



## Apollo GEM at a Glance for Installers

The Apollo GEM system is a system which increases the efficiency and return of solar PV systems.

The way GEM does this is by storing excess generated energy which is not required by the household appliances as heat in the hot water cylinder rather than allowing it to be exported to the grid. This provides free hot water by utilising energy that would have otherwise been given away to the grid.

GEM uses a current sensor on the main incoming supply to measure power being imported or exported to the property. Any export power measured is then diverted by the GEM into a standard immersion heater element.

Installing the GEM system is akin to installing an immersion heater timer. Essentially the GEM controller is wired in series with the immersion heater element.

**The GEM does not form part of the solar PV system itself nor are any modifications to the solar PV system or wiring required to install the GEM system. GEM installers do not need to be MCS accredited and installing a GEM system will not affect FITs registration or FITs payments.**

There are two basic installation methods depending on how the immersion heater is supplied.

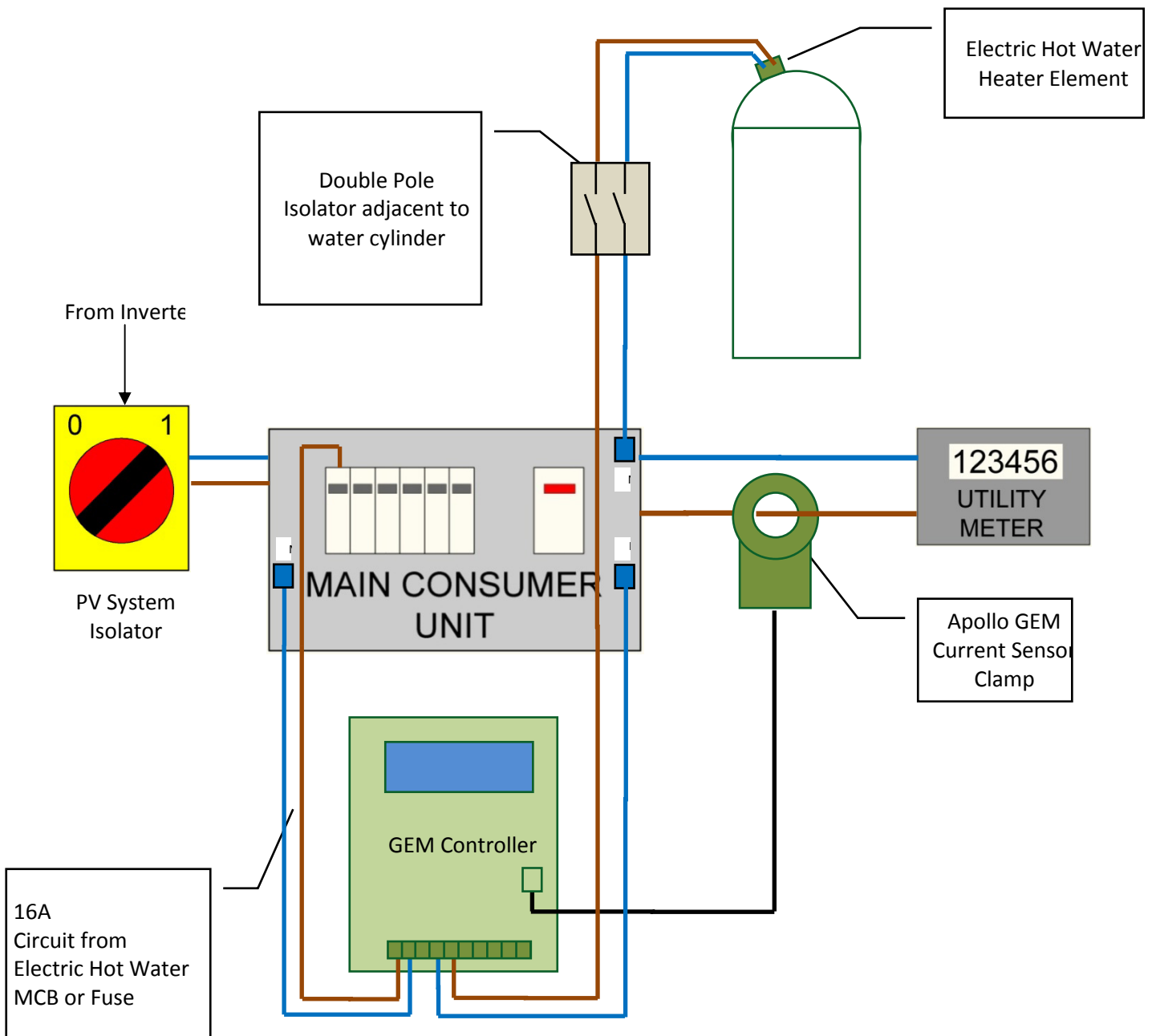
1. If the immersion heater has a dedicated circuit back to the consumer unit, and the solar inverter is fed from the consumer unit, or terminated in a Henley block near the consumer unit, then a direct wired GEM controller can be installed in the vicinity of the consumer unit.
2. If the immersion heater is supplied from a ring main via a fused spur and does not have a dedicated circuit back to the consumer unit then the GEM is installed next to the hot water cylinder in series with the immersion heater. Additionally a small transmitter unit is installed next to, and powered from, the consumer unit.

Installation time for the system typically takes 1.5 to 2 hours.



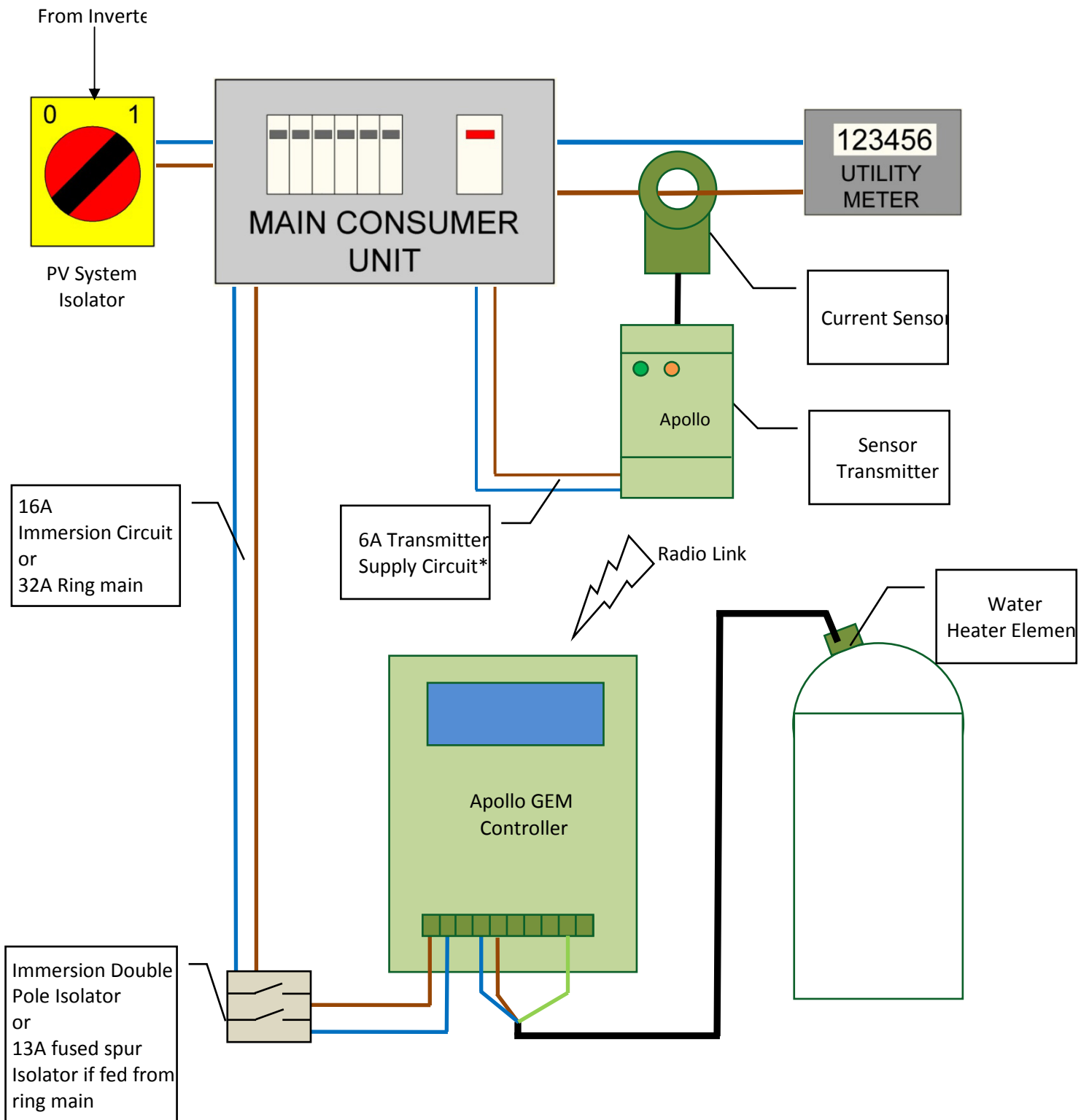
The Apollo GEM PV Immersion Controller System

## Installation method 1 - Direct wired GEM Controller



More detailed installation information can be found in the GEM user and installation manual which can be downloaded here:  
[http://www.apollosolarelectric.co.uk/img/pics/pdf\\_1476439097.pdf](http://www.apollosolarelectric.co.uk/img/pics/pdf_1476439097.pdf)

## Installation method 2 - Wireless Connected GEM Controller



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