

Modules equipped with streamlined DC/DC converters, dust & water-resistant IP67, available in three presentations for optimum space saving and heat dissipation:

- **4** : special heat dissipator, mounting on side or front, on DIN rail or wall; connections through 4 streamlined clamps for wires $\leq 72\text{mm}^2$.
- **1** : integrated dynamic cooling with a mini tubed fan, fast racking-out for fan replacement directly by the user after 50,000 hours. Case $96 \times 64 \times 61\text{ mm}$ thickness, to be mounted on wall or DIN rail. NB. The range of temperatures is limited (-30 to +70°C).
- **1Cl** : like **1** but weldable on printed circuit (not half-brick), thickness 45 mm only.

Electrical data

◆ "Vin" Input (protected against undervoltage and surge pulses)

- two voltage input ranges available:
 - 9 to 36V (accidental max.: 50V / 0.1s)
 - 18 to 75V (accidental max.: 100V / 0.1s)
- no load consumption: 80mA to 200mA (see table)
- possible external time-delay fuse: 70A (35A for 18 to 75V)
- optional "ON/OFF" remote control for cases **4** and **1**

◆ "Vout" Output

- 5V/12V/15V/24V/28V/48V; accuracy: 1%
- optional fit **4** & **1** with embedded "10 revolutions" axis: $\pm 10\%$
- line and load regulation: $< 2 \cdot 10^{-3}$ of Vout
- remote sense -S and +S: 2-position mini screw-terminal (wires $\leq 2\text{mm}^2$)
- temperature coefficient: $3 \cdot 10^{-4}$ of Vout, per °C
- switching frequency: fixed ($\approx 200\text{ kHz}$)
- residual ripple: $\leq 1\%$ of Vout ($< 2\%$ for 5V)
- nominal efficiency: 88 to 90% (losses $\leq 41\text{W}$)
- dynamic response: $< 0.5\text{ ms}$, with 25% load variation
- permissive capacitive load: $2200\mu\text{F}$ to $\geq 22,000\mu\text{F}$ depending on load

Protections

- input-output insulation: 1500V DC. Internal filter on the input
- against overload and short circuit (even constant) by pulsed flow
- in case of inductive load: option "L" will reinforce protection
- "inversion Vin" option: internal diode (external fuse required)
- abnormal temperature rise: automatic shutdown and restarting
- total sealing IP67 (except fan for case **1** and **1Cl**)

Thermal and environmental performances

- storage **4** : -40 to +105°C ; operating **4** : -40 to +90°C
- cooling **4** : natural convection (derating 2.5% per °C)
- temperature rise of the case, at full load: $< 41^\circ\text{C}$
- maximum ambient temperature: 50°C at full power and 70°C at half power
- vibrations, shocks, humidity: protection by epoxy resin

Standards and specifications

- marking CE/UL60950-1, ICE60950-1, EN60950-1 / RoHS
- flammability for PA 2002: UL94HB, horizontal test
- MTBF case **4** : $> 8 \cdot 10^5$ hours, case at 25°C (MIL-HB217E)
- MTBF fan (easy rapid unplugging): 50,000 hours
- worldwide manufacturers for active parts
- assembling and final controls: ELECDAN-CONVERTER

Case mountable on	Dimensions (mm) & Weight	SKU	Connections
4 DIN rail & wall	225 x 120 x 37 1150 g	4	screw terminal wires $\leq 72\text{ mm}^2$
1 DIN rail & wall	96 x 64 x 61 380 g	1	
1Cl printed circuit	64 x 64 x 45 200 g	1Cl	pins $\varnothing 1$ & 2 mm

OPTIONS and SKU for cases 4 & 1	Vout fit with axis "10 revolutions"	AJ
	inductive load driving	L
	"ON / OFF" remote control	H
	other Vin and/or Vout	value
	"inversion" protection	PI

Pin	Ø mm	function
1	1	+Vin
2	1	on/off (2-4)
3	1	Case
4	1	-Vin
5	2	-Vout
6	1	-Sense
7	1	Trim
8	1	+Sense
9	2	+Vout
10	1	+ of 12V fan
11	1	0 of 12V fan

Range & No. sequence	Input range (Volts)	Outputs		no load consu. (mA)	SKU add 4 or 1 or 1Cl	Pre-tax price
		Volts	Amp			
10 - 1	9V to 36V	5	60	200	CC 5-60 / 936	
10 - 2		12	25	200	CC 12-25 / 936	
10 - 3		15	20	200	CC 15-20 / 936	
10 - 4		24	12.5	120	CC 24-12.5 / 936	
10 - 5		28	10.6	120	CC 28-10.6 / 936	
10 - 6		48	6.2	120	CC 48-6.2 / 936	
10 - 7	18V to 75V	5	60	100	CC 5-60 / 1875	
10 - 8		12	25	100	CC 12-25 / 1875	
10 - 9		15	20	100	CC 15-20 / 1875	
10 - 10		24	12.5	80	CC 24-12.5 / 1875	
10 - 11		28	10.6	80	CC 28-10.6 / 1875	
10 - 12		48	6.2	80	CC 48-6.2 / 1875	



clip C225 →

Case **4** to be mounted on wall or DIN rail

Wall:

- front 225 x 120: 2 holes $\varnothing 4.5\text{mm}$, vertical fixing dist.: 90 or 200mm
- side 225 x 37: two M3, vertical fixing dist.: 50mm

Clip:

- front 225 x 120: clip C 225
- side 225 x 37: clip C 37



Case **1**

- 64 x 96 x thickness 61mm
- built-in fan
- DIN rail mounting
- wall mounting (vertical fixing distance 85mm)



Case **1Cl** : weldable on printed circuit

- 64 x 64 x thickness 45 mm
- built-in fan

