Rise time	Voltage(Full load)	10ms
Fall time	Voltage(No load)	5ms
Fall time	Voltage(Full load)	5ms
Output Protection range		
OCP		-31A or 31A
OVP		61V
OPP		-410W or 410W
External analog (optional)		
Voltage programming		External 0V~10V is 0~60V
Voltage monitoring		External 0V~10V is 0~60V
Current programming		External -10V~10V is -30A~30A
Current monitoring		External -10V~10V is -30A~30A
AC parameters		
Voltage range		100VAC -240VAC
OVP		264VAC
UVP		90VAC
Frequency		47Hz~63Hz
Max. current (rms)		2Aac (AC220V)
DC Offset		-0.1A~+0.1A

Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C—120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	86%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.3 IT-M3432

Parameter	IT-M3432 V1.2	
Source Parameter		
Rated value (0 °C-40 °C)	Output Voltage	0-60V
	Output Current	-30A~30A
	Output Power	-800W~800W
	Min. operating voltage	3.6V at -30A
CC	Range	-30A~30A
	Setup Resolution	10mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}
CV	Range	0-60V
	Setup Resolution	1mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000m Ω
	Setup Resolution	0.1m Ω

	Accuracy	$2\% \cdot R_{max}$
CP	Range	-800W~800W
	Setup Resolution	0.1W
	Accuracy	$<1.0\% P_{max}$
Output Read-back		
Read-back current	Range	-30A~30A
	Resolution	1mA
	Accuracy	$<0.1\% I_{max} + 0.1\% I_{current}$
Read-back Voltage	Range	0-60V
	Resolution	1mV
	Accuracy	$<0.1\% U_{max}$
Read-back Power	Range	-800W~800W
	Resolution	0.1W
	Accuracy	$<1\% P_{max}$
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Battery Test		
AH Measurement	AH Range	0AH-300AH
	Accuracy	0.20%
	Resolution	0.001AH
Regulation		
Load Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Line Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Ripple		
Ripple	Voltage	$\leq 100mV_{p-p}$
	Current	$\leq 30mA_{rms}$
value voltage rise/fall time		
Rise time	Voltage (No load)	5ms
Rise time	Voltage (Full load)	10ms
Fall time	Voltage (No load)	5ms

Fall time	Voltage (Full load)	5ms
Output Protection range		
OCP	-31A or 31A	
OVP	61V	
OPP	-810W or 810W	
External analog (optional)		
Voltage programming	External 0V~10V is 0~60V	
Voltage monitoring	External 0V~10V is 0~60V	
Current programming	External -10V~10V is -30A~30A	
Current monitoring	External -10V~10V is -30A~30A	
AC parameters		
Voltage range	100VAC -240VAC	
OVP	264VAC	
UVP	90VAC	
Frequency	47Hz~63Hz	
Max. current (rms)	4Aac (AC220V)	
Power factor PF	>0.98 (Lead or Lag)	
DC Offset	-0.1A~+0.1A	
Harmonic THDI	<5%	
Environment		
Working temperature	0- 40 ° C	
Storage temperature	-20- 70°C	
Noise	60dB	
External temperature measurement		
Measurement range	-20°C——120°C	
Measurement accuracy	±1°C	
Measurement resolution	0.1°C	
Efficiency		
Max. efficiency (Full-load)	86%	
Communication (Optional)		
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog	
Mechanical parameters		

Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.4 IT-M3413

Source Parameter		
Rated value (0-40 °C)	Output Voltage	0-150V
	Output Current	-12A~12A
	Output Power	-200W~200W
	Min. operating voltage	9V at -12A
CC	Range	-12A~12A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-150V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-200W~200W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-12A~12A
	Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0-150V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-200W~200W
	Resolution	0.1W

	Accuracy	<1% Pmax
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% Umax
	Current	≤0.05% Imax
Line Regulation	Voltage	≤0.05% Umax
	Current	≤0.05% Imax
Ripple		
Ripple	Voltage	≤300mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	20ms
Rise time	Voltage(Full load)	50ms
Fall time	Voltage(No load)	20ms
Fall time	Voltage(Full load)	20ms
Output Protection range		
	OCP	-12.5A or 12.5A
	OVP	155V
	OPP	-210W or 210W
External analog (optional)		
	Voltage programming	External 0V~10V is 0~150V
	Voltage monitoring	External 0V~10V is 0~150V
	Current programming	External -10V~10V is -12A~12A
	Current monitoring	External -10V~10V is -12A~12A
AC parameters		
	Voltage range	100VAC -240VAC
	OVP	264VAC
	UVP	90VAC
	Frequency	47Hz~63Hz
	Max. current (rms)	1Aac (AC220)

DC Offset	-0.1A~+0.1A
Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.5 IT-M3423

Rated value (0-40 °C)	Output Voltage	0-150V
	Output Current	-12A~12A
	Output Power	-400W~400W
	Min. operating voltage	9V at -12A
CC	Range	-12A~12A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-150V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ

	Accuracy	2%*Rmax
CP	Range	-400W~400W
	Setup Resolution	0.1W
	Accuracy	<1.0% Pmax
Output Read-back		
Read-back current	Range	-12A~12A
	Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}
Read-back Voltage	Range	0-150V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-400W~400W
	Resolution	0.1W
	Accuracy	<1% Pmax
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Line Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Ripple		
Ripple	Voltage	≤300mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	20ms
Rise time	Voltage(Full load)	50ms
Fall time	Voltage(No load)	20ms
Fall time	Voltage(Full load)	20ms
Output Protection range		
OCP		-12.5A or 12.5A

OVP	155V
OPP	-410W or 410W
External analog (optional)	
Voltage programming	External 0V~10V is 0~150V
Voltage monitoring	External 0V~10V is 0~150V
Current programming	External -10V~10V is -12A~12A
Current monitoring	External -10V~10V is -12A~12A
AC parameters	
Voltage range	100VAC -240VAC
OVP	264VAC
UVP	90VAC
Frequency	47Hz~63Hz
Max. current (rms)	2Aac (AC220)
DC Offset	-0.1A~+0.1A
Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.6 IT-M3433

Parameter	IT-M3433 V1.2	
Source Parameter		
Rated value (0 °C~40 °C)	Output Voltage	0~150V
	Output Current	-12A~12A
	Output Power	-800W~800W
	Min. operating voltage	9V at -12A
CC	Range	-12A~12A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0~150V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0~1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-800W~800W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-12A~12A
	Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0~150V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-800W~800W
	Resolution	0.1W
	Accuracy	<1% P _{max}
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C

Regulation		
Load Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Line Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Ripple		
Ripple	Voltage	$\leq 300mV_{p-p}$
	Current	$\leq 30mA_{rms}$
value voltage rise/fall time		
Rise time	Voltage (No load)	20ms
Rise time	Voltage (Full load)	50ms
Fall time	Voltage (No load)	20ms
Fall time	Voltage (Full load)	20ms
Output Protection range		
	OCP	-12.5A or 12.5A
	OVP	155V
	OPP	-810W or 810W
External analog (optional)		
	Voltage programming	External 0V~10V is 0~150V
	Voltage monitoring	External 0V~10V is 0~150V
	Current programming	External -10V~10V is -12A~12A
	Current monitoring	External -10V~10V is -12A~12A
AC parameters		
Voltage range		100VAC -240VAC
OVP		264VAC
UVP		90VAC
Frequency		47Hz~63Hz
Max. current (rms)		4Aac (AC220)
Power factor PF		>0.98 (Lead or Lag)
DC Offset		-0.1A~+0.1A
Harmonic THDI		<5%
Environment		
Working temperature		0- 40 ° C
Storage temperature		-20- 70°C

Noise	60dB
External temperature measurement	
Measurement range	-20℃—120℃
Measurement accuracy	±1℃
Measurement resolution	0.1℃
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.7 IT-M3414

Source Parameter		
Rated value (0-40℃)	Output Voltage	0-300V
	Output Current	-6A~6A
	Output Power	-200W~200W
	Min. operating voltage	18V at -6A
CC	Range	-6A~6A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-300V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-200W~200W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}

Output Read-back		
Read-back current	Range	-6A~6A
	Resolution	0.1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0-300V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-200W~200W
	Resolution	0.1W
	Accuracy	<1% P _{max}
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Line Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Ripple		
Ripple	Voltage	≤600mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	20ms
Rise time	Voltage(Full load)	50ms
Fall time	Voltage(No load)	20ms
Fall time	Voltage(Full load)	20ms
Output Protection range		
OCP		-6.2A or 6.2A
OVP		305V
OPP		-210W or 210W
External analog (optional)		
Voltage programming		External 0V~10V is 0~300V

Voltage monitoring	External 0V~10V is 0~300V
Current programming	External -10V~10V is -6A~6A
Current monitoring	External -10V~10V is -6A~6A
AC parameters	
Voltage range	100VAC -240VAC
OVP	264VAC
UVP	90VAC
Frequency	47Hz~63Hz
Max. current (rms)	1Aac (AC220V)
DC Offset	-0.1A~+0.1A
Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.8 IT-M3424

Source Parameter		
Rated value (0-40 °C)	Output Voltage	0-300V
	Output Current	-6A~6A
	Output Power	-400W~400W

	Min. operating voltage	18V at -6A
CC	Range	-6A~6A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-300V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-400W~400W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-6A~6A
	Resolution	0.1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0-300V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-400W~400W
	Resolution	0.1W
	Accuracy	<1% P _{max}
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Line Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}

Ripple		
Ripple	Voltage	≤600mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	20ms
Rise time	Voltage(Full load)	50ms
Fall time	Voltage(No load)	20ms
Fall time	Voltage(Full load)	20ms
Output Protection range		
OCP		-6.2A or 6.2A
OVP		305V
OPP		-410W or 410W
External analog (optional)		
Voltage programming		External 0V~10V is 0~300V
Voltage monitoring		External 0V~10V is 0~300V
Current programming		External -10V~10V is -6A~6A
Current monitoring		External -10V~10V is -6A~6A
AC parameters		
Voltage range		100VAC -240VAC
OVP		264VAC
UVP		90VAC
Frequency		47Hz~63Hz
Max. current (rms)		2Aac (AC220V)
DC Offset		-0.1A~+0.1A
Environment		
Working temperature		0- 40 °C
Storage temperature		-20- 70°C
Noise		60dB
External temperature measurement		
Measurement range		-20°C——120°C
Measurement accuracy		±1°C
Measurement resolution		0.1°C
Efficiency		

Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.9 IT-M3434

Parameter	IT-M3434 V1.2	
Source Parameter		
Rated value (0 °C-40 °C)	Output Voltage	0-300V
	Output Current	-6A~6A
	Output Power	-800W~800W
	Min. operating voltage	18V at -6A
CC	Range	-6A~6A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}
CV	Range	0-300V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance	Range	0-1000mΩ
(positive current mode)	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-800W~800W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-6A~6A
	Resolution	0.1mA
	Accuracy	<0.1% I _{max} +0.1%I _{current}

Read-back Voltage	Range	0~300V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-800W~800W
	Resolution	0.1W
	Accuracy	<1% P _{max}
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Line Regulation	Voltage	≤0.05% U _{max}
	Current	≤0.05% I _{max}
Ripple		
Ripple	Voltage	≤600mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage (No load)	20ms
Rise time	Voltage (Full load)	50ms
Fall time	Voltage (No load)	20ms
Fall time	Voltage (Full load)	20ms
Output Protection range		
OCP		-6.2A or 6.2A
OVP		305V
OPP		-810W or 810W
External analog (optional)		
Voltage programming		External 0V~10V is 0~300V
Voltage monitoring		External 0V~10V is 0~300V
Current programming		External -10V~10V is -6A~6A
Current monitoring		External -10V~10V is -6A~6A
AC parameters		
Voltage range	100VAC -240VAC	

OVP	264VAC
UVP	90VAC
Frequency	47Hz~63Hz
Max. current (rms)	4Aac (AC220V)
Power factor PF	>0.98 (Lead or Lag)
DC Offset	-0.1A~+0.1A
Harmonic THDI	<5%
Environment	
Working temperature	0- 40 ° C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.10 IT-M3415

Source Parameter		
Rated value (0-40 °C)	Output Voltage	0-600V
	Output Current	-3A~3A
	Output Power	-200W~200W
	Min. operating voltage	36V at -3A
CC	Range	-3A~3A
	Setup Resolution	1mA

	Accuracy	$<0.1\% I_{max} + 0.1\% I_{current}$
CV	Range	0-600V
	Setup Resolution	10mV
	Accuracy	$<0.1\% U_{max}$
Output Resistance (positive current mode)	Range	0-1000m Ω
	Setup Resolution	0.1m Ω
	Accuracy	$2\% \cdot R_{max}$
CP	Range	-200W~200W
	Setup Resolution	0.1W
	Accuracy	$<1.0\% P_{max}$
Output Read-back		
Read-back current	Range	-3A~3A
	Resolution	0.1mA
	Accuracy	$<0.1\% I_{max} + 0.1\% I_{current}$
Read-back Voltage	Range	0-600V
	Resolution	10mV
	Accuracy	$<0.1\% U_{max}$
Read-back Power	Range	-200W~200W
	Resolution	0.1W
	Accuracy	$<1\% P_{max}$
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/ $^{\circ}$ C
	Current Temperature Coefficient	50ppm/ $^{\circ}$ C
Regulation		
Load Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Line Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Ripple		
Ripple	Voltage	$\leq 1200\text{mVp-p}$
	Current	$\leq 30\text{mA}_{rms}$
value voltage rise/fall time		

Rise time	Voltage(No load)	30ms
Rise time	Voltage(Full load)	60ms
Fall time	Voltage(No load)	30ms
Fall time	Voltage(Full load)	30ms
Output Protection range		
	OCP	-3.1A or 3.1A
	OVP	610V
	OPP	-210W or 210W
External analog (optional)		
	Voltage programming	External 0V~10V is 0~600V
	Voltage monitoring	External 0V~10V is 0~600V
	Current programming	External -10V~10V is -3A~3A
	Current monitoring	External -10V~10V is -3A~3A
AC parameters		
Voltage range		100VAC -240VAC
OVP		264VAC
UVP		90VAC
Frequency		47Hz~63Hz
Max. current (rms)		1Aac (AC220V)
DC Offset		-0.1A~+0.1A
Environment		
Working temperature		0- 40 °C
Storage temperature		-20- 70°C
Noise		60dB
External temperature measurement		
Measurement range		-20°C——120°C
Measurement accuracy		±1°C
Measurement resolution		0.1°C
Efficiency		
Max. efficiency (Full-load)		88%
Communication (Optional)		
Communication interfaces		RS232/USB/RS485/CAN/LAN/GPIB/Analog

Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.11 IT-M3425

Source Parameter		
Rated value (0-40 °C)	Output Voltage	0-600V
	Output Current	-3A~3A
	Output Power	-400W~400W
	Min. operating voltage	36V at -3A
CC	Range	-3A~3A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0-600V
	Setup Resolution	10mV
	Accuracy	<0.1% U _{max}
Output Resistance (positive current mode)	Range	0-1000mΩ
	Setup Resolution	0.1mΩ
	Accuracy	2%*R _{max}
CP	Range	-400W~400W
	Setup Resolution	0.1W
	Accuracy	<1.0% P _{max}
Output Read-back		
Read-back current	Range	-3A~3A
	Resolution	0.1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
Read-back Voltage	Range	0-600V
	Resolution	10mV
	Accuracy	<0.1% U _{max}
Read-back Power	Range	-400W~400W

	Resolution	0.1W
	Accuracy	<1% Pmax
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	≤0.05% Umax
	Current	≤0.05% Imax
Line Regulation	Voltage	≤0.05% Umax
	Current	≤0.05% Imax
Ripple		
Ripple	Voltage	≤1200mVp-p
	Current	≤30mArms
value voltage rise/fall time		
Rise time	Voltage(No load)	30ms
Rise time	Voltage(Full load)	60ms
Fall time	Voltage(No load)	30ms
Fall time	Voltage(Full load)	30ms
Output Protection range		
	OCP	-3.1A or 3.1A
	OVP	610V
	OPP	-410W or 410W
External analog (optional)		
	Voltage programming	External 0V~10V is 0~600V
	Voltage monitoring	External 0V~10V is 0~600V
	Current programming	External -10V~10V is -3A~3A
	Current monitoring	External -10V~10V is -3A~3A
AC parameters		
Voltage range		100VAC -240VAC
OVP		264VAC
UVP		90VAC

Frequency	47Hz~63Hz
Max. current (rms)	2Aac (AC220V)
DC Offset	-0.1A~+0.1A
Environment	
Working temperature	0- 40 °C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg

11.12 IT-M3435

Parameter	IT-M3435 V1.2	
Source Parameter		
Rated value (0 °C~40 °C)	Output Voltage	0~600V
	Output Current	-3A~3A
	Output Power	-800W~800W
	Min. operating voltage	36V at -3A
CC	Range	-3A~3A
	Setup Resolution	1mA
	Accuracy	<0.1% I _{max} +0.1% I _{current}
CV	Range	0~600V
	Setup Resolution	10mV

	Accuracy	$<0.1\% U_{max}$
Output Resistance (positive current mode)	Range	0–1000m Ω
	Setup Resolution	0.1m Ω
	Accuracy	2%*R _{max}
CP	Range	-800W~800W
	Setup Resolution	0.1W
	Accuracy	$<1.0\% P_{max}$
Output Read-back		
Read-back current	Range	-3A~3A
	Resolution	0.1mA
	Accuracy	$<0.1\% I_{max}+0.1\% I_{current}$
Read-back Voltage	Range	0–600V
	Resolution	10mV
	Accuracy	$<0.1\% U_{max}$
Read-back Power	Range	-800W~800W
	Resolution	0.1W
	Accuracy	$<1\% P_{max}$
Temperature Coefficient		
Temperature Coefficient	Voltage Temperature Coefficient	100ppm/°C
	Current Temperature Coefficient	50ppm/°C
Regulation		
Load Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Line Regulation	Voltage	$\leq 0.05\% U_{max}$
	Current	$\leq 0.05\% I_{max}$
Ripple		
Ripple	Voltage	$\leq 1200mV_{p-p}$
	Current	$\leq 30mA_{rms}$
value voltage rise/fall time		
Rise time	Voltage (No load)	30ms
Rise time	Voltage (Full load)	60ms
Fall time	Voltage (No load)	30ms
Fall time	Voltage (Full load)	30ms

Output Protection range	
OCP	-3.1A or 3.1A
OVP	610V
OPP	-810W or 810W
External analog (optional)	
Voltage programming	External 0V~10V is 0~600V
Voltage monitoring	External 0V~10V is 0~600V
Current programming	External -10V~10V is -3A~3A
Current monitoring	External -10V~10V is -3A~3A
AC parameters	
Voltage range	100VAC -240VAC
OVP	264VAC
UVP	90VAC
Frequency	47Hz~63Hz
Max. current (rms)	4Aac (AC220V)
Power factor PF	>0.98 (Lead or Lag)
DC Offset	-0.1A~+0.1A
Harmonic THDI	<5%
Environment	
Working temperature	0- 40 ° C
Storage temperature	-20- 70°C
Noise	60dB
External temperature measurement	
Measurement range	-20°C——120°C
Measurement accuracy	±1°C
Measurement resolution	0.1°C
Efficiency	
Max. efficiency (Full-load)	88%
Communication (Optional)	
Communication interfaces	RS232/USB/RS485/CAN/LAN/GPIB/Analog
Mechanical parameters	
Size and weight	450mm*214mm*43.5mm
Net weight	5kg