

ACP Series



Addressable Damper Control Systems

- Centralised addressable damper panel for control, testing and monitoring of connected dampers.
- 4.3" Colour Touch Screen LCD display offering clear status indication.
- Visual indication and audible alarm status.
- Factory pre-programmed software to suit project cause and effect.
- 7 models with up to 350 actuator capacity.
- 1 to 7 networks per panel, 50 actuators per network.
- Continuous damper monitoring.
- Programmable inputs and outputs.
- Event log.
- Modbus and BACnet compatible.



A brand of

MAICO

MANUFACTURERS OF AIR, FIRE AND SMOKE CONTROL PRODUCTS

ACP Series

Addressable Damper Control System - Introduction



Benefits

The BSB ACP addressable control panel is an advanced software driven system offering control of up to 350 dampers from our standard panel. Offering flexibility to control basic or complex cause & effect strategies.

Damper communications are wired on a simple 2 core daisy chained network, greatly reducing the wiring involved when compared to electro-mechanical systems.

Each damper actuator communicates with the ACP panel over the network via an ADM module which is installed locally to each damper. Each ADM and actuator requires a local power supply to match the voltage of the actuator specified.

The ACP control panel has programmable volt-free inputs fitted as standard to accept fire alarm input and various other control inputs, Programmable outputs are also fitted as standard for common fault, enable signal and various other control outputs.

ACP panels are BMS enabled for Modbus or BACnet. They are BTL (BACnet Testing Laboratories) tested to a maximum of 500 points as standard.

ACP control systems are pre-programmed with the site-specific cause & effect. This results in a significant reduction in the time required on site for commissioning and testing.

Bespoke ACP panels are available where more than 500 points are required.

Larger touch screens available to special order.

Features

- Panel capacity up to 350 actuators (depending on model)
- 4.3" colour touch screen LCD display
- Lockable glass fronted door
- Individual damper status indication
- Visual indication and audible alarm status
- Event log
- 4 programmable inputs on ACP50
- 8 programmable inputs on ACP100 to ACP350
- 4 programmable outputs as standard
- USB Port
- 1 to 7 networks per panel
- Maximum 50 actuators per network
- BMS compatible:-
 - BACnet BTL (max 500 points)
 - Modbus
- 2014/35/EU The Low Voltage Directive BS EN 60439-1:1999
- 2014/30/EU The Electromagnetic Compatibility Directive EN 55011: 2009 + A1:2010

ACP Control Panel Specification

- Mains Supply : 230v AC 50Hz (3 amp)
- Cabinet Size : 500mm (H) x 400mm (W) x 200mm (D)
- Weight (Typical): 16Kg
- IP Rating: IP56 - Surface mount
- Materials: Powder coated mild steel cabinet, internal door and lockable glazed front door
- Climatic: 0°C to 70°C ambient, 80% RH non-condensing
- Colour: Light Grey RAL 7035
- Cable entry: Gland plate top
- Hinging: Left as standard, Right by request

ADM Module

Damper Ref:	<input type="text"/>
Location:	<input type="text"/>
Network:	<input type="text"/>
Telephone: +44 (0)1795 422609	
Email: sales@bsb-dampers.co.uk	



Each ADM unit has an address label for identification showing:
1) Damper reference,
2) Location within building
3) Network that it sits on.
This information is for inclusion on the project asset register.

ADM Module



ADM Module Specification

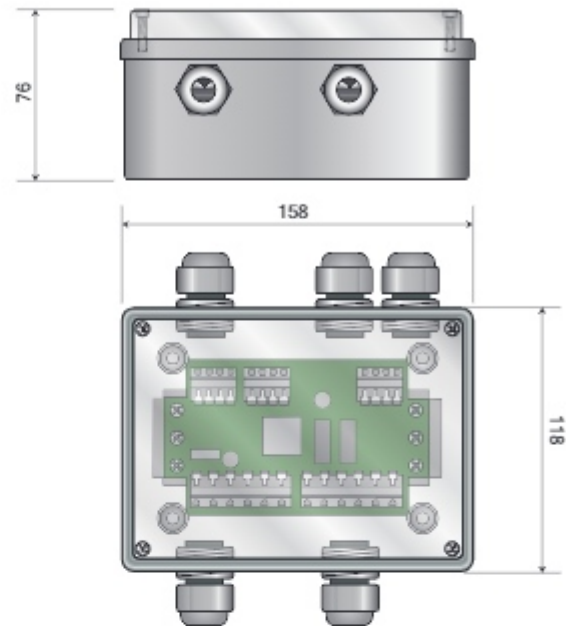
The ADM module comprises of a PCB installed within an ABS enclosure to communicate the individual damper actuator status with the ACP control panel via the data network.

The enclosure acts as a junction box and is fitted with grip glands to accept the actuator flying leads, data network and power supply cables. The transparent lid allows clear sight of the on-board status LED's.

Each module is clearly labelled with damper reference, location and network number when provided, prior to despatch.

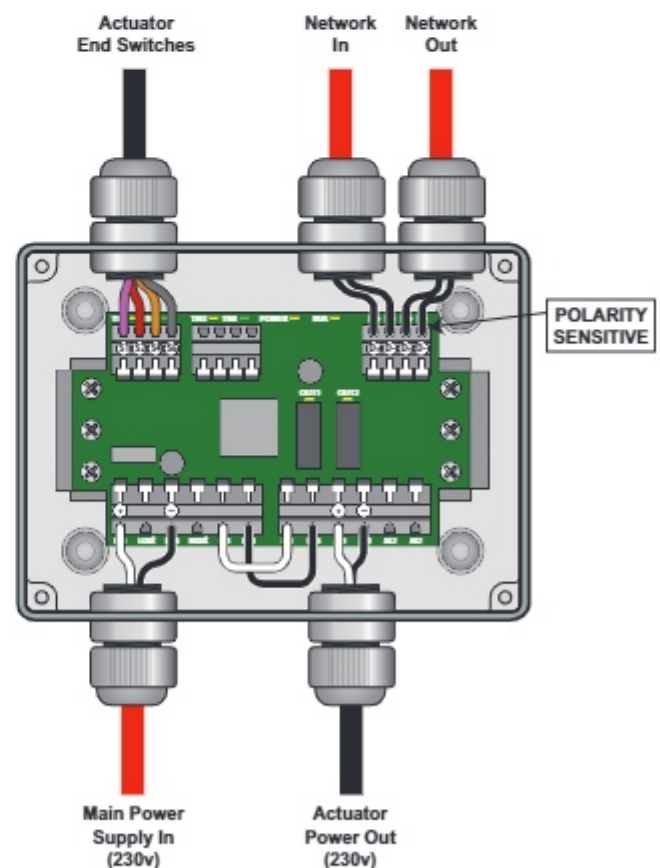
- Power Supply: 230v AC 50Hz +/-15% 3.2VA (3amp)
- Power Supply: 24v AC/DC 50Hz +/-15% 3.2VA (3 amp)
- Inputs: 4 x volt free contacts
- Outputs: 2 x type SPST AC max 250VAC 5amp/ DC max 30VDC 3amp
- Dimensions: 150mm (W) x 110mm (H) x 70mm (D)
- Weight: 0.6 Kg
- IP Rating: IP55 - Surface mount
- Materials: ABS type junction box
- Climatic: 0°C to 50°C ambient, 20-90% RH (non-condensing)
- Colour: Light grey with transparent lid
- Cable Entry: 5 x cable glands fitted (for M12 or M16 cable)
- On-board led status display

Dimensions (mm)



ADM Module Terminal Connections

Connections for 24v and 230v ADM Modules are common.



Each ADM damper module must be connected to a fused supply local to each damper.

ADM module terminals will accept up to 2.5mm cables.

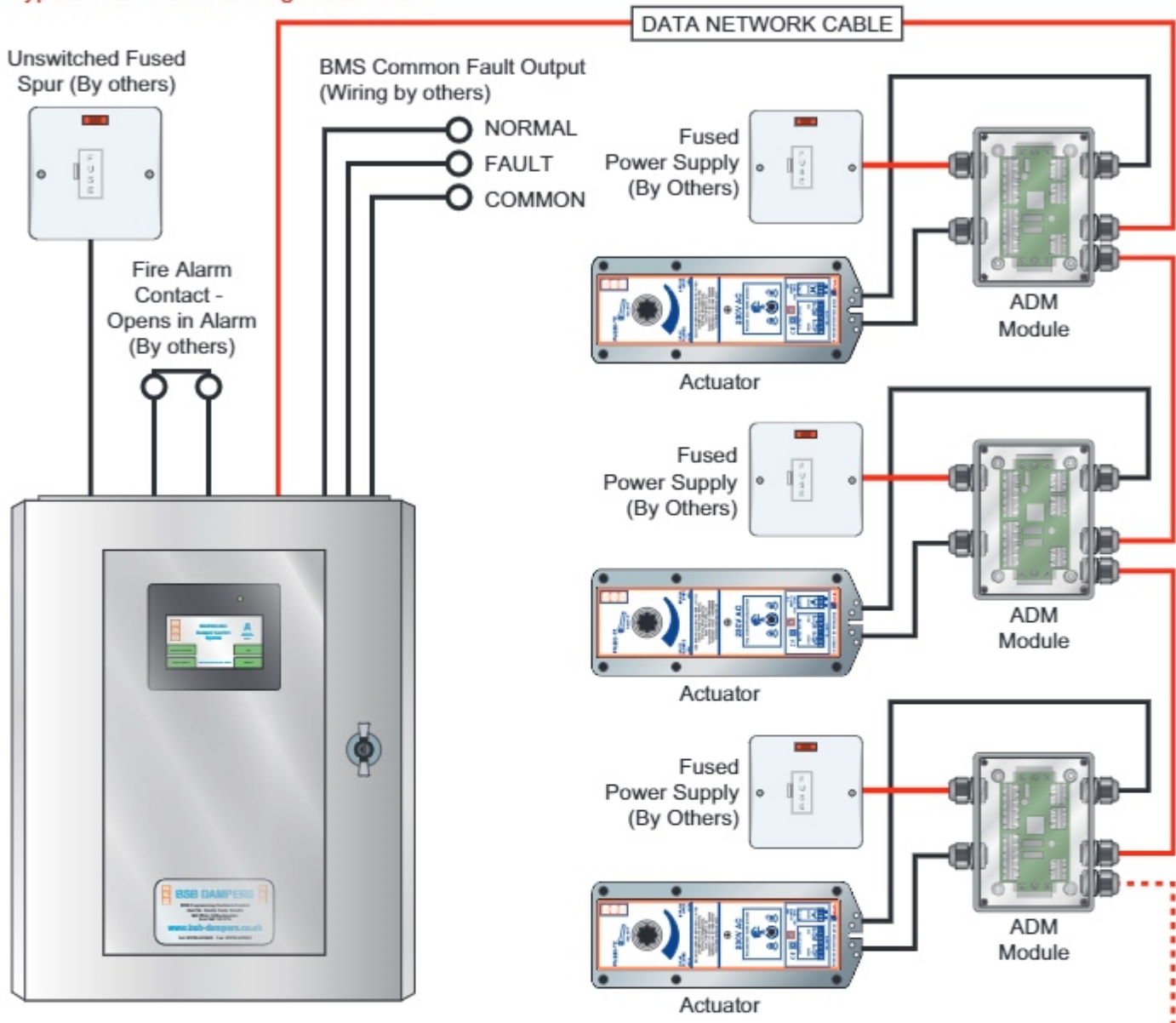
Site wiring by others.

ADM clear cover removed for clarity.

ACP Series

Addressable Damper Control System - Wiring

Typical ACP Panel Wiring Schematic



For clarity, the above schematic shows a single control network, e.g. ACP50. For ACP100 and above networks are repeated, one network for every 50 dampers.

Site Wiring (by others)

The power supply into the ACP must be taken from a stable 230V fused spur.

The power supply into the ADM is taken locally via a fused spur to the damper and shall match the voltage of the actuator.

Data network cable is recommended as a radial installation. Where a break occurs in that cable, the dampers after that break will fail safe closed and show as a fault at the panel.

Cable Specification

Power supply cables typically would be LSF 1.5mm² 2 core and earth class 1.

Data network cable shall be 2 core 1.5mm² screen recommended.

Maximum permitted network length = 1000 metres.

Maximum number of devices per data network = 50 number.

Typical description of operation with FSD Series motorised fire dampers

Normal (Power on and no alarm input) - Damper open.

Active Alarm Input - Damper closes (Failsafe).

Power Off - Damper closes (Failsafe).

Damper Activation via Thermal Fuse (@72°C) - Damper closes (Failsafe). No control possible. Fault indication at panel.

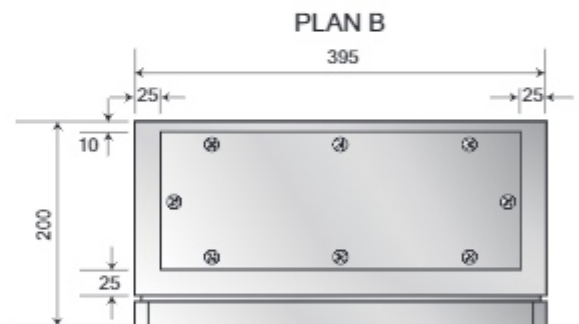
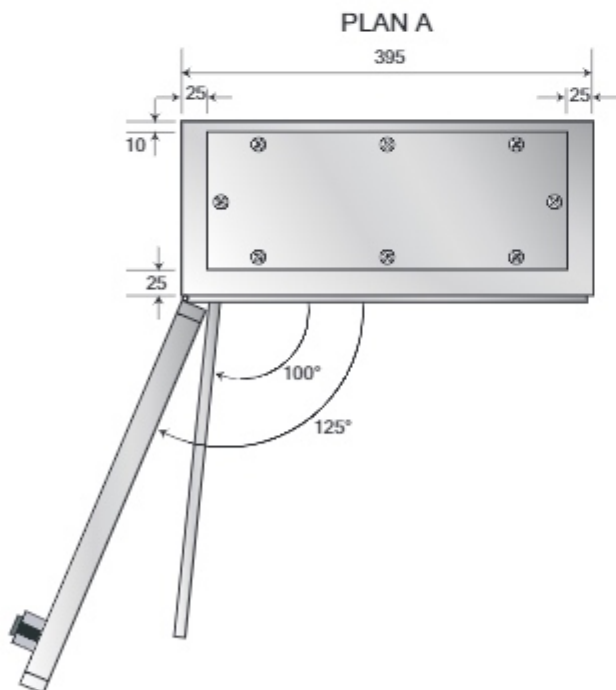
Damper Release Time - <20 seconds.

Damper Reset Time - <60 seconds.

Commissioning

Following installation, the ACP system must be commissioned by BSB qualified personnel. The system is pre-programmed prior to despatch and this reduces site time significantly when compared to other systems.

ACP Control Panel Dimensions (mm)



The Addressable Damper Control panel is designed to be surface mounted to a solid surface.

It is important that before connecting live power, all swarf and debris is carefully removed.

Cables:

The power supply cable input is via the top gland plate.

Data cable entry is via correct sized cable glands through the top gland plate.

Where this is not practical for larger systems, the gland plate can be cut to suit the number of cables or totally removed. However, where glands are not used and the large gland plate is cut or totally removed for multiple cable entry, then the aperture where the cables enter the panel must be sealed to maintain the IP rating to an approved detail.

ACP Series

Addressable Damper Control System - Ordering Codes



Model	Part Number	Configuration (max)
ACP50	206139	50 actuators, 1 network
ACP100	206140	100 actuators, 2 networks
ACP150	206141	150 actuators, 3 networks
ACP200	206142	200 actuators, 4 networks
ACP250	206143	250 actuators, 5 networks
ACP300	206144	300 actuators, 6 networks
ACP350	206145	350 actuators, 7 networks



Model	Part Number	Configuration (max)
ADM230	206147	Addressable Damper Module 230V
ADM24	206416	Addressable Damper Module 24V
ADM230D	206413	Double Damper Module 230V
ADM24D	206413	Double Damper Module 24V
ADM/S230	206149	Single Damper Module 230V (Power Open/Close)
ADM/S24	206148	Single Damper Module 24V (Power Open/Close)

Further ADM modules available on request.

Accessories

- TFT LCD Colour Displays** Specify 7", 10" or 12"
- Mimic Panels**
- Fireman's Override Panels**
- Network Extender**
- 4 or 8 Additional Programmable Inputs** Panel or Network Mounted
- 4 or 8 Additional Programmable Outputs** Panel or Network Mounted
- UPS/4 Battery Back Up**
- Flush Mount Flange**

Other Air, Fire and Smoke Control Products in the BSB Range:



For full details of the complete BSB Product Range, please refer to our individual product brochures, sales office or website.



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