КАТАЛОГ

CSP – 1KW Series Programmable Digital DC Power Supply

- Rated power range: 900W ~ 1KW
- Rated voltage range: 30V / 60V / 100V / 200V / 300V
- 5 - digit voltage display voltage and 4 - digit current display, with a maximum resolution of 1mV and 1mA.
- High programming accuracy, high output accuracy, and low ripple noise.
- Excellent dynamic response time <10ms.
- Output start - up without overshoot, and can set the rising slope of voltage and current.
- Real-time power display, one - time working time and cumulative working time display.
- Communication interface: RS232 & RS485.

Overview

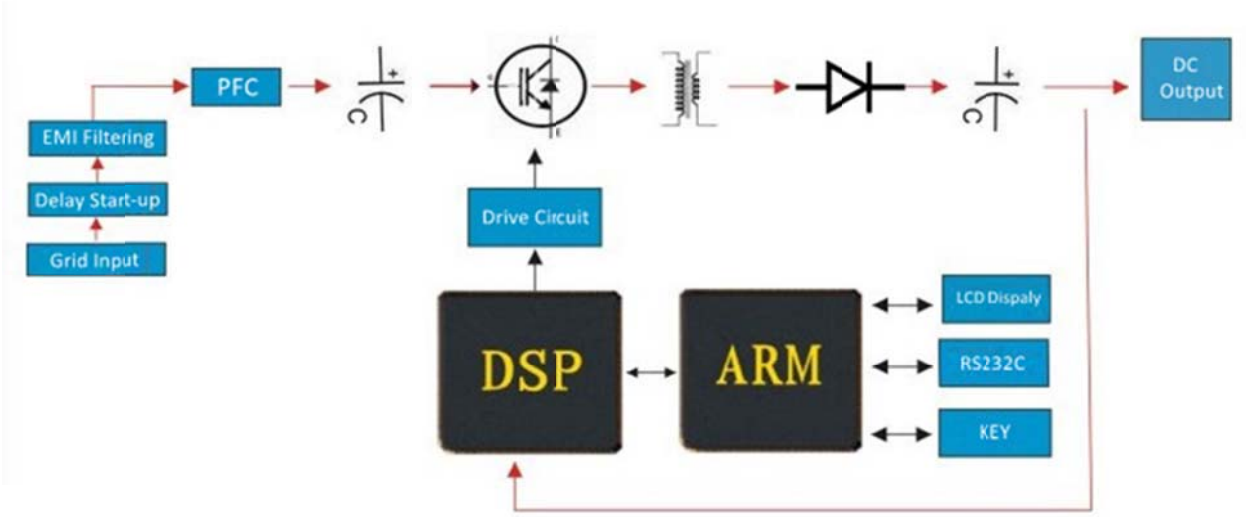
CSP – 1KW series Digital Programmable DC power supply is a compact and smart DC switching power supply for benchtop application. This series of power supplies can meet the output power requirements of 1KW, and the rated output voltage ranges from 30V to 300V under different rated power values.

This series of DC power supplies uses IGBT-based PWM high-frequency switching technology, which gives this series of power supplies high power density and high working efficiency, and the built-in microprocessor control circuit makes the power supply featured for high output accuracy,

fast control response and excellent programmable working characteristics.

All CSP series DC power supplies have perfect protection functions and can withstand long-term continuous operation. They are the best choice for research institutes and laboratories as adjustable DC power supplies or production lines as product life test power supplies.

Block diagram



Features

- The power supply chassis is produced by laser cutting technology, with unique color matching design and excellent baking paint production work craft, which gives the power supply generous and elegant appearance.
- The internal circuit boards of power products all produced by PCBA and DIP process, which can reduce human failures and improve product reliability.
- The power supply adopts LCD display, preset voltage / current values, output voltage / current values, local / remote working mode & start / stop status are all displayed on LCD interface, which is convenient for customers to control & monitor the DC power supply.
- High display accuracy: 0.1% voltage display accuracy in CV mode, 5 digits voltage display with minimum 1mV resolution; 0.2% current display accuracy in CC mode, 4 digits current display with minimum 1mA resolution.
- The power supply can be used as a constant current source for its low output current ripple while ensuring low voltage ripple.
- The power supply voltage and current have almost no starting impact, and the rising slope of the voltage and current are settable.

Applications

- LED and energy-saving lamps aging test.
- Switching power supply and power adapter aging test.
- Photovoltaic inverter aging test.
- Aerospace and national defense industry.
- Capacitors, resistors, relays, transistors, sensors and other electronic devices.

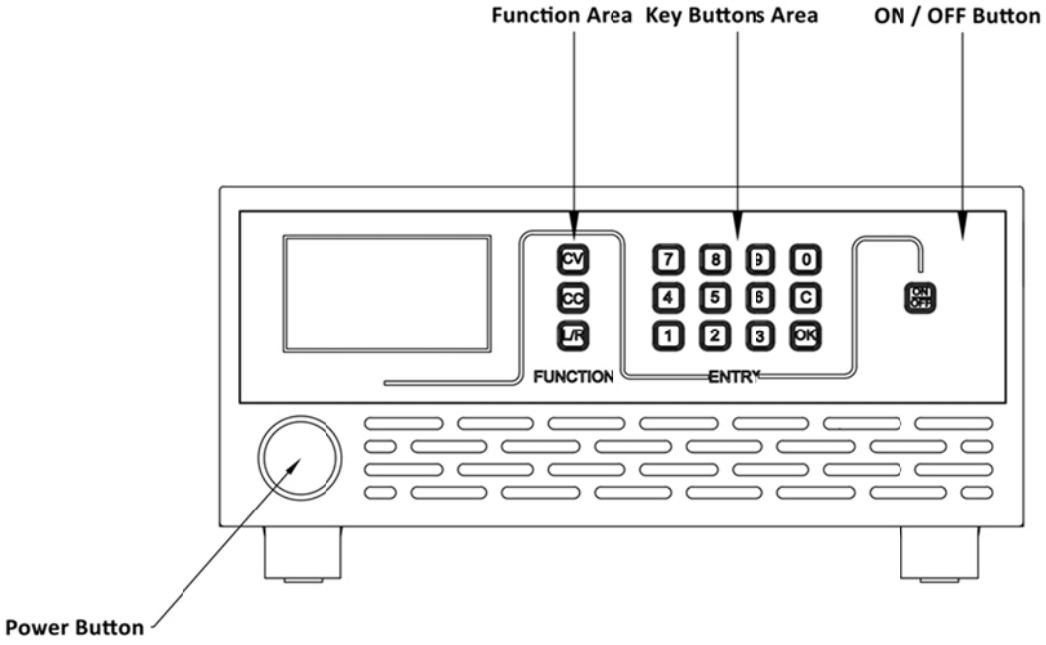
- Electrolytic, electroplating, and corroded aluminum foil processing.
- LCD, touch screen test.
- Automotive electronics, DC motor, motor controller, cigarette lighter, audio and video burn-in test.

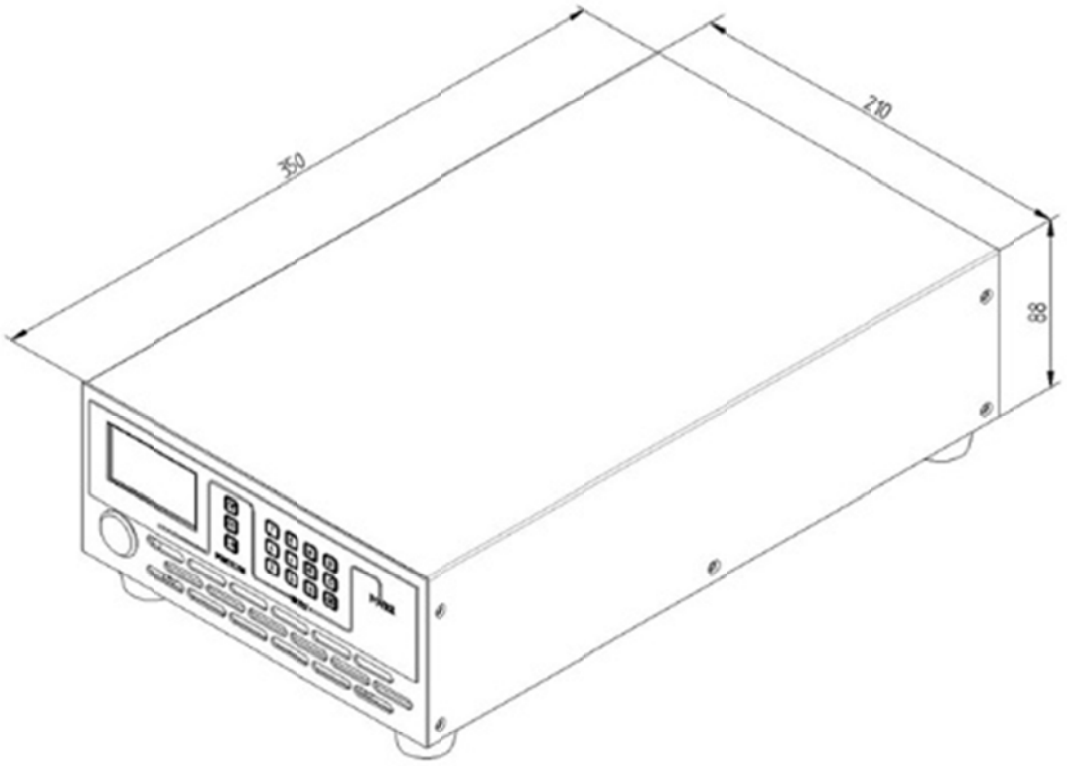
Specifications			
Input	Phase		Single – phase
	Voltage		220Vac±10%
	Frequency		50Hz/60Hz
	Power factor		＞0.92
Output	DC Voltage	Accuracy	＜0.2% of rated value (CV mode)
		Load regulation (0 ~ 100% load variance)	＜0.05% of rated value
		Line regulation (±10%△UAC)	＜0.05% of rated value
		Regulation time (10% ~ 100% load variance)	＜10ms
		Rise time from 10% to 90% loading	＜20ms ~ 10s (optional)
	DC Current	Accuracy	＜0.3% of rated value (CC mode)
		Load regulation (1% ~ 100% load variance)	＜0.15% of rated value
		Line regulation (±10%△UAC)	＜0.05% of rated value
	DC Power	Accuracy	＜0.5% of rated value
Isolation withstand voltage	AC Input to Shell		1500VDC
	AC Input to Output		1500VDC
	DC Output to Shell		500VDC
Protection functions			Output voltage – limiting protection, output current – limiting protection, output power – limiting protection and over temperature protection

Communication port	RS232 or RS485 In line with MODBUS-RTU standard.
Cooling method	Forced air cooling
Working temperature	-5℃ ~ 45℃
Storage temperature	-20℃ ~ 60℃
Relative humidity	< 80%(non-condensing)
Size (W*H*D) (mm)	210*88*350
Weight	Approx. 6Kg

Power Supply Front & Back Panel

Chassis Drawing





Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	CSP3030	CSP6015	CSP10H10	CSP20H05	CSP30H03
Rated power	900W		1000W		900W
Rated voltage	30.000V	60.000V	100.00V	200.00V	300.00V
Rated current	30.00A	15.00A	10.00A	5.000A	3.000A
Voltage Ripple	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%

CSP – 3KW Series Programmable Digital DC Power Supply

- Rated power range: 3KW
- Rated voltage range: 30V / 60V / 100V / 200V / 300V / 600V
- 5 - digit voltage display voltage and 4 - digit current display, with a maximum resolution of 1mV and 1mA.
- High programming accuracy, high output accuracy, and low ripple noise.
- Excellent dynamic response time <10ms.
- Output start - up without overshoot, and can set the rising slope of voltage and current.
- Real-time power display, one - time working time and cumulative working time display.
- Communication interface: RS232 & RS485.

Overview

CSP series Digital Programmable DC power supply is a compact and smart DC switching power supply for benchtop application. This series of power supplies can meet the output power requirements of 3KW, and the rated output voltage ranges from 30V to 600V under different rated power values.

This series of DC power supplies uses IGBT-based PWM high-frequency switching technology, which gives this series of power supplies high power density and high working efficiency, and the built-in microprocessor control circuit makes the power supply featured for high output accuracy,

fast control response and excellent programmable working characteristics.

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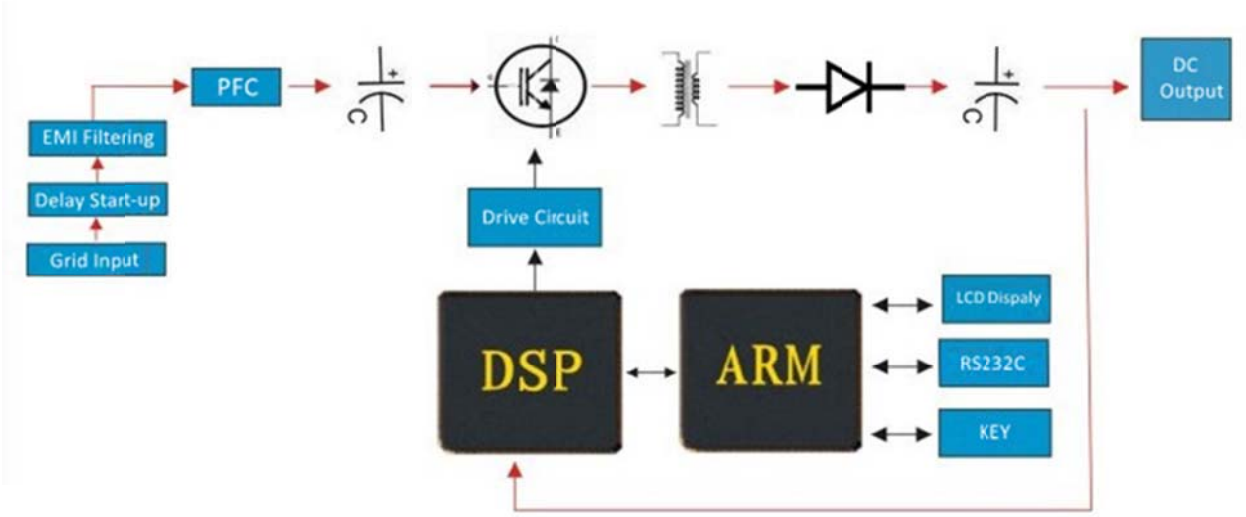
Block diagram



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- Switching power supply and power adapter aging test.
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- LCD, touch screen test.
- Automotive electronics, DC motor, motor controller, cigarette lighter, audio and video burn-in test.

Specifications			
Input	Phase		Single – phase
	Voltage		220Vac±10%
	Frequency		50Hz/60Hz
	Power factor		＞0.92
Output	DC Voltage	Accuracy	＜0.2% of rated value (CV mode)
		Load regulation (0 ~ 100% load variance)	＜0.05% of rated value
		Line regulation (±10%△UAC)	＜0.05% of rated value
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Isolation withstand voltage	AC Input to Shell		1500VDC
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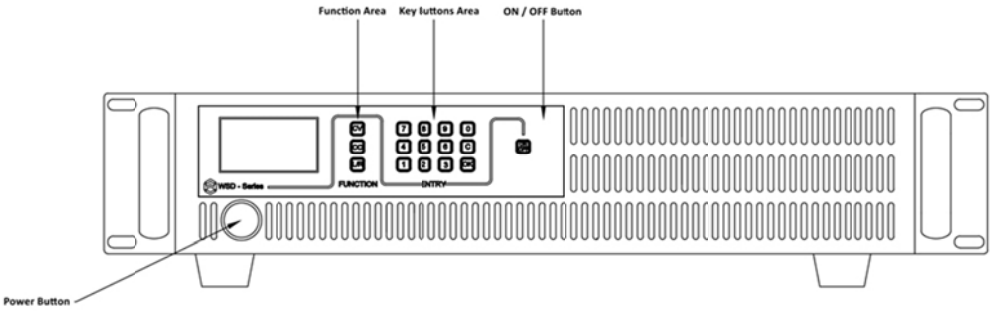
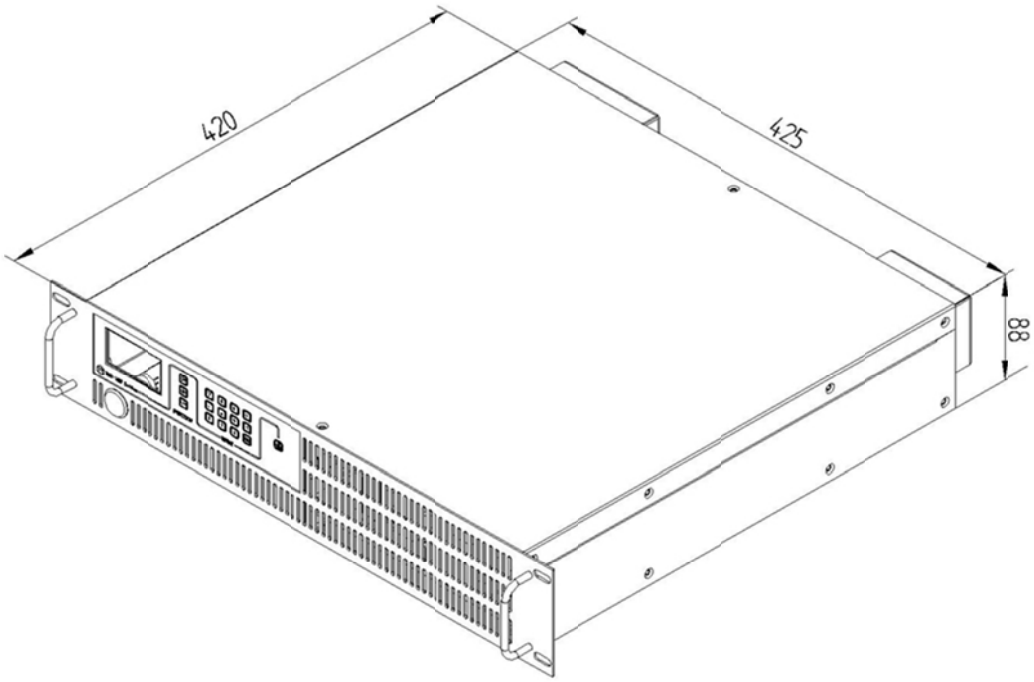
	DC Output to Shell		500VDC
Protection functions			Output voltage – limiting protection, output current – limiting protection, output power – limiting protection and over temperature protection

Communication port	RS232 or RS485 In line with MODBUS-RTU standard.
Cooling method	Forced air cooling
Working temperature	-5℃ ~ 45℃
Storage temperature	-20℃ ~ 60℃
Relative humidity	< 80%(non-condensing)
Size (W*H*D) (mm)	425*88*420
Weight	Approx. 12Kg

Power Supply Front & Back Panel

Chassis Drawing





Installation environment

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Standard model list

Model	CSP3010H	CSP6050	CSP10H30	CSP20H15	CSP30H10	CSP60H05
Rated Power	3KW					
Rated Voltage	30.000V	60.000V	100.00V	200.00V	300.00V	600.00V
Rated Current	100.0A	50.00A	30.00A	15.00A	10.00A	5.000A
Voltage Ripple	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%

CSP – 6KW Series Programmable Digital DC Power Supply

- Rated power range: 6KW
- Rated voltage range: 60V / 100V / 200V / 300V / 600V
- 5 - digit voltage display voltage and 4 - digit current display, with a maximum resolution of 1mV and 1mA.
- High programming accuracy, high output accuracy, and low ripple noise.
- Excellent dynamic response time <10ms.
- Output start - up without overshoot, and can set the rising slope of voltage and current.
- Real-time power display, one - time working time and cumulative working time display.
- Communication interface: RS232 & RS485.

Overview

CSP series Digital Programmable DC power supply is a compact and smart DC switching power supply for benchtop application. This series of power supplies can meet the output power requirements of 6KW, and the rated output voltage ranges from 100V to 600V under different rated power values.

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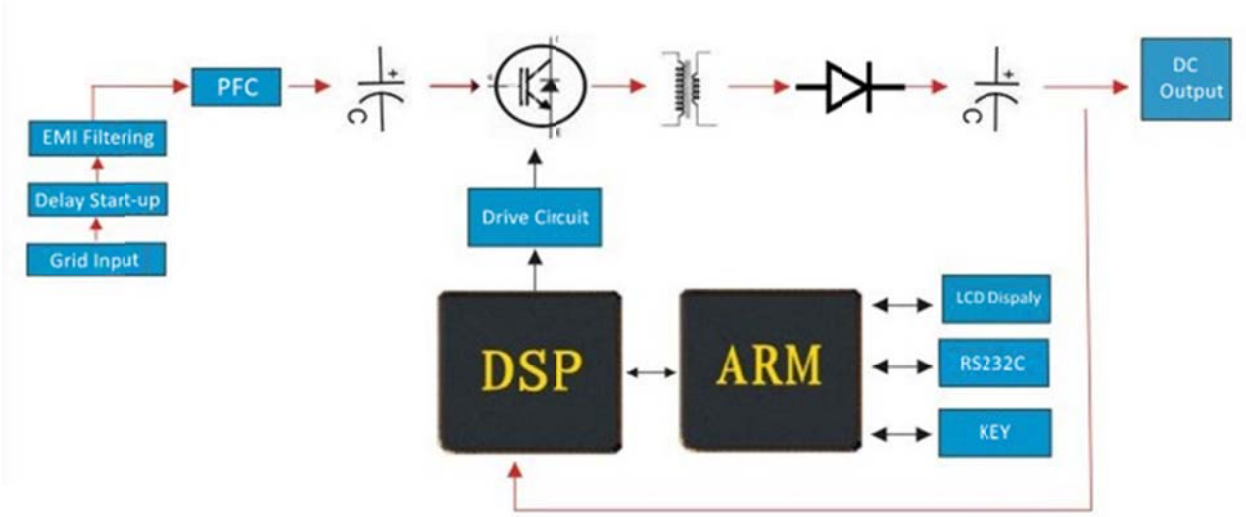
Block diagram



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- LCD, touch screen test.
- Automotive electronics, DC motor, motor controller, cigarette lighter, audio and video burn-in test.

Specifications			
Input	Phase		Three – phase
	Voltage		380Vac±10%
	Frequency		50Hz/60Hz
	Power factor		＞0.92
Output	DC Voltage	Accuracy	＜0.2% of rated value (CV mode)
		Load regulation (0 ~ 100% load variance)	＜0.05% of rated value
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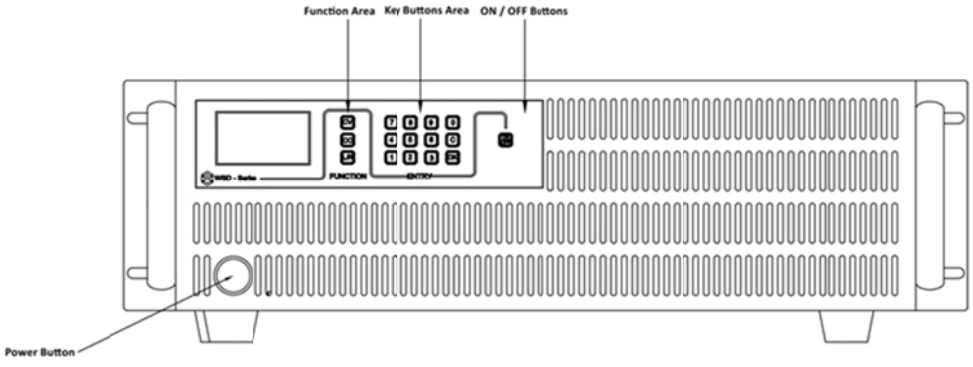
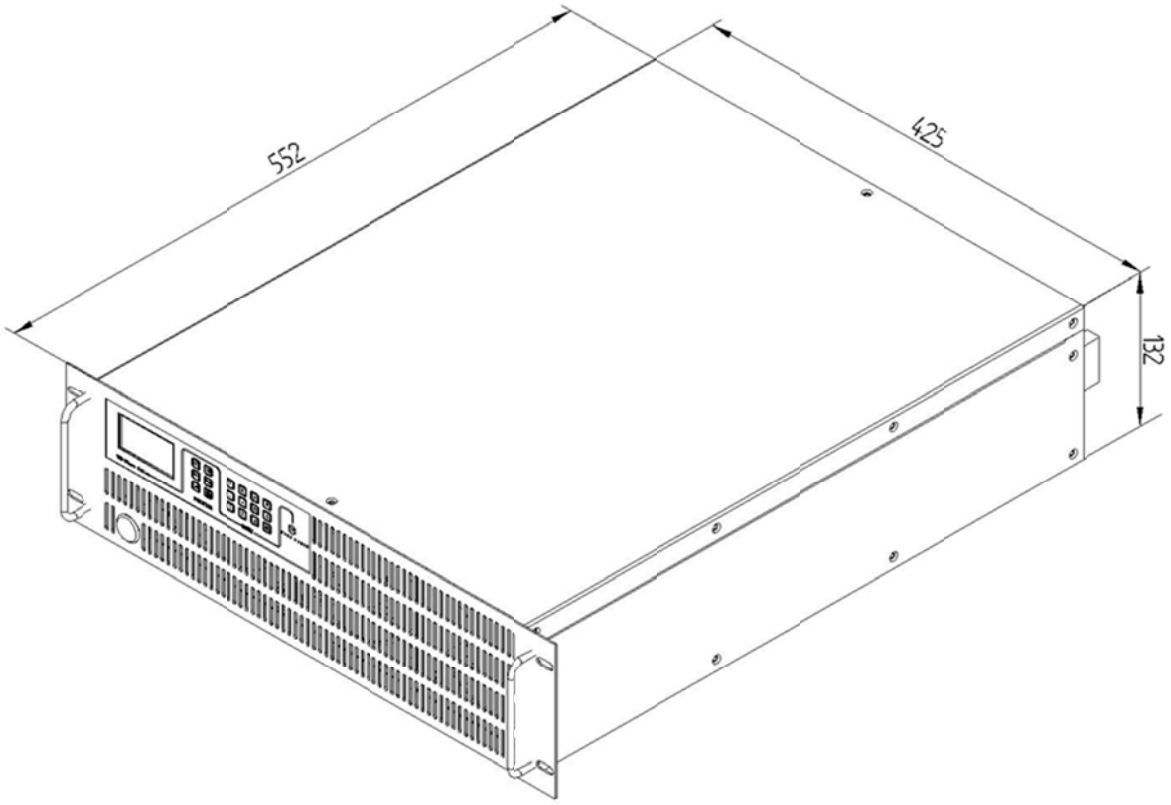
Protection functions			Output voltage – limiting protection, output current – limiting protection, output power – limiting protection and over temperature protection

Communication port	RS232 or RS485 In line with MODBUS-RTU standard.
Cooling method	Forced air cooling
Working temperature	-5℃ ~ 45℃
Storage temperature	-20℃ ~ 60℃
Relative humidity	< 80%(non-condensing)
Size (W*H*D) (mm)	425*132*552
Weight	Approx. 24Kg

Power Supply Front & Back Panel

Chassis Drawing





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Standard model list

Model	CSP6010H	CSP10H60	CSP20H30	CSP30H20	CSP60H10
Rated Power	6KW				
Rated Voltage	60.000V	100.00V	200.00V	300.00V	600.00V
Rated Current	100.0A	60.00A	30.00A	20.00A	10.00A
Voltage Ripple	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%

CSP – 10KW Series Programmable Digital DC Power Supply

- Rated power range: 10KW
- Rated voltage range: 100V / 200V / 300V / 500V / 600V
- 5 - digit voltage display voltage and 4 - digit current display, with a maximum resolution of 1mV and 1mA.
- High programming accuracy, high output accuracy, and low ripple noise.
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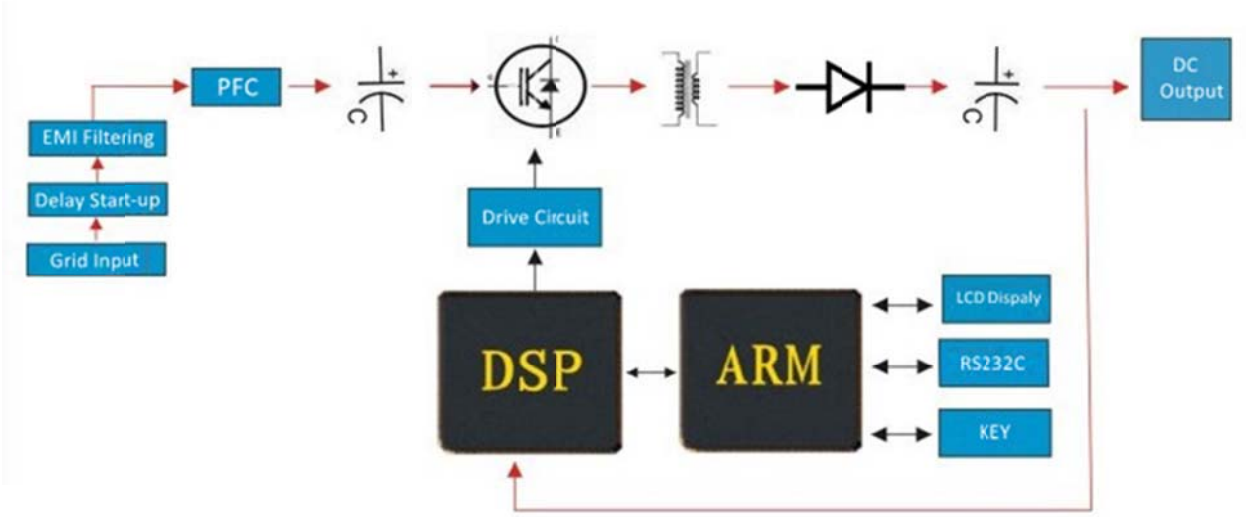

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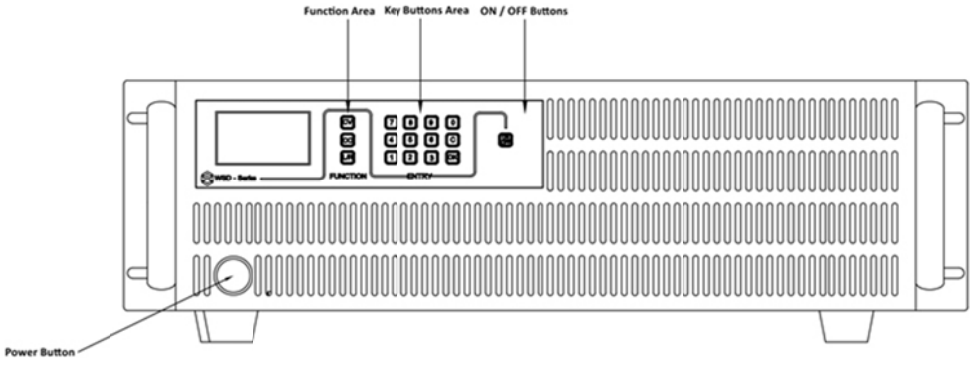

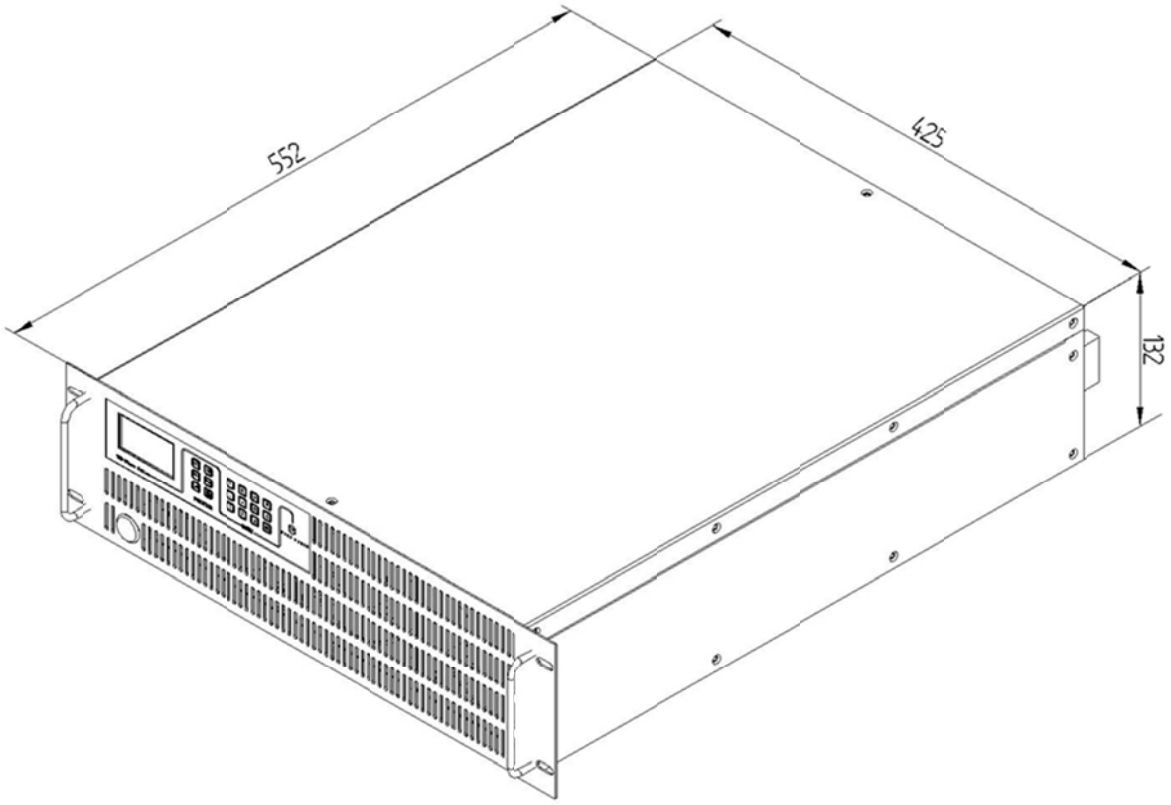

Installation environment

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- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	CSP10H10H	CSP20H50	CSP30H30	CSP50H20	CSP60H15	CSP10HH10
Rated Power	10KW	10KW	9KW	10KW	9KW	10KW
Rated Voltage	100.00V	200.00V	300.00V	500.00V	600.00V	1000.0V
Rated Current	100.0A	50.00A	30.00A	20.00A	15.00A	10.00A
Voltage Ripple	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%	Vrms < 0.3%

MTP Series Switching Mode DC Power Supply

- Power range: 1.5 ~ 3KW
- Voltage range: 30 ~ 1000V
- Current range: 3.5 ~ 100A
- 2U / 19-inch standard chassis
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Single – phase, two – wire + GND
	Voltage		220V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		* kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤10ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel button control
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		LED digital display
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)
			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)

			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Protection & Monitoring functions		Output over voltage protection (OVP)	Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
		Output over current protection (OCP)	Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
		Over temperature protection (OTP)	Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
		Output short-circuit protection	Power supply automatically cuts off output and alarms when the output has short-circuit.
		Automatic voltage compensation protection	Output over compensation protection / compensation line reverse-connected protection
Noise			≤55dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features		Insulation resistance	≥20MΩ
		Withstand voltage ability	60s test @ 2000VDC, no flash-over or spark-over.
		Grounding inductance resistance	≤100mΩ
Working conditions		Ambient temperature	0℃～45℃
		Humidity	10%～90%(non-condensing)
		Height	≤2000m
Size (W*H*D) (mm)			500*88*500 (19" 2U standard chassis)

Functions

1. Working modes

The power supply has two working modes: CV / CC mode, power supplies can automatically switch between different working modes according to actual use requirements.

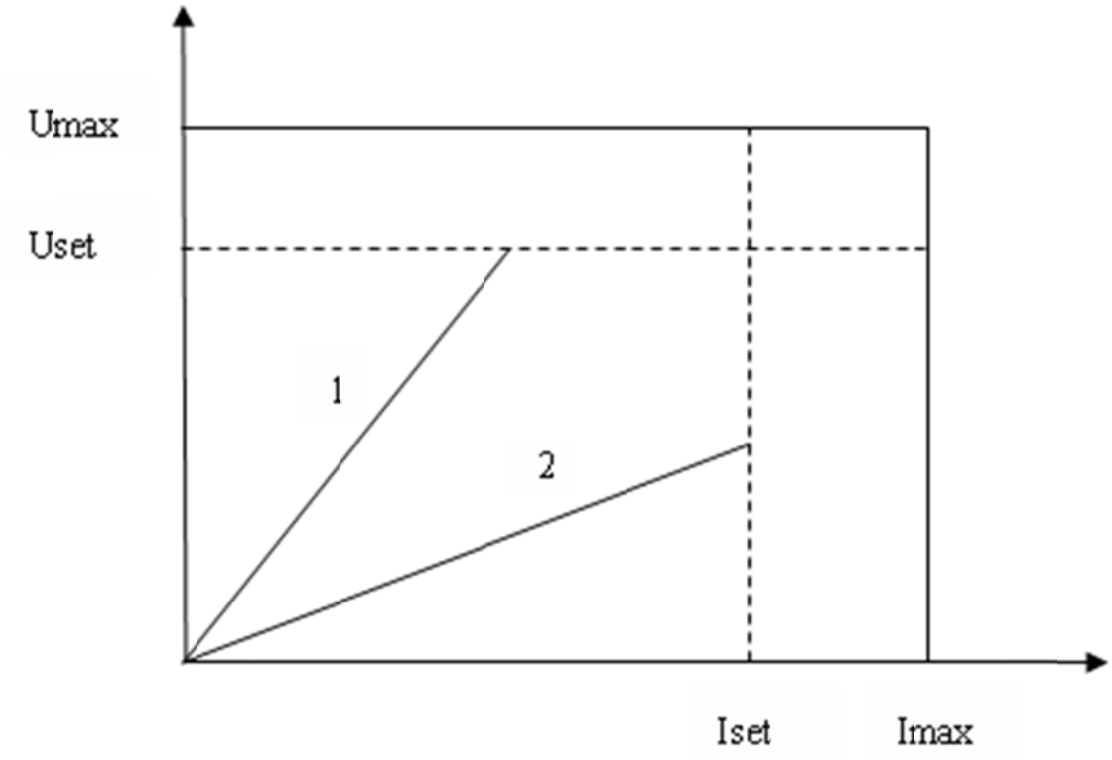
CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



2. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

3. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

4. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

5. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LEDs on front panel would display corresponding alarm code.

6. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

7. Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status

monitoring.

8. *24V interlock circuit (optional)*

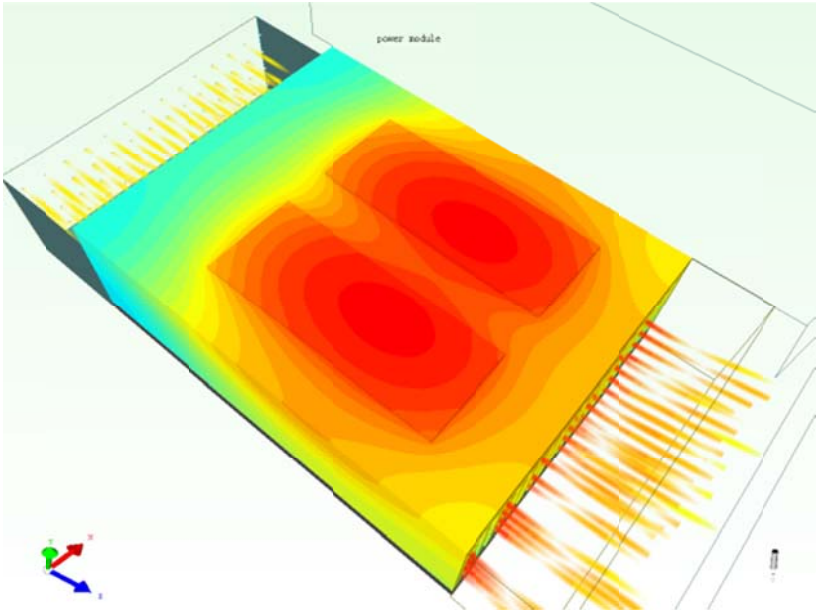
The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



2. Modular design

The power supply follows the modular design concept and requirements. According to the analysis of product characteristics and functions, each subsystem will use components with independent functions. By the Laminated busbar structure and the use of standardized long-term verified power units, the loop sense is effectively reduced, and the reliability of the product operation is greatly improved.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

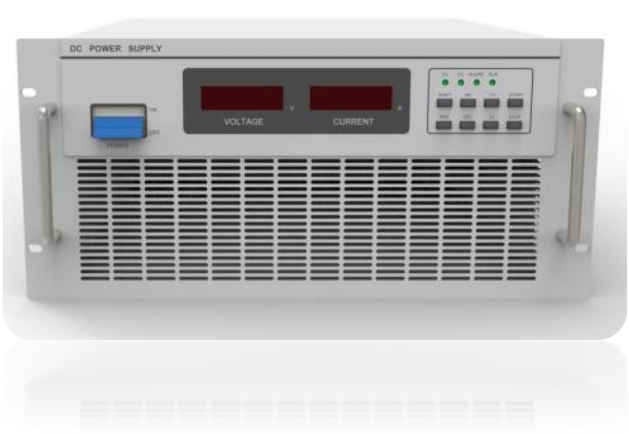
Standard model list

Model	MTP-0030-0100S	MTP-0060-0050S	MTP-0120-0025S	MTP-0150-0020S	MTP-0200-0015S	MTP-0300-0010S	MTP-0600-0005S	MTP-1000-0003S

Rated power	3KW							
Rated voltage	30V	60V	120V	150V	200V	300V	600V	1000V
Rated current	100A	50A	25A	20A	15A	10A	5A	3.5A

MTP Series Switching Mode DC Power Supply

- Power range: 3.5 ~ 6KW
- Voltage range: 30 ~ 1000V
- Current range: 6 ~ 200A
- 4U / 19-inch standard chassis
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified



Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, four – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		* kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤10ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel button control
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		LED digital display
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)
			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)

		Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
		Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation		≤5V (Ue ≤ 100V)
		≤10V (100V < Ue ≤ 300V)
		≤15V (300V < Ue ≤ 1000V)
Over-loading ability		Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Output over voltage protection (OVP)	Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)	Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)	Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection	Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection	Output over compensation protection / compensation line reverse-connected protection
Noise		≤60dB
Protection degree		IP20
Cooling method		Forced air cooling
Safety features	Insulation resistance	≥20MΩ
	Withstand voltage ability	60s test @ 2000VDC, no flash-over or spark-over.
	Grounding inductance resistance	≤100mΩ
Working	Ambient temperature	0℃～45℃

conditions	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		500*178*550 (19'' 4U standard chassis)

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

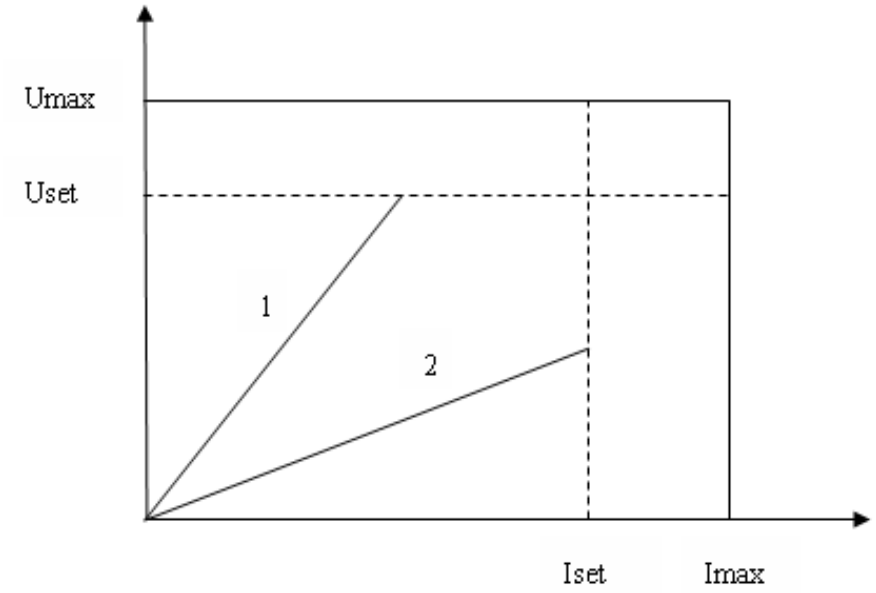
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

3. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is

reverse connected or not.

4. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

5. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LEDs on front panel would display corresponding alarm code.

6. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

7. Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

8. 24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

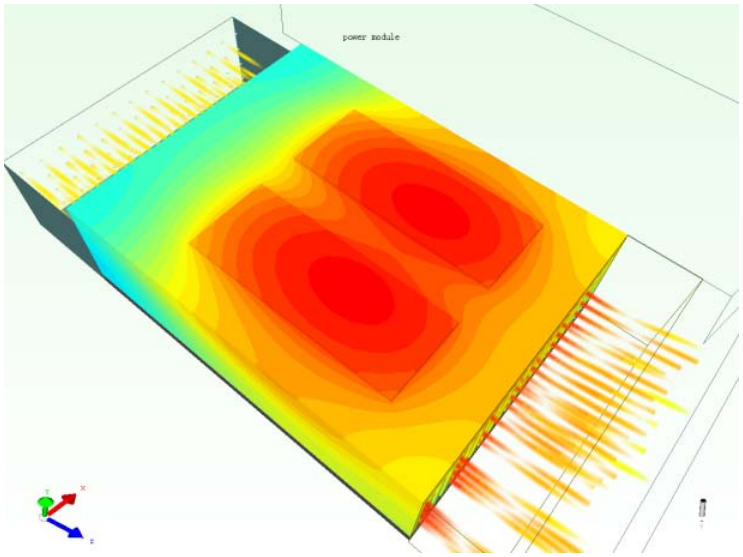
Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device

with low temperature rise and long life.



2. Modular design

The power supply follows the modular design concept and requirements. According to the analysis of product characteristics and functions, each subsystem will use components with independent functions. By the Laminated busbar structure and the use of standardized long-term verified power units, the loop sense is effectively reduced, and the reliability of the product operation is greatly improved.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

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Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~

45℃) or it would affect life of power source.

- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0030-0200T	MTP-0060-0100T	MTP-0120-0050T	MTP-0150-0040T	MTP-0200-0030T	MTP-0300-0020T	MTP-0600-0010T	MTP-1000-0006T
Rated power	6KW							
Rated voltage	30V	60V	120V	150V	200V	300V	600V	1000V
Rated current	200A	100A	50A	40A	30A	20A	10A	6A

MTP Series Switching Mode DC Power Supply

- Power range: 7 ~ 15KW
- Voltage range: 30 ~ 1000V
- Current range: 10 ~ 500A
- 5U / 19-inch standard chassis
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, four – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤10ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel button control
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		LED digital display
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)
			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)

		Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
		Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation		≤5V (Ue ≤ 100V)
		≤10V (100V < Ue ≤ 300V)
		≤15V (300V < Ue ≤ 1000V)
Over-loading ability		Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Output over voltage protection (OVP)	Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)	Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)	Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection	Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection	Output over compensation protection / compensation line reverse-connected protection
Noise		≤60dB
Protection degree		IP20
Cooling method		Forced air cooling
Safety features	Insulation resistance	≥20MΩ
	Withstand voltage ability	60s test @ 2000VDC, no flash-over or spark-over.
	Grounding inductance resistance	≤100mΩ
Working	Ambient temperature	0℃～45℃

conditions	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		500*222*550 (19'' 5U standard chassis)

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

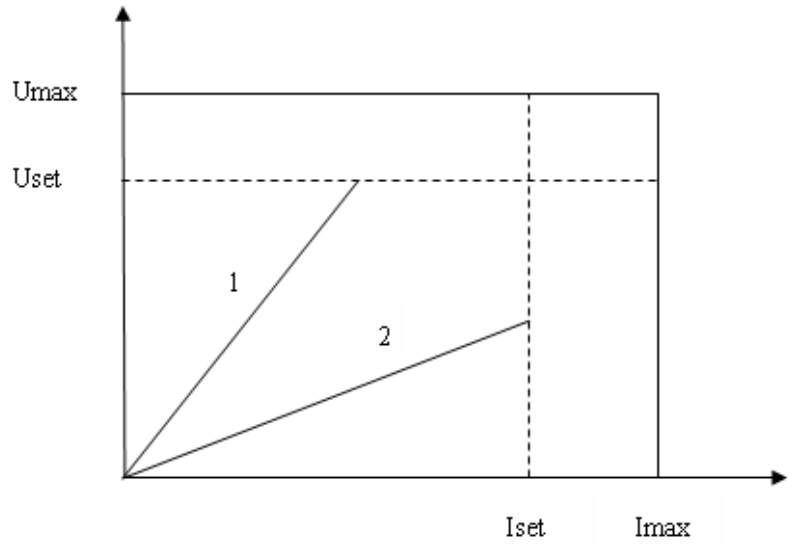
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated, the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

3. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

4. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

5. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally

started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LEDs on front panel would display corresponding alarm code.

6. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

7. Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

8. 24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

9. Reverse energy discharging (optional)

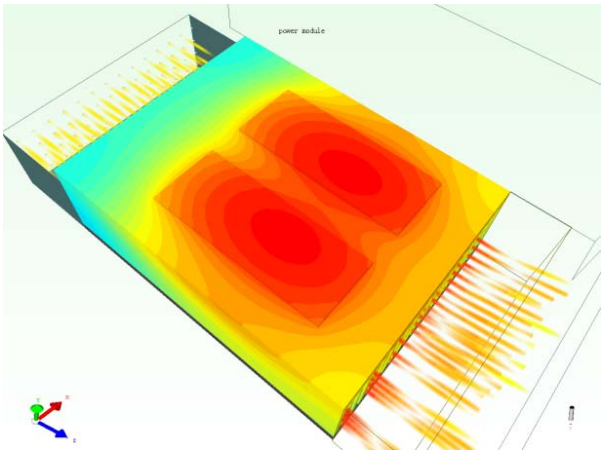
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



2. Modular design

The power supply follows the modular design concept and requirements. According to the analysis of product characteristics and functions, each subsystem will use components with independent functions. By the Laminated busbar structure and the use of standardized long-term verified power units, the loop sense is effectively reduced, and the reliability of the product operation is greatly improved.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

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Changes for the Better

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like

puncher.

- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0030-0350T	MTP-0060-0170T	MTP-0120-0085T	MTP-0150-0070T	MTP-0200-0050T	MTP-0300-0035T	MTP-0600-0017T	MTP-1000-0010T
Rated power	10KW							
Rated voltage	30V	60V	120V	150V	200V	300V	600V	1000V
Rated current	350A	170A	85A	70A	50A	35A	17A	10A
Model	MTP-0030-0500T	MTP-0060-0250T	MTP-0120-0125T	MTP-0150-0100T	MTP-0200-0075T	MTP-0300-0050T	MTP-0600-0025T	MTP-1000-0015T
Rated power	15KW							
Rated voltage	30V	60V	120V	150V	200V	300V	600V	1000V
Rated current	500A	250A	125A	100A	75A	50A	25A	15A

MTP Series Switching Mode DC Power Supply

- Power range: 20 ~ 30KW
- Voltage range: 50 ~ 1000V
- Current range: 20 ~ 800A
- 10U / 19-inch standard chassis
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing &compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, four – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel button control
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		LED digital display
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)
			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)

			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤65dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.
	Grounding inductance resistance		≤100mΩ
Working	Ambient temperature		0℃～45℃

conditions	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		500*450*550 (19" 10U standard chassis)

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

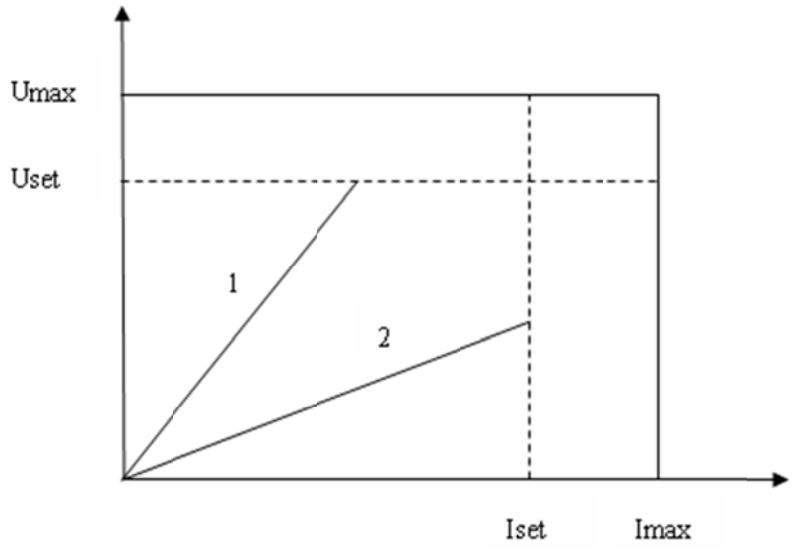
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

3. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

4. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

5. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally

started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LEDs on front panel would display corresponding alarm code.

6. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

7. Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

8. 24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

9. Reverse energy discharging (optional)

The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

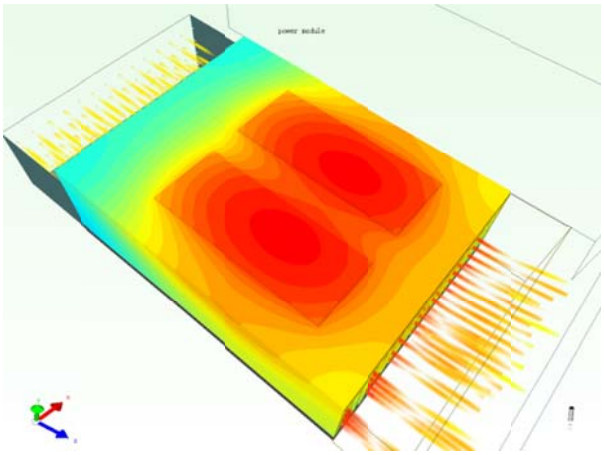
Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the

device with low temperature rise and long life.



2. Modular design

The power supply follows the modular design concept and requirements. According to the analysis of product characteristics and functions, each subsystem will use components with independent functions. By the Laminated busbar structure and the use of standardized long-term verified power units, the loop sense is effectively reduced, and the reliability of the product operation is greatly improved.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

Infineon

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MITSUBISHI ELECTRIC
Changes for the Better

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.

- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0050-0400T	MTP-0100-0200T	MTP-0120-0160T	MTP-0150-0133T	MTP-0200-0100T	MTP-0300-0070T	MTP-0600-0035T	MTP-1000-0020T
Rated power	20KW							
Rated voltage	50V	100V	120V	150V	200V	300V	600V	1000V
Rated current	400A	200A	160A	133A	100A	70A	35A	20A
Model	MTP-0100-0300T	MTP-0150-0200T	MP-0200-0150T	MTP-0300-0100T	MTP-0600-0050T	MTP-1000-0030T		
Rated power	30KW							
Rated voltage	100V	150V	200V	300V	600V	1000V		
Rated current	300A	200A	150A	100A	50A	30A		

MTP Series Switching Mode DC Power Supply

- Power range: 30 ~ 50KW
- Voltage range: 100 ~ 1500V
- Current range: 30 ~ 500A
- 600*800*600 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications			
Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)

			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤65dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		500*1100*600

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

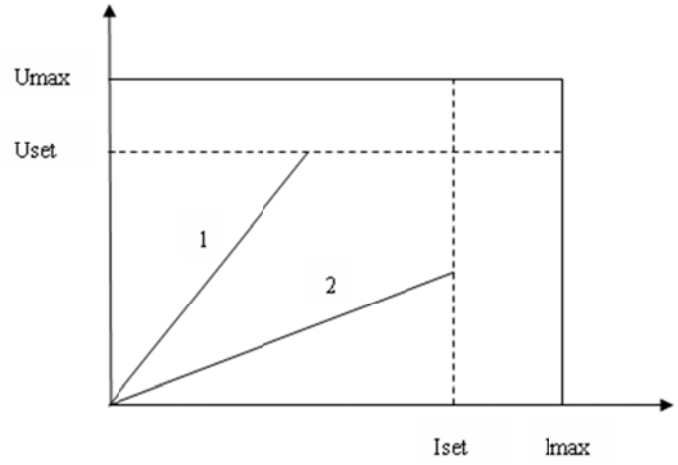
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. LCD touch screen operation / display function

The power supply adopts LCD touch screen for output parameters setting, working status and alarm information monitoring.

The LCD screen has memory function which can automatically save the power failure occurrence time and fault phenomenon for easy query in real time.

Also, the touch screen has lock screen function, which can automatically lock screen when the operation is not performed for a long time. Thereby preventing the wrong operation from changing the power output state by mistake.

3. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

4. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

5. Input voltage detection function

Power supply has an input voltage detection circuit that generates an alarm and protects the power supply when an abnormality occurs in the input voltage.

6. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

7. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LCD on front panel would display corresponding alarm code.

8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

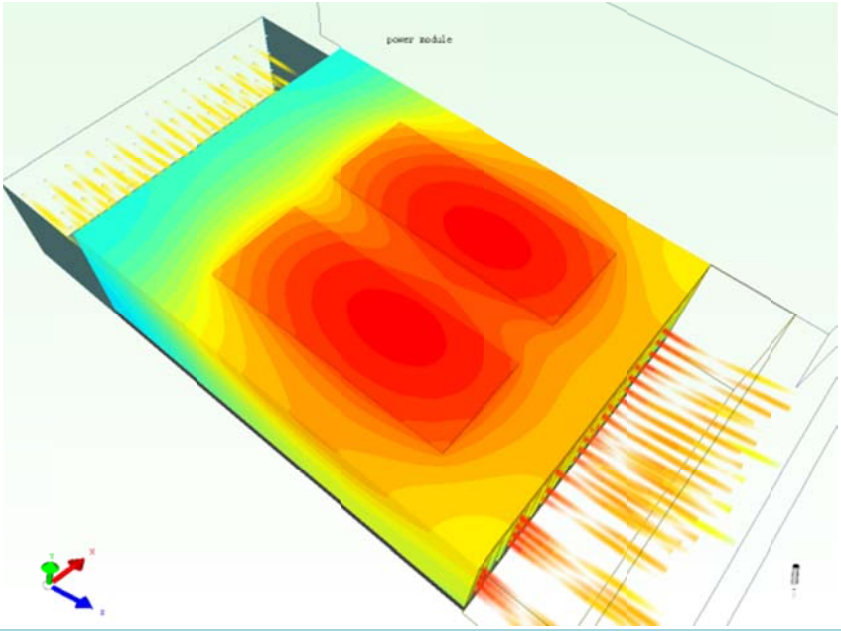
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



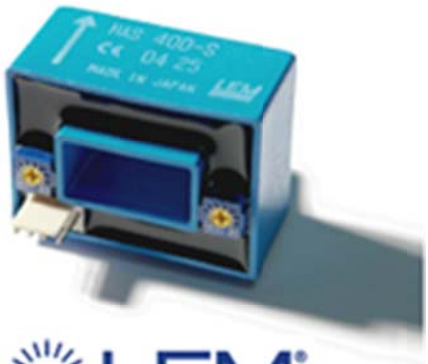
2. Integrated design

The power circuit adopts integrated design to give better impact resistance and eliminate the output uneven-current problem during full load operation or working with inductive load and rectifying load.

This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.



Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source away from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0100-0450T	MTP-0150-0300T	MTP-0200-0225T	MTP-0300-0150T	MTP-0600-0075T	MTP-1000-0045T
Rated power	45KW					
Rated voltage	100V	150V	200V	300V	600V	1000V
Rated current	450V	300A	225A	150A	75A	45A
Rated power	50KW					
Rated voltage	100V	150V	200V	400V	600V	1000V
Rated current	450V	333A	250A	125A	85A	50A

MTP Series Switching Mode DC Power Supply

- Power range: 50 ~ 60KW
- Voltage range: 100 ~ 1500V
- Current range: 45 ~ 600A
- 600*1700*800 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications			
Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ***A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)

			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤65dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		600*1700*800

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

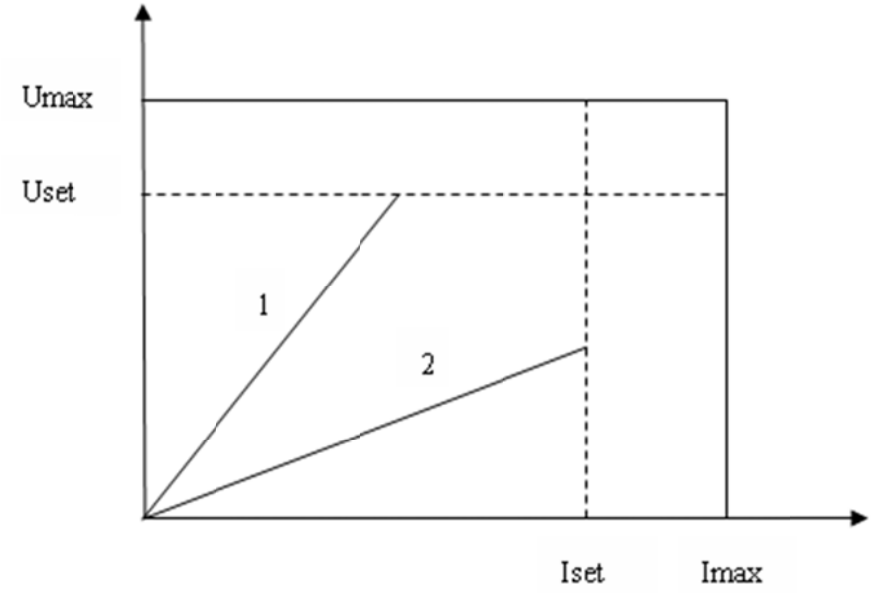
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. LCD touch screen operation / display function

The power supply adopts LCD touch screen for output parameters setting, working status and alarm information monitoring.

The LCD screen has memory function which can automatically save the power failure occurrence time and fault phenomenon for easy query in real time.

Also, the touch screen has lock screen function, which can automatically lock screen when the operation is not performed for a long time. Thereby preventing the wrong operation from changing the power output state by mistake.

3. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

4. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

5. Input voltage detection function

Power supply has an input voltage detection circuit that generates an alarm and protects the power supply when an abnormality occurs in the input voltage.

6. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

7. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LCD on front panel would display corresponding alarm code.

8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via

PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

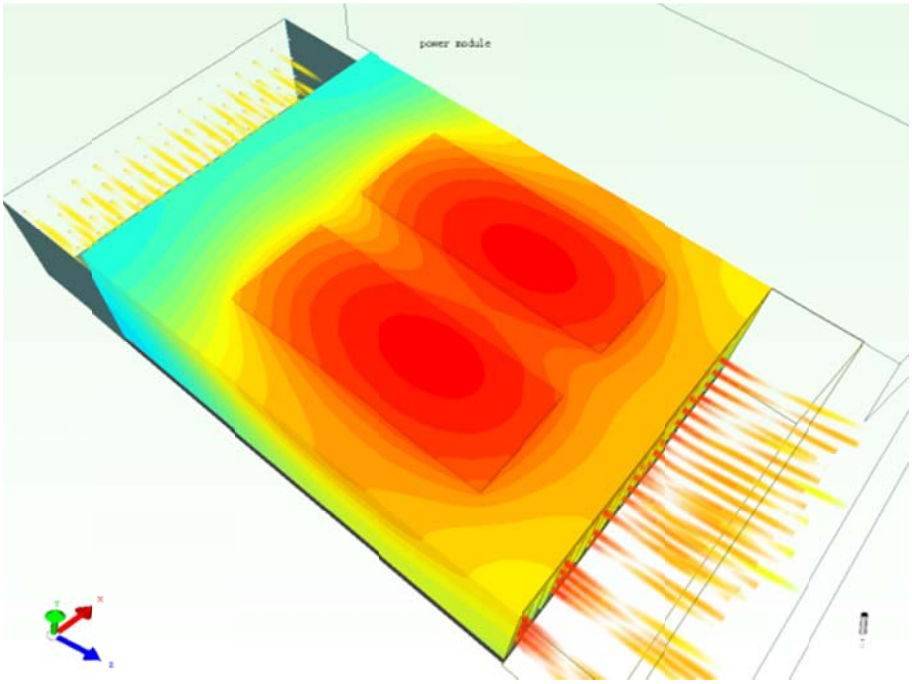
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



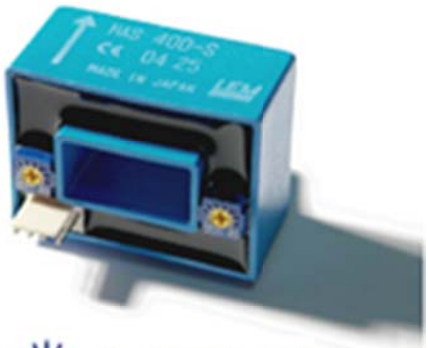
2. Integrated design

The power circuit adopts integrated design to give better impact resistance and eliminate the output uneven-current problem during full load operation or working with inductive load and rectifying load.

This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.



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Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0100-0500T	MTP-0150-0333T	MTP-0200-0250T	MTP-0300-0167T	MTP-0600-0085T	MTP-1000-0050T
Rated power	50KW					
Rated voltage	100V	150V	200V	300V	600V	1000V
Rated current	500A	333A	250A	167A	85A	50A
Model	MTP-0100-0500T	MTP-0150-0400T	MTP-0200-0300T	MTP-0300-0200T	MTP-0600-0100T	MTP-1000-0060T
Rated power	60KW					
Rated voltage	100V	150V	200V	300V	600V	1000V
Rated current	500A	400A	300A	200A	100A	60A

MTP Series Switching Mode DC Power Supply

- Power range: 75 ~ 100KW
- Voltage range: 100 ~ 1500V
- Current range: 50 ~ 1000A
- 800*1800*800 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		*** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ****A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)

			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤70dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		800*1800*800

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

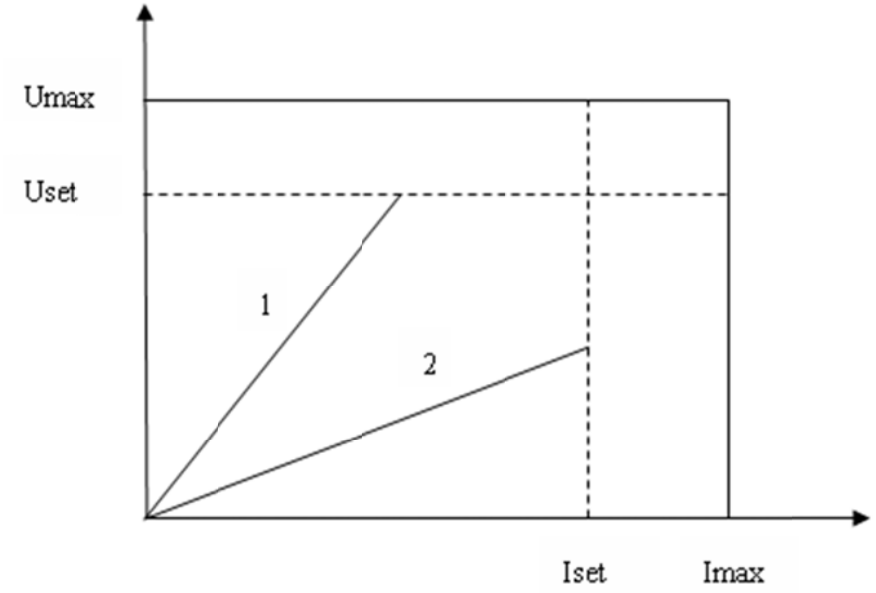
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. LCD touch screen operation / display function

The power supply adopts LCD touch screen for output parameters setting, working status and alarm information monitoring.

The LCD screen has memory function which can automatically save the power failure occurrence time and fault phenomenon for easy query in real time.

Also, the touch screen has lock screen function, which can automatically lock screen when the operation is not performed for a long time. Thereby preventing the wrong operation from changing the power output state by mistake.

3. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

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Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

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Power supply has an input voltage detection circuit that generates an alarm and protects the power supply when an abnormality occurs in the input voltage.

6. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

7. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

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If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LCD on front panel would display corresponding alarm code.

8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

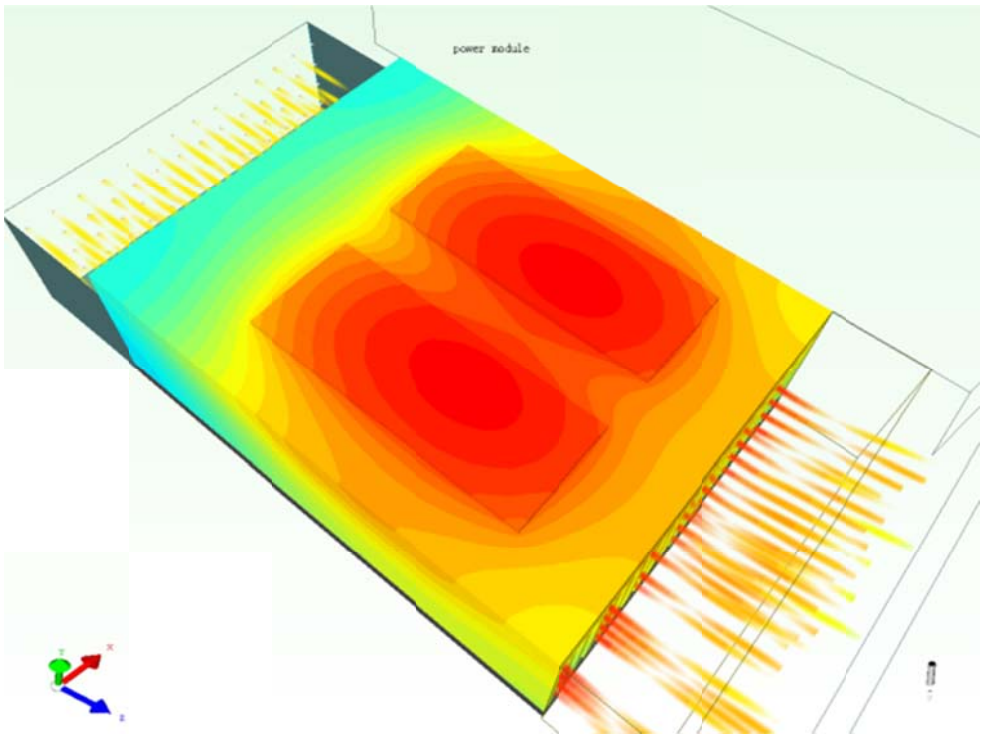
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



2. Integrated design

The power circuit adopts integrated design to give better impact resistance and eliminate the output uneven-current problem during full load operation or working with inductive load and rectifying load.

This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

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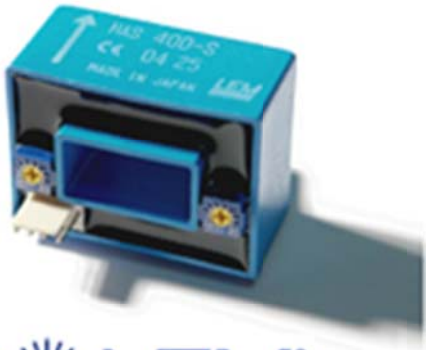
The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.



Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.
- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0100-0750T	MTP-0150-0500T	MTP-0200-037T	MTP-0300-0250T	MTP-0600-0125T	MTP-1000-0075T
Rated power	75KW					
Rated voltage	100V	150V	200V	300V	600V	1000V
Rated current	750A	500A	375A	250A	125A	75A
Model	MTP-0100-1000T	MTP-0150-0667T	MTP-0200-0500T	MTP-0300-0333T	MTP-0600-0167T	MTP-1000-0100T
Rated power	100KW					
Rated voltage	100V	150V	200V	300V	600V	1000V
Rated current	1000A	667A	500A	333A	167A	100A

MTP Series Switching Mode DC Power Supply

- Power range: 120 ~ 200KW
- Voltage range: 100 ~ 1500V
- Current range: 90 ~ 1500A
- 1300*2100*800 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		*** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ****A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)

			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤75dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		1300*2100*800

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

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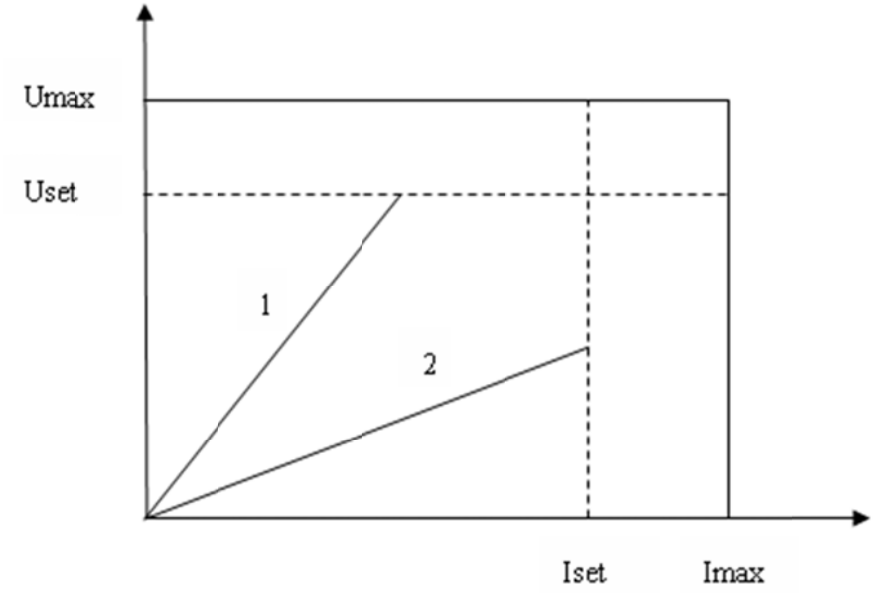

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Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

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Power supply has an input voltage detection circuit that generates an alarm and protects the power supply when an abnormality occurs in the input voltage.

6. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

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The power supply can adapt to two kinds of short-circuit conditions as below:

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8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

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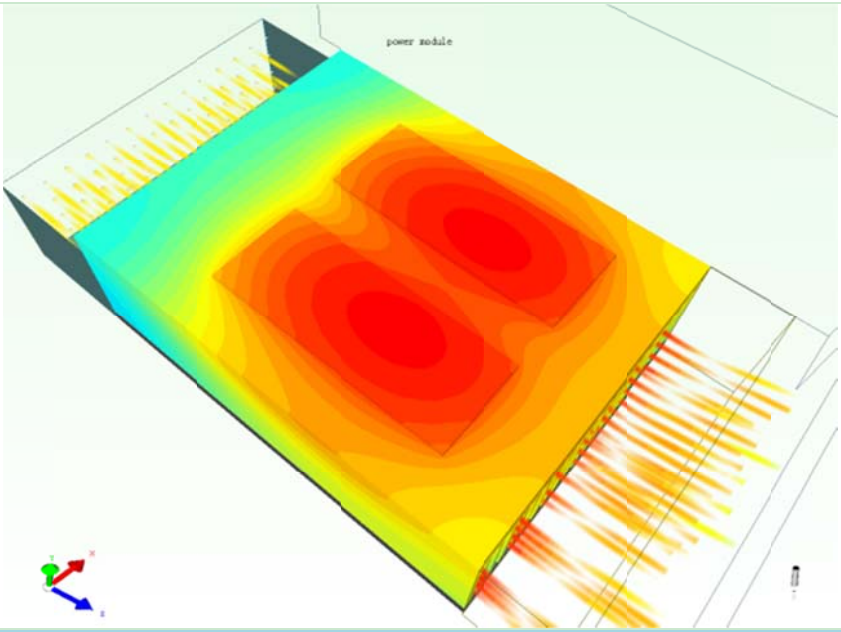

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This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

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Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.

- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0120-1000T	MTP-0150-0800T	MTP-0200-0600T	MTP-0300-0400T	MTP-0600-0200T	MTP-1000-0120T
Rated power	120KW					
Rated voltage	120V	150V	200V	300V	600V	1000V
Rated current	1000A	800A	600A	400A	200A	120A
Model	MTP-0150-1000T	MTP-0200-0750T	MTP-0300-0500T	MTP-0500-0300T	MTP-0800-0188T	MTP-1000-0150T
Rated power	150KW					
Rated voltage	150V	200V	300V	500V	800V	1000V
Rated current	1000A	750A	500A	300A	188A	150A
Model	MTP-0150-1335T	MTP-0200-1000T	MTP-0300-0667T	MTP-0500-0400T	MTP-0800-0250T	MTP-1000-0200T
Rated power	200KW					
Rated voltage	150V	200V	300V	500V	800V	1000V
Rated current	1335A	1000A	667A	400A	250A	200A

MTP Series Switching Mode DC Power Supply

- Power range: 250 ~ 450KW
- Voltage range: 100 ~ 1500V
- Current range: 100 ~ 2000A
- 2100*2150*800 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
- Full-bridge phase-shifting soft switching technology, the overall efficiency is up to 88%.
- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications			
Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		*** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ****A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
		Current	0.5%FS
	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
			Four-digit display with a minimum resolution of 0.1V (30V < Ue < 1000V)

			Four-digit display with a minimum resolution of 1V (Ue ≥ 1000V)
		Current	Four-digit display with a minimum resolution of 0.01A (Ie ≤ 50A)
			Four-digit display with a minimum resolution of 0.1A (50A < Ie < 1000A)
			Four-digit display with a minimum resolution of 1A (Ie ≥ 1000A)
Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
			≤15V (300V < Ue ≤ 1000V)
Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Output over current protection value settable. Power supply automatically cuts off output and alarms when the output has over current.
	Over temperature protection (OTP)		Power supply automatically cuts off output and alarms when the internal temperature of the power supply exceeds 85 °C.
	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤80dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		2100*2150*800

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

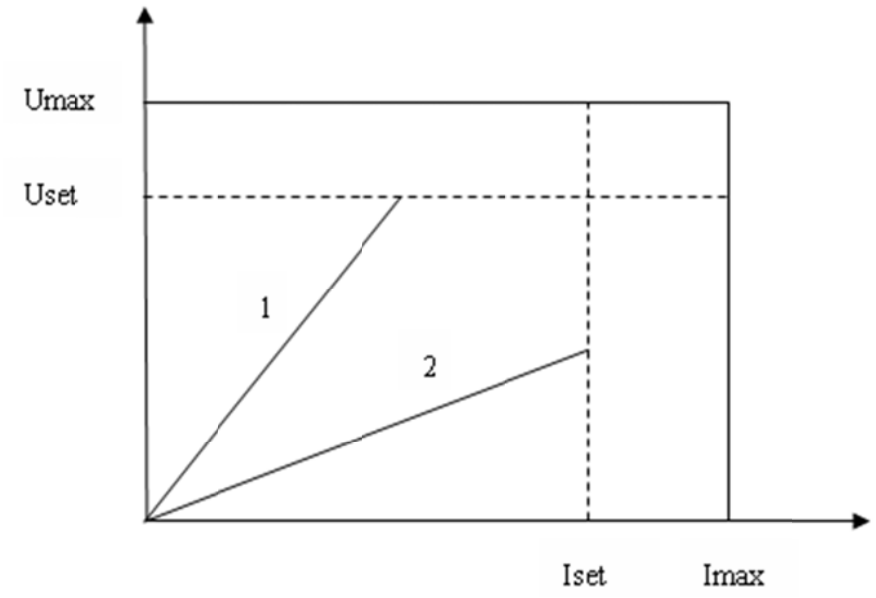
(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

Power supply works either in constant voltage (CV) or constant current (CC) state, the CV & CC working state are automatically switchable, the switching conditions are determined by the voltage & current set values and the customer's load resistance value. For details, please refer to the following figure.

In CV state, the output voltage is adjustable and regulated; the output current varies with the output voltage value and the customer load resistance.

In CC state, the output current is adjustable and regulated, the output voltage varies with the output current value and the customer load resistance.



(2). CV / OC mode

Under CV / OC (over current) mode, besides CV function, power supply still has over-current working ability, (OCP is invalid in this mode), detailed parameters as below:

0% ~ 100% rated current value➔ continuous working with load

100% ~ 125% rated current value ➔ withstand 600s continuous working

125% ~ 150% rated current value ➔ withstand 60s continuous working

150% ~ 200% rated current value ➔ withstand 5s continuous working

Power supply automatic protected and stops output when Max. Over-current time exceeded.

2. LCD touch screen operation / display function

The power supply adopts LCD touch screen for output parameters setting, working status and alarm information monitoring.

The LCD screen has memory function which can automatically save the power failure occurrence time and fault phenomenon for easy query in real time.

Also, the touch screen has lock screen function, which can automatically lock screen when the operation is not performed for a long time. Thereby preventing the wrong operation from changing the power output state by mistake.

3. OVP & OCP value setting function

OVP and OCP value could be set via front control interface, power supply could automatically stop output when output voltage or output current exceeds the set protection values.

OVP: over voltage protection value.

OCP: over current protection value.

4. Automatic line voltage drop compensation function

Power supply has automatic line voltage drop compensation terminals, connect the terminals to load ends; power supply could automatically detect load end voltage value and make voltage compensation for line voltage drop. Meanwhile, this function could detect if load connection is reverse connected or not.

5. Input voltage detection function

Power supply has an input voltage detection circuit that generates an alarm and protects the power supply when an abnormality occurs in the input voltage.

6. Self-discharging function

The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

7. Short-circuit protection

The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LCD on front panel would display corresponding alarm code.

8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

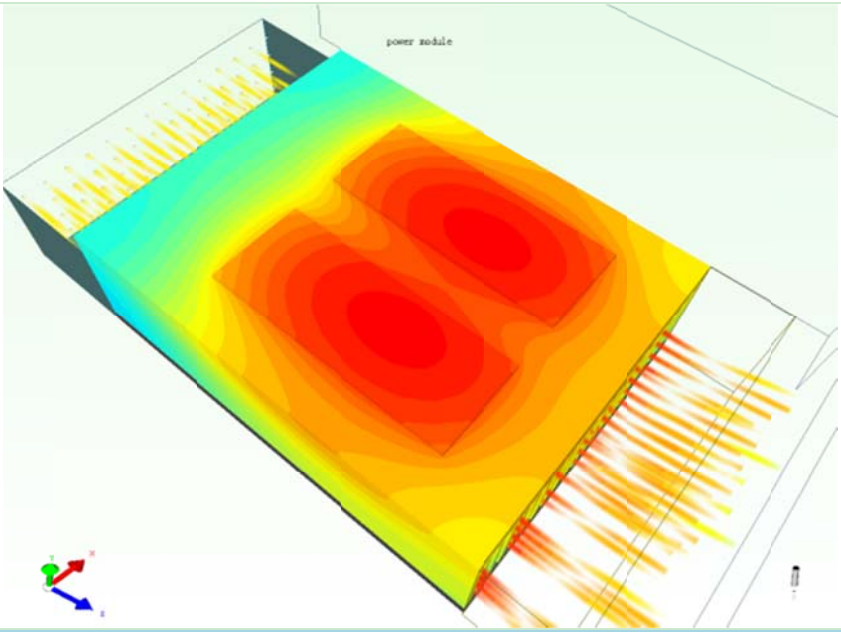
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



2. Integrated design

The power circuit adopts integrated design to give better impact resistance and eliminate the output uneven-current problem during full load operation or working with inductive load and rectifying load.

This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.

- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0200-1250T	MTP-0450-0555T	MTP-0600-0420T	MTP-0750-0333T	MTP-0800-0313T
Rated power	250KW				
Rated voltage	200V	450V	600V	750V	800V
Rated current	1250A	555A	420A	333A	313A
Model	MTP-0200-1500T	MTP-0450-0667T	MTP-0600-0500T	MTP-0750-0400T	MTP-0900-0333T
Rated power	300KW				
Rated voltage	200V	450V	600V	750V	900V
Rated current	1500A	667A	500A	400A	333A
Model	MTP-0300-1500T	MTP-0450-1000T	MTP-0600-0750T	MTP-0750-0600T	MTP-0900-0500T
Rated power	450KW				
Rated voltage	300V	450V	600V	750V	900V
Rated current	1500A	1000A	750A	600A	500A

MTP Series Switching Mode DC Power Supply

- Power range: 500KW ~ 2MW
- Voltage range: 100 ~ 1500V
- Current range: 100 ~ 2000A
- 2500 ~ 6000*2150*800 industrial cabinet.
- Precise voltage and current setting and measurement capabilities
- Line voltage drop remote sensing & compensation function.
- OVP, OCP, OTP and short circuit protections etc.
- CE certified

Overview

MTP series high-precision DC test power supply adopts full-bridge phase-shift soft-switching technology, high output efficiency and small size; it has two-stage conversion circuit structure and double closed-loop control circuit system to ensure power supply with high stability and good output precision.

It can meet the testing needs of power electronics industry, electronic device industry, new energy motor industry and power battery industry.

Block diagram

Features

- Isolated input and output for safe operation.
- CV & CC output mode, output voltage and current continuously adjustable in full scale.
- Multi-stage filtering circuit adopted to reduce harmonic interference to the power grid.
- Double closed-loop circuit, fast response speed and stable output.
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- With RS485 communication interface, in line with MODBUS-RTU communication protocol.
- With LCD touch screen for convenient operation, intuitive displays & indications.
- Amorphous high-frequency transformers and potted inductance adopted to give smaller temperature rise and better reliability.
- The input and output terminals are equipped with safety shielding to ensure the safety of installation.

Optional functions

- Analog control via 0 ~ 5V / 0 ~ 10V or 4mA ~ 20mA signal. (+AC)
- Output power-limiting function (+PL)
- Built-in automatic energy discharging unit (+EDU)
- 24V interlock circuit (+ILK)
- Parallel-connection function (+PC)

Specifications

Input	Connection mode		Three – phase, three – wire + GND
	Voltage		380V±10%
	Frequency		50Hz/60Hz±5Hz
Output	Rated power		**** kW
	Output voltage adjusting range		0V ~ ****V
	Output current adjusting range		0A ~ ****A
	Output voltage precision		0.5%FS
	Output current precision		0.5%FS
	Line regulation		≤0.2%FS
	Load regulation		≤0.2%FS
	Temperature drift		0.04%FS/℃
	Time drift		0.3%FS
	Ripple (Vr.m.s.)		≤0.5% F.S (measured @ rated voltage with 80%-100% resistive loading)
	Response time		≤20ms (measured @ 10%-90% resistive loading)
	Efficiency		≥88% (measured @ 80%-100% resistive loading)
	Working ability		Withstand long-term continual working.
Setting & Display	Control mode	Local	Front panel LCD touch screen.
		Remote	RS485 communication interface. In line with MODBUS-RTU standard.
	Display mode		Touch screen display items as below: 1. Real-time working state display (fault state, running state, stop state, emergency stop state) 2. Working mode display (CV / CC) 3. Output voltage / current display. 4. Power supply system and fault information queriable.
	Set & Display error	Voltage	0.5%FS
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	Display resolution	Voltage	Four-digit display with a minimum resolution of 0.01V (Ue ≤ 30V)
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Automatic voltage compensation			≤5V (Ue ≤ 100V)
			≤10V (100V < Ue ≤ 300V)
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Over-loading ability			Iout≤1.25 Ie, output shutdown after 600s. Iout≤1.5Ie, output shutdown after 60s. Iout≤2Ie, output shutdown after 5s Iout>2Ie, output shutdown immediately.
Protection & Monitoring functions	Input protection		Input lack voltage and lack phase protection.
	Output over voltage protection (OVP)		Output over voltage protection value settable. Power supply automatically cuts off output and alarms when output has over voltage.
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	Output short-circuit protection		Power supply automatically cuts off output and alarms when the output has short-circuit.
	Automatic voltage compensation protection		Output over compensation protection / compensation line reverse-connected protection
Noise			≤88dB
Protection degree			IP20
Cooling method			Forced air cooling
Safety features	Insulation resistance		≥20MΩ
	Withstand voltage ability		60s test @ 2000VDC, no flash-over or spark-over.

	Grounding inductance resistance	≤100mΩ
Working conditions	Ambient temperature	0℃～45℃
	Humidity	10%～90%(non-condensing)
	Height	≤2000m
Size (W*H*D) (mm)		(2500 ~ 6000)*2150*800

Functions

1. Working modes

The power supply has two working modes: CV / CC mode and CV / OC mode, customers can select different working modes according to actual use requirements.

(1). CV / CC mode

Under CV / CC mode, the output voltage and current of power supply are continuously adjustable from 0 to the rated value.

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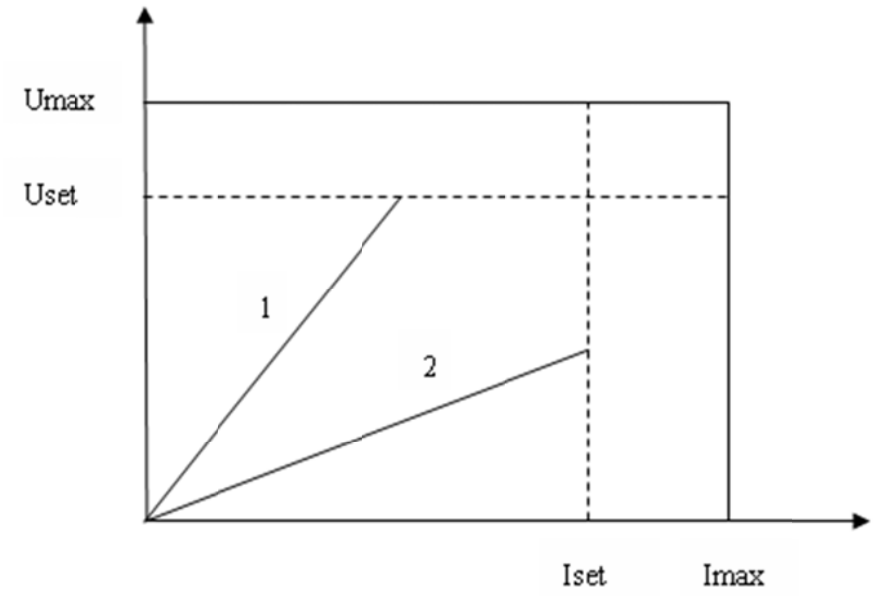

(2). CV / OC mode

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The power supply has built-in discharging circuit, which would be automatically activated to quickly release the energy stored in the output capacitor after the power supply stops output, so as to prevent personal injury caused by accidently touching the output terminal right after the power supply stops.

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The power supply can adapt to two kinds of short-circuit conditions as below:

If the power supply has short-circuit before starting output, then power supply can be normally started and running continuously for a long time.

If power supply has a sudden short-circuit during running with load, then power supply would automatically stop output and gives sound alarm, LCD on front panel would display corresponding alarm code.

8. Emergency stop function

Power supply has emergency stop button for stopping output immediately in case of emergence.

9. Communication port

Power supply equipped with RS485 communication port for remote control and monitoring via PC.

10.Analog signal port (optional)

The power supply can be equipped with an external analog signal port via 0 ~ 10V or 4 ~ 20mA signal to realize power supply start / stop control, power supply running / fault status monitoring.

11.24V interlock circuit (optional)

The power supply can be equipped with 24VDC output interface to build an interlock circuit with external devices.

12.Reverse energy discharging (optional)

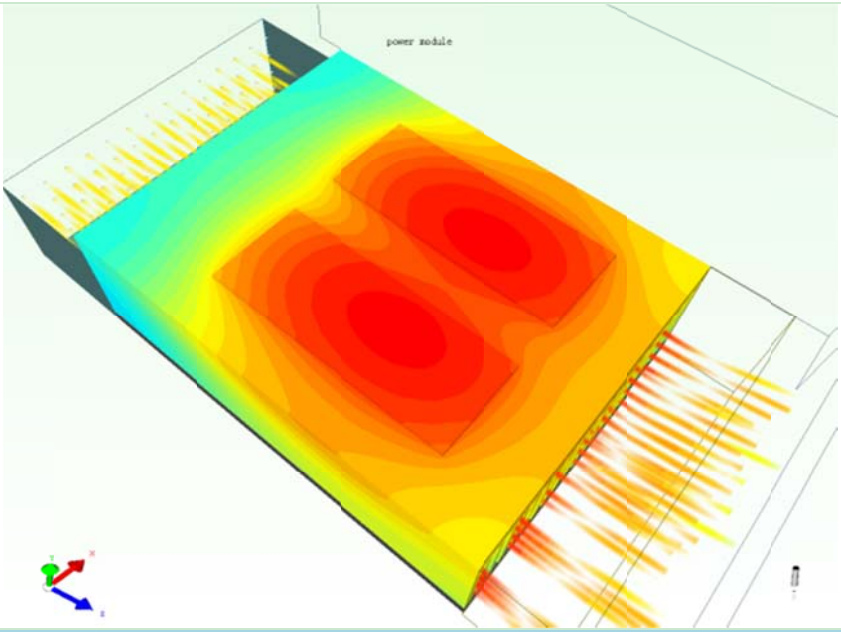
The power supply has automatic reverse energy discharging function, which automatically detects the reverse energy. When the load reverses the energy to the power supply device, the built-in discharging unit would be automatically turned on, and the discharging unit would be automatically turned off after the discharging is completed. The discharging reaction time is less than 1ms.

Key technology introduction

1. Air duct design

Full-sealing independent "Chimney" type air duct design adopted, the inner circuit uses independent cooling fan to improve the product heat dissipation effect, and the air inlet has dustproof measures, which greatly reduces dust and debris entering the power supply. The radiator and fan can be cleaned and maintained separately

The heat dissipation system undergoes rigorous simulation and actual testing, and is designed with reliability in consideration of national standards and enterprise standards to ensure that the device with low temperature rise and long life.



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This designed structure greatly improves the stability of power supply and prolong the working life of power supply.

3. Core component

The key and important core devices are all internationally renowned brands, and high-quality devices ensure the stability and reliability of product operation.

Installation environment

- Ambient temperature: Please have the power source working in safe temperature range (0℃ ~ 45℃) or it would affect life of power source.
- Please install the power source at least 50cm distant from surroundings to have better ventilation.

- Please install the power source away from vibration (less than 0.6G), especially equipment like puncher.
- Keep the power source away from direct sunshine, humidity or place with water globule.
- Keep the power source from corrosive, flammable & explosive gas.
- Keep the power source away from oil stain, dust & metallic dust.

Standard model list

Model	MTP-0500-1000T	MTP-0600-0835T	MTP-0750-0667T	MTP-0900-0556T	MTP-1000-0500T
Rated power	500KW				
Rated voltage	500V	600V	750V	900V	1000V
Rated current	1000A	835A	667A	556A	500A
Model	MTP-0500-1600T	MTP-0600-1335T	MTP-0750-1067T	MTP-0900-0889T	MTP-1000-0800T
Rated power	800KW				
Rated voltage	500V	600V	750V	900V	1000V
Rated current	1600A	1335A	1067A	889A	800A
Model	MTP-0500-2000T	MTP-0900-1111T			
Rated power	1MW				
Rated voltage	500V	900V			
Rated current	2000A	1111A			

PPS604T Series Programmable DC Power Supply

Features

- Scientific structure layout, small size, saving work space.
- Output: High & Low range output.
- Maximum output power up to 300W.
- Voltage & Current resolution: 10mV / 1mA (depends on output values)
- Full-function operation of keys and knobs to meet any usage habit.
- Intelligent fan for active heat dissipation, can bear 24 hours continuous working.
- 4 sets of output status storage.
- This unit can go with the pulse output programming function & cycle time settable.

Optional functions

- USB 5V/1A (Max.) charging port on front panel.
- USB communication port on back panel.

Front & Back Panel instruction

Specifications

Input	Voltage		Single – phase 100Vac ~ 240Vac
	Frequency		50Hz/60Hz
Output	Working modes		Constant current (CC), Constant voltage (CV), PULSE
	Output voltage adjusting range		0V ~ **V
	Line regulation		CV≤0.01%+3mV / CC≤0.2%+3mA (Stability @ ±10% Δ UIN)
	Load regulation		CV≤0.02%+5mV / CC≤0.2%+5mA (Stability @ 10% ~ 90% load variance)
	Ripple & Noise		≤3mV (RMS)
Setting & Display	Control mode		Front panel button control
	Display mode		4 – digit LED display, (GREEN)
	Display accuracy	Voltage	≤±0.5%+3 digit
		Current	≤±1%+3 digit
	Display resolution	Voltage	0.01V / 0.1V
		Current	0.001A
	Display stability		30min≤3 digits
Protection & Monitoring functions	Output over voltage protection (OVP)		Power supply automatically cuts off output and alarms when output has over voltage.
	Output over current protection (OCP)		Power supply automatically cuts off output and alarms when the output has over current.
Noise			≤55dB
Protection degree			IP20
Cooling method			Forced air cooling
Working conditions	Ambient temperature		0℃~40℃
	Humidity		10%~80%(non-condensing)
	Height		≤1000m
Size (W*H*D) (mm)			95*150*280 (handle excluded)
Weight			Approx. 3 ~ 5Kg
Accessories			Operation Manual × 1pc Output line × 1 pair Power cord (Universal type) × 1pc

Model list

Model	Output	Output power	Dimension (W*H*D) (mm)
PPS604T	0-30.00V / 4.000A 30.00V-60.00V / 2.000A	120W	95*150*280
PPS605T	0-36.00V / 5.000A 36-60.00V / 3.000A	180W	95*150*280
PPS607T	0-36.00V / 6.50A 36.00-60.00V / 4.00A	240W	95*150*280
PPS608T	0-36.00V / 8.00A 36.00-60.00V / 5.00A	300W	95*150*280
PPS1002T	0-60.0V / 2.000A 61.0-100.0V / 1.200A	120W	95*150*280
PPS1003T	60.0V / 3.000A 61.0-100.0V / 1.800A	180W	95*150*280
PPS1004T	60.00V / 4.000A 61.0-100.0V / 2.500A	250W	95*150*280
PPS1005T	60.0V / 5.000A 61.0-100.0V / 3.000A	300W	95*150*280

More models are coming soon. ☺