

TERMS OF WARRANTY

Innovative Energies Ltd warrants its power supplies for 24 months (two years) from date of shipment against material and workmanship defects.

Innovative Energies' liability under this warranty is limited to the replacement or repair of the defective product as long as the product has not been damaged through misapplication, negligence, or unauthorized modification or repair.

Thank you for purchasing from Innovative Energies.

We trust your power supply will exceed your expectations and perform for years to follow.

Sincerely,
The Innovative Energies team.

Innovative Energies Limited

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User Manual IEXT-CISCO

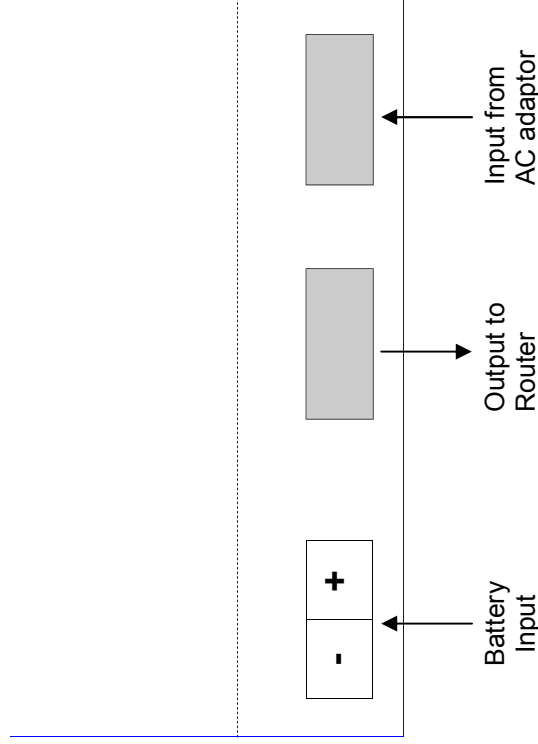
38 Watt DC-DC Converter



General

The IEXT-CISCO is a DC/DC converter designed for use with CISCO 800 Series routers requiring uninteruptible +5V/+12VDC supply. The input from the AC adaptor is used when there is no mains power. and the battery is used when there is no mains power.

Connections



SPECIFICATIONS

All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

ELECTRICAL	
DC Inputs	Battery input: 9.4-18V AC adaptor: 5.2V, 4.4A/ 12V, 0.56A
Output (when operating from battery)	5V, 5A / 12V, 1.15A
Rated Power	25W/ 13.8W (38.8W total)
Protection	Input : Fuse Output: Short circuit (max. 60sec) Overload above 105% power Overvoltage clamp
Isolation	1KV DC input / output
Efficiency	77/81%
Input Idle	55mA
Line Regulation	±1% at 10%-100% load
Load Regulation	±1% at 10%-100% load
Ripple	75mV p-p at 25-100% load
EMI conduction & radiation	To EN55022/CISPR22 Class B
Operating temperature	0 to 40°C; linearly derate to 40% output at 70°C

PHYSICAL	
Enclosure	Base: anodised aluminium Cover: black powder coated mild steel
Dimensions (mm)	180 x 75 x 35H
Weight	436g
Mounting	M5 Ø holes 164 x 46 mm, and/or: M3 threaded inserts 164 x 66 mm Suitable for DIN Rail mounting with additional clips, specify DINKIT

Safety

This equipment is designed to comply with information technology/business equipment standard IEC950. As stand alone equipment, the design allows for simple connection to mains and output (where applicable) The user is responsible for ensuring that input and output wiring segregation complies with local standards and that in the use of the equipment, access is confined to operators and service personnel.

HAZARDOUS VOLTAGES EXIST WITHIN A POWER SUPPLY ENCLOSURE AND ANY REPAIRS MUST BE CARRIED OUT BY A QUALIFIED SERVICEPERSON.

Electrical Isolation Testing

Electric strength tests: Components within the power supply responsible for providing the safety barrier between input and output are constructed to provide electrical isolation as required by the standard. However EMI filtering components could be damaged as result of excessively long high voltage tests between input, output and ground. Please contact our technicians for advice regarding electric strength tests.

Earth Leakage

The internal interference suppression circuit causes earth leakage currents which may be to the maximum allowable of 3.5mA. A low resistance earth connection is essential to ensure safety and additionally, satisfactory interference suppression.

Ventilation

High operating temperature is the cause of the majority of power supply failures. For example a 10°C rise in the operating temperature of a capacitor may halve its expected life. The rated operating temperature of the equipment is the highest test temperature at which internal components will provide maximum lifetime consistent with flexibility in application.

A switchmode power supply with a rated efficiency of 85% at full load draws 1.18 times the output power from the input. This extra power is lost as heat within the circuitry of the unit. Cases and heatsinks are designed to provide maximum transfer of heat to the surrounding air. However, if airflow is constrained within a cabinet, a unit will heat its environment and operate at an elevated temperature. The final operating temperature therefore must be considered in the design of a system for maximum trouble free service life.

Batteries and cooling fans may also suffer drastically shortened lifetime if subjected to high ambient temperatures - both should be included in a routine maintenance schedule to check for signs of reduced efficiency.

Water / Dust

Every effort must be made in the installation to minimise the risk of ingress of water or dust. Dust settling on internal heatsinks will degrade their ability to radiate heat and will also attract moisture, thus possibly causing leakage currents and circuit damage. All electrical equipment should be cleaned free of any dust accumulation at regular intervals.

Electromagnetic Interference (EMI)

Switching power supplies and DC-DC converters inherently generate electrical noise.

A major aim at the design stage is to suppress switching noise to at least the levels required by the various standards. Residual noise is nevertheless capable of causing interference in associated equipment if susceptible.

Generally, power supply and susceptible equipment wiring should be well segregated, as short as practicable and all equipment well earthed.

Residual noise can be reduced by looping DC wiring through ferrite cable sleeves. These are most effective as close to the power supply as possible and as many turns of the wire taken through the core (+ and - in the same direction) as the core will accommodate.

For more information, contact our sales office or your distributor.