TE4

Tethered Power Supply System

USER MANUAL

V1.0 2025.6

Disclaimer and Safe Operation Guide

Warnings and Disclaimers

Read the entire user manual and familiarize the functions of the product before operating it. Improper operation of this product may cause serious injury to oneself or others, or result in product damage and property loss. The use of this product has certain security risks, it needs to be familiar with a period of time before safe use, and you need to have some basic knowledge before operating. This product is not suitable for children. Do not use any parts that are not provided or recommended by us. Install and use the product in accordance with our guidelines. Be sure to read all instructions and warnings in the user manual carefully before assembly, setup, and use.

Saft Operation Guide

1 Power Supply System

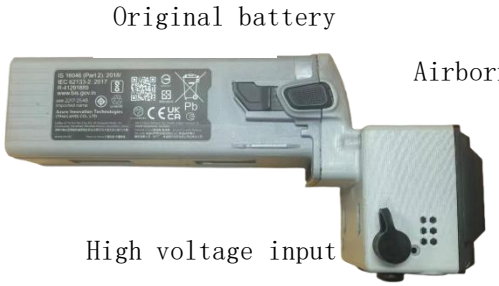
1.1 Introduction

The TE4 tethered power supply system can be adapted to DJI M4 series products, converting single-phase AC power into DC high voltage, and transmitting it to the airborne power supply through high-performance nickel alloy power cables, continuously supplying power to the aircraft. Combined with the use of backup batteries, it can achieve 12 hours of continuous operation with an extended endurance while ensuring safe flight.

The TE4 power supply system consists of two main parts: the airborne power supply and the manual automatic integrated retracting & releasing system. The manual automatic integrated retracting & releasing system integrates ground power supply, high-performance power supply cables, and automatic cable device.

The high integration provides portability while the automatic retracting & releasing function of the 55 meter cable ensures that the tethered system can be quickly automatic retracting & releasing, reducing cable impact and bending, making it an effective device for protecting cables. TE4 supports lighting below 15 meters and monitoring tasks below 45 meters.

1.2 Specification of airborne power supply



Item	Technical Data
Overall dimension	Excludingbattery50× 72mm× 60mm Includingbattery190mm× 72mm× 95mm
Shell material	Aviation aluminum alloy hybrid material
Weight	Excluding battery170g Including battery 570g
Power	Rated 450W
Rated input voltage	380-420 VDC
Rated output voltage	4S
Main rated output current	25A
Efficiency	98%
Circuit protection	Output current greater than 25A, automatic protection of airborne power supply, 420V overvoltage protection.
Output Short Circuit Protection	Output short circuit automatic protection, automatically restored to normal after troubleshooting.
Over temperature protection function	Activate temperature protection after 80 ℃ and turn off output.
Lighting function	Equipped with red blue flashing lights and white light
Control and Interface	EPORT, Y8 interface, supports DJIPSDK, WIFI and Bluetooth.

1.3 Specifications of ground power supply system

Item	Technical Data
Overall dimension	**480mm× 380mm× 200mm**
Shell color	**Black**
Flame retardant grade	**V1**
Weight	**Including 1 kWh battery version ≤ 15.5Kg, excluding 1 kWh battery version ≤ 9.5Kg**
Power	**Rated 2KW**
Cable	55 meter cable (secondary) Cable diameter less than 3mm, The overcurrent capability is greater than 2A, Weight less than 600g per hundred meters, The tensile strength is greater than 20kg, Withstand voltage 600V, Internal resistance less than102Ω/100m@20℃
Rated input voltage	**110-220 VAC+10%**
Rated working frequency	**50/60 Hz**
Output voltage	**350-430 VDC**
Function	**Equipped with automatic wire collection and stop function,** **Equipped with overcurrent, overvoltage, undervoltage and other protection functions**

2. Environmental requirements for use

Item	Min value	Max value	Unit	Remarks
Working temperature (environment)	-20	50	℃	
Working temperature (Shell temperature)	-20	80	℃	Forced-air cooling.
Storage Temperature	-40	80	℃	
Relative humidity	5	95	%	
Storage humidity	5	95	%	No condensation
Atmospheric pressure	54	106	kPa	No condensation
Above sea level	/	3000	m	

3. Method of application

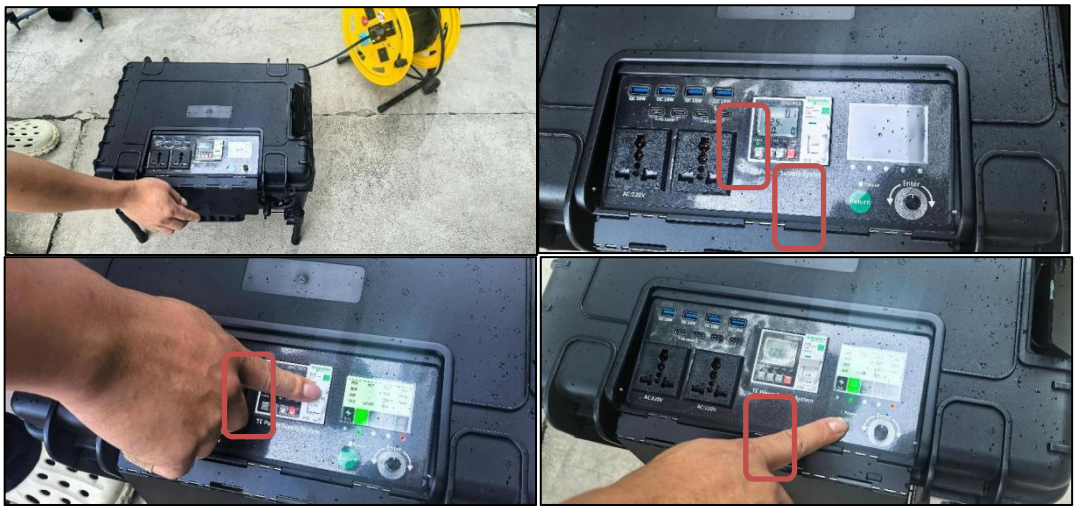
3.1 Installation

1. Install the airborne power supply into the M4 series drone using the original battery box installation method, and complete the installation of the PSDK control cable as shown in the diagram.

2. Connect the hook to the screw opening at the bottom of the M4 series drone as shown in the diagram;;

3. Pull out the AC input line of the TE4 ground power supply system and connect it to interfaces such as mains power, energy storage devices, or generators. Different AC connectors can be provided according to each national standard;;

4. Open the cover of the TE4 ground power supply system control panel, turn on the air switch, and turn on the protector switch. At this point, if the requirements for operating the energy storage version and the non energy storage version are different;

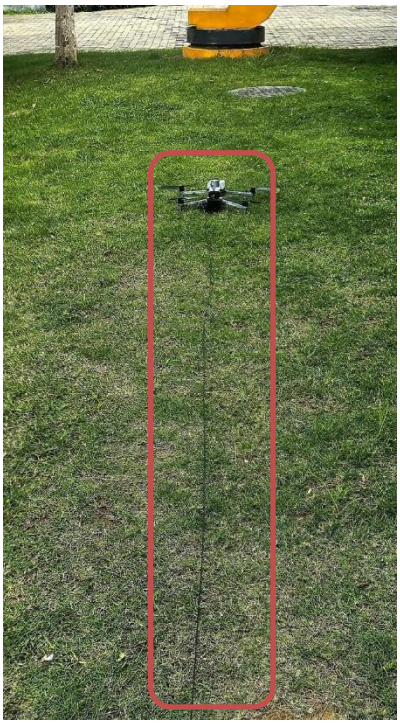


The energy storage version requires short pressing the return button first, and then long pressing the return button to start the system, at which point the LCD will light up.

But, For the non energy storage version once powered on, the power supply system controller can start immediately, and the LCD will light up at this time.

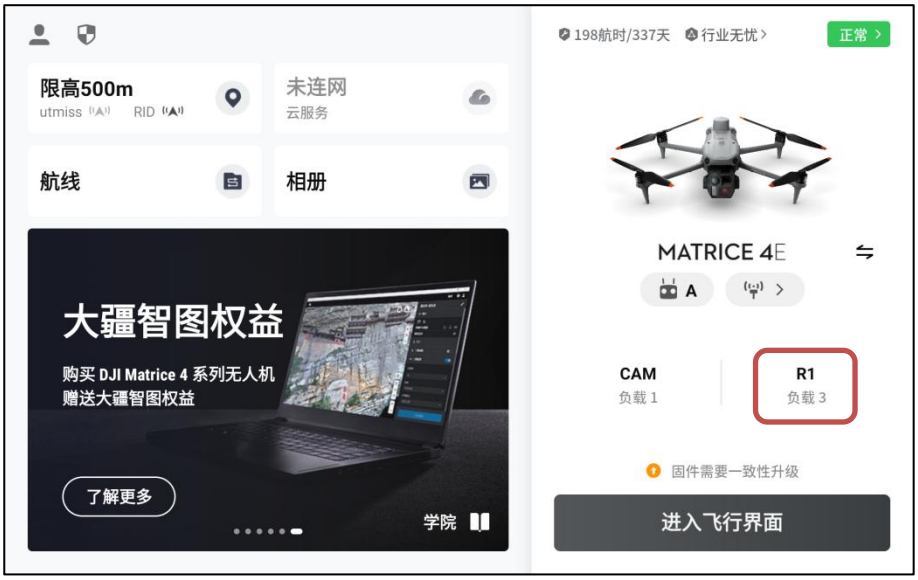
5. Open the high-voltage cable cover of the ground power supply, pull out the high-voltage Y8 connector, connect the high-voltage plug of the aircraft airborne power supply, and hook the cable onto the bottom hanging ring of the aircraft;

6. Place the aircraft at a distance of over 5 meters and prepare for takeoff;



7. Confirm that the drone battery is fully charged (TE4 can only be used if the battery level is above 90), turn on the drone power, and turn on the high voltage;

8. Set up the remote control before takeoff to identify the PSDK payload;



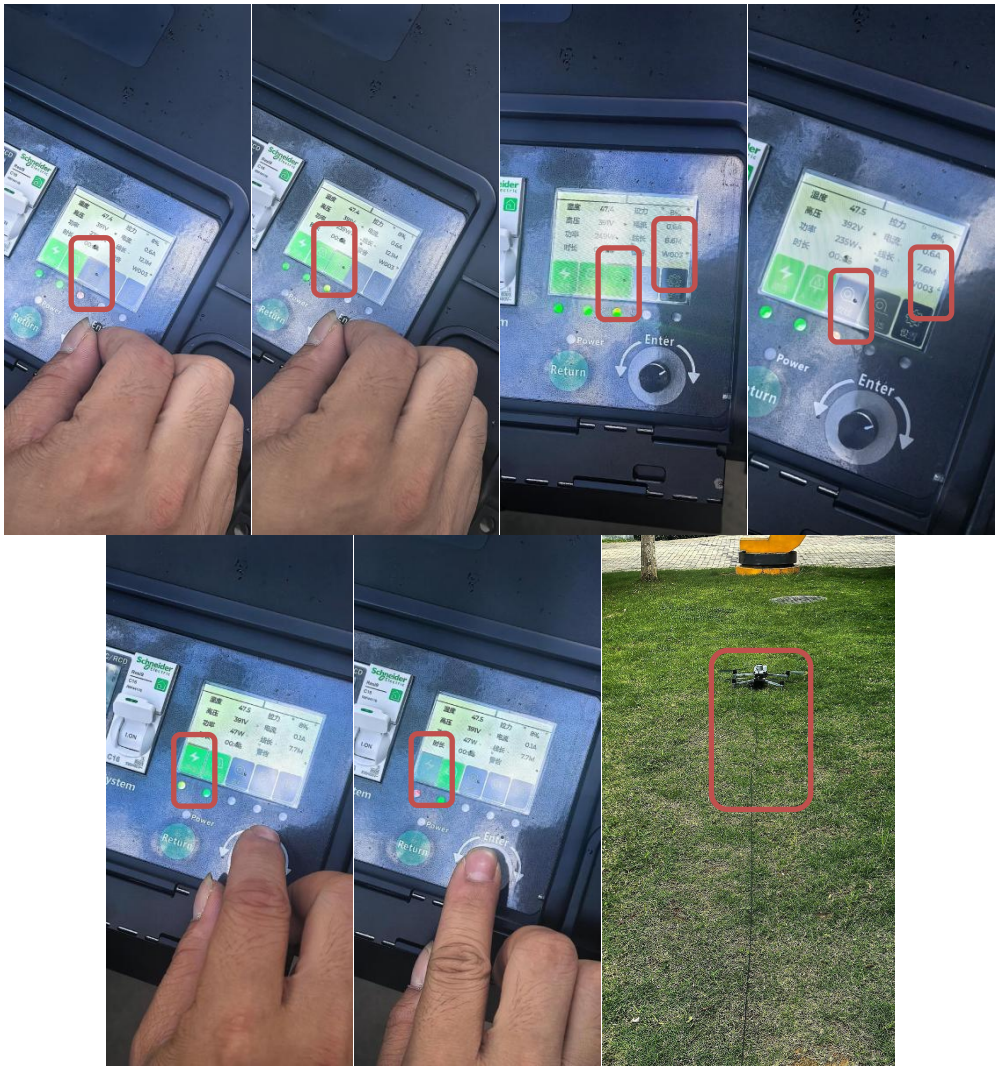
9. Set the remote control before takeoff and set the parameters as follows;

10. Normal takeoff of M4 drone;;

11. Turn on and off the red and blue flashing lights of the airborne power supply;

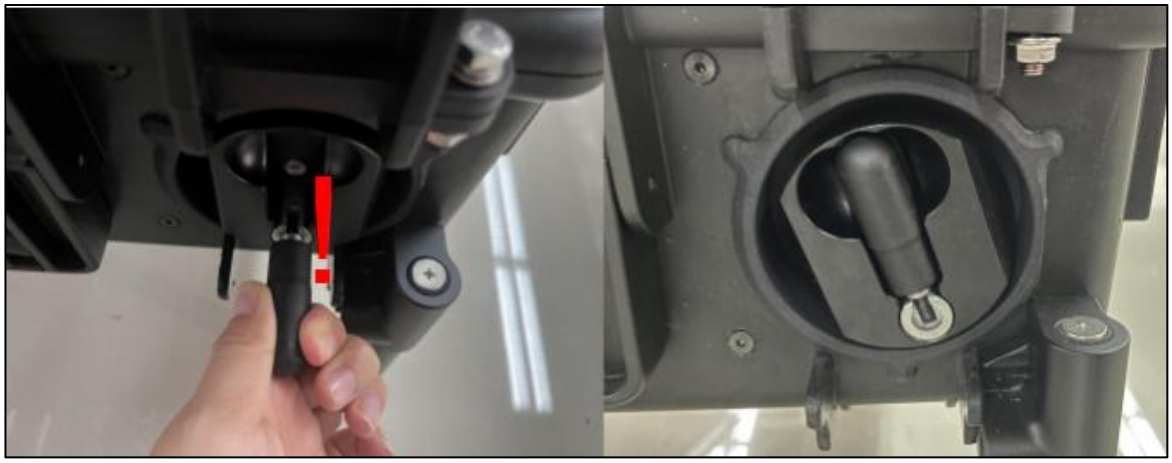
3.2 Landing

12. To land the M4 drone normally, first turn on the retracting button. If the drone's landing line length is within 8 meters (adjustable), the automatic retracting will automatically stop, the high voltage will be turned off, and the drone will land;



4. Note

1）If foreign objects enter the equipment, the power should be immediately turned off and the operation can only continue after the foreign objects are removed. Attention:
Manual winding reel usage method:
Pull the handle outwards with force and then push it upwards; Do not use brute force to push the handle.



2）Power on process

1. Ensure that the airborne power supply is fully charged;
2. Connect to the high-voltage connector;
3. Turn on the power of the remote control;
4. Turn on the drone battery power;
5. Open the empty switch;
6. Turn on the controller switch;
7. Operate the power supply system normally.