



POWERVERTER PVPro & PV65R

USB Chargers for Bus and Coach





Low Voltage Disconnect Battery Guards offer excellent protection for communication and automotive applications.



Dc-Dc Voltage Converters 24V-12V. Isolated and non-isolated. 24V-24V, 12V-12V, 48V-12V/24V.



British manufacturer of USB Chargers, Voltage Converters, Power Supplies, Low Voltage Disconnects and Battery Chargers for OEM and after market supply.

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POWERVERTER USB PART SELECTION

PVPro-S	Single output standard/slim fit USB charger	USB-POD	Pod for under-seat installations - use PVPro or PV65R units
PVPro-D	Double output standard/slim fit USB charger	USB-WPOD	Pod for on-wall installations - use PVPro units only
PVPro-SFf	Single output front-fitting standard/slim fit USB charger	USB-TPOD	Pod for tabletop installations - use 2 x PV65R units
PVPro-DFf	Double output front-fitting standard/slim fit USB charger	PVP-FUSE 2	2A fast-blow fuse in 150mm wiring with male blade and female crimp terminals
PV65R-S	Single output USB charger with electronics protected to IP65	PVPro-S-Assy	Single USB charger assembled in under-seat pod including 1.2m wiring and fuse
PV65R-D	Double output USB charger with electronics protected to IP65	PVPro-D-Assy	Double USB charger assembled as above
PV65R-SFf	Single output front-fitting USB charger with electronics protected to IP65	PV65R-S-Assy	Single USB charger assembled as above, protected to IP65
PV65R-DFf	Double output front-fitting USB charger with electronics protected to IP65	PV65R-D-Assy	Double USB charger assembled as above, protected to IP65

For alternative LED colours, ring colours and branded rings, please check with our sales team for part numbers.

TECHNICAL DATA FOR PVPro & PV65R

Input voltage range	9-32Vdc
Output voltage	5Vdc +/- 0.2V
Output Power	2.1A (single) 3.0A (double) - max 1.5A per socket
Application	Charges all USB devices including Apple and Android
Transient voltage protection	Meets ISO7637-2 International standard for 12/24V vehicles
Output noise	<50mV pk-pk
Off load current (quiescent current)	<1.7mA
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: 6.3mm 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	30mm diameter hole with or without bezel. USB2 for non-through-fitting applications.
Safe area protection:	<ul style="list-style-type: none"> Over Current Limited by current sensing circuit Over Heat Limited by temperature sensing circuit Overvoltage and Undervoltage Limited by sensing circuit Reverse Polarity Limited by sensing circuit Transients Protected by filters and rugged component selection Catastrophic Protection Internal fuse
Approvals	2014/30/EU The general EMC directive Regulation 10 The automotive directive 93/68/EEC The CE marking directive AES5, ECE R118.02 and UL 94: V-0
Designed to	EN50498, EN61373 and ISO 7637-2 To fully meet railway approval to EN50155 & EN50121-3-2 the PVPro is to be used in conjunction with a PV6i-R or PV12i-R
Markings	CE and E marked
IP Rating:	PVPro: IP30 PV65R: IP65

Note: Our policy is one of continuous improvement and we reserve the right to change specifications without prior notice.

STANDARD USB CHARGER SELECTION

PVPro STANDARD USB CHARGERS

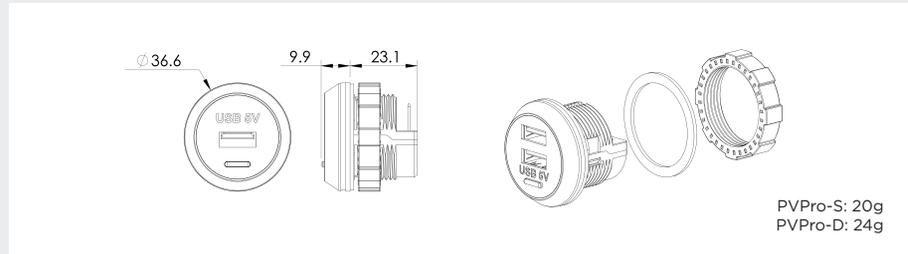


PVPro-S



PVPro-D

Available in both single and double outputs, these USB chargers are suitable for a wide variety of bus and coach installations. The slim design makes them particularly suitable for installation into seat backs and where rear space is limited. They can also be installed underneath seats, on vehicle walls and on table tops using the appropriate mounting pods - see next page.



PVPro-Ff FRONT-FIT VERSIONS

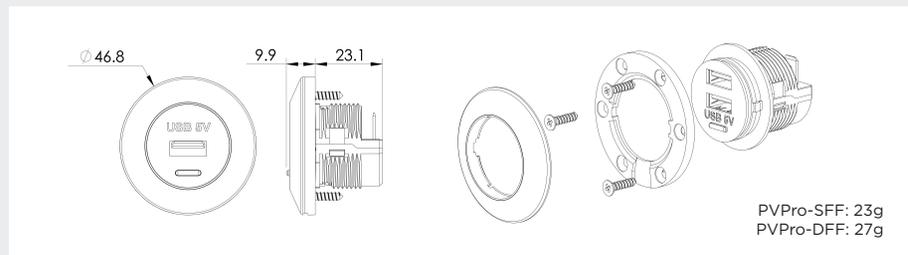


PVPro-SFf



PVPro-DFf

These units allow for the USB chargers to be removed and replaced quickly and easily where rear access is limited or inconvenient. A retaining bezel is placed over the front of the unit and secured with three screws. The tamper-resistant cover plate completes this aesthetically pleasing installation.



PV65R RUGGED VERSION - ELECTRONICS PROTECTION: IP65

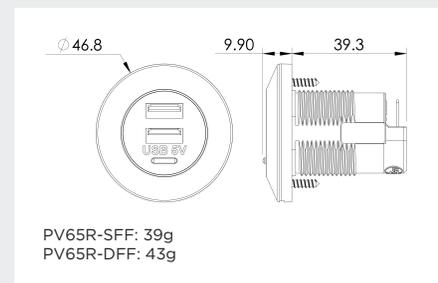
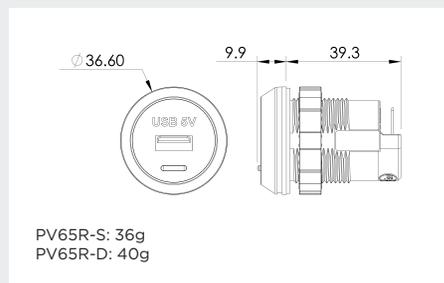


PV65R-S



PV65R-D

Designed to operate reliably in harsh environments with all the electronics protected to IP65 (excludes the USB connector). These are particularly suitable for 'in wall' installations as the space between the inner and outer vehicle walls can contain moisture and dirt causing corrosive airflow. Available in both standard and front-fit versions, this design is also suitable for installations using under-seat and tabletop pods.

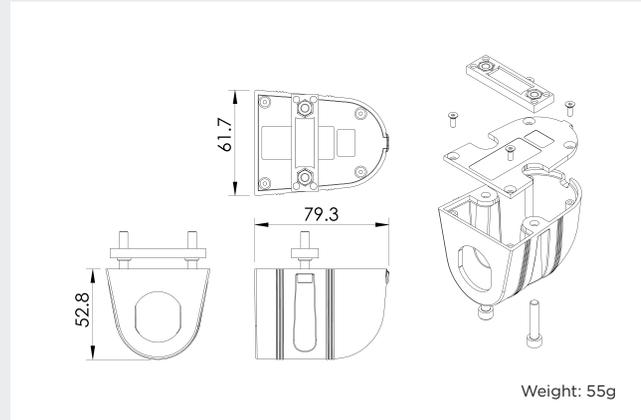


INSTALLATION ACCESSORIES

USB-POD

FOR UNDER-SEAT INSTALLATIONS

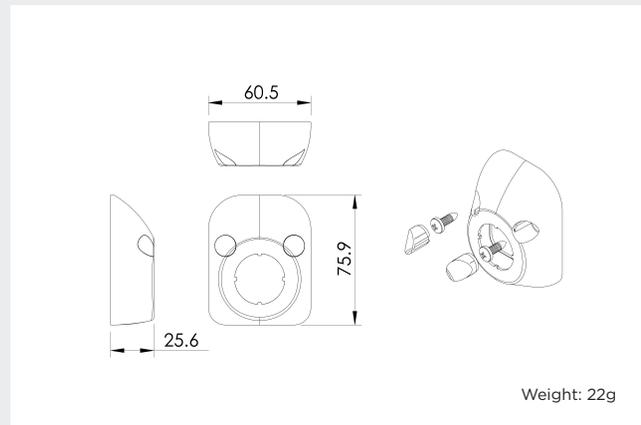
Rugged mounting pod for PVPro USB installation under seats, accessible from the front or rear. It can house a PVPro or PV65R USB charger and is also available as a complete assembly together with 1.2m of fused wiring.



USB-WPOD

FOR ON-WALL INSTALLATIONS

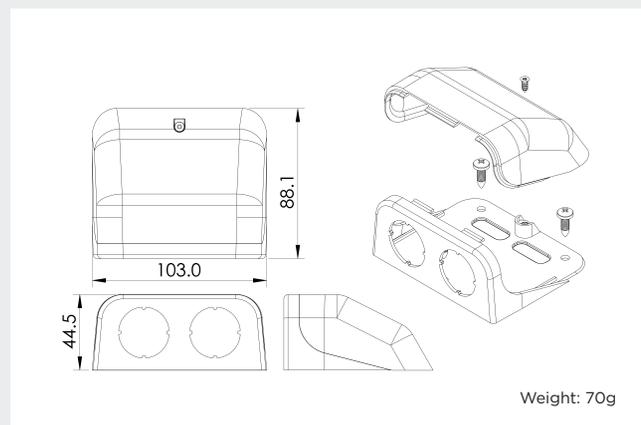
Wall-mounted housing to allow the standard PVPro range to be installed on the wall of the vehicle without the need of a 30mm drilled hole. It is fixed to the wall with screws hidden by tamper-proof cases and space is provided for a fuse to protect the wiring (recommended).



USB-TPOD

FOR TABLE-TOP INSTALLATIONS

Designed to house two PVPro or PV65R USB chargers. It comes complete with fused internal wiring to allow for a single input source from the vehicle wiring. Using this system up to four USB outlets (2 x double units) can be made available for charging at tables.



POWERVERTER PRO RANGE

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.

- Charges all USB devices including Android & Apple
- Sidewall & dash mounting, seating systems for coach, bus & rail applications
- 5 Vdc output voltage
- Wide input range of 9-32Vdc
- Tested to 10,000 mating cycles (insertion and extraction)
- CE marked, E marked, AESP 5 & R118 certification



CUSTOMISABLE

Enhance your corporate image with our branded versions

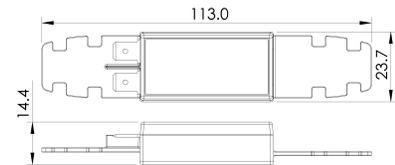


PV-USB2

USB Charger without passenger access



Designed to allow USB compatible equipment to be installed either where there is a separate USB connector interface or where a permanent installation is made to power separate 5V equipment. This small, lightweight unit is designed to be simply retained by tie-wrapping within the wiring loom.



Weight: 17g

PVP-FUSE 2

We recommend individual fusing to protect the wiring of all installations in the event of a short circuit in the system. The PV-FUSE provides a simple, compatible 2A fast-blow fuse set in 150mm of R118 approved wiring with blade/crimp terminals. This can be included in all of the above installations for extra protection and peace of mind.

All dimensions in mm.