JBOXSET6-MPPTB-SNFW

www.solar-motors.com

Set Jun. Box 60x40x20cm w MPPT charger 15A / SLA BATx2 / FUSES / SWITCH ON / SIGMA / NANO-F / WLM LORA 433MHz

Code: **1323-005**

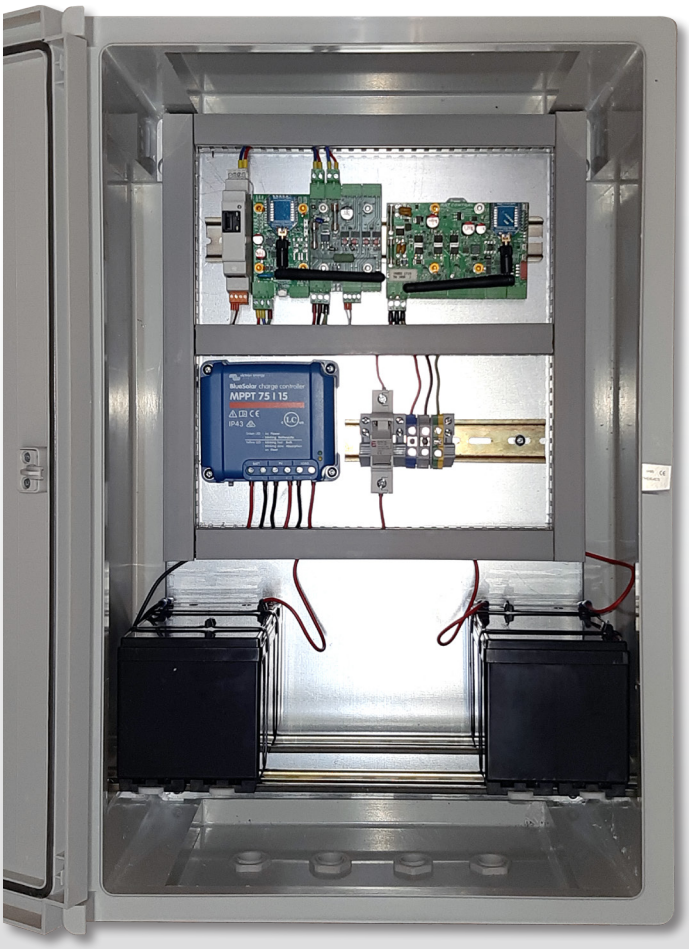
JBOXSET6-MPPTB-SIGWL – Smart server solution set for controlling and monitoring of PV parks with solar trackers in harsh environments and wide operational temperature range

Junction Box JBOXSET6-MPPTB-SIGWL Set - is a Smart solution designed for solar power plant server SIGMA with LoRa wireless module 433MHz radio communication transmission and including one positioner controller NANO-F for driving 2 motors or 2 solar trackers with included self-powered solution which include batteries and MPPT solar charger controller with high current switches, fuses and terminal blocks that can be connected to PV panel. Sigma server can control up to 50 solar positioner controllers so another 49 Junction boxes JBOXSET6-MPPTB-NANOF which is equivalent to 100 motors as a whole system. If you order our motor cables, we usually connect it to the Junction box. In this way you have all wired except the PV panels. Here is easy installation, so all you have to do is connect the PV panel into a PV terminal inside box, install UTP cable with RJ45 connector on with live ethernet signal and mount box to vertical surface of construction near motors and of course connect cables for motors into motors.

Temperature range is from -20 °C to +50 °C

The JBOX6 is professionally made with respected all latest standards by wiring of that kind of electrical boxes.

IK10	Impact resistance	24 V DC	Rated voltage (V)
Ta -20..+50°C	Ambient temperature	V2 UL94	Flammability according to UL 94
	Mounting method: on a vertical surface		Lamp with protection class against direct contact II.
In max. 15 A	Rated current (A)	RAL 7035	Color
180°	Door opening angle	IP 65	Degree of protection
UV	UV resistance	Ui 1 kV	Rated insulation voltage



User-friendly

- Separate of both mechanical and electronic components
- Front doors for easy maintenance
- Can be integrated into existing and new Solar Trackers/PV plants

Simple

- Easily accessible connection area
- Comfortable installation and commissioning
- Free choice of mounting location

Durable

- High protection class IP65
- Comply with the outdoor use under harsh environment requirements
- 2-year Sat Control's warranty, optionaly 5 or 10 years

Sat Control d.o.o.

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Technical Capabilities

General data	
External dim. (H / W / D) in mm	640 / 400 / 200
Weight (without cables)	15 kg
Colour	grey
Characteristics & Material & Rated current	Halogen Free, Steel, max.
Mounting site	Outdoors
Mounting options	DIN-Rail mounted interfaces
Ambient Conditions	
Ambient temperature	-20 °C ... +50 °C
Relative air humidity	95 % relative humidity (non-condensing) at closed box
Degree of protection (according to IEC 60529)	IP65
Features	
Front door	Yes
Din metal mounting rail	Yes, 4x
Metric plastic glands	PG21-2x, PG16-2x, PG11-4x
DIN Rail Terminal Block 6 mm	2x + 1x PG
Warranty: 2 / 5 / 10 years	yes / opt. / opt.
Certificates and approvals	CE, RoHS
Main content – components	
1x SESTIV52A / 5528 - TIV52A Asm. MOSFET SWITCH 120A, 4XFUSE 5A, 1X20A, DIN rail, LED indicators, 2x8 WIRE TERMINAL 2 mm^2	
1x POZSOLNANO-F / 0452 - NANO-F Solar Tracker Positioning Controller dual axis, with LoRa interface, RS485, surge protection, DIN rail, TIV34F Rev.1	
1x WLM-LORA-TIV50-433-A / 0449 - Lora RF TXRX MODUL 433MHz 20dBm RA-01, TIV50, SMA-RP, antenna	
1x CHAMPPT70/15 / 8146 - Charger Victron BlueSolar MPPT 70/15 12/24V-15A	
2x BATSLA12V12AH-C / 8197 - Battery SLA 12V/12Ah cyclic	
4x DINLET35-7.5 / 5997374126236 - DIN rail 35/7,5, perforated	
5x RMKANPLA25X25 - Plastic channel grey 25x25	
1x PLASKA60-40-20 / 8199 Box plastic 60x40x20 cm w front door, IP65, grey	
Battery voltage	24V
Rated current	15A
Maximum PV open circuit voltage from PV panel	75V
Maximum PV power, @24V	400W

CE Made in Europe

RoHS COMPLIANT

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BlueSolar Charge Controller MPPT 75/15

Ultra-fast Maximum Power Point Tracking (MPPT)

Especially in case of a clouded sky, when light intensity is changing continuously, an ultra-fast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers and by up to 10% compared to slower MPPT controllers.

Load output

Over-discharge of the battery can be prevented by connecting all loads to the load output. The load output will disconnect the load when the battery has been discharged to a pre-set voltage. Alternatively, an intelligent battery management algorithm can be chosen: see Battery Life. The load output is short circuit proof. Some loads (especially inverters) can best be connected directly to the battery, and the inverter remote control connected to the load output. A special interface cable may be needed, please see the manual.

Battery Life: intelligent battery management

When a solar charge controller is not able to recharge the battery to its full capacity within one day, the result is often that the battery will continually be cycled between a 'partially charged' state and the 'end of discharge' state. This mode of operation (no regular full recharge) will destroy a lead-acid battery within weeks or months. The Battery Life algorithm will monitor the state of charge of the battery and, if needed, day by day slightly increase the load disconnect level (i.e. disconnect the load earlier) until the harvested solar energy is sufficient to recharge the battery to nearly the full 100%. From that point onwards the load disconnect level will be modulated so that a nearly 100% recharge is achieved about once every week.

Programmable battery charge algorithm

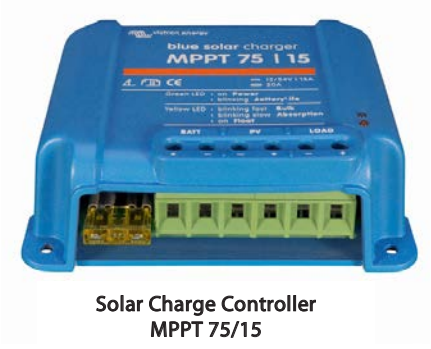
See the software section on our website for details

Day/night timing and light dimming option

See the software section on our website for details

Programming, real-time data and history display options

- Modern Apple and Android smartphones, tablets, macbooks and other devices: see the VE.Direct Bluetooth Smart dongle and the MPPT app discovery sheet for screenshots.
- ColorControl panel



Solar Charge Controller
MPPT 75/15

BlueSolar Charge Controller		MPPT 75/15	
Battery voltage	12/24V Auto Select		
Rated charge current		15A	
Maximum PV power, 12V 1a,b)		200W	
Maximum PV power, 24V 1a,b)		400W	
Max. PV short circuit current 2)		1 A	
Automatic load disconnect	Yes, maximum load 15A		
Maximum PV open circuit voltage	75V		100V
Peak efficiency	98%		
Self-consumption	10 mA		
Charge voltage 'absorption'	14,4V / 28,8V (adjustable)		
Charge voltage 'float'	13,8V / 27,6V (adjustable)		
Charge algorithm	multi-stage adaptive		
Temperature compensation	-16 mV / °C resp. -32 mV / °C		
Continuous/peak load current	15A / 50A		
Low voltage load disconnect	11,1V / 22,2V or 11,8V / 23,6V or Battery Life algorithm		
Low voltage load reconnect	13,1V / 26,2V or 14V / 28V or Battery Life algorithm		
Protection	Battery reverse polarity (fuse) Output short circuit / Over temperature		
Operating temperature	-30 to +60°C (full rated output up to 40°C)		
Humidity	95%, non-condensing		
Data communication port	VE.Direct See the data communication white paper on our website		
ENCLOSURE			
Colour	Blue (RAL 5012)		
Power terminals	6 mm² / AWG10		
Protection category	IP43 (electronic components), IP22 (connection area)		
Weight	0,5 kg		
Dimensions (h x w x d)	100 x 113 x 40 mm		
STANDARDS			
Safety	EN/IEC 62109		

1a) If more PV power is connected, the controller will limit input power to the stated maximum.
1b) PV voltage must exceed Vbat + 5V for the controller to start.
Thereafter minimum PV voltage is Vbat + 1V
2) A PV array with a higher short circuit current may damage the controller.

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