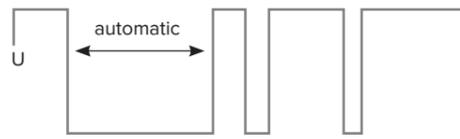


PMW CHARGING TECHNOLOGY

* Pulse Width Modulation



- Charges by modulating current pulses.
- Recharges faster (than an ON/OFF charge controller).
- Reduces internal battery heating.
- Lowers the panel voltage to the charging voltage of the battery

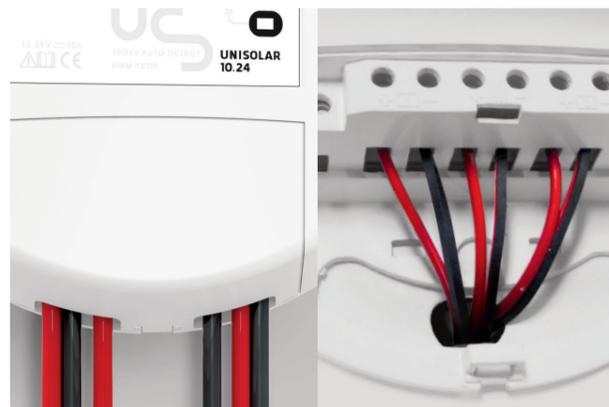
EASIER CABLING AND MOUNTING



UNISOLAR 10.24/10.24S/20.24/
20.24S/20.24D/30.24

UNISOLAR 20.24D/30.24

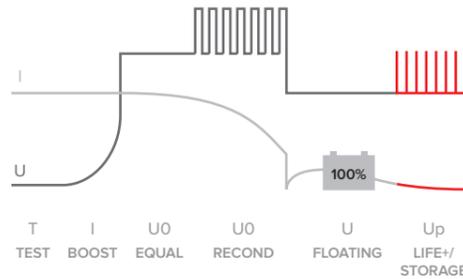
Wall and/or DIN rail mount



Normal wiring or through a partition wall



CHARGING CURVE UNIQUE ON THE MARKET



- 1 Test**
Analysis of the battery's status.
- 2 Boost charge**
Fast charge at maximum power
- 3 Equalisation**
Equalization of the charge to 100% on all the elements of the battery.
- 4 Recondition**
Battery stirring to prevent stratification. Electrolyte mixing of the battery to avoid all sulfation and stratification
- 5 100%**
Maintaining the charge at 100% (floating).
- 6 Life+/Storage**
Compensation of the natural self-discharge of the battery, with pulsed charge for more battery life.

The chemical properties of the battery change according to the ambient temperature. With its external incorporated temperature sensor, UNISOLAR regulates its end of-charge voltage, related to a reference temperature of 25°C, with +/- 30mV per °C.

Without any regulation, the battery is either under loaded, limiting the electrical autonomy, or overloaded, irreversibly damaging its lifespan.



- Tests, charges at 100%, avoids sulfation and stratification, maintains the charge and improves the battery life.
- Charges all lead-acid batteries thanks to its regulation adapted to every type of battery.
- Regulates the voltage according to the ambient temperature, to avoid over- or under-charging.
- Protects against surges, overconsumption, short circuits, polarity reversals, low battery
- 100% made in France

UNISOLAR PWM Solar Charge controllers

EVOLVED ELECTRONICS

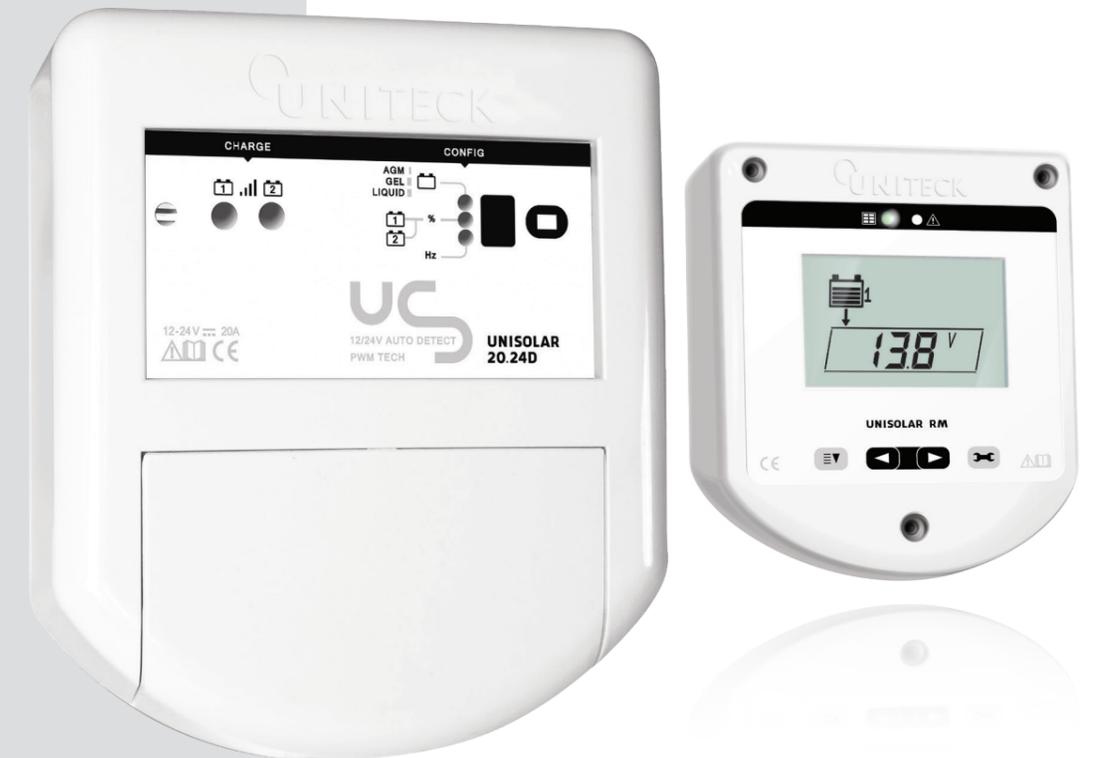
The Unisolar range revolutionizes the charge controller market.

UNISOLAR controllers incorporate an unique 6-step charging algorithm, Algotek 6, which tests your battery, charges it at 100%, desulfates it, delaminates it, maintains its charge and improves its lifetime while taking into account the ambient temperature to adjust its voltage thresholds according to the recommendations of the battery manufacturers (integrated temperature sensor).

With its unique and innovative design, and its possible wiring through walls, UNISOLAR perfectly integrates into the passenger compartment of your vehicle or in your residence.

Its intuitive interface enables an easy access to necessary information in order to optimize the charge and your power consumption.

Its mechanical conception provides a high level of protection, preserving the electronics against dust.



	UNISOLAR 10.24 & 10.24S	UNISOLAR 20.24 & 20.24S	UNISOLAR 20.24D	UNISOLAR 30.24
	Ref 0002 & 0958	Ref 0019 & 0576	Ref 0026	Ref 0965
System				
Battery voltage	12/24 V	12/24 V	12/24 V	12/24 V
Max. charging current	10 A	20 A	20 A	30 A
Self-consumption	4 mA	4 mA	4 mA (RM=20mA)	4 mA
Compatible panel				
Recommended voltage (for 12V Battery) - Vmp	17-19 V	17-19 V	17-19 V	17-19 V
Recommended voltage (for 24V Battery) - Vmp	34-38 V	34-38 V	34-38 V	34-38 V
Max. power (for 12V Battery)	150 W	300 W	300 W	450 W
Max. power (for 24V Battery)	300 W	600 W	600 W	900 W
Technology	PWM	PWM	PWM	PWM
Battery charge controller				
Algorithm	Algoteck 6	Algoteck 6	Algoteck 6	Algoteck 6
Voltage selection	auto	auto	auto	auto
Battery type selection	yes	yes	yes	yes
Recommended battery capacity	10 - 150 Ah	10 - 300 Ah	10 - 300 Ah	10 - 450 Ah
Temperature compensation	yes	yes	yes	yes
Panel surge protection	yes	yes	yes	yes
Output controller 12/24V*	Model 10,24 only	Model 20,24 Only		
Output current	1-10 A	1-20 A		1-30 A
Output voltage 12 or 24V (depending on battery)	yes	yes		yes
Overconsumption protection	yes	yes		yes
Low battery protection	yes	yes		yes
Mechanical characteristics				
Max. cable cross section	6 mm ²	6 mm ²	6 mm ²	10 mm ²
International Protection rating	IP43	IP43	IP43	IP43
Operating temperature	-35 °C/+55 °C	-35 °C/+55 °C	-35 °C/+55 °C	-35 °C/+55 °C
Storage temperature	-35 °C/+80 °C	-35 °C/+80 °C	-35 °C/+80 °C	-35 °C/+80 °C
Dimensions (w x h x d) without DIN rail (mm)	120 × 110 × 42	20.24 : 127×150×55 20.24S : 120×110×42	137 × 150 × 46,5	127 × 150 × 55
Weight	200 g	250 g	350 g	400 g
Warranty				
Period	2 years	2 years	2 years	2 years

* Equipped with an output controller, UNISOLAR directly supplies your 12 or 24 V electrical devices (depending on the connected battery). UNISOLAR 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.

UNISOLAR PWM Charge controllers

ONE BATTERY



UNISOLAR 10.24



One battery
10 A - 12/24 V
12/24 V output controller
Max Panel power:
150 W (☐ 12 V)
300 W (☐ 24 V)
Ref 0002



UNISOLAR 10.24S



One battery
10 A - 12/24 V
Max Panel power:
150 W (☐ 12 V)
300 W (☐ 24 V)
Ref 0958



UNISOLAR 20.24



One battery
20 A - 12/24 V
12/24 V output controller
Max Panel power:
300 W (☐ 12 V)
600 W (☐ 24 V)
Ref 0019



UNISOLAR 20.24S



One battery
20 A - 12/24 V
Max Panel power:
300 W (☐ 12 V)
600 W (☐ 24 V)
Ref 0576



UNISOLAR 30.24



One battery
30 A - 12/24 V
12/24 V output controller
Max Panel power:
450 W (☐ 12 V)
900 W (☐ 24 V)
Ref 0965

TWO BATTERIES



UNISOLAR 20.24 D



Two batteries
20 A - 12/24 V
12/24 V output controller
Max Panel power:
300 W (☐ 12 V)
600 W (☐ 24 V)
Ref 0026



UNISOLAR RM
Remote display
for Unisolar 20.24D

Wall mounted or embedded
into wall

Enables complete control
and configuration:
• Batteries 1 and 2 : current
voltage, min., max., injected
capacity
• Panel: voltage, instant
current, max. current,
injected capacity in Ah,
frequency, priority (battery 1,
battery 2)
• Temperature/time



W x H x D =
110 × 120 × 53 mm
300g
RJ45 - 8 m cable
Ref 0033

**UNISOLAR 20.24D + RM =
UNISOLAR 20.24 DR**
Ref 0040