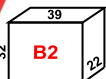
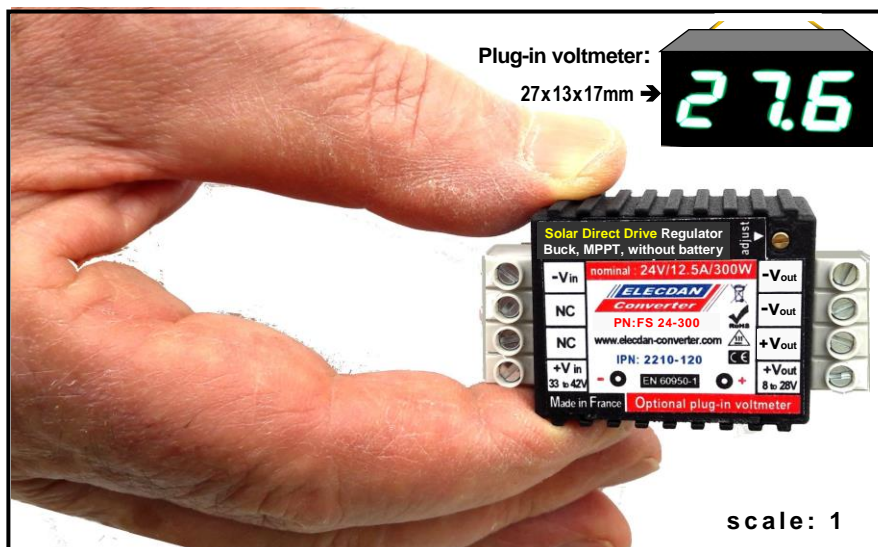
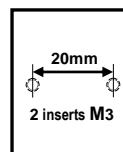


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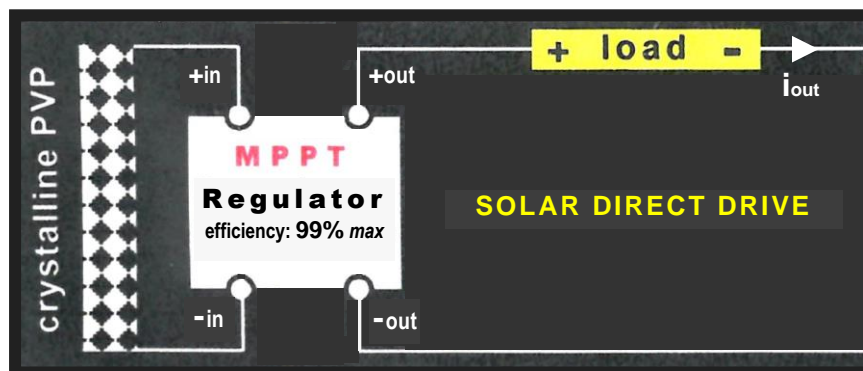
ELECDAN
Converter
MPPT solar buck regulator 300W

Solar Direct Drive (SDD), without battery

Vout possible: 5 to 28V, with photovoltaic panel 33V / 300W

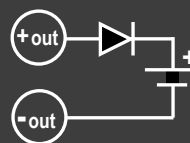
Made in France


 13/11/23
 (6013-A)

 Case : in PA12 thermoplastic
 > 39 x 32 x thickness 22
 > weight: 60g (without heatsink)
 Screw terminals; 4mm² wires
 Fixing: 2 M3, 4mm deep


SKU : case, Vout (or Vout range), İout, option				Unit price (€)
case	Vout (V)	Vout range (V)	İout (A)	
B2	12		20	
	24		12.5	
		5 / 14	20 to 17.2	
		5 / 28	20 to 10.8	
Some options and references			heatsink: D2 or D3	
			wired outputs: F	
			voltmeter: V	
Examples			B2-12-20-D2	
			B2-5/28-20/10.8-D3-F	



In the absence of a battery, the torque and speed of a motor (e.g. helical pump) adapt perfectly to variations in light levels, morning, noon and evening. What's more, with a response time of < 0.1 seconds, our MPPT regulator takes the strain off mechanical transmissions: suddenly connected to a loaded motor, it supplies it with a voltage that is immediately lowered, then restored linearly in a matter of seconds.



If, however, the addition of a battery is desired, please insert a blocking Schottky diode, such as VS-19TQ015-M3. For a 24V battery, set Vout ≈ 27,6V.

This 300W / 24V regulator is the buck 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 (28cm³, excluding cooling), as well as ≤ 99% efficiency and IP67 sealing. These qualities, and the choice of a suitable photovoltaic panel, facilitate a wide range of Solar Direct Drive applications: refrigerator, fan, helicoidal pump, bicycle ... and even, possibly, direct installation under the aluminum edge of the photovoltaic panel.

Input voltage Vin of the MPPT regulator and Vout
Vin is supplied by mono- or poly-crystalline cells (0.55V and 5W each), the number of which determines the voltage Vp and the power of the photovoltaic panel. The panel generally comprises 15, 30 or 60 cells. Example: a 15-cell panel supplies 75W at 8.25V. > Voltage supplied by panel ≥ Vout regulator + ≈3V > Power supplied by panel ≥ 1.1 (Vout regulator x İout)
Vout : either fixed (12 or 24V) or adjustable (5 to 14V, or 5 to 28V).

PANEL		Some possibilities with the regulator (300W max)		
cells	Vp (V)	Vout (V)	İout <u>max</u> (A)	Efficiency
15	8.25	5	14	0.93
30	16.5		20	0.93
60	33			0.92
30	16.5	12	20	0.98
60	33			0.96
60	33	24	12.5	0.98
60	33	28	10.8	0.99

Thermal characteristics:

- > case thermal resistance (Rth): 10°C / W (7°C / W for A1 aluminium case 51 x 51 x 26mm)
- > extreme case temperatures: -30°C to +90°C
- > cooling: direct on wall or, optionally, in heatsink D2 or D3, Rth = 5°C and 4°C / W

Options: custom output voltages; plug-in voltmeter; molded-wire outputs; heatsinks with lower Rth.

Standards and special features: EN / UL / CSA / 60950-1 / RoHS; MTBF: > 10⁶ hours, base at 50°C (with thermal grease)

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.

For initial information, see data sheets "5116" ①, "5088" ② et "6154" ③

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