



FOR MOBILES AND TABLETS - THE SAFE **ALTERNATIVE FOR ONBOARD POWER**

The widespread use of smartphones and computer tablets has created an increasing need for useraccessible, 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 system has the distinct advantage of largely negating the need for mains electricity on vehicles. The 5 Volt 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 supplied with all such products.

All versions in the range can be connected directly to 12 VDC and 24 VDC systems without adjustment. The advanced electronic design will detect the charge status of the device 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.



THE RANGE

The PowerVerter USB range has been completely redesigned to include a standard design that can be used in regular and slim-line installations. Aesthetically, the design has been improved with a dark grey body and contrasting light grey ring as well as an attractive and more obvious LED indicator. This helps to draw attention to the unit and encourages use. Part numbers are: (Single Output: PVPro-S; Double Output: PVPro-D).

The front-fitting system has also been improved with a round bezel and a tamperproof covering ring to hide the screws, yet will still allow the unit to be replaced quickly and easily should this be required. Part numbers are: (Single Output: PVPro-SFf; Double Output: PVPro-DFf).

Electronically, the design now includes automatic short-circuit detection, so in the event of tampering or compromise, the unit will automatically shut down and restart again once the fault has been

A charger-only version is also available for permanent, behind-the-scenes installations without a customer interface. Part number is: PV-USB2. The range is completed with our 'Pod'. This is ideal for retrofit installations and is designed to fit underneath the seat in front. This system can also be bought as a complete assembly including: PVPro-USB charger, pod, and 1.2 m of fused cable. (Single Output: PVPro-S-Assy; Double Output: PVPro-D-Assy).

COMMERCIAL INSTALLATIONS

The PowerVerter USB chargers offer an advanced design that effectively counteracts the voltage drop common when output currents vary as different devices charge at different rates. This avoids the common problem of the phone or tablet indicating it is charging when in fact very little current is being supplied. They also have an exceptionally low quiescent current of less than 2 mA meaning that multiple devices can safely be installed throughout buses and coaches without materially discharging the battery.

They have been designed to meet the rigorous standards required for onboard commercial vehicle applications including BS EN50498 and ISO 7637-2 and are both CE and E-marked. The casings are made from V0-rated (self-extinguishing) high-impact polycarbonate and the electronic assembly is predominantly by computer-controlled SMT for maximum reliability.

All versions have a subtle blue LED light to highlight their location on the vehicle.

- 12 VDC and 24 VDC systems
- Up to 2.1 A output (single) 3.0 A (double) max 1.5 A per socket
- Apple and Android compatible
- Dashboard, slim-line seat back or underseat pod configurations
- LED output indicator
- CE and E Marked



PowerVerter USB PVPro-S and PVPro-D single and double outputs.



A slim design can be installed with as little as 20 mm rear space.



PVPro-DFf, front-fitting version can be



WARRANTY

Like all products, the USB chargers are manufactured using rugged components to provide years of service in demanding commercial environments. Due to the limitations of public use, the guarantee on these products is limited to three years.



POWER

CHOOSE YOUR USB PRO PRODUCT

| | TAE Part No. | OE No. | Description | Dimensions (mm) | Weight |
|---|--------------|-----------|--|--------------------------------|--------|
| | T260019830 | PVPro-S | Single output 12/24-5 V USB Charger 2.1 A | Ø37 x 33; Hole Ø30 | 20 g |
| | T260019834 | PVPro-D | Double output 12/24-5 V USB Charger 3.0 A (1.5 A per socket) | Ø37 x 33; Hole Ø30 | 24 g |
| | ТВА | PVPro-SFf | Single output 12/24-5 V USB 2.1 A Front fitting | Ø47 x 33; Hole Ø30 | 23 g |
| | TBA | PVPro-DFf | Double output 12/24-5 V USB Charger 3.0 A Front fitting | Ø47 x 33; Hole Ø30 | 27 g |
| | TBA | PV-USB2 | Single output charger only 12/24-5 V USB 2.1 A | 113 x 24 x 15 | 17 g |
| | TBA | PV-USB-H1 | Standard 1.2 m wiring with in-line 2 A fuse | 1 x Red 1.2 m, 1 x Black 1.2 m | 50 g |
| | ТВА | USB-POD | Under-seat mounting pod for USB chargers | Width 60; Height 52; Depth 80 | 69 g |
| _ | | | For Railway-Approved Versions please see PowerVerter Pro Railw | (2) (| |

TECHNICAL DATA

| Input Voltage Range | 9-32 VDC |
|---|---|
| Output Voltage | 5 VDC ± 0.2 V |
| Output Power | 2.1 A (single) 3.0 A (double) - max 1.5 A per socket |
| Application | Charges all USB devices including Apple and Android |
| Transient Voltage Protection | Meets ISO7637-2 International standard for 12/24 V vehicles |
| Output Noise | <50 mV pk-pk |
| Off-Load Current (Quiescent Current) | <1.7 mA |
| Power Conversion Efficiency | 90% |
| Operating Temperature | -25 °C to +55 °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: 6.3 mm push-in flat blade connectors Output: USB type A single socket/double socket - tested to 10 000 mating cycles |
| Output Indicator | Blue LED output indication |
| Mounting Method | 30 mm diameter hole with or without bezel. USB2 for non-through-fitting applications. |
| Safe Area Protection: Over Current Over Heat Overvoltage and Undervoltage Reverse Polarity Transients Catastrophic Protection | Limited by current-sensing circuit Limited by temperature-sensing circuit Limited by sensing circuit Limited by sensing circuit Protected by filters and rugged component selection Internal fuse |
| Approvals | 2014/30/EU The general EMC directive Regulation 10 The automotive directive 93/68/EEC The CE marking directive AES5, ECE R118 and UL 94: V-0 |
| Designed To | EN50498, EN61373, and ISO 7637-2 |
| Markings | CE, UKCA, and E (automotive) marked |
| IP Rating | IP30. Cleaning: wipe with a damp cloth (do not spray). |



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Delivering Optimal Uptime!