

MERLIN CO2 RS AVG

Complies with Scottish Technical Handbook 2025



DOMESTIC CO2, TEMP & HUMIDITY MONITOR

**Ensuring a comfortable
living environment within
new build homes**

The Merlin CO2 RS AVG by S&S Northern

A Household CO2, Temperature & Humidity Monitoring System

Provides a visual indication of the present CO2, temperature & humidity levels, the past 8 hours, 24 hours and the maximum recorded levels in the 24hr period.

This sensor is designed to inform the occupant when action is required to improve ventilation conditions. Specifically designed in line with the Scottish technical handbook January 2025.

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- ENERGY SAVING SYSTEMS
- GAS PROVING SYSTEMS

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Key Features:

- Colour display providing live digital CO2, temperature & relative humidity levels
- The screen changes colour on the increase and decrease of detected levels
- Ambient light sensor changes screen brightness
- Touch button to provide on/off screen control
- 240v AC mains powered
- Quick to install with no setup requirements
- Integral terminal outputs to activate mechanical ventilation
- 2 Year warranty and manufactured in Britain

Scottish Building Standards Technical Handbook January 2025: 3.14 Ventilation awareness in dwellings

Carbon dioxide (CO2) is present in the external air we breathe at concentration levels of around 400 parts per million and is not harmful to health at low concentration levels. However, as people release CO2 into the air when they exhale, increased levels of CO2 in occupied buildings can occur. This is generally accepted as being a reasonable indication that ventilation action is necessary

A CO2 monitor should be provided in the apartment expected to be the main or principal bedroom in a dwelling. This should raise occupant awareness of CO2 levels (and therefore other pollutants) present in their homes and of the need for them to take proactive measures to increase the ventilation. Guidance on the operation of the monitoring equipment, including options for improving ventilation when indicated as necessary by the monitor, should be provided to the occupant. For more detailed information on the provision of guidance to occupants, reference should be made to sections 3.A.9 & 3.A.10 of Annex 3A – 'Domestic Ventilation Guide'.

The installed monitoring equipment for CO2 should be mains operated and may take the form of a self-contained monitor/detector or a separate monitor and detector head. The monitor should have an easily understood visual indicator and be capable of logging data to allow the occupant to gain information on CO2 levels for at least the preceding 24 hour period. If the detector/monitor has an audible alarm this should be capable of being permanently deactivated.

CO2 monitoring equipment should be capable of recording and displaying readings within a range of at least 0 – 5,000 parts per million. The equipment should also be capable of logging data at no more than 15 minute intervals, over a 24 hour period.



Where carbon dioxide monitors/detectors are within the scope of either or both:

- European Directive 2014/35/EU – Low Voltage Directive (LVD), and/or
- European Directive 2014/53/EU – Radio Equipment

they should be constructed to fully comply with all applicable safety aspects of the Directive(s) as implemented through UK regulations.

<https://www.gov.scot/publications/building-standards-technical-handbook-january-2025-domestic/>

A carbon dioxide detector head requires a flow of air over it to operate correctly, therefore, it should not be located in an area that is likely to restrict the free movement of air. Unless otherwise indicated by the manufacturer, a carbon dioxide detector head should not be sited:

- if ceiling mounted, within 300 mm of any wall
- if wall mounted, within 150 mm of the ceiling or a junction with another wall
- where it can be obstructed (for example by curtains, blinds or furniture)
- next to a door or window, or
- Domestic Technical Handbook January 2025 Edition
- Page 244 Applicable from 1 January 2025
- Next to an air vent or similar ventilation opening

Unless otherwise indicated by the manufacturer, a carbon dioxide monitor, with or without an integral detector, should be mounted between 1.4 m and 1.6 m above floor level. A carbon dioxide detector head (or monitor if integrated) should not be sited within 1 m of the expected location of a bed-head. Where a separate detector head and monitor is installed, the monitor may be located other than in the room containing the detector head, for example, the hallway. This may be desirable if more than one detector head is installed.

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