MIKROTIK





APA-1

APA-1 is an Automotive Power Adapter with overvoltage protection and other safety features to protect your LtAP and other devices from aggressive vehicle environments.



CAN BE USED WITH THE GPER IP67 CASE!

Failed car battery, harness coupling, jump-starting or even just switching the AC unit – nasty voltage spikes can occur anywhere, anytime! The built-in gas-discharge tube is an elegant, clever solution. Usually, this gas, secured within a tiny glass tube, does not conduct electricity. However, when a high voltage is applied, the gas becomes ionized, enabling a new low-resistance path for the excess voltage to flow. Excess voltage that otherwise might have fried your devices!

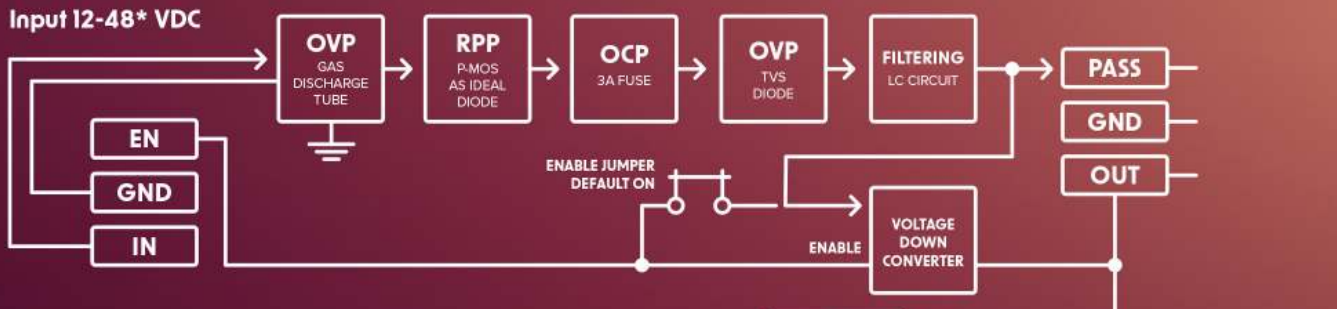
Another layer of protection is the TVS: transient voltage suppressor semiconductor. This combination of layers protect your devices from extreme voltage spikes. We've also added active polarity protection, so that your devices stay safe even if you apply the power in reverse by accident. Additionally, there's a built-in low-pass filter to block all unwanted impulses, and a standard fuse for extra protection.

The output voltage can be easily modified via jumper position, but there's also a pass-through mode – in case if you don't need input voltage regulation. Remember: preventing a crisis is always cheaper than fixing it!

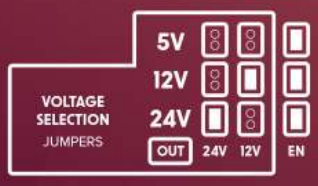
EN- Enable
GND - DC- (negative) terminal
IN – DC+ (positive) terminal

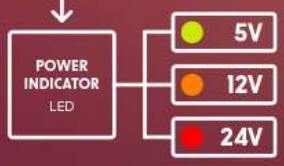
OVP - Over Voltage Protection
RPP - Reverse Polarity Protection
OCP - Over Current Protection
OVP - Over Voltage Protection

PASS- Pass-through mode "+" (positive) terminal
GND - DC- (negative) terminal
OUT – Voltage converter output "+" (positive) terminal



EN – enable voltage down converter, High(9-60VDC) = on, Low(0-1.2VDC) = off EN can be used with car accessories or the vehicle ignition power switched on to enable a voltage converter; by default - a jumper enables a voltage-down converter.





Current limits shown on the case are for single output pass-through mode or regulated 5/12/24V mode, but not for both outputs simultaneously.

5V	12V	24V	PASS
3A	2A	1A	2A

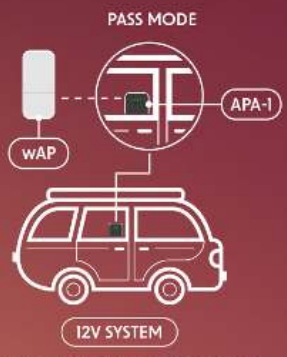
OUTPUT

PASS - pass-through mode – input voltage after protection circuit, EN input does not affect PASS output. OUT and PASS outputs can be used simultaneously, but the 3A input fuse limits the current, so the output power budget depends on the input voltage level.

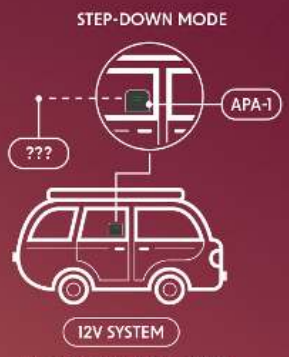
*to be used in 12, 24 and 48 VDC automotive/vehicle electric systems, absolute maximum voltage input +60VDC, min input 9VDC

Some ways to use the APA-1

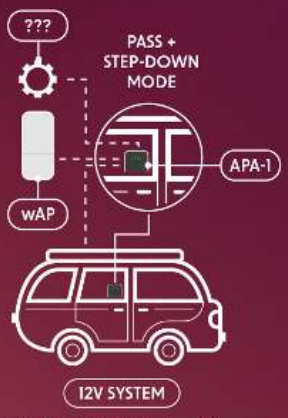
INPUT FROM A CAR (12V), BUS (24V), TRACTOR OR OTHER VEHICLE



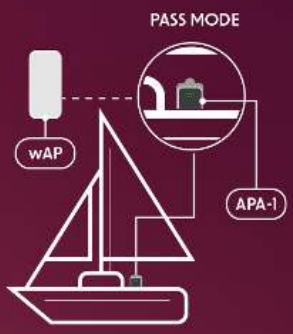
Using only PASS mode to connect a MikroTik wAP or any other equipment.



Using the APA-1 5V output for another device.



Using STEP-DOWN 5V output for some equipment + the PASS option for the router + the EN with the automotive accessory electrical pin of the vehicle to enable some equipment



Using APA-1 in a boat with the GPeR IP67 Case



Using APA-1 as a standard step-down converter with an input range of 12-57V

Specifications

Product code	APA-1
Number of DC inputs	1 (3-pin terminal)
Min voltage	12 V
Max voltage	48 V
Max power consumption with attachment	100 W
Dimensions	86 x 16 x 31 mm
Operating temperature	-40°C to +85°C

APA-1 is E-mark certified and compatible with other E-mark certified devices:



LtAP-2HnD&FG621-EA



RB912R-2nD-Ltm&R11e-LTE