

PS915 24 TO 12 VOLT ISOLATED CONVERTOR

POWER CONVERSION RELIABILITY WITHOUT COMPROMISE



New Features

- Wider tolerance to input surges
- Higher conversion efficiency
- Lower output noise
- Lower stand by current

The newly re-engineered PS915 has been immensely successful since its original development in 1989 for the radio communications market, with thousands in daily use. It has been robustly engineered for the harsh electrical and physical environment encountered in vehicles and radio huts. Its main design criteria was reliability without compromise, essential for operators of buses, trucks and other commercial vehicles.

Unlike linear supplies, the output of the PS915 is completely isolated from the input via a

transformer and opto isolator. This ensures that under no circumstance is it possible to have the 24Vdc input connected directly to the output.

Failure of a linear unit can often result in the main supply being directly connected to expensive radio equipment. Since there is no connection between the electronics and the housing, the supply is fully floating. This enables the equipment to be operated on positive earthed vehicles or vehicles which have earth switching for battery isolation. Linear supplies can often cause problems when battery isolation switches are operated incorrectly and an earth return is provided by the battery

wiring. Inadvertent starting of the motor under these conditions can cause damage to the wiring harness.

An optional timing circuit application is available which interlocks the power supply with a vehicle's ignition system, disconnecting the unit 45 minutes after the ignition is switched off.

The PS915 is fully protected, is very efficient (80% at 10A output) and draws little current on stand by, typically less than 30mA.

Typical Applications

- Mining vehicles
- Buses
- Emergency service vehicles
- Marine environment
- Radio huts



SPECIFICATIONS

Operating parameters

Nominal input working voltage	24 to 29Vdc
Output voltage	13.6V +/- 0.3V
Output resistance	0.6 ohms (this causes a 0.6V drop at 10A output)
Output current	8 amps continuous 10 amps @ 50% duty cycle
Stand by current	< 30mA
Operating temperature	0 to 60 deg C
Minimum load	none

Regulation

Conversion efficiency	88% at 5A output 80% at 10A output
Switching frequency	25KHz
Output noise	50mVp-p, up to full load
Power supply rejection ratio	better than 40dB

Protection

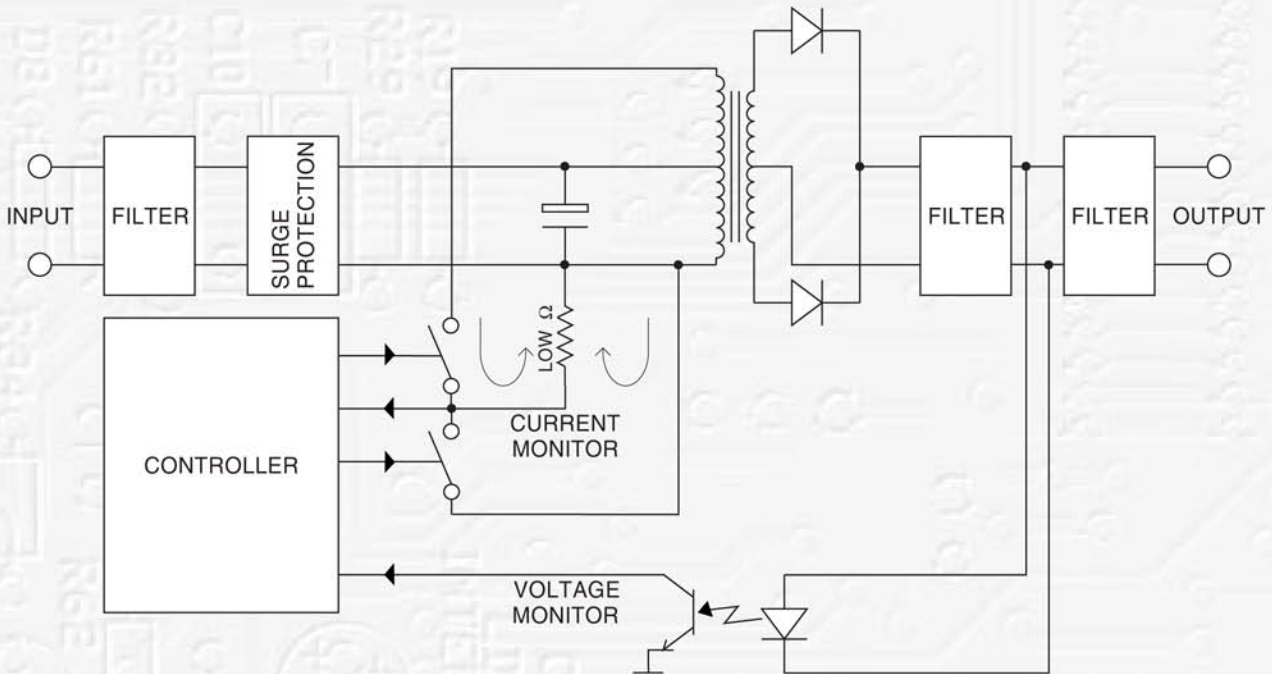
Current limit	12A
Maximum input voltage	35Vdc continuous, surges to 48Vdc with over voltage protection
Short circuit protected	yes, with fold back current limiting
Isolated output	yes
Input protection	In line fuse (7.5A for reverse polarity)

Mechanical

Mounting flange width	140mm
Mounting flange height	140mm
Depth (flange to back of heatsink)	90mm

Other PS915 models are available in batch quantities which feature additional voltage ranges, as follows:

PS915B	12 to 24 Vdc
PS915C	24 to 24 Vdc
PS915D	12 to 12 Vdc



BLOCK DIAGRAM

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