



Model N2412-40 (Vin: 22-32 Vdc)

Model A4812-40 (Vin: 30-56 Vdc)



Product Data Sheet

DC-DC Converter Series Non-Isolated 22-56 Vin Wide Range 13.8 Vout @ 40 Amps Peak

Key Features

- **Input voltage ranges:** Model N2412-40 (Vin: 22-32 Vdc); Model A4812-40 (Vin: 30-56 Vdc)
- **Built-in Protections:** Over-voltage, Over-current, Over-temperature and short-circuit protections with crowbar.
- **LED visual indicator features:** Standby, Hiccup, CV Mode, CC Mode, Fault, and Fault-Locked.
- **Remote 'ON/OFF'** connection terminal for independent control with an external ignition switch.
- **High quality heavy duty industrial** metal construction with easy access Terminal Block screw connections
- **RoHS (lead free) compliant**

Applications

Critical Peak Power Solution for 13.8Vdc Mobile Equipment

These wide range DC-DC Converter power supplies are 'Non-Isolated' and ideally suited for use with mobile 12/13.8 VDC equipment. The design technology emphasizes high efficiency (92% min), tight regulation and low ripple/noise. The ICS Peak output current is rated at 25% above maximum continuous operation for 5 minutes max with a 50% duty Cycle.

Protection Features

All models have built-in protection features including output current limiting, overvoltage protection, internal fuse protection, and over temperature shutdown. Convection Air cooling (a fan is not required).

LED Indicator Features

The LED indicates the status of the DC-DC converter: *Standby* (Flashing Green), *Hiccup* (Flashing Amber), *CV Mode* (Green), *CC Mode* (Amber), *Fault* (Flashing Red), and *Fault-Locked* (Red)

Easy installation, safety and reliability

These units integrate seamlessly with standard 12/13.8 VDC equipment. Secure screw-type terminal connections are used which are easily accessible and ensure a safe and reliable installation. The chassis is *FLOATING* which allows the Battery negative voltage input to be connected to either the "chassis ground" or directly to the Battery negative terminal.

Electrical Specifications (Non-Isolated Models)

Model	Input Voltage	Output Voltage	ICS Output, (Cont./Peak)	Size (H x W x D)	Temperature	Weight Lbs (kg)
N2412-40	22 to 32 Vdc	13.8 \pm 0.2 Vdc	32 A / 40 A	1.8 x 6.2 x 8.1	Operating -25 to +55°C Storage: -40 to +85°C	2.2 (1.0)
A4812-40	30 to 56 Vdc	13.8 \pm 0.2 Vdc	32 A / 40 A			

ICS Output Derating N2412-40 / A4812-40	N2412: 25A @Vin=18Vdc, linear. A4812: No derating
Output Ripple / Noise	\leq 100mVp-p / \leq 200mVp-p
Line / Load Regulation	\leq 100mV
Minimum Efficiency at Full Load	\geq 92%
Over voltage Protection Limit	15.0 Volts max
Over current Protection Limit	42.5 Amps max
Over temperature Protection Limit	70°C max shutdown

Mechanical

LED Indicator



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ON/OFF Connection

The DC/DC Converter may be turned on and off via an external ignition switch.

Remove the metal jumper between **ON/OFF** and **VIN**

"+" and then connect a wire from the **ON/OFF** terminal to the external ignition switch.

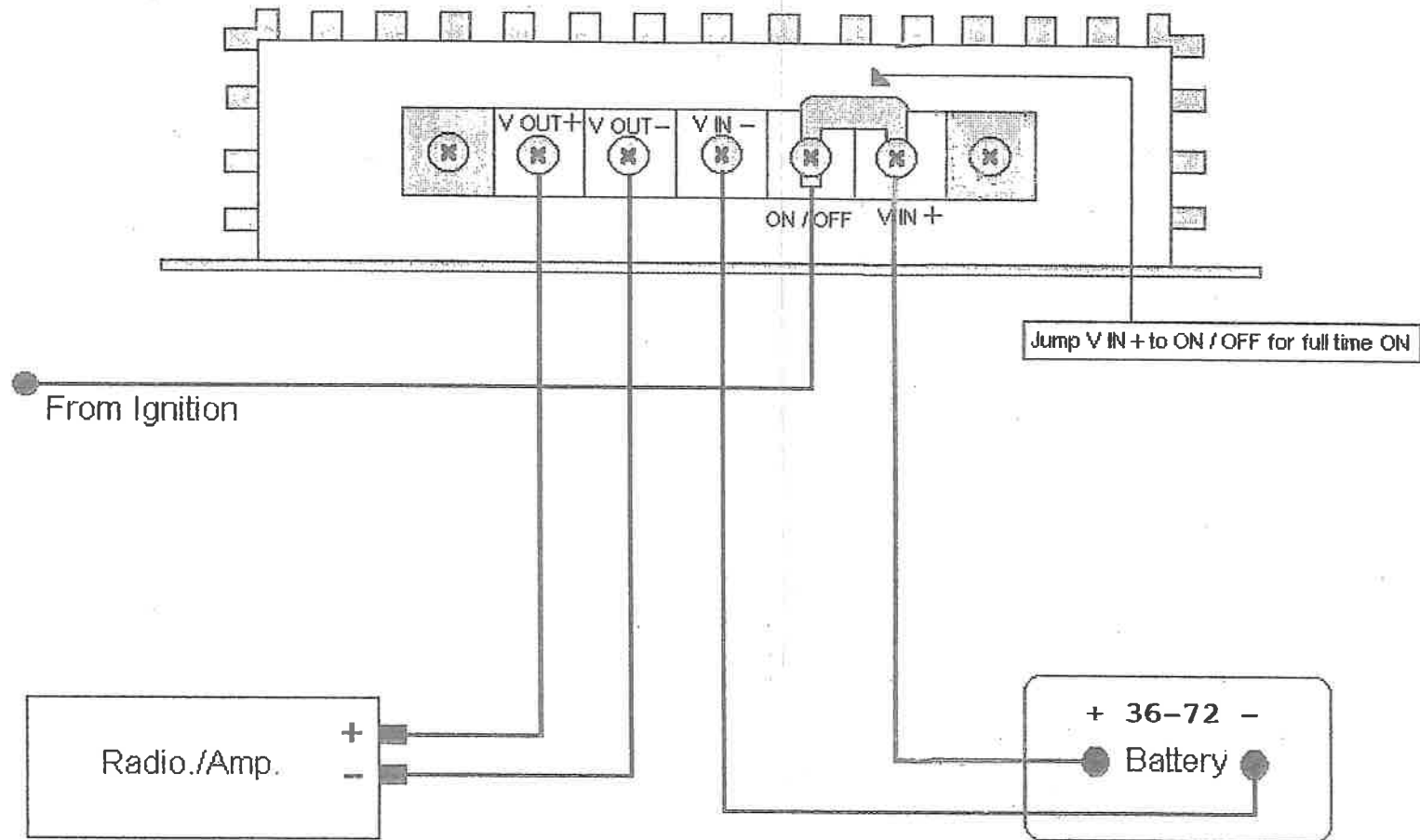
TERMINAL Connections

VO+	Vout "+"
VO-	Vout "-"
VIN-	(*) Battery Input "-"
ON/OFF	Ignition Switch Control
VIN+	Battery Input "+"

(*) The **VIN** "-" terminal **MUST BE CONNECTED** to either "**chassis ground**" or directly to the Battery's "-" negative terminal. Connect **VIN** "-" to "**chassis ground**" if the Battery's "-" is connected to chassis, otherwise connect **VIN** "-" directly to the Battery's "-" terminal.



A4812-40



MODEL: A4812-40

PROTECTION: SHORT CIRCUIT, CURRENT LIMIT, OVER VOLTAGE PROTECTION

IN PUT: 30 - 56 VDC , NEGATIVE GROUND ONLY