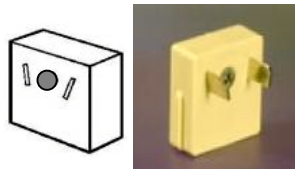


## Connecting FAHReenergy HRV-Solar To A Caravan:

Some examples of 'standard' caravan plugs and sockets are shown below



12V caravan socket & plug  
Non polarised



12V caravan socket & plug  
Polarised




12V caravan socket & plug  
One pin. Polarised




12V caravan  
'lighter' socket  
& plug. One  
pin. Polarised

### Connecting The FAHReenergy Solar PWM-Supply:

Using a plug of the type used in your caravan, connect the

 Brown wire to the + (plus) terminal and the

 Blue wire to the - (minus) terminal of your caravan plug.



Connect this plug to the FAHReenergy  
HRV-Solar Unit

The PWM-Supply is provided with  
open wires (no plug) due to the lack of  
a common standard for plugs in  
caravans.

By changing the position of the rocker switch, you may switch between Full and Quiet mode.

Full Mode delivers to 60m<sup>3</sup> / h of heat recovered fresh air and consumes ca. 6 watt at 12VDC.

Quiet Mode delivers 40m<sup>3</sup> / h of heat recovered fresh air and consumes 4 watt at 12VDC.  
(Quiet mode is also Power Save Mode).

Specifications: [http://www.fahreenergy.co.uk/PWM\\_SolarSpecification.pdf](http://www.fahreenergy.co.uk/PWM_SolarSpecification.pdf)

### Using A Solar Panel:

Become independent on external electricity.

Three protection functions: Over voltage (OVP), Inverse voltage (IPP) and resettable fuse (RF).

The three protection functions of the PWM-Solar unit protects a HRV-Solar, a solar panel a caravan/car/boat battery and prevents fire.



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[www.fahrenergy.co.uk/index.html](http://www.fahrenergy.co.uk/index.html)

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Due to the extreme low power consumption and high efficiency of both the FAHREnergy Medium HRV as well as the PWM-Solar supply, a 12V / 6 watt solar panel delivers adequate electricity (energy).

#### IMPORTANT:

Always use the 12V solar panel together with a 12V accumulator (for example a car battery).

The reason for the above:

Common 12V solar panels deliver 22V when activated by the sun and not loaded. This voltage is above the maximum level of 13.4V and may damage your PWM-Solar supply and ultimately the HRV.

As the solar panel delivers more energy than the FAHREnergy HRV-Solar uses, the battery takes up the excess energy. This energy is then supplied to the HRV when the sun sets.

In Quiet mode a 6w solar panel delivers 2 watt extra which is stored in the accumulator.

During 6 month of the year a 6 watt solar panel and a 60Ah charged accumulator will typically run the HRV in quite mode for 10 days before a charge is needed (5 hours sun per day).

Using a 10 watt solar panel and a 60Ah charged accumulator will typically run the HRV for 15 days before a charge is needed (5 hours sun per day).

Using a 20 watt solar panel and a 12Ah charged battery would run the HRV continuously at 5 hours sun every day (summertime, northern Europe).

#### Prolonged Periods Without Sunshine (winter)

A standard 12V / 60Ah accumulator stores 720 watt hours.

In Quite Mode the HRV will run for up to 7.5 days before a charge of the accumulator is needed. Longer periods without charge need a similarly larger accumulator.

### Caravan Storage

The FAHREnergy HRV-Solar prevents mould and rot during storage.

Continuous balanced heat recovered fresh air enters your caravan at virtually no cost.

Your caravan will at all time stay dry and pleasant using only 4 watt.

The energy consumed, during one month continuous fresh air ventilation, is only 2.9 kilo watt hours.

2.9 kilo watt hours of energy (electricity) costs around 50 pence!

Compare this to today's standard 500 watt electrical heating and you have saved 360 kilo watt hours per month!

The monthly energy consumption, during storage, is reduced 125 times!