

**FOR MOBILES AND TABLETS - THE SAFE ALTERNATIVE FOR ON BOARD POWER**

The widespread use of smartphones and computer tablets has created an increasing need for user accessible, on the move charging systems. The PowerVerter USB Chargers can be easily installed onto any vehicle and allow both drivers and passengers to readily access power to charge any device connected via a USB lead.

This type of system has the distinct advantage of largely negating the need for mains electricity on vehicles. The 5Volt DC power is much safer than mains, so installation is quick and simple. Passengers can access the charging facility directly and power their equipment simply through the USB charging lead which is supplied with all such products.

All versions in the range can be connected directly to both 12Vdc and 24Vdc systems without adjustment. The advanced electronic design will also automatically detect if the device is an Apple or Android configuration and alter the charging process accordingly. This ensures that whatever device is connected, be it Apple, Android, iPad, phone or tablet, it will always be charged as fully as time and capacity allow. This avoids the confusion of providing dual outputs which can often appear to be charging when in fact they are doing little more than lighting the LED.



PV USB-1

**THE RANGE**

The product is available in three configurations. The PV USB-1 can be installed in a dashboard or fascia display, connected invisibly from behind and retained with the threaded securing ring provided. Where there is limited rear access, a front retaining plate is supplied as an alternative. In each case, an attractive professional finish is achieved.

PV USB-2 provides the same performance but is designed to be installed out of the way with other wiring, while USB-3 offers a slim-line socket with a 30cm cable. This allows the user interface to be installed in

positions where there is limited depth available such as seat backs or armrests, while the actual charger can be located out of the way along with other wiring.

Both PV USB-1 and USB-3 have a subtle blue LED to highlight their location on the vehicle and include an optional dust cover for when not in use.

**COMMERCIAL INSTALLATIONS**

The PowerVerter USB Chargers are designed to BS EN50498 and ISO 7637-2 and are both CE and E marked for commercial, on board vehicle installations. The casings and mounting components are manufactured in high

- 12Vdc and 24Vdc systems
- Up to 2.1A output
- Apple and Android auto-detect
- Dashboard or slim-line seat back configurations
- LED output indicator
- CE and E Marked



PV USB-3



Optional dust cover

quality impact resistant V-0 rated polycarbonate and the electronic assembly is entirely by computer controlled SMT for maximum reliability.



Part Number	Power	Nominal Voltage	Dimensions	Weight
PV USB-1	2.1A	12Vdc/24Vdc input, 5Vdc output	Diameter (max) 35mm; Hole 30mm; Depth 55mm	?
PV USB-2	2.1A	12Vdc/24Vdc input, 5Vdc output	85 x 24 x 14mm	?
PV USB-3	2.1A	12Vdc/24Vdc input, 5Vdc output	Diameter (max) 35mm; Hole 30mm; Depth 20mm	?

**TECHNICAL DATA**

Input voltage range	9-32Vdc
Output voltage	5Vdc
Output Power	2.1A
Application	Charges all USB devices including Apple and Android
Transient voltage protection	Meets ISO7637-2 International standard for 24V vehicles
Electrostatic voltage protection	Meets ISO10605, ISO14982, >8kV contact, 15kV discharge
Output noise	<50mV pk-pk
Off load current (quiescent current)	<1.5mA
Power conversion efficiency	86%
Operating temperature	-25°C to +60°C to meet this specification table
Storage temperature	-25°C to +100°C
Operating humidity	95% max., non-condensing
Casework	Black polycarbonate body
Connections	Input: 6.3mm push-in flat blade connectors Output: USB type A single socket
Output indicator	Blue LED output indication
Mounting method	30mm diameter hole with or without bezel
Dimensions	58mm overall length (including cover and connectors x Ø37mm) (excluding optional face plate)
Safe area protection:	Over current Limited by current sensing circuit Over heat Limited by temperature sensing circuit Transients Protected by filters and rugged component selection Catastrophic protection Internal fuse
Approvals	2004/108/EC The general EMC directive Regulation 10.04 The automotive directive 93/68/EEC The CE marking directive
Designed to	EN50498, ISO 7637-2
Markings	CE and E marked