

NVLogiQ™ Room Controller



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The NVLogiQ™ Room Controller has been designed to offer an effective, efficient and user friendly solution for adaptive Environmental Ventilation applications that is easily integrated into a new or refurbished building.

The NVLogiQ™ Room Controller can be used as a standalone system or networked to give individual room control with global common signals such as wind, rain and security closing.

All within a small wall-mounted enclosure, the NVLogiQ™ Room Controller has integrated sensors, switches and a backlit LCD display that offers the following facilities without the need for separate sensors within the room:

- CO₂ monitoring and level display
- Temperature monitoring and level display
- Humidity monitoring and level display
- User control via inbuilt switches with ten increments of operation
- Output signal for external devices such as central heating control etc
- Lock out function to prevent misuse

- Time clock for strategy and security closing
- Vent position/open output signal
- Fresh air 'morning start' setting
- Intuitive menu for setpoint adjustment via a security dongle
- Continuous data logging for performance analysis

The NVLogiQ™ Room Controller is supplied with a pre-programmed Environmental Ventilation control algorithm developed in partnership with Loughborough University's Building Energy Research Group.

The strategy was formulated by modelling hundreds of comparable scenarios in both education and commercial buildings in conjunction with industry recognised methods and data collected from Environmental Ventilation projects installed over several years by SE Controls.

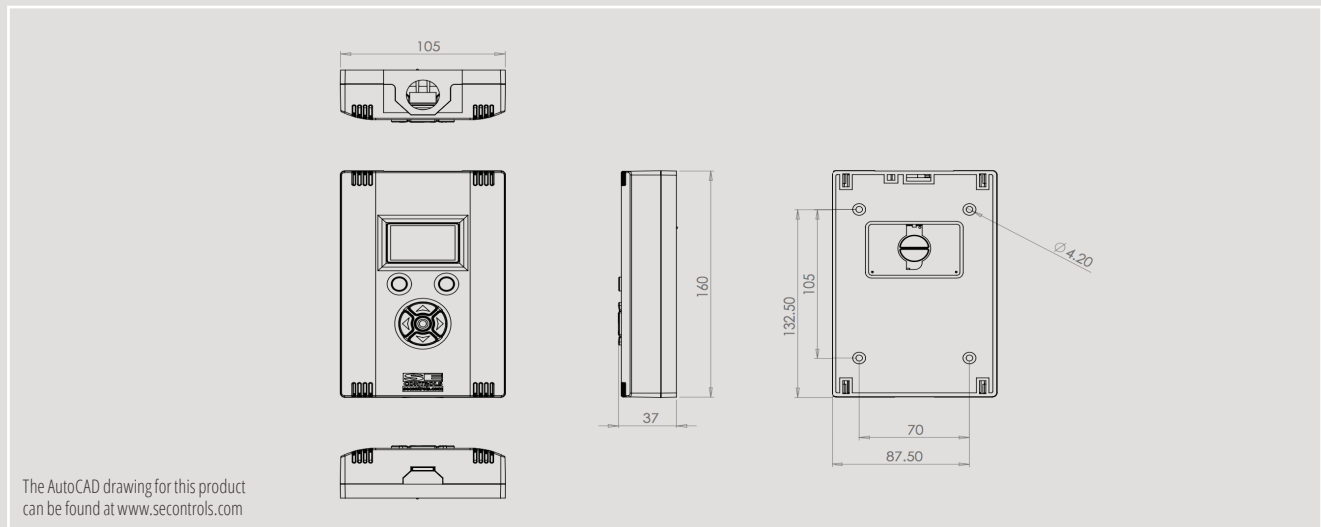
Accreditations



Applications



Technical Drawing



Requirements for regulations such as BB101 (internal environment for schools) and CIBSE Guides A have heavily influenced the design of the algorithms.

Dynamic Thermal Simulation models (DTS) and Computational Fluid Dynamics (CFD) were used to analyse the effectiveness and efficiency of the algorithm.

The system controls room CO₂ levels to a variable profile ensuring that Indoor Air Quality (IAQ) is optimised. The temperature control strategy increases the ventilation rate before internal temperature escalates and becomes uncontrollable. There are multiple temperature control strategies

based on external temperature, and occupancy, which provide appropriate temperature control throughout the year.

A night purge strategy cools the building for a fresh start and can provide prolonged daytime cooling in buildings with sufficient thermal mass. All settings are adjustable from standard or after the initial 'learning' period of occupancy.

Data logging is essential for pre or post occupancy performance analysis; the controller is capable of 3 months' recording of sensor readings and operation signals, and is downloadable using a dongle.

NVLogIQ™ Part Numbers

NVLogIQ™ with CO2

NCS00020001

NVLogIQ™ without CO2

NCS00010002

Power

- Supply: Class 1
- Input: 24V DC
- Output: 0-10V and OSLink
- Real time clock battery average life 10 years

Environment

- Rating: IP20
- Humidity Range: 10 to 90% non-condensing
- Storage: -20 to +50°C
- Operating temp: -10 to +50°C

Miscellaneous

- Dimensions: 160 x 105 x 37 mm
Dia. 20mm top entry with cap and 58mm x 36mm rear entry