



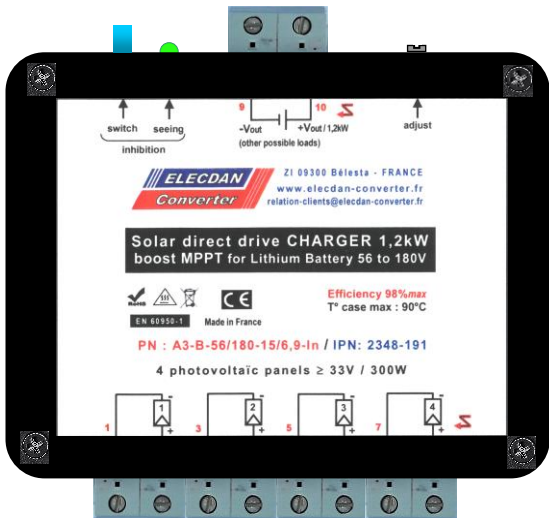
MPPT SOLAR CHARGER 1.2kW
for 48V to 144V lithium batteries

Fixed or adjustable charging voltage, from 56V to 180V
Charging current, depending on V_{battery} : 15A to 6.9A



Made in France

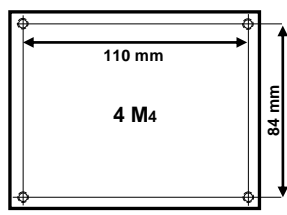
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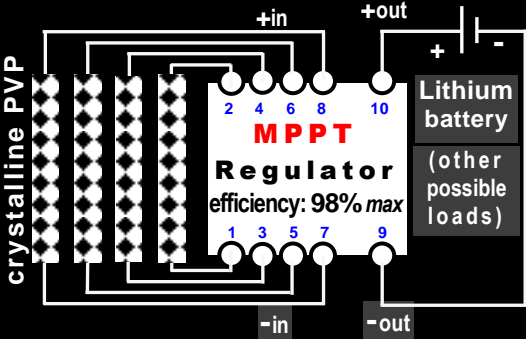
scale: 0.6

Case: molded aluminum
 > 120 x 94 x thickness 26
 > weight: 590g (without heatsink)

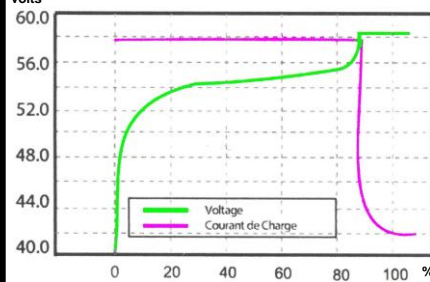
Terminal blocks:
 Inputs and outputs: 8mm²
 Bottom mounting (4 M4)



SKU: case, type, V _{out} (or V _{out} range), I _{out} , option					Price (€)
case	type	V _{out} (V)	V _{out} range (V)	I _{out} (A)	
A3	B	your choice		corresponding	
			56 / 180	15 to 6.9	
Some options and their references			heatsink: D6 inhibition ; In wired outputs: F		
Examples of references			A3-B-96-10.4 A3-B-56/180-15/6.9-In		



Charging characteristics, 0.5C, of a 48V Lithium Ferro-Phosphate (Li Fe PO4) battery



Connections "2" to "10" are at voltages increasing from 58V to 180V max and are accessible on the locking screws.

Safety precautions for installation if the panel incomings do not have individual switches upstream:

- > 1st method: protect all panels simultaneously from light before connection
- > 2nd method: opt for the "inhibit all risers" option by positioning the integrated side switch "down" (LED not lit whereas the first panel is connected).

This 1.2kW / 180V max regulator is the multi-battery-charger version of our MPPT SDD range, buck or buck-boost, with power increasing, in steps from 150W up to ≥ 2.4kW / 100V. Controlled by our innovative analog MPPT (sheet "5116" ①), it benefits from extreme reliability and miniaturization (293 cm³, excluding cooling), as well as 98% max efficiency and IP67 sealing. These qualities, and four 300W photovoltaic panel, provide optimized, customized, solar charging for 5 types of lithium batteries (from 48V to 144V), with maximum charging currents from 15A to 6.9A.

Permissible input voltages V_{in} of the MPPT regulator: 33V to 52V

V_{in} is supplied by mono- or poly-crystalline cells (0.55V and 5W each), the number of which determines the voltage V_p and the power of the photovoltaic panel. The panel generally comprises 60 or 72 cells. Example: 1/ a 60-cell panel supplies 300W at 33V. 2/ lighted at 83%, a 72-cell panel would supply 300W

Power supplied by panel ≥ 1.1 (V_{out} regulator x I_{out})

V_{out}: either fixed (your choice), or adjustable 56V to 180V / 15A to 6.8A

4 panels		Charging current by battery type			
cells	V _p (V)	Type	Nominal voltage (V)	Charging voltage (V)	I _{load} (A)
60	33	48	51.2	57.6	15 max
		72	76.8	86.4	13.9
		96	102.4	115.2	10.4
		120	128	144	8.3
		144	153	172.8	6.9

Nota: these 4 panels must be mounted separately (see label above).
 The battery can be replaced by a regular receiver;
 Example: 120V / 1.2kW motor that adapts, from morning to night, to variations in luminosity as the sun goes by.

Thermal characteristics:

- > case thermal resistance (R_{th}): 2.5°C / W
- > extreme case temperatures: -30°C to +90°C (info: when charged, these batteries can withstand 0 to 50°C)
- > cooling: direct on wall or, optionally, in heatsink D7, R_{th} = 0.5°C / W

Options: custom output voltages; V_{out} adjustment via external resistor; outputs on molded wires

Standards and special features: EN / UL / CSA / 60950-1 / RoHS; MTBF maintained at > 10⁶ h (base at 50°C), thanks to the absence of chemical capacitors.

Specialized since 1974 in electrical energy conversion, analog calculation and signal processing, over the past 5 years we have also been studying and testing our innovative MPPT (breakthrough technique and technology, new patent). We have also expanded our knowledge of green, autonomous or complementary energies. So please do not hesitate to ask us for advice if our technical data sheets are not sufficiently didactic. **Note:** we are also involved in the development of ultra-light photovoltaic panels, with the option of an inbuilt MPPT controller, 150 or 300W.