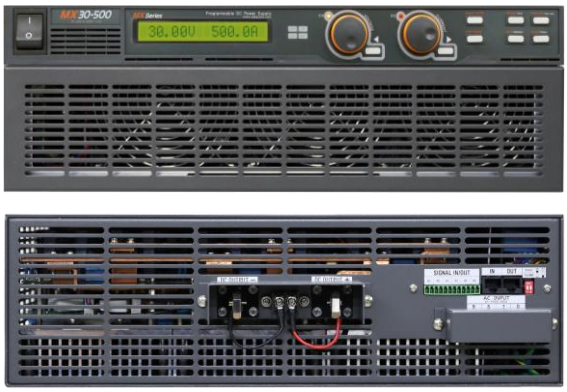
MX Series

Updated on Mar 30, 2020

High Precision Programmable DC Power Supply

Feature

- High Power Density
  Up to 15kW in 3U
- Wide Voltage Range
  0~20V up to 1500V from 5kW to 15kW
- Intensively Fast Load Transient Response Time
  0.5%/500us
- Low Ripple and Noise
- High Accuracy
- High Efficiency
- High Stability
- Parallelable up to 300kW
- 380/400Vac 3phase AC Input
- 0.95 Power Factor
- 11 kinds of Protection Modes
- SCPI compatible protocol is supported and
  Modbus is selectable for RS485



MX Series can output much more power with small product size.
This series can supply power and measurement without other measuring instruments by providing excellent and various protection mode.
MX Series is designed suitably for high power by using parallel function and can supply clear power continually with low ripple/noise and fast transient time.
As PFC is equipped basically, accessories of AC input is simplified and reactive power is minimized.
MX Series can be used for any application with various voltage and current (combination)
Also, wide range of AC input can offer more choices for product.

Easy Control

MX Series can set voltage and current fastly by intuitive control panel design and encoder switch for voltage and current each. Also, as it provides only few buttons for frequently used function, you can control the product easily. Various setting can be available by providing diverse function.

Intensively Fast Load Transient Response Time

MX Series can supply stable voltage to load by extremly fast recovery action from voltage drop or rise caused by excessive load change.

11 kinds of protection mode

MX Series supports various 11 protection modes.
OVP, OCP, OTP, AC Input Range, AC Phase, PFC, FAN, Module Balance, Control VCC, V-Sensing and Max Watt Trip protect product and load by detecting in real time.

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MX30-500 Specification

1. Output rating

Volt 0 ~ 30

Curr 0 ~ 500

2. Output WATT

15 kW

3. Efficiency

Max load	>89%	
50% load	82~86%	Tested by setting 10%~100% of maximum voltage and current.
20% load	71~83%	Tested by setting 10%~100% of maximum voltage and current.

4. Remote Voltage Sensing

Up to 5% from max voltage

Up to 10% for Nominal voltage

5. Parallel Operation

12 units

6. AC Input

380/400Vac 3phase ±10% (342 ~ 440Vac)

3 line + ground

47~63Hz

7. Power Factor

>0.95@ Full rate and 342~440Vac input

8. AC Input Protection

Fuse

Input Voltage Window Detector

Phase Fail Monitoring Detector

9. Programming Accuracy

Volt ±0.1% of F.S.

Curr ±0.15% of F.S.

10. Readback Accuracy

Volt ±0.1% of F.S.

Curr ±0.15% of F.S.

11. Display Resolution

4-Digit

12. Ripple & Noise

Volt ± 15 mVrms ± 0.15 Vpp

Curr ± 200 mArms

13. Voltage Rise/Fall Time (10%~90% , 90%~10%)

Rising	No Load	≤20ms
	Full Load	≤20ms
Falling	No Load	≤2sec
	Full Load	≤25ms

14. Current Rise/Fall Time (10%~90% , 90%~10%)

Rising	Full Load	≤30ms
Falling	Full Load	≤30ms

15. Line Regulation

Volt ±0.01%

Curr ±0.05%

16. Load Regulation

Volt ±0.01%

Curr ±0.05%

17. Transient Response Time

0.5%/500us

50%~100% or 100%~50% load change Recovers within 500μs to ±0.5% of full-scale

18. Stability

0.05%/12Hr of F.S

19. Temperature Coefficient

Volt 0.02%/℃

Curr 0.02%/℃

20. OVP & OCP

0 to 110% (up to 10% of output rate)

±0.5% of Volt F.S

±1% of Curr F.S

<7ms Response Time

21. OTP Protection

70℃ Trip temperature

22. Overshoot

Power Switch ON/OFF	No Overshoot, undershoot : ≤ -0.7V (Protection operation)
Volt & Curr Setting	No Overshoot

23. Communication Interface

RS232, RS485 Standard

TCP/IP, GPIB is optional

24. Operating Temperature

0 to 50℃

25. Storage Temperature

-25 to 65℃

26. Humidity Range

95% non-condensing, 0 to 50℃

27. Altitude

Up to 5000ft(~1500m)	Full power
Every 1000ft	10% derate
below 40,000ft(12,000)	Non-operating

28. Insulation Resistance

100Mohm at 500VDC

10Mohm at 1500VDC

29. Leakage Current

< 15mA

30. AC Current

30.0Arms at 342Vac

27.0Arms at 380Vac

25.6Arms at 400Vac

23.3Arms at 440Vac

31. Recommended Circuit Breaker

30A or more

32. Inrush Current

90Apk at 342Vac

70Apk at 440Vac

33. Output Terminal Isolated (maximum, from chassis ground)

±60 Vdc when connecting shorting conductors without insulation to the (+)output to the (+)sense and the (-)output and the (-)sense terminals

34. Audible Noise

from DC fans inside

35. Units may be stacked without spacing

Max. 3units

Max. 10units in case packed.

36. Product Size

429W * 133H * 670Dmm

37. Weight

<35kg (Net)

MX-Series Dimension

Unit : mm