

DC/DC Converter

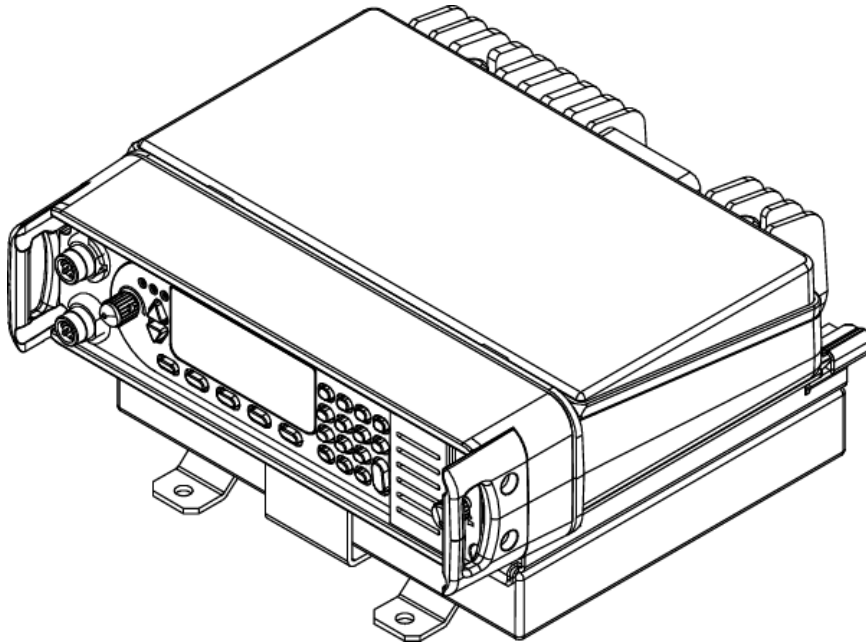
Installation Instructions

Option G469
Field Retrofit Kit: FLN2539

Introduction

The DC/DC Converter is designed to enable MICOM radios to operate from a $24V \pm 25\%$ (vehicular) power supplies. When installed, the converter also serves as a vehicular installation kit for the MICOM radio.

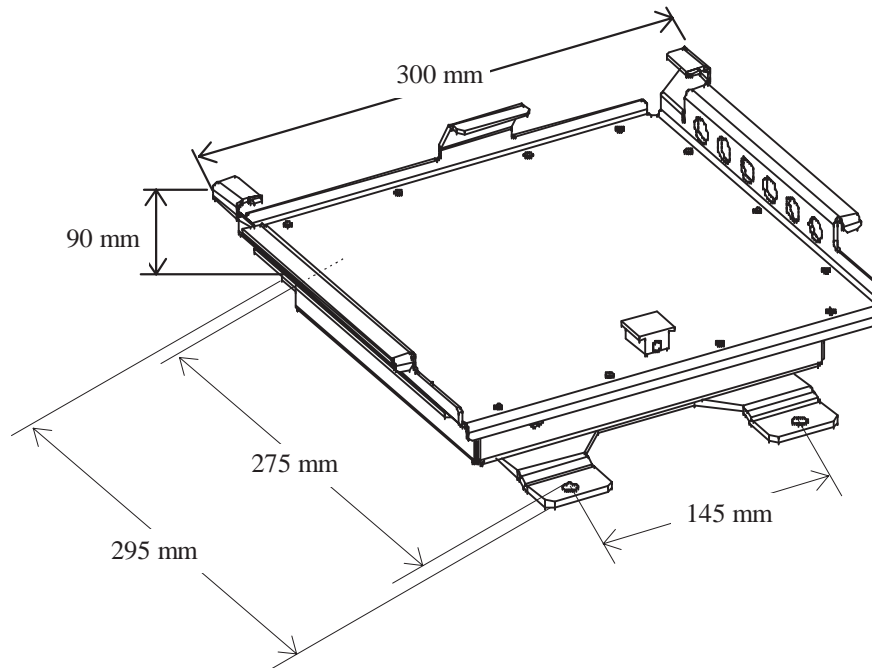
The DC/DC converter contains a switching regulator which converts the available power supply to 12V, with almost no loss of power (over 90% efficiency). The DC/DC Converter includes a current limit mechanism, and is protected by two fuses (input and output). Noise filters are located at both input and output points. The housing of the converter is completely sealed, RF isolated, and complies with standard MIL-STD-810E for shock, vibration, rain, dust and salt fog.



MICOM radio installed on DC/DC Converter

Installing the DC/DC Converter

- Step 1.** Place the Converter in the desired location.
Using the base of the converter as a template, mark the points where holes are to be drilled.
- Step 2.** Use the four supplied screws to fasten the Converter to the mounting surface.
- Step 3.** Slide the MICOM radio into the tray of the Converter and fasten the tray bracket with the supplied " allen head screw .



DC/DC Converter with measurements

Connecting the Converter to the MICOM Radio

- Step 1.** Verify that both the Converter and the MICOM radio are turned off.
- Step 2.** Attach the connector leading from the Converter (marked **MICOM-2**) to the DC connector (J4) of the radio.

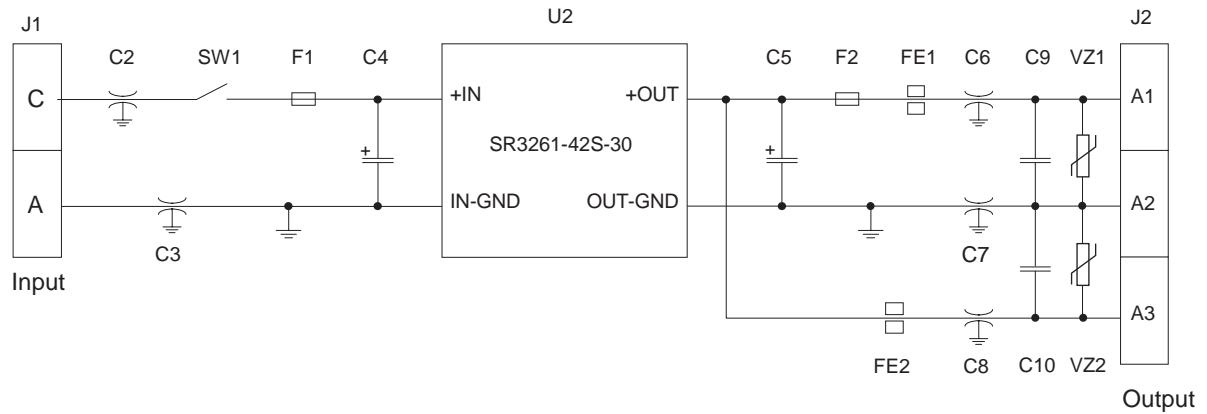
Connecting the Converter to the DC Power Supply

- Step 1.** Attach the DC Power Cable (marked **Conv**) to the connector on the Converter (marked **28 VDC**).
- Step 2.** Connect the lugs of the red wire to the positive terminal of the battery.
- Step 3.** Connect the lug on the black wire to the negative terminal of the battery.

Specifications

Performance	Input Voltage Range:	24V ± 25%
	Output Voltage:	12.8V ± 5%
	Output Current:	30A
	Output Power:	Continuous - 414W Peak - 469W
	Input Current with no Load:	18V Input – 13mA 24V Input – 16mA 30V Input – 30mA
	Efficiency:	With a 15A current – 93% At a 30A current – 91.5%
	Ripple:	55 mVpp
	Protections	Overvoltage Protection:
Isolation:		Input 500VDC Output 500VDC
Current Limit:		34A
General	Operating Temperature:	-30°C to 60°C
	Humidity:	95%
		(w) x (d) x (h)
	Size of DC to DC Converter:	300 x 295 x 90 (mm)
	Size of Converter with radio	300 x 295 x 150 (mm)
	Weight of DC to DC Converter:	5 kg
	Weight of Converter with radio:	14.5 kg

Electrical Diagram



Parts List

Component	Description	Part Number
C2, C3, C6, C7, C8	Capacitor, feed-through, 10nF	2184211B01
C4, C5	Capacitor, 3300 μ F x 100V	2380327L02
C9, C10	Capacitor, 0.01 μ F x630V	0813910A01
F1	Fuse tube 25A, 32V	6500061682
F2	Fuse tube 7.5A, 32V	6500086099
FE1	Ferrite	7604185K04
FE2	Ferrite	7604185K02
J1	Connector (male)	2802224C14
J2	Connector (female)	0902225C/0
SW1	Switch 20A 2G-A-0-4-78/2 Hex	40MB000001
U2	Switching regulator 24/12V 30A	0102706K36
VZ1, VZ2	Varistor 250VRMS	0602597K18