## **TECHNICAL BULLETIN**

### **PRODUCT: ISM1 INTELLIGENT SOLAR MODULE**

# WIRING DIAGRAM & SCHEMATIC LAYOUT WITH CDI SYSTEM BOILER AND SOLAR WATER HEATING SYSTEM:

For many years there has been a general consensus, mainly driven by training and accreditation bodies, that the only way of complying with the Building Regulation requirements for the installation of an unvented hot water storage cylinder is to install a 2-port motorised valve on the primary flow from the boiler or solar circuit to the cylinder.

This is not the case, and other alternative methods can also comply.

#### FURTHER DETAILS:

In fact, Building Regulation Approved Document G3, paragraph 3.6 states '...the non self-resetting thermal cut out should be wired up to a motorised valve or some other suitable device to shut off the flow to the primary heater...'. The latter part of this sentence can be interpreted to mean as long as we as responsible Manufacturer's are confident our method provides an equal amount of protection to the common approach, we may instruct installers of our equipment to follow a different approach.

Shortly the installation instructions of the Greenstar CDi optional Integral Diverter Valve kit will be updated to reflect this change, however in the meantime a summary is provided below.

#### **BOILER CONNECTIONS:**

- ► The installer will use the cylinder sensor supplied with the optional CDi Diverter Valve kit to control the hot water temperature.
- The installer, therefore, will NOT need to use the hot water control thermostat of the cylinder's dual thermostat.
- The installer may have to alter the wiring of the dual thermostat (depending on cylinder and thermostat manufacturer) to only use the high limit thermal cutout of the dual thermostat\*.
- The high limit thermal cut out of the dual thermostat MUST be wired to interrupt the permanent live to the Greenstar CDi System Boiler.
- The 2-port valve supplied with the unvented cylinder will NOT be used. If it is already physically installed in the pipe work it should be removed and electrically disconnected from the wiring centre\*.

\* The cylinder manufacturer must be contacted for approval to undertake this.

#### SOLAR CONNECTIONS:

- ► The installer will use the cylinder sensor supplied (white) with the ISM1 to control the hot water temperature and the solar sensor (grey) supplied with the ISM1 to monitor the temperature of the solar panels.
- ► The installer MUST wire the supply to the ISM1 via the separate high limit thermal cut-out supplied with the Greenskies Unvented Cylinder.

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Whilst it is always our intention to fully assist, it is essential to recognise that all information given by the company in response to an enquiry of any nature is provided in good faith and based upon the information provided with the enquiry. We recommend that advice should always be checked with your installer or contract partner. Consequently, the company cannot be held responsible for any liability relating to the use or repetition of such information or part thereof. In addition, whilst making every reasonable effort to monitor the performance and quality of our supply, installation and service network, we do not accept responsibility for the workmanship or operation of any third party company that the company may have promoted either in conversation, e-mail or other communication. Similarly, the views and opinions expressed in communication with individuals within the company may not reflect that of the business as a whole.



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Fig. 1: Wiring configuration – Greenstar CDi system boiler, FW100 weather compensation controller, ISM1 intelligent solar module, with Greenskies unvented cylinder

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Fig. 2: System Layout – Greenstar CDi system boiler, FW100 weather compensation controller, ISM1 intelligent solar module, with Greenskies unvented cylinder

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