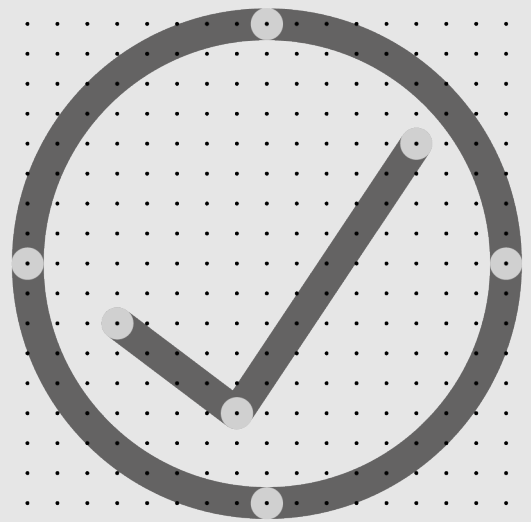


# The Solar Heating Standard

(Product)



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Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 2 of 11

# TABLE OF CONTENTS

- About MCS ..... 4
- Changes to standards ..... 5
- Foreword..... 6
- 1 Introduction & Scope ..... 7
- 2 Definitions ..... 7
- 3 Applications to join the Scheme..... 7
- 4 Certification and approval..... 8
- 5 Technical documentation ..... 8
- 6 Performance and testing criteria..... 9
- 7 Maintenance of certification and listing..... 10
- 8 Certification mark and labelling ..... 10

# ABOUT MCS

## Giving you confidence in home-grown energy

With energy costs constantly rising and climate change affecting us all, low-carbon technology has a bigger and bigger role to play in the future of UK energy.

We're here to ensure it's a positive one.

Working with industry we define, maintain and improve quality – certifying products and installers so people can have confidence in the low-carbon technology they invest in. From solar and wind, to heat pumps, biomass and battery storage, we want to inspire a new generation of home-grown energy, fit for the needs of every UK home and community.

### About

The Microgeneration Certification Scheme Service Company Ltd (MCSSCo Ltd) trades as MCS and is wholly owned by the non-profit MCS Charitable Foundation. Since 2007, MCS has become the recognised Standard for UK products and their installation in the small-scale renewables sector.

We create and maintain standards that allow for the certification of products, installers and their installations. Associated with these standards is the certification scheme, run on behalf of MCS by Certification Bodies who hold UKAS accreditation to ISO 17065.

MCS certifies low-carbon products and installations used to produce electricity and heat from renewable sources. It is a mark of quality. Membership of MCS demonstrates adherence to these recognised industry standards; highlighting quality, competency and compliance.

### Vision

To see MCS certified products and installations in every UK home and community.

### Mission

To give people confidence in low-carbon energy technology by defining, maintaining and improving quality.

### Values

1. We are expert – ensuring quality through robust technical knowledge
2. We are inspiring – helping to reshape energy in UK homes and communities
3. We are collaborative – working with industry and government to create positive change
4. We are principled – operating in a way that's clear, open and fair
5. We are determined – supporting the UK's drive towards a clean energy future

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Date: 01/08/2024		Page 4 of 11

# CHANGES TO STANDARDS

When MCS Standards are revised, the issue number is also revised to indicate the nature of the changes. This can either be a whole new issue or an amendment to the current issue. Details will be posted on the website at [www.mcscertified.com](http://www.mcscertified.com)

Technical or other significant changes which affect the requirements for the approval or certification of the product or service will result in a new issue. Minor or administrative changes (e.g. corrections of spelling and typographical errors, changes to address and copyright details, the addition of notes for clarification etc.) may be made as amendments.

The issue number is given on the left of the decimal point, and the amendment number on the right. For example, issue 3.2 indicates that it is the third significant version of the document which has had two sets of minor amendments. The table below does not include minor amendments to early issues.

Users of this Standard should ensure that they are using the latest issue.

## Amendments issued since publication

Issue No.	Amendment Details	Date
1.0	First Publication.	
2.0	Requirements for roof integrated collectors added. For immediate implementation. N.B. These changes do not affect products already certificated.	23/06/2008
3.0	Definitions for Solar Thermal Collector updated.	01/10/2013
4.0	Update in response to MCS Standards Project review: <ul style="list-style-type: none"><li>• Modernised document style and updated to new MCS standard text.</li><li>• Removed collectors which are not of the liquid flat plate or liquid evacuated tube type from the standard.</li><li>• Testing criteria now includes reference to ISO 9806.</li><li>• New definitions for Solar Heating System, Solar Collector Array, Solar Heating Collectors and PV Thermal (PVT) Collector and included informative reference to ISO 9488.</li><li>• Update language to 'Solar Heating'.</li></ul>	01/08/2024

# FOREWORD

This document contains references to other documents which may be either normative or informative. At the time of publication any editions of those documents, where indicated, were valid. However, as all documents are subject to revision, any users of this document should apply the most recent editions of those referenced documents (unless a dated version is specified).

This issue 4.0 is a significant update to issue 3.4. It is available for reference from the date of publication 01/08/2024. Manufacturers or importers of microgeneration systems who have certificated products in accordance with MCS 004 may start working in accordance with this update from the date of publication. Compliance with this update is mandatory for products to be certified in accordance with MCS 004 from the date of implementation 01/08/2026.

Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 6 of 11

# 1 INTRODUCTION & SCOPE

This Standard describes the evaluation and assessment criteria for the purposes of certification and listing of Solar Heating products. The certification and listing of products is based on evidence acceptable to the Certification Body:

- that the product meets the appropriate standards detailed herein and;
- that the manufacturer has staff, processes, and systems in place to ensure that the product delivered meets the standard.

And on:

- periodic audits of the manufacturer, including testing as appropriate.
- compliance with the contract with the Certification Body for listing and approval including agreement to rectify faults as appropriate.

Whilst it is not possible to ensure safety, this Standard includes criteria which should help to mitigate potential safety risks from the installation and operation of the product.

Certification against this Standard does not imply compliance with regulations which may apply to such products unless explicitly stated.

Solar air heating products are excluded from the scope of this Standard.

# 2 DEFINITIONS

Solar Heating System	System composed of Solar Heating Collectors and other components for the delivery of thermal energy.
PVThermal (PVT) Collector	Co-generation collector / hybrid device use to convert solar radiation to thermal and electrical energy
Solar Heating Collectors	Device designed to absorb solar radiation and to transfer the thermal energy so produced to a liquid passing through it
Solar Collector Array	Group of solar collectors that are closely connected in series, in parallel or in combination of both modes, with one hydraulic input and one hydraulic output

Where a definition does not appear in this Standard, informative reference is made to ISO 9488 (Solar Energy – Vocabulary).

# 3 APPLICATIONS TO JOIN THE SCHEME

Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 7 of 11

Applications should be made to an accredited Certification Body operating this Scheme, who will provide the appropriate application form and details of the applicable fees.

## 4 CERTIFICATION AND APPROVAL

4.1 Certification and approval is based on the following:

- a) Evidence of compliance with the performance and testing criteria detailed in Section 6.

Evidence of compliance is generally accepted as independent third party testing by a UKAS (or equivalent) accredited test laboratory. However, other evidence of compliance may be considered at the discretion of the Certification Body (see document MCS 011 – Testing Acceptance Criteria).

- b) An assessment of the evidence demonstrating compliance with the requirements set out MCS 010 – Generic Factory Production Control and Product Quality Requirements.
- c) Review of the technical documentation relating to the material or product.

4.2 Applications for a range of common products (product families) will be dealt with on a case-by-case basis.

*Note: for example, where one or more characteristics are the same for products with similar design, construction and functionality then the results of tests for these characteristics on one product may be applied to other similar products, as agreed between the manufacturer/supplier and the Certification Body.*

4.3 A certificate is awarded following demonstration of satisfactory compliance with the appropriate standard and this Scheme document, taking into account any limitations imposed by the Standard and other appropriate guidelines and satisfactory verification/assessment of the manufacturer’s Factory Production Control and technical documentation.

4.4 Certificates contain the name and address of the manufacturer, model and reference number of the Solar Heating product, a unique certificate reference number, and the issue number and date.

4.5 Certificates are valid from the date of issue and are maintained and held in force subject to satisfactory completion of the requirements for maintenance of certification (see Item 8) but remain the property of the issuing Certification Body.

4.6 Details of the manufacturer and the certificated product(s) are listed at [www.mcscertified.com](http://www.mcscertified.com)

## 5 TECHNICAL DOCUMENTATION

Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 8 of 11



- 5.1 Technical documentation for the product must be submitted for review. This documentation shall be presented in English and shall be such that it can be assured that the products submitted for test are equivalent to those that are to be manufactured for normal production. The documentation must consist of the following as a minimum:
- a) Details of intended use, application and classifications (if any) required.
  - b) Manufacturing drawings and/or specifications including tolerances, issue and revision numbers.
  - c) The revision number of the product.
  - d) Raw material and components specifications.
  - e) Details of the quality plan applied during manufacture to ensure ongoing compliance.
  - f) Where historical test data is requested to be considered for the application, full test report and details of any existing approvals (*NOTE: each application will be dealt with on a case-by-case basis and further information about the acceptance of previous testing is available on request*).
  - g) User and installation documentation, including commissioning requirements, use and maintenance instructions with evidence that the product, when installed into a system, is able to meet the installation requirements of Building Regulations of the country where the product will be installed.

## 6 PERFORMANCE AND TESTING CRITERIA

- 6.1 Solar Heating products shall be tested and comply with:
- BS EN 12975-1 Thermal solar systems and components. Solar collectors. General requirements and tests performed in accordance with BS EN 12975-2 or ISO 9806.
  - BS EN 12976-1 Thermal solar systems and components. Factory made systems. General requirements and test performed in accordance with BS EN 12976-2.

*Note: The UK left the European Union on 31 January 2020 and as a result, manufacturers must ensure their Solar Heating products meet UK product standards and safety regulatory requirements. These may be different from those required for Solar Heating products sold in the European Union.*

- 6.2 For roof-integrated Solar Heating products (i.e. those that replace part of the roof covering and, hence, perform some of the functions of the roof covering) the installation instructions shall specify:
- a) The types of roof constructions (e.g. slate, shingle, seam, concrete tile etc) with which the Solar Heating products can be integrated and, for each of these roof types, shall give full instructions of how the collector is to be installed to provide a weatherproof installation (i.e. details of any flashing or sealing kits and how these are fitted to the collector and to the adjoining roof covering). Particular attention should be paid into roof-integration with double lap plain clay tiles.
  - b) Any limitations on the use of the Solar Heating products required to meet building regulation requirements, in particular those relating to external fire spread.

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Date: 01/08/2024		Page 9 of 11

# 7 MAINTENANCE OF CERTIFICATION AND LISTING

Certificates and listing are maintained and held in force subject to satisfactory completion of the following requirements for maintenance of certification:

## 7.1 FACTORY AUDITS

Certification is maintained through on-going audits of the manufacturer’s quality control system as appropriate, during which time a detailed check will be made that the product being manufactured is the same as the specification tested.

## 7.2 PRODUCT AUDITS

Product audits will be conducted as follows:

- Review of the product technical data files including materials.
- Review of end of line tests in accordance with the manufacturer’s quality plan.
- Repeat testing of elements from the product standard as appropriate to confirm that the product continues to meet the requirements for certification and listing.

# 8 CERTIFICATION MARK AND LABELLING

All approved products listed under this Scheme shall be traceable to identify that they have been tested and certificated in accordance with the requirements of this Standard (e.g., via a unique serial number). See below for details.

Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 10 of 11

The Supplier shall use the Certification Mark(s) only in accordance with their Certification Body’s instructions.

The Certification Mark(s) to be used for certified products under the Scheme is as follows:



**CERTIFIED**

Certificate Number MCS "XXX"  
*"Description of the Technology certificated"*

Where 'XXX' is the certificate number, and the logo of the Certification Body issuing the certification would sit on the right-hand side of the logo.

Companies may only use the Mark while certification is maintained.

Issue: 4.0	COPYRIGHT © The MCS Charitable Foundation 2024	MCS 004
Date: 01/08/2024		Page 11 of 11