Miniware MDP-XP Smart Digital Power Supply Kit

FIT0889

Product Overview
01/16/2023
For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

DFRobot Miniware MDP-XP Smart Digital Power Supply Kit is a system of programmable linear DC power supply based on a modular design capable of connecting different modules. The MDP-XP features indicators, stability, reliability, and a distinct user interface comparable with professional power supplies. This system also features 0.25mV ultra-low ripple, microsecond transient response, high frame rate real-time waveform sampling, 2.4G wireless display, control, and flexible stacking.

The MDP-XP includes a display control module and a digital power supply module. This system is controlled by an STM32 smart chip which allows for editing parameters and upgrading firmware at any time.

The MDP-M01 display control module is equipped with a 2.8-inch TFT screen and can display voltage/current waveform in real-time, support data statistics, and automatically pair with and control six sub-modules.

The MDP-P905 digital power module features high-efficiency linear output, 0.25mV ripple, and high-speed transient response and supports precise fine-tuning of 0.001V and 0.001A.

Typical applications include maintenance of cellphones, laptops, and other digital products, emergency power supply for model airplanes and vehicles, and quality control and quality inspection.

Features

- 2.4G wireless connection
- High-speed transient response
- Intelligent line loss compensation
- Support 1+6 Modules
- Extremely low load regulation

Specifications

- Mode:
  - MDP-XP
- Input:
  - $4.2V_{DC}$ to $30V_{DC}$ (after startup 2.7V),100mA to 6A, support QC3.0
- 30V/5A,90W output
- Adjustment rate:
  - <±0.01^% load adjustment rate
  - <±0.01^% power adjustment rate
- 250μVrms/3mVpp ripple and noise
- ≤4μs transient response time
- 5mR to100mR line loss compensation range
- Protection:
  - Input over-voltage
  - Under-voltage
  - Anti-reverse
  - Output anti-backflow
  - Over temperature
- Data record:
  - 7MB maximum storage
  - 24 hours maximum recording time
- Others:
  - Automatically shut down and enter micro-power mode
  - Support USB firmware upgrade
  - Support user calibration
- Size:
  - MDP-M01:
    - 101.5mm x 64mm x 12mm
  - MDP-P905:
    - 107mm x 66mm x13.6mm
- Weight:
  - MDP-M01:
    - 133g
  - MDP-P905:
    - 143g

Applications

- Universal tests and teaching experiments in the R&D laboratory
- Maintenance of cell phones, laptops, and other digital products
- Power supply testing and data logger of RF and microwave circuits or modules
- Supply purified power for high-accuracy digital-analog hybrid circuits and Hi-Fi audio devices
- Property verification and fault diagnosis of devices and circuits
- Quality control and quality inspection
- Emergency power supply for model airplanes and vehicles

Kit Contents

- 1x MDP-M01
- 1x cable (2.5mm jack to Micro USB)
- 1x MDP-P905
- 2x output cable (4mm Banana plug to Alligator clip)
- 1x data cable (2.5mm jack to USB-A)
- 1x user manual

Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/dfrobot/dfrobot-mdp-xp-power-supply-kit/