DC-DC CONVERTER, isolated and controlled

0 to 10V ➡ 0 to 32V / 12.5A / 350W

regular, or with options or customizations

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Mini module, half brick type, with standard or optional or customized features. Insensitive to moisture, dust, shock and vibrations, with IP67 molding.

Supply voltage

- Nominal voltage: 24V
- Range: 18 to 36V
- No-load consumption: 45mA (or 25mA when off)

Control setting ("zero" of the control is shared with the "zero" of the output)

- Standard: 0 to 10V ➔ 0 to 32V
- Optional:
  - ❶ 0 to 20mA ➔ 0 to 32V
  - ❷ 0 to 20kΩ ±10% ➔ 0 to 32V (external or built-in potentiometer)
- Customized: the voltage can vary from zero to any maximum between 2Vdc and 200Vdc (you choose) ➔ 0 to 32V.

Linear output voltage (input / output isolation: 1500V)

- Standard: 0 to 10V ➔ 0 to 32V
- Possible options:
  - ❶ lower maximum; example: 0 to 10V ➔ 0 to 19V
  - ❷ shifted minimum; example: 0 to 10V ➔ 8V to 32V
  - ❸ shifted minimum and maximum; ex.: 0 to 10V ➔ 20V to 28V

Output current

- Standard: 0 to 12.5A / 350W, depending on load; in case of abnormal overload > 13A, the output voltage starts hiccupping.
- Options "constant current generator"
  - ❶ in-built setting (axis ∅ 3mm, 10 rounds) or external setting
  - ❷ controllable by 0 to 10V ➔ 0 to 12.5A *max* / 350W *max*

Response time

- Rise time from 0 to 32V / 10A: ≤12ms
- Down time: depends on the load

Other characteristics

- Line and load regulation: 10^{-3} of V_{out}
- Control accuracy: better than 0.5%
- Efficiency at full load: ≤ 91%
- Efficiency at half-load: ≤ 89%

Thermal characteristics

- Storage temperature: - 55°C to +125°C
- Operating temperature of the case: - 40°C to +90°C
- Thermal resistance of standard case 2A : 6°C / W
- Temperature drift: 2.10^{-4} of V_{out} / °C

Cases

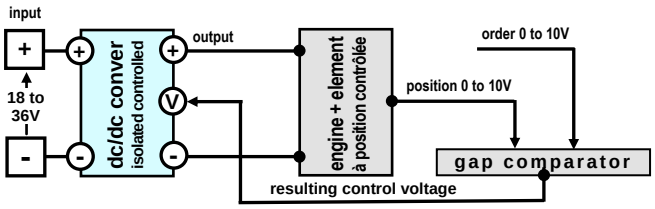
- Standard cases 2A and 3A (please see opposite)
- Optional or special cases:
  - ➢ for PCB (80x 63 x 16 mm)
  - ➢ with built-in mini fan
  - ➢ with overmolded wires at the outputs

Standards and particularities

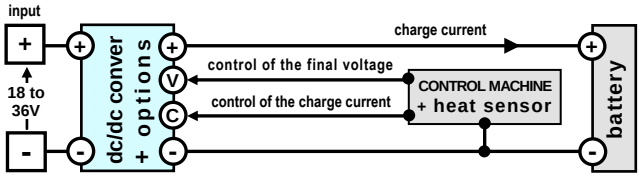
- CE / UL 60950-1 / RoHS marking
- MTBF > 10^6 hours at 30°C

Three examples of applications

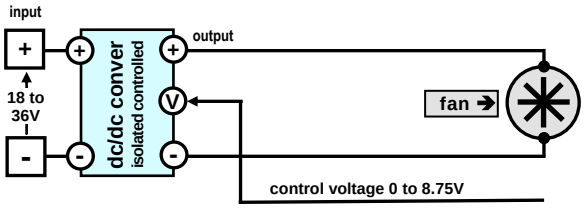
Example ① : positioning a mechanical element, at a decreasing speed



Example ② : charging an experimental battery, with controlled current and thermally controlled final voltage



Example ③ : controlling the speed of an industrial fan 28V / 12.5A / 350W



Case 2A

- ➢ 83 x 65 x 30 mm/100cm³ (except connections)
- ➢ Weight: 200g
- ➢ Thermal resistance: 6°C / W
- ➢ Screw connectors for wires ≤ 50mm² and ≤ 1.8mm² for the options
- ➢ Screwable on a thermally conductive frame, with 4 M3 (48.2 x 50.8 mm)

Case 3A (case 2A mounted on heatsink 112)

- ➢ 112 x 120 x 37 mm
- ➢ Weight 700g
- ➢ Thermal resistance: 1.5°C / W
- ➢ Mounting on DIN rail:
  - either on back side (112 x 120)
  - or on the side (112 x 37)
- ➢ Mounting on wall: two holes ∅ 4.5mm; vertical centers distance: 90mm

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