

# POWERVERTER PVPPro A & C Range

## 12/24VDC USB CHARGERS

### A & C PORT USB CHARGING FOR 12V AND 24VDC APPLICATIONS

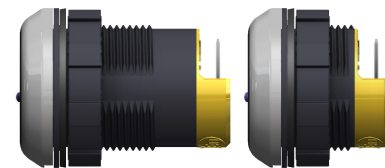
The ever-popular PowerVerter PVPPro Range of USB chargers has now been updated to include USB-C options, expanding on the great design concepts of USB charging on vehicles. Models are now available offering combined Dual USB A & C and Single USB-C output versions.

As well as standard (rear fit), all models are also available in front fit versions. This is a popular option for when rear space access is limited, and also allows for quick removal and replacement if required.

Ingress protection is to IP30 as standard. However, the PVPWp versions retain the slimline design and offer enhanced protection to IP65 (not connectors). The ruggedised PV65R versions which are also IP65 (not connectors), offer additional transient protection and are particularly suitable in more demanding environments such as for installation into vehicle walls.

Output power performance has also been enhanced. As well as charging both Apple and Android mobile phones, the USB-C models offer higher current outputs for limited charge assistance on tablets and laptops.

Standard versions require only 20mm (typical) rear space and can easily be installed in bus and coach seat backs, walls and dashboards. A series of installation pod designs enable retrofit options for underseat, table and wall mounting.



**IP65 versions available**  
**PV65R - ruggedised and PVPWp,**  
**both IP65 rated; indicated by**  
**yellow rear cap**

- The new A & C range has the following key benefits:
- Both type-A and type-C outputs
  - Apple and Android compatible
  - Dashboard, slimline seat back or underseat pod configurations
  - LED output indicator
  - IP30 or IP65 ingress protection -see Product Overview
  - CE, E and UKCA marked



**Protective pod for under seat or retrofit installation. Can be supplied with charger, pod & wiring ready assembled.**

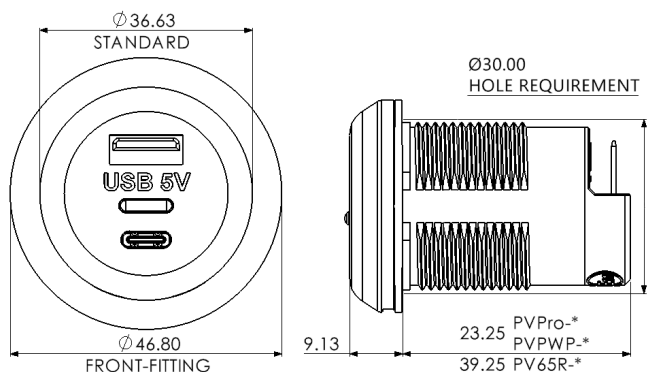


**All products are available in front fit options for when rear access is limited**

### THE RANGE

All units are installed through a 30mm hole. Standard format units are retained by a rear nut while the front fit versions include a bezel with tamperproof cover ring. Input power is by way of two 6.3mm push-in flat fit automotive terminals.

Dimensionally the USB A and C Chargers are the same and are interchangeable with the ever-popular PVPPro Range. Electronically the designs include reverse polarity protection and the output withstands short circuit current and will return back to full operation when the short is removed.



PVPPro-C  
Single output  
C connector



PVPPro-AC  
Dual output A  
& C connector



### WARRANTY

The PVPPro A and C range of chargers are manufactured using rugged components to provide years of service in demanding commercial environments and are covered by a three year return to base guarantee.

# CHOOSE YOUR USB PRODUCT

PART NUMBER	DESCRIPTION	DIMENSIONS (mm)	WEIGHT
<b>Standard IP30 USB Chargers:</b>			
<b>PVPro-AC</b>	USB 'A' & 'C' Dual output 12/24-5V, 3.6A	Ø37 x 33; Hole Ø30; Rearspace typ.22	25g
<b>PVPro-C</b>	USB 'C' Single output 12/24-5V, 2.5A	Ø37 x 34; Hole Ø30; Rearspace typ.22	20g
<b>Ruggedised IP65 USB Chargers:</b>			
<b>PV65R-AC</b>	USB 'A' & 'C' Dual output rugged, IP65 12/24-5V, 3.6A	Ø37 x 49; Hole Ø30; Rearspace typ.36	42g
<b>PV65R-C</b>	USB 'C' Single output rugged, IP65 12/24-5V, 2.5A	Ø37 x 50; Hole Ø30; Rearspace typ.36	36g
<b>Slimline IP65 USB Chargers:</b>			
<b>PVPWp-AC</b>	USB 'A' & 'C' Dual, slimline, IP65 12/24-5V, 3.6A	Ø37 x 33; Hole Ø30; Rearspace typ.22	31g
<b>PVPWp-C</b>	USB 'C' Single, slimline, IP65 12/24-5V, 2.5A	Ø37 x 34; Hole Ø30; Rearspace typ.22	26g
For front fit versions, please add the suffix Ff, e.g. PVPro-ACFf, PV65R-ACFf etc. The detachable ring in both standard and front fit format can be customised for branding and advertising purposes. Please ask our sales team.			
<b>Accessories:</b>			
<b>USB-POD</b>	Underseat mounting pod for USB chargers	W 60, H 52, D 80	55g
<b>USB-TPOD</b>	Table mounting pod for 2x USB chargers	W 103, H 44.5, D 88	62g
<b>USB-WPOD</b>	Wall mounting pod for USB chargers	W 60.5, H 76, D 26	22g
<b>PV-USB-H1</b>	Standard 1.2 wiring with in line fuse	1x red 1.2m, 1x black 1.2m, 1x 2A fuse	50g
The USB 'A' & 'C' dual output or 'C' single output can be installed with the USB-POD, USB-WPOD or USB-TPOD and appropriate H1 wiring harness to produce a full assembly.			

## TECHNICAL DATA

Input voltage range	9-32Vdc
Output voltage	5.2Vdc +/- 0.2V
Max Output Power	Single C: 2.5A, Dual A & C: 3.6A
Application	Charging of 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)	<2.5mA
Isolation	Non-isolated >400Vrms between casing and terminals
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	Dark grey polycarbonate body, contrasting trim ring
Connections	Input: 6.3mm push-in flat blade connectors Output: USB type-A socket, USB type-C socket
Output indicator	Blue LED output indication
Mounting method	30mm diameter hole, with rear nut or front fit bezel
Safe area protection:	Over Current Limited by current sensing circuit Over heat Limited by temperature sensing circuit Overvoltage and Undervoltage Limited by sensing circuit Reverse Polarity Protected by sensing circuit Transients Protected by filters and rugged component selection Catastrophic protection Internal fuse (external fusing recommended)
Approvals	2014/30/EU The general EMC directive Regulation 10 The automotive directive 93/68/EEC The CE marking directive IP65 approved (PV65R and PVPWp) Regulation R118 (Automotive Fire)
Designed to	EN50498, ISO 7637-2, R118 & R080
Markings	CE, UKCA and E marked
IP Rating	IP30/IP65 according to product selection (For IP65 USB connector excluded). Cleaning: wipe with damp cloth, do not spray.