

# Off grid happy

POWER ANYWHERE

Comparing the CTEK D250SE DC-DC Charger and Victron Orion DC-DC Charger Solutions.



## Features, Performance and Efficiency

	CTEK D250SE	Victron Orion Tr 12/12 30A Non-Isolated DC/DC Charger	Victron SmartSolar MPPT 100/20	Victron SmartSolar MPPT 100/30
<b>Charging from Alternator</b>				
Conventional Alternator Compatible	Y	Y		
Euro 5/6 Smart Alternator Compatible	Y	Y		
Working Temperature Range	-20°C to + 50°C	-20°C to + 55°C		
Max Charge Current (A)	20A	35A (40A for 10s)		
Max Charge Current @ 25°C (A)	20A	35A		
Max Charge Current @ 30°C (A) (1)	16A	30A		
Max Charge Current @ 40°C (A)	15A	30A		
Max Charge Current @ 50°C (A)	13A	21A		
Parallel Units to increase charge (2)	N	Y		
Pre-Programmed Battery Settings	3	8		
User customised battery settings/programmable	N	Y		
Adaptive Automatic Absorption time	N	Y		
Configurable Input Voltage Lock-out	N	Y		
Remote On/Off	N	Y		
Remote Control/Configuration/Monitoring	N	Y		
Battery Management System Control (LiFePO4)	N	Y		
<b>Charging from Solar PV</b>				
Working Temperature Range	-20°C to + 50°C		-30°C to + 60°C	-30°C to + 60°C
MPPT Maximum panel Voc (V) (3)	23V		100V	100V
MPPT Maximum Charge Current (A)	20A		20A	30A
Max Charge Current @ 25°C (A)	20A		20A	30A
Max Charge Current @ 30°C (A)	16A		20A	30A
Max Charge Current @ 40°C (A)	15A		20A	30A
Max Charge Current @ 50°C (A)	13A		17A	21A
Parallel Units to increase charge	N		Y	Y
Pre-Programmed Battery Settings	3		3	8
User customised battery settings/programmable	N		Y	Y
High Voltage Panel	N		Y	Y
Ultra Fast MPPT Tracking Algorithm	N		Y	Y
Advanced MPP detection (locks to best MPP) (4)	N		Y	Y
Maximum Conversion Efficiency	Unpublished		>98%	>98%
Auxiliary Load Output	N		20A	N
Remote Control/Configuration/Monitoring	N		Y	Y
Intelligent Battery Management (5)	N		Y	Y
Battery Management System Control (LiFePO4)	N		Y	Y
Bluetooth Connectivity	N		Y	Y
Warranty	2 years	5 years	5 years	5 years
Typical Price inc VAT	£250.00	£195.00	£145.00	£214.00

(1) The maximum charge current delivered by the CTEK is considerably reduced to just 16A (by 50%) at typical operating temperatures c.30°C.

(2) To increase the charge capability of the CTEK unit, an additional product (SMARTPASS 120S) must be purchased at a typical cost of £240.00 inc VAT.

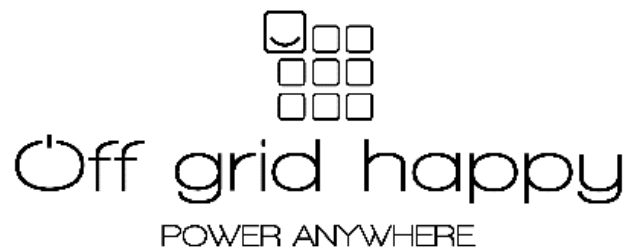
(3) Solar panel limitations: Typical 100W panel has a Voc @ STC of 22.9V. However, this Voc can increase to 24V plus @ STC for cell temperatures below 25°C.

(4) If partial shading occurs, two or more maximum power points may be present on the power-voltage curve. Conventional MPPTs tend to lock to a local MPP, which may not be the optimum MPP. The innovative SmartSolar algorithm will always maximize energy harvest by locking to the optimum MPP.

(5) 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.

**Additional information:**

**For further information, product pricing and details of discounts and special offers, please contact us.**



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