30W isolated DC/DC converters

with very large input range

27/04/15
17/06/15
(3084)

www.elecdan-converter.com

Mini modules DC-DC converters with:

- **large input range,**
- **maximum thermal dissipation** facilitated by epoxy resin internal casting and two aluminum sides,
- **protection against humidity, dust, shocks and vibrations,**
- **3 presentations, for mounting** either: **on DIN rail or wall** (ARD case) / **on wall** (AP case) / **on printed circuit board** with "half-brick" connection (ACI case)

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: 30mA to 190mA (see table)**
- ➢ **possible external fuse: 6A (4A for 18 to 75V)**
- ➢ **optional "ON/OFF" remote control**

♦ "Vout" **Output** **(soft start in 50ms)**

- ➢ **5V/12V/15V/±12V/±15V/24V/28V/48V; accuracy: 1%**
- ➢ **optional fit with embedded "10 revolutions" axis: ±10%**
- ➢ **line and load regulation: < 10^{-3} of Vout**
- ➢ **temperature coefficient: 2.10^{-4} of Vout, per °C**
- ➢ **switching frequency: fixed (280 kHz)**
- ➢ **residual ripple: ≤1% of Vout**
- ➢ **nominal efficiency: 87 to 91% (losses ≤ 4.5W)**
- ➢ **dynamic response: < 1% of Vout / 200µs / load 50% to 75%**
- ➢ **permissive capacitive load: 470µF to ≥10,000µF depending on load**

Protections

- ➢ **input-output insulation: 2000V 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 ; this option reduces the efficiency**
- ➢ **abnormal temperature rise: automatic shutdown and restarting**
- ➢ **sealing: IP67 protection against water and dust** (for the 3 presentations)

Thermal and environmental performances

- ➢ **storage: -40 to +125°C ; operating: -40 to +85°C**
- ➢ **cooling: natural convection (derating ≤ 4% per °C)**
- ➢ **temperature rise of the case: +25°C** (DIN rail) or **+35°C** (other mounting)
- ➢ **maximum ambient temperature:**
  - **60°C at full power** (DIN rail) or **50°C** (other mounting)
  - **72°C at half power** (DIN rail) or **67°C** (other mounting)
- ➢ **vibrations, shocks, humidity: protection by epoxy resin**

Standards and specifications

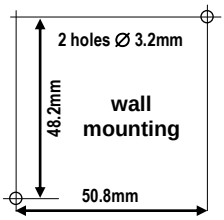
- ➢ **marking CE/UL60950-1, ICE60950-1, EN60950-1 / RoHS**
- ➢ **flammability: UL94HB, horizontal test**
- ➢ **MTBF: > 5.10^5 hours, case at 30°C**
- ➢ **worldwide manufacturers for active parts**
- ➢ **assembling and final controls: *ELECDAN-CONVERTER***

Case mountable on	Length	Width x depth	Material *Weight*		add **SKU**	Connections
❶ DIN rail or wall	69 + 15 mm	64 x 15 mm	PA 2002	*120g*	ARD	screw terminal wire ≤ $2mm^2$
❷ Wall	64 + 8 mm	64 x 16 mm	PA 2002	*115g*	AP	screw terminal wire ≤ $2mm^2$
❸ Printed circuit	64 mm	64 x 15 mm	PA 2002	*110g*	ACI	pin Ø 1mm

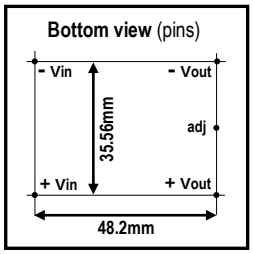
OPTIONS and their SKU				
Vout **fit with axis "10 revolutions"**	AJ	**"inversion" protection**	PI
inductive load driving	L	**wired outputs**	F
"ON / OFF" remote control	H	Vout **presence indicator**	V
other Vin and/or Vout	value	**personalized case**	P

Range & No. sequence	Input range (Volts)	Outputs Volts	Outputs Amp	no load consu. (mA)	SKU add ARD or AP or ACI	Pre-tax price
2 - 1	9V to 36V	5	6	130	CC 5-6 / 936	
2 - 2		12	2.5	75	CC 12-2.5 / 936	
2 - 3		15	2	95	CC 15-2 / 936	
2 - 4		± 12	1.25	30	CC 212-1.25/936	
2 - 5		± 15	1	36	CC 215-1 / 936	
2 - 6		24	1.25	30	CC 24-1.25 / 936	
2 - 7		28	1.06	33	CC 28-1.06 / 936	
2 - 8		48	0.625	190	CC 48-0.625 / 936	
2 - 9	18V to 75V	5	6	130	CC 5-6 / 1875	
2 - 10		12	2.5	40	CC 12-2.5 / 1875	
2 - 11		15	2	50	CC 15-2 / 1875	
2 - 12		± 12	1.25	30	CC 212-1.25/1875	
2 - 13		± 15	1	28	CC 215-1 / 1875	
2 - 14		24	1.25	30	CC 24-1.25 / 1875	
2 - 15		28	1.06	33	CC 28-1.06 / 1875	
2 - 16		48	0.625	100	CC 48-0.625 / 1875	

Case ARD
DIN rail or wall mounting
width: 9 + 69 + 6 mm
height: 64 mm
depth: 15 mm



Case AP
wall mounting
width: 64 + 8 mm
height: 64 mm
depth: 16 mm



Case ACI 64 x 64 x 15mm, weldable on printed circuit
("half-brick" type of location, pins Ø 1mm)