

## Safeguard EMB

### Installation Datasheet

The panel is built to meet project specific requirements, see project drawings for details.

This product forms part of a life safety system. Failure to correctly store, handle, install and maintain the product will directly put at risk the lives of the occupants and the fabric of the building.



ALWAYS READ THIS DOCUMENT BEFORE INSTALLATION. PLEASE RETAIN FOR FUTURE REFERENCE.

## Mounting

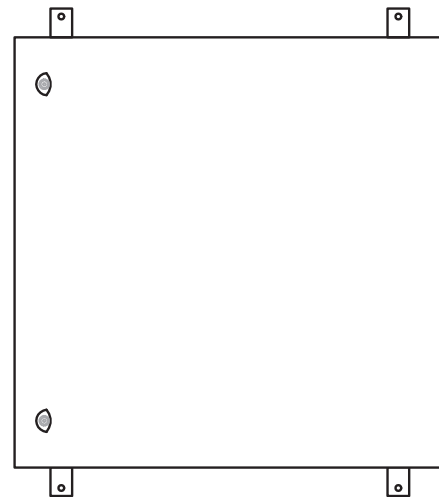
- Only use the mounting brackets provided.
- The height of the unit above the floor level should be chosen so that the centre of the panel is just above normal eye level (approximately 1.5 m).
- The unit should be placed in a naturally vented area and this area should be considered fire safe and free from high levels of shock and vibration.
- Conditions should not arise which may allow the temperature in this area to reach or exceed the operating temperature of the unit.
- Do not locate the unit where access to its internal components and connections are restricted.

**WARNING:** Observe all health and safety procedures when lifting or moving this equipment.

## Preparation

- Only trained and qualified personnel should be allowed to install, replace or service this equipment. Installation should be in accordance with the relevant local safety standards.
- The mains wiring should comply with IEC 60227 or IEC 60245.
- A switch or circuit breaker should be included as part of the installation.
- The switch or circuit breaker should meet the relevant requirements of IEC 60947-1 and IEC 60947-3.
- The switch or circuit breaker should be in close proximity to the equipment and be within easy reach of the operator.
- The switch or circuit breaker should be marked as the disconnecting device for the equipment and should disconnect both poles of the supply.
- The switch or circuit breaker should not interrupt the protected earth conductor.
- This equipment **MUST** be earthed.

## Mounting Diagram



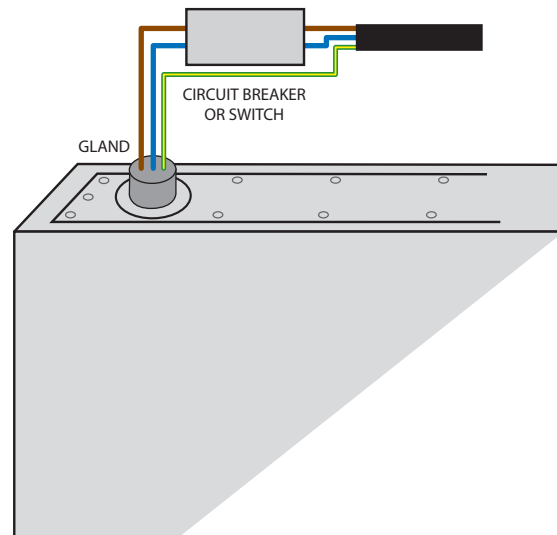
## Panel sizes & weights

Panel sizes and weights are dependent on project specific requirements.

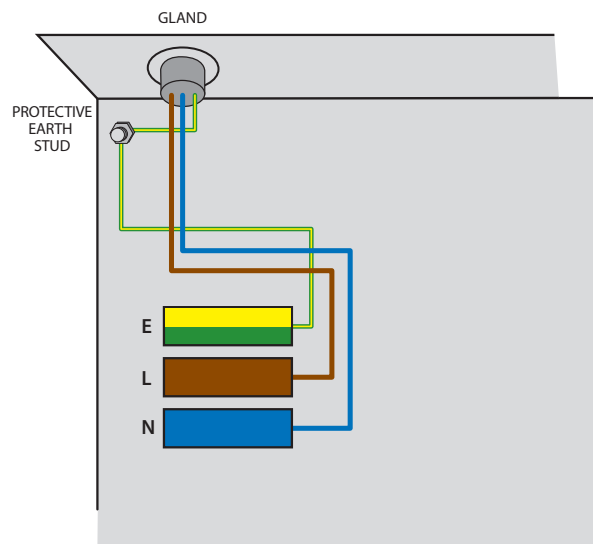
## Installation

1. Disconnect the local supply before commencing any work on this equipment.
2. Wire the mains supply feed in accordance with wiring diagram 1. When complete, secure the mains cable using a cable gland (by others).
3. Wire the incoming mains cable in accordance with wiring diagram 2.
4. Wire the incoming live (brown) and neutral (blue) wires to the mains terminal. Max 4mm<sup>2</sup> wiring.
5. Connect the incoming earth (green and yellow) wire to the protected earth stud using a ring connector. This connector must be fitted and secured independently using the shake proof washer and nut provided. The floating panel earth wire should be connected on top of this using the additional shake proof washer and nut provided.
6. The mains cable should be fitted in such a manner that, should the cable be subject to strain, the earth wire would be the last wire to break loose.
7. Finally, the mains wires should be tie wrapped to prevent slippage. Once wiring is complete, apply power to the equipment.

## Wiring Diagram 1 (Mains supply feed)



## Wiring Diagram 2 (Incoming mains cable)



## Alarm Input(s) Wiring

- The volt free alarm input is a closed contact that opens in alarm
- The input cable diameter should be 1mm<sup>2</sup> or 1.5mm<sup>2</sup>
- Limit cable runs to 100m and avoid running input cables near sources of mains or noisy environments.

| INPUT | TERMINAL NUMBER |
|-------|-----------------|
| 1     | 201, 202        |
| 2     | 203, 204 etc.   |

*Number of inputs is dependent on project specific requirements*

## General Fault Output Wiring

- It is the user's responsibility to ensure the switched equipment is adequately protected.

| OUTPUT | TERMINAL NUMBER |
|--------|-----------------|
| Common | 401             |
| Fault  | 402             |
| Normal | 403 etc.        |

*Number of outputs is dependent on project specific requirements*

## Dampers

- Wire the first damper actuator supply as shown in the specific project drawing and repeat for subsequent dampers.
- Wire the first damper actuator end position switch wiring as shown in the specific project drawing and repeat for subsequent dampers.
- It is recommended that the damper end position cables are not run alongside any high voltage or high frequency sources as this could render the panel indication unreliable.

**Please note:**

2 core and 3 core site wiring (by others).  
Typically, 1mm<sup>2</sup> - 2.5mm<sup>2</sup> solid core wiring.

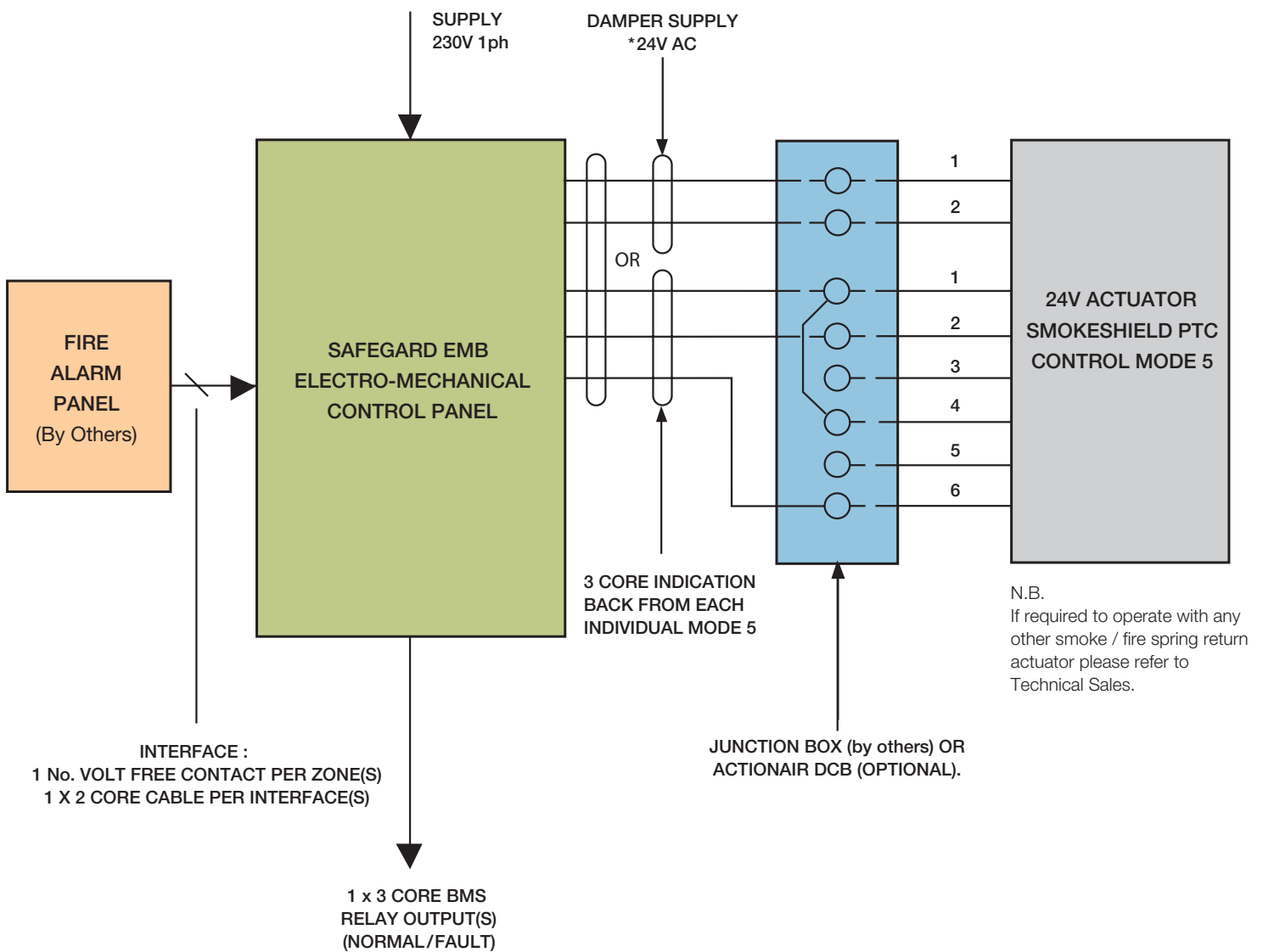
Be aware of voltage drop when using 24V (Mode 5) actuators.

**Please note:**

All panel terminals (except mains supply) accept max 2.5mm<sup>2</sup> wiring

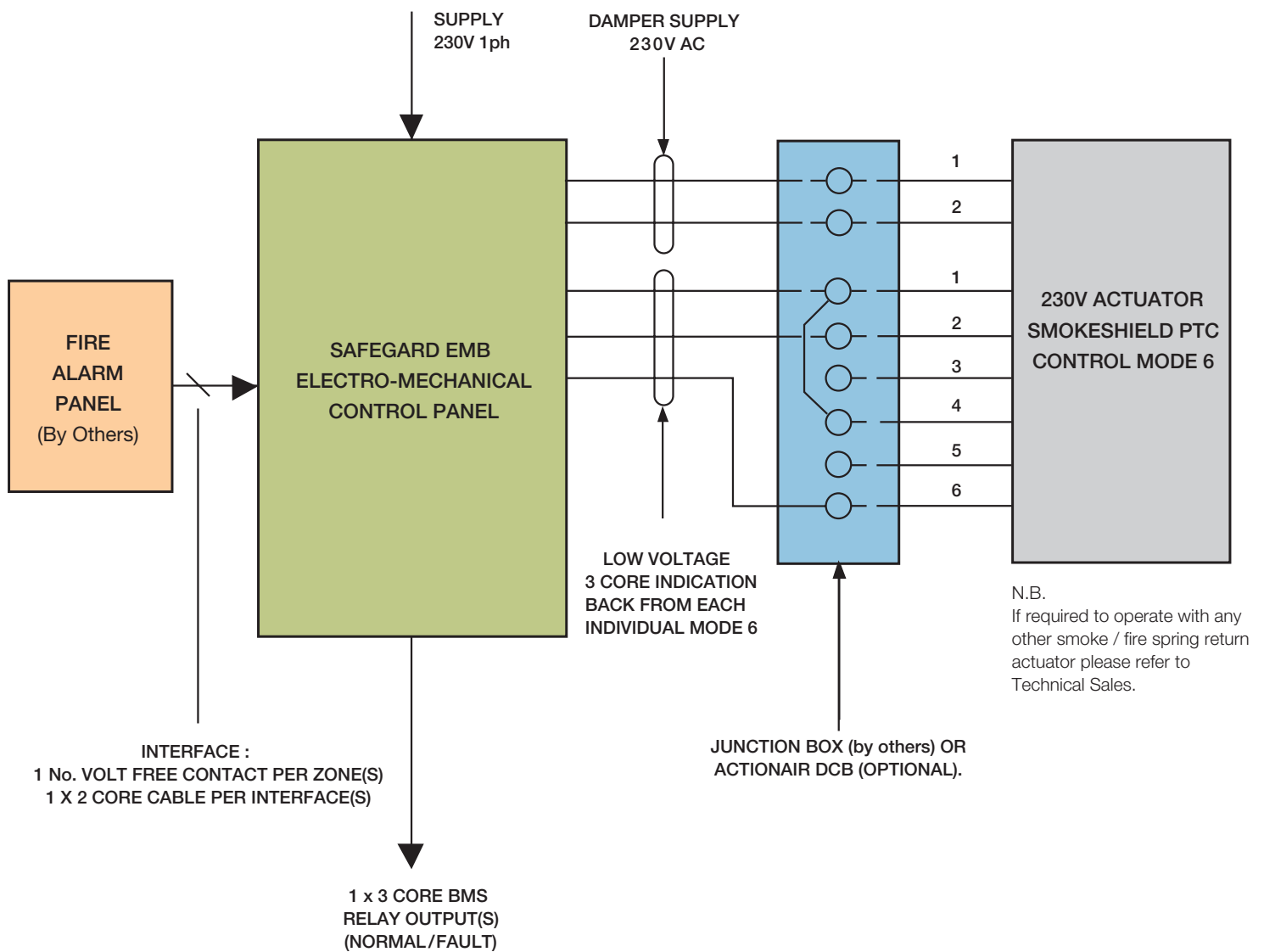
## Typical EMB Electro-Mechanical System Schematic

**Incorporating SmokeShield PTC™**  
 (24V Actuator, Control Mode 5 illustrated)

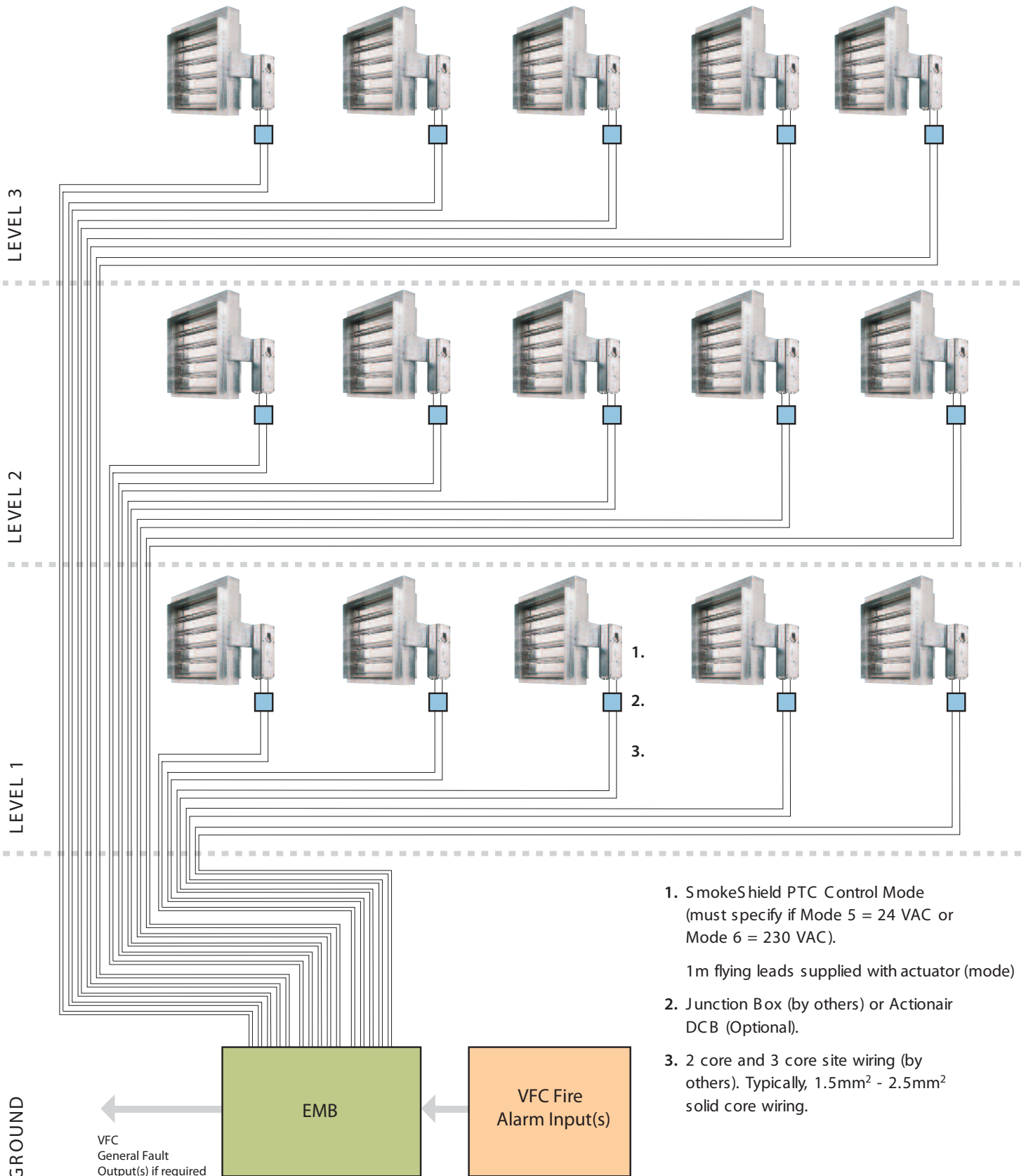


## Typical EMB Electro-Mechanical System Schematic

**Incorporating SmokeShield PTC™**  
(230V Actuator, Control Mode 6 illustrated)



## Typical Network Schematic (230V Actuator, Control Mode 6 illustrated)



## Specification

### Supply

Input voltage (230 ± 23) V AC, 50 Hz

### Environmental

Operating temperature 0 °C to 35 °C

Storage temperature -15 °C to 45 °C

### Alarm Input(s)

Contact type Non-isolated dry contacts


Humidity 80 % RH to 25 °C decreasing linearly to 50 % RH at 35 °C

Maximum altitude 2000 m

### General Fault Output

Contact type SPCO mechanical relay contact

Maximum switched load 1 A at 230 V AC  
1 A at 30 V DC

 Complies with European standards

**WARNING: The responsible body shall be made aware that, if the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.**

*The information herein is subject to change without notice. We do not assume any liability arising out of the use of this product. Purchase of goods and services is subject to Safegard Systems standard terms and conditions.*

*Product warranty 12 months from date of delivery.*

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