



### fangpusun MATE 2

Fangpusun MATE is a complete system controller and display for both the Fangousn FX2000 inverter/charger and MX60 MPPT PV charge controller. It provides a display of the operation as well as allow control and adjustment of the setpoints.

The Fangpusun Mate also coordinates the operation of the entire system to maximize performance and to prevent multiple products from conflicting.

A single Fangpusun MATE 2 is able to connet multiple Fx2000 inverter/chaeges, MX60 MPPT PV charge controllers and any other Fangpusun power conversion and control products offered in the future. Maximum of ten Fangpusunproducts will be able to be connected to a single MATE via CAT5 / ethernet type cabling with 8 wire RJ45 modular connectors and the Fangpusun HUB communication manager.

#### Prdduct features

- A 4 line backlit LCD display
- A built in real time clock and calendar
- An opto-isolated RS232 port with a DB9 jack for connection to the serial port of a PC computer
- Permanent storage, reprogram the system after a shutdown or battry replacement

#### Display

- Multiple measurements are displayed at the same time and reduces the amount of abbreviations required

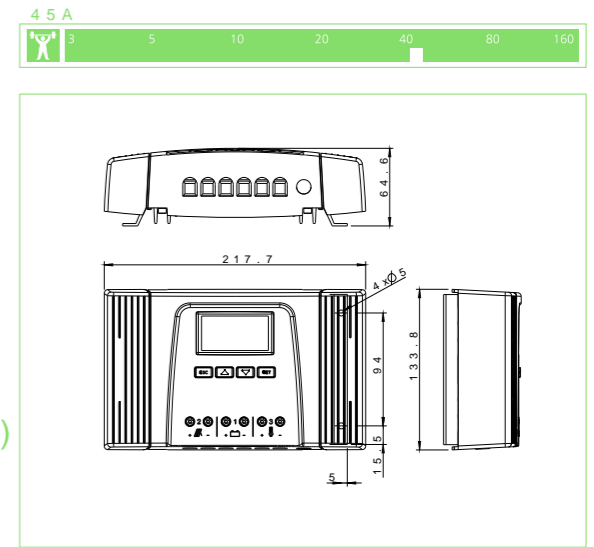
Specifications	The MATE 2
Interface Display	4 line 80 character backlit LCD - Alphanumeric with graphic symbols
Control Keypad	6 backlit silicone membrane keys- dedicated inverter and AC input keys
Status Indicators	Two Led Status Indicators: Green=Inverter Yellow=AC Input
Communication Protocol	Proprietary Fangpusun Multi-drop using an Fangpusun HUB
Interconnection Cabling	Standard CAT5 network cable with RJ45 modular jack - 50 ft included
PC Computer Interface	Rs232 opto-isolated DB9 jack 9600 baud serial communication
Microprocessor	16 MHz low power consumption version
Setpoint and Data Memory	32K non-volatile flash RAM
Clock / Calendar	On-board real time clock with battery backup
Audible Indicator	2 KHz Transducer
Environmental Rating	Indoor Type 1 Optional outdoor Type 3R transparent lockable cover
Dimensions	5.75" W x 4.25" H x 2" D 14.6cm x 10.8cm x5.08cm
Shipping Weight	1 lb - 454 g
Warranty	Two years parts and labor Optional Extended Warranty

Preliminart - Specifications subject to change without notice



### fangpusun Tarom (new generation)

4545 4545 48



The new design for the Fangpusun Tarom sets new standards in this power class. A graphic display informs the user about all important system data and enables configuration and adjustment of the controller to the specific requirements of the individual system.

Numerous clever functions allow the user to adjust the controller to the particular features of the system in question. Thanks to the significantly improved state of charge determination, the system is optimally controlled and the batteries are protected. The Fangpusun Tarom charge is the best choice for system sizes of up to 2,700 Wp at three voltage levels (12 V, 24 V, 48 V).

The integrated data logger stores all important system data. Controller data can be read by the minute via a Fangpusun open UART interface. As an option, an external temperature sensor can also be connected. Two additional switching contacts can be freely configured as a timer, a night light function, to start generators or as surplus management.

#### Product features

- Hybrid controller
- State of charge determination with Steca atoniC (SOC)
- Automatic detection of voltage
- Pwm control
- Multistage charging technology
- Load disconnection depending on SOC
- Automatic load reconnection
- Temperature compensation
- Common positive grounding or negative grounding on one terminal
- Innovative, comprehensive data logger with energy meter
- Real-time clock (date, time)
- Night light and daylight function
- Integrated self test
- Monthly maintenance charge
- Four freely programmable timers with week day function
- Two configurable multifunctional contacts

#### Electronic protection functions

- Overcharge protection
- Deep discharge protection
- Reverse polarity protection of module and battery
- Automatic electronic fuse
- Short circuit protection of load and module
- Open circuit protection without battery
- Reverse current protection at night
- Overtemperature and overload protection
- Load disconnection on battery overvoltage

#### Displays

- Multifunction graphical LCD display with backlighting for operating parameters ,fault messages ,self test

#### Operation

- Simple menu-driven operation
- Programming by buttons
- Manual load switch

#### Options

- External temperature sensor
- Alarm contact

#### Certificates

- Compliant with European Standards (CE)
- RoHS compliant
- SGS
- ISO 9001
- Made in China

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<b>Characterisation of the operating performance</b>		
System voltage	12 V (24 V)	12 / 24 / 48 V
Own consumption	30 mA	
<b>DC input side</b>		
Circuit voltage solar module	< 60 V	< 100 V
Module current	45 A	
<b>DC output side</b>		
Load current	45 A	
Reconnection voltage (SOC / LVR) > 50 % / 12.5 V (25 V)	> 50 % / 50 V	
Deep discharge protection (SOC / LVD) < 30 % / 11.7 V (23.4 V)	< 30 % / 46.8 V	
<b>Battery side</b>		
End of charge voltage	14.1 V (28.2 V)	56.4 V
Boost charge voltage	14.4 V (28.8 V)	57.6 V
Set battery type	liquid (adjustable via menu)	
<b>Operating conditions</b>		
Ambient temperature	-10 °C ... +60 °C	
<b>Fitting and construction</b>		
Terminal (fine / single wire)	25 mm <sup>2</sup> / 35 mm <sup>2</sup> - AWG 4 / 2	
Degree of protection	IP 31	
Dimensions (X x Y x Z)	218 x 134 x 65 mm	
Weight	800 g	

Technical data at 25 °C / 77 °F  
\* Inverters must not be connected to the load output.