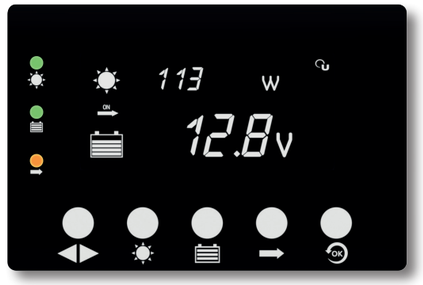
INTUITIVE LCD SCREEN



Solar panel mode

Instantaneous production power in Watt, instantaneous production current (A), instantaneous voltage (V), and production history (kWh).

Battery mode

Instantaneous battery voltage (V),
battery technology, instantaneous charge and discharge current (A).

Controlled output mode

Instantaneous DC current consumed (A), instantaneous power consumed (W), instantaneous DC output voltage, and consumption history (kWh).

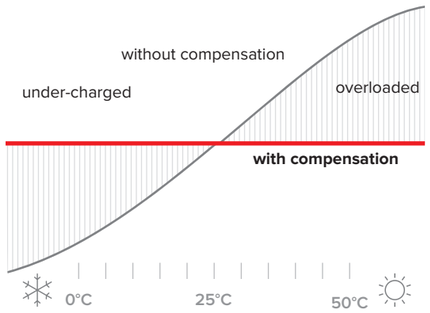
PERFECT CHARGE ADAPTED TO BATTERY'S TECHNOLOGY

Voltage thresholds

Gel battery	AGM battery	Flooded battery
Boost		
14,2 V	14,4 V	14,5 V
Absorption		
-	14,4 V	14,5 V
Leveling		
-	-	14.8 V
Floating		
13,9 V	13,9 V	13,9 V

Algoteck adjusts the levels according to the internal analysis of the battery and the ambient temperature.

PERFECT CHARGE ADAPTED TO AMBIENT TEMPERATURE



The chemical characteristics of the battery vary according to the ambient temperature. Thanks to its temperature sensor, UNIMPPT regulates all its voltage thresholds, compared to a reference temperature of 25°C of +/- 30mV per °C.
Without regulation, the battery is either under-charged, limiting the electric autonomy, or overloaded, irreversibly degrading its life.

HIGH EFFICIENCY

1st price	UNIMPPT
Output at 20W	
95%	98%
Output at 50W	
90-95%	98%
Output at max. capacity	
< 90%	98%

UNIMPPT L SOLAR Charge controller

A CONCENTRATE OF TECHNOLOGY

The UNIMPPT range revolutionizes the market of charge controllers.

Its charging curve charges to 100% while taking into consideration the technology of your battery and the ambient temperature to adjust its voltage thresholds according to the recommendations of battery manufacturers.

MPPT technology (converter/regulator), UNIMPPT also uses the entire panel voltage by converting the excess panel/battery voltage, not used by a standard regulator, into charging current for the battery.

The optimized MPPT program, coupled with one of the fastest microprocessors on the market, searches in real time (every 100 ms) for the maximum power point of the panel.

UNIMPPT guarantees up to 40% more energy in winter and 15% more in summer compared to PWM regulator, Even under challeging weather conditions.
Its unique and innovative design allows a perfect and discreet integration in your home or car interior.

The UNIMPPT L also features an intuitive LCD display for precise monitoring of panel production, battery charge and power consumption via its controlled 12/24V output.

UNITECK

- Evolved MPPT Technology
- Management and monitoring of production and consumption.
- Charge curves adapted to all lead-acid and lithium batteries for L models (LifePO4).
- Perfect charge depending on the ambient temperature
- Twilight timer function for controlling night-time lighting

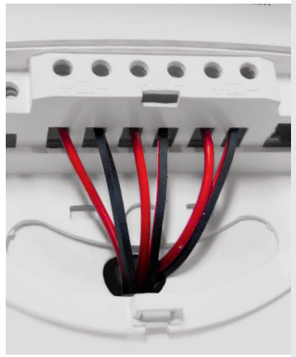
European standard
EN 60335-2-29

Quality guaranteed by
Uniteck
Made in P.R.C.

EASIER CABLING AND MOUNTING

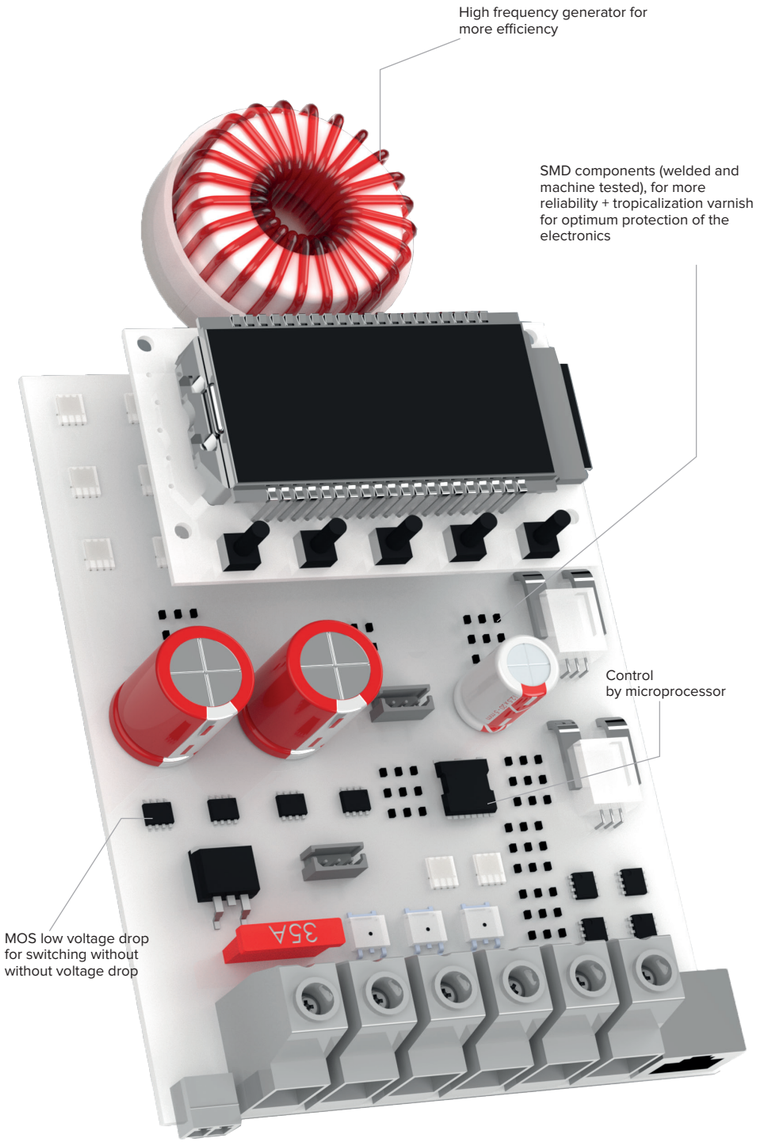
Wall mounting

Wiring by partition



Normal wiring

ADVANCED CONCEPTION



mppt TECHNOLOGY

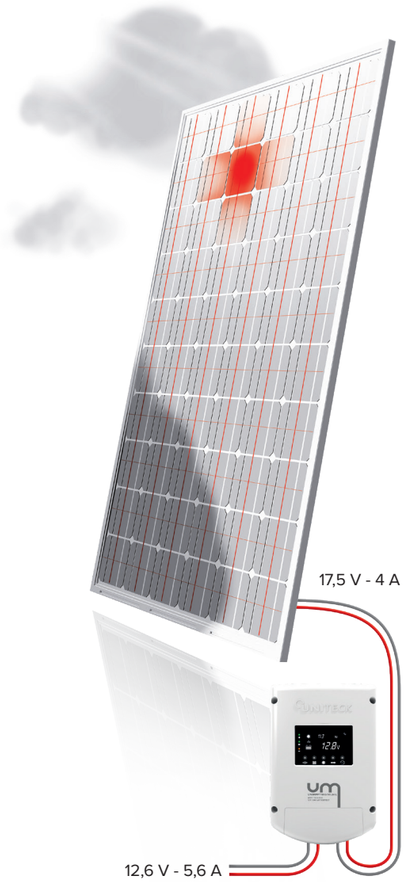
Maximum Power Point Tracking

MPPT VS PWM 20 TO 40% MORE ENERGY

Unlike a PWM regulator, that lowers the panel's voltage to the battery's voltage, an MPPT (inverter charge controller) uses all of the panel's voltage by reconverting the voltage surplus of panel/battery voltage not used by the battery into charging current (amperes).

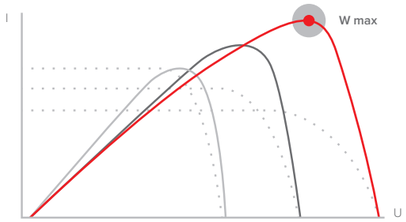
Winter simulation	
Solar panel 100 W	
Panel voltage : 19 V	
Panel current : 5 A	
Controller	
PWM	**MPPT**
Output voltage	
↘ 12.5 V	↘ 12.5 V
Output current	
➔ 5 A	↗ **8 A**
Battery	
67 W	**95 W (+ 40%)**

In summer, the panel voltage decreases with the ambient temperature (average V: 16-17 V), the average gain of a MPPT compared to a PWM is 20%.



UNIMPPT FAST TRACK

Due to clouds and shadows, the light intensity changes rapidly. Thanks to its Fast Track MPPT program and its ultra fast microprocessor, UNIMPPT searches for the maximum power point of the solar panel and then modifies in real time its conversion parameters (input / output) for maximum power.



MPPT UNIMPPT CHARGE CONTROLLERS

UNIMPPT L 60/10.24L

Ref 3287

UNIMPPT L 60/20.24L

Ref 3294

UNIMPPT L 100/30.24L

Ref 3300

UNIMPPT L 100/40.24L

Ref 3317

System					
Battery voltage		12/24 V	12/24 V	12/24 V	12/24 V
Max. charging current		10 A	20 A	30 A	40 A
Self-consumption		5 à 15 mA	5 à 15 mA	5 à 15 mA	5 à 15 mA
Compatible panel					
Min-max intensity (Voc)	with 12V battery	17-60 V	17-60 V	17-100V	17-100V
	with 24V battery	34-60 V	34-60 V	34-100 V	34-100 V
Max. power	with 12V battery	150 W	300 W	450 W	600 W
	with 24V battery	300 W	600 W	900 W	1200 W
Technology		**MPPT**	**MPPT**	**MPPT**	**MPPT**
Max. efficiency		98,00%	98,00%	98,00%	98,00%
Battery charge controller					
Algorithm		Multi-step	Multi-step	Multi-step	Multi-step
Voltage selection		auto	auto	auto	auto
Battery type selection					
Gel/Agm/liquid		yes	yes	yes	yes
LiFePO4		yes	yes	yes	yes
Recommended battery capacity		10 - 200 Ah	20 - 400 Ah	30 - 600 Ah	50 - 800 Ah
Temperature compensation					
via integrated sensor		yes	yes	yes	yes
via remote sensor		yes	yes	yes	yes
Output controller 12/24V**					
Output current		10 A	20 A	30 A	40 A
Output voltage 12 or 24V (depending on battery)		yes	yes	yes	yes
Overconsumption protection		yes	yes	yes	yes
Low battery protection		yes	yes	yes	yes
Twilight timer function		yes	yes	yes	yes
Mechanical characteristics					
Max. cable cross section		4/6 mm^2	6 mm^2	16 mm^2	16 mm^2
International Protection rating		IP32	IP32	IP32	IP32
Operating temperature		-20°/+50°C	-20°/+50°C	-20°/+50°C	-20°/+50°C
Storage temperature		-20°/+70°C	-20°/+70°C	-20°/+70°C	-20°/+70°C
Dimensions (W x H x D)		205 x 150 x 50	250 x 170 x 57	265 x 175 x 63	300 x 195 x 68
Weight		700g	1,2kg	1,6 kg	2,0 kg
Warranty					
Period		2 years	2 years	2 years	2 years

* Equipped with an output controller, UNIMPPT directly supplies your 12 or 24 V electrical devices (depending on the connected battery).
UNIMPPT protects your battery against deep discharges of the battery thanks to a low battery voltage cut, with automatic recovery of the power supply when the battery charge level is sufficient.
Warning : this output is not adapted for an DC-AC inverter connection.

THERMAL SENSOR INCLUDED

Battery voltage charge depends on ambient temperature. In order to deliver the correct voltage, to avoid any overcharging or undercharging of the battery and therefore guarantee a good lifespan for your battery, Unimppt L is delivered as standard with 1 temperature sensor.

Temperature sensor
Length: 3 meters