



Specialist Ventilation Control Panels. Fire & Smoke Dampers. Kitchen Ventilation systems. Smoke & Natural Ventilation General or bespoke systems.

Our range of specialist Ventilation Control Panels are designed to satisfy the demands of modern buildings in terms of performance and system requirements.

Our bespoke panels can be tailor made in accordance with the clients specific application in mind.

SMOKE CONTROL PANEL OPTIONS

Hard Wired Panels : CPHW

PLC Addressable System : CPFA

Simple Addressable System : CPSA

Mini Panel : CPMP

All of our smoke control systems can power 24v or 230v damper motors.

Hard Wired Panels – Mini Panels & Standard Panels

In our Hard Wired Panel systems all dampers are held open normally but will close on a fire signal. The dampers will automatically re-open when the fire signal returns to normal.

Mini Panels : CPMP

Our Mini Panel is available to operate from just one fire alarm input or up to a maximum of 12 fire alarm inputs. This panel is especially suitable for smaller buildings. We can also supply panels that purely monitor the status of the damper if required.

Standard Panels : CPHW

Our Standard Panel CPHW operates up to 30 fire alarm inputs which can be duplicated to provide control for up to 60 fire alarm inputs for larger smoke control systems.

Simple Addressable Systems : CPSA

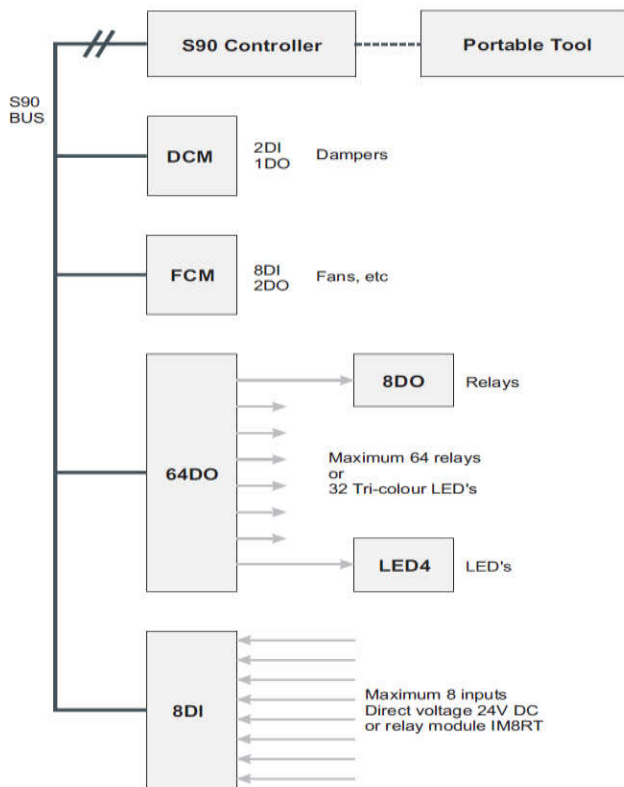
Our simple addressable systems are used in more complex situations where individual control is needed over the open or closed status of the dampers upon a fire alarm signal. **Up to 96 dampers** can be controlled on one loop.

Plc Addressable Systems : CPFA

Our PLC addressable system uses a Mitsubishi PLC for larger complex systems. Optional extras include a HMI touchscreen display with graphics. Again **up to 96 dampers** can be controlled on one loop.

Typical Simple Addressable System : CPSA

Schematic of Simple Addressable System



Advantages of Addressable Systems compared to hard-wired panels

- Reduces cable costs
- Easily expanded or modified with a minimum of extra cabling
- Up to six loops can be controlled from one Programmable Logic Controller (PLC). Very large projects can use multiple controllers.
- Individual loops systems can be networked to a Building Management System (BMS) using Modbus protocol

S90C Controller

The S90C is the heart of our CPSA system. It controls an XP95 network and it has the memory to store the status of all inputs and outputs on the loop. It acts as a protocol converter to share this information with different systems.

Watchdog Module

The watchdog module is an addressable module with 2 inputs and 1 relay output in a slim DIN rail mounted housing. If anything in the system should stop operating the relay in the watchdog de-energises to give an alarm. It is usually located in the panel and is wired to an audible alarm but can be located anywhere on the loop.



Our Addressable Systems incorporate the following communications network advantages:

- Resistant to fire and heat through use of Firetuff, pyro, etc cabling
- Bi-directional so a break in the cable does **not** affect the system
- Fault tolerant of short-circuits with the use of line isolators

Damper Control Module : DCM



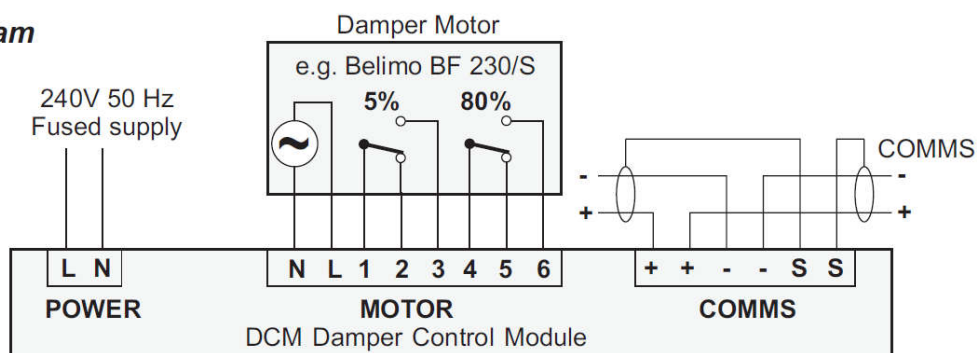
DCM.1 (Damper Control Module)

The DCM.1 damper control module is an addressable field unit for use with the S90C controller.

The unit provides 2 inputs and 1 output on a system where field units are connected together on a 2 wire communications bus.

This unit can be used as a general purpose 2DI/1IO input/output unit, but was specifically designed for controlling smoke and fire dampers.

Wiring Diagram



Notes :-

Terminals + + are linked, Terminals - - are linked
Terminals S S are linked and provide a through connection for the comms cable screen but are not earthed to the unit.

The DCM is a printed circuit board which clips into a plastic rail within the housing. This makes it convenient to fit or change during maintenance. It has a plug in LED module with LEDs to show the following functions:

Comms LED	Red	Flashes when the unit communicates with the controller
Output LED	Amber	Lit when the relay is on
Open status LED	Green	When the damper is open
Closed status LED	Red	When the damper is closed

Typical PLC Addressable System

For PLC addressable systems we incorporate our own **S90C Controller** which we have designed to control motorised fire/smoke dampers over a high integrity 2 wire network. In the event of a fire alarm signal, each damper is controlled either to be in the open or closed position dependent upon where the fire is located in the building.

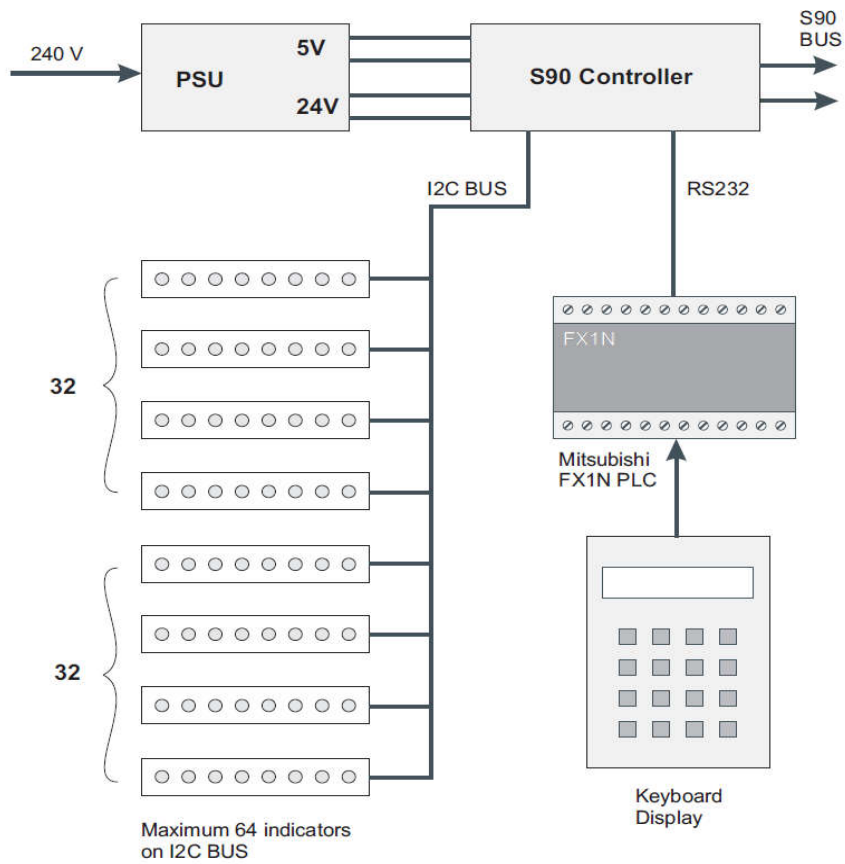
This gives greater flexibility than a hard wired system and also reduces wiring costs as each damper is not individually wired to the control panel. When working with a PLC the S90C sends input data from the field to the PLC. It then receives output data from the PLC and transmits to the field.



Picture of a typical PLC Addressable Panel

On the fascia on the panel a key switch is provided to enable a fire officer to manually override the dampers.

Schematic of PLC Panel Components



Photographs of : CPSA



Recent Projects

PROJECT	LOCATION	PANEL SIZE	MODEL	TYPE
Townend Court LD Unit	Hull	36 Dampers	CPHW-36	Hard Wired
Sheltered Housing	Cambuslang	72 Dampers	CPFA-72	Fully Addressable
HMP Rochester	Kent	16 Dampers	CPHW-16	Hard Wired
QMC Hospital	Nottingham	16 Dampers	CPHW-16	Hard Wired
Olympia Leisure Centre	Belfast	50 Dampers	CPFA-50	Fully Addressable
Thornford Park	Newbury	16 Dampers	CPHW-16	Hard Wired
St Malachy's College	Belfast	4 Dampers	CPHW-4	Hard Wired



Specialist Ventilation Design Services.

Specialist Ventilation Services Ltd have been providing Design assistance and technical support to the Building Services Industry and Mechanical Consulting Engineers since our incorporation in 1998.

We have been offering a full design and selection service for our comprehensive range of ventilation products and are proud to represent some of our more specialist suppliers who are the market leaders in their field.

Our main area of expertise is the design & manufacture of bespoke ventilation products and systems to suit our client's specific requirements. We focus on high efficiency products and systems to enable our clients to achieve as minimum an environmental impact as possible using low energy consumption products and innovative system designs.

These can vary from complete turnkey specialist packages, to the supply only of basic products. We aim to offer a service which represents value for money as well as being a high quality technically evaluated solution.

Our Factory in County Durham is well situated to cover the whole of the United Kingdom and Ireland.

Head Office:
Specialist Ventilation Services Ltd.
Unit 3, Greencroft Industrial Park,
Annfield Plain, Stanley, County Durham,
DH9 7YB
Tel: 01207 529333 Fax: 01207 529444

E-mail: sales@specialistventilation.com
Website: www.SpecialistVentilation.com

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Fire, Smoke & Insulated Dampers.

Smoke and Ventilation Control Panels.

Fire & Smoke activated Transfer Grilles.

Louvre Screens, Grilles & Diffusers.

Stainless Steel ventilation components and accessories.

Prison Grilles, and other Security or Vandal resistant products.

Laboratory Extract Benches, Bench Extract units, Laminar Flow units, HEPA Filter Grilles & Containment Hoods.

Fire Rated Wall, Ceiling, Transfer Grilles & Plenums