

... making your environment greener

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WELCOME...



Welcome to the SC Controls Newsletter bringing you up to date news and development on the SeaChange range of products within the Commercial sector.

We have seen a large growth in the market place over the last few years as more emphasis is placed on Energy Consumption and Efficiency, and being one of the first intelligent modular control systems in the UK market, we have been perfectly placed to provide that solution for our customers. As an independent controls manufacturer with a British based product, we are extremely proud of the inherent intelligent technology and functionality on which our products are based and this is supported by a network of approved and accredited SeaChange installers throughout the UK. We always strive to keep abreast of the new technology and market requirements and hope that you will enjoy reading the news and updates that we shall bring you in these regular bulletins.

Navid Mehr, Managing Director



INTELLIGENT CONTROL OF UNDERFLOOR HEATING

Underfloor heating in recent years has become very popular, and is now seen as a 'green option' when designing heating schemes in both commercial and residential applications.

This form of heating is more fuel efficient because of the lower operating temperatures (i.e. 45 - 50C water circulation). Using radiating heat from the floor rather than air temperature to warm the occupants directly, comfortable conditions can be achieved without drying out the air or creating hot and cold spots in the conditioned areas. Because of the lower operating temperatures, underfloor heating systems are suitable for use in conjunction with condensing boilers and renewable energy sources.

A new SeaChange 6 channel underfloor heating controller has been designed to provide demand based temperature control of underfloor heating zones. The controller works in conjunction with conventional room temperature sensors to provide an easy and cost-effective method of controlling underfloor heating circuits.

The occupancy times are provided by using a SeaChange zone controller, or by setting the controller's own internal operating times using

InSite or Doorway. When used in conjunction with a zone controller, in addition to providing the occupancy times, a global setpoint can also be sent to all underfloor heating zones. The sensor inputs can be shared with other heating channels for added flexibility on applications where a temperature sensor is used to control more than one underfloor heating circuit. The VT circuit feeding the UFH manifold is

controlled by a boiler controller or a secondary circuit controller based on zone demands. In addition, the underfloor heating circuits can be disabled automatically during the summer season when the outside temperature exceeds a pre-defined level.

This level of system integration will ensure repeat performance and maximum energy savings throughout the year.



Natural Ventilation Schemes

With building regulations increasingly focusing on lowering energy consumption and preventing of overheating in buildings, naturally ventilated buildings have in the recent years gained popularity amongst building services consultants and construction professionals.

Unlike a mechanical ventilation system, the ventilation is driven by forces of wind around the building and indoor and outdoor temperature differences. Regulating the indoor climate of a naturally ventilated building is generally achieved by controlling air changes through motorised windows and roof lights.

SeaChange range of Natural Ventilation control modules are designed to ensure guaranteed



results and repeat performance due to their inherent energy saving control strategies. We have devised a set of standard and proven demand based control strategies to cater for schemes with cooling only, cooling and air quality control, rain detection, wind speed and direction influence, single and multiple zone operation and other options relating to this type of application.

For schemes where supplementary mechanical heating is provided to cater for cold weather conditions (e.g. underfloor heating), the system will provide an automatic change-over based on internally generated heating demands. User interface is provided via SeaChange zone controllers for maximum performance and ease of operation. An application guide is available for download from our website that provides details of the available control options.

New ACD Intelligent Valve Actuator

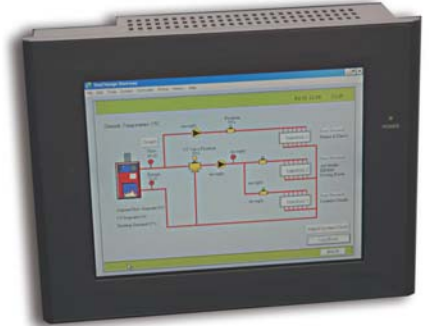
A new network powered intelligent valve actuator sub module has been introduced that includes internal configuration parameters that can be accessed via InSite. The actuator can be configured via InSite for reverse or direct acting, heating or cooling mode and demand re-scaling. In addition to reporting the actuator status and the valve position, a manual override facility is provided to enable the installer to drive the valve to a desired position during commissioning.

New SC Touch Panel

The new SC Touch Panel has been designed to provide the latest in touch panel and integrated PC technology. The operating system is based on a powerful 32bit Windows platform to ensure maximum performance and flexibility. The 8" industrial grade high resolution LCD touch screen is IP65 rated and provides clear visibility and ease of use in all plant room conditions. Site specific graphics are generated via a user friendly and simple to engineer Doorway graphic supervisor (supplied preconfigured with the unit).

The unit features an internal hard drive that can be used for data logging and storing of site's operation and maintenance manuals for use by the maintenance staff and the building operator. Connection to a SeaChange control system is provided via a direct connection using a serial port or an Ethernet port using the client's IT network.

The touch panel can be panel mounted on the front of a control panel, or it can be installed in public areas in the building as an educational source to display the energy usage and other system information. In addition, the unit can be connected to an external display, if required.



Interface Options for Split Air Conditioning Systems

With the ever increasing number of split air conditioning and VRV systems in commercial buildings, we have recognised the importance of providing an integrated network to ensure these systems operate in tandem with the building's energy management system to ensure maximum system performance and ease of user operability.

Building on our close working relationship with the network integration specialist, North Building Technologies, we can now offer a range of interface options for integrating SeaChange control systems with Mitsubishi, Daikin, Sanyo, Toshiba and other leading air conditioning systems.

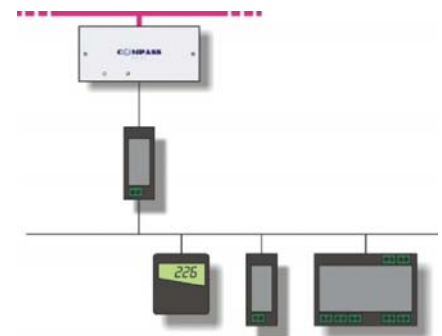
By utilising their Compass Point products and a SeaChange driver, SeaChange control modules can exchange data with disparate systems. Each Compass point has an RS485 network connector (to connect to other compass points) and a device connector (to connect to third party systems). For example, to connect a SeaChange control system to a Mitsubishi VRV system you would require 2 Compass Points: 1 Compass Point would be fitted with SeaChange device software and the other with Mitsubishi device software.

A single Compass Point provides all the connectivity required for a system, network or a device. Once the devices are connected, using a laptop you can setup the compass points with addresses and test the comms to the systems. Once communication has been established, you can configure the compass points to share data between the SeaChange control system and the third party controllers.

The Compass Point connects to the SeaChange controllers via a SeaChange serial adaptor (SLT). Once connected, values within the controllers can be read and written by the connected Compass Point, and any other Compass point on the Compass network.

In addition, we can provide interface modules for connecting to M-Bus and Modbus devices.

We are planning a presentation day for the smartpartners to cover the subject of system integration and the interface options available. We will send you an update in due course.



InSite Corner:



An up-to-date InSite system file is now available for downloading from our website that includes new product entries and device parameter labels. These include entries for the Utility Meter Monitor, Underfloor Heating Controller, Solar Heating Controller and the Intelligent Valve Actuator Sub Module. Additional parameter labels have been included for the boiler controller, DHW controller and VTC secondary circuit controllers to cater for the new product features.