

Actionpac EMS Panel Installation Datasheet

Actionpac EMS 15-24

For the control/monitoring of up to 15 off 24V Smoke Shield Damper Actuators (Mode 5) in a single zone

Actionpac EMS 30-24

For the control/monitoring of up to 30 off 24V Smoke Shield Damper Actuators (Mode 5) in a single zone or two zones of up to 15 off each

Actionpac EMS 15-230

For the control/monitoring of up to 15 off 230V Smoke Shield Damper Actuators (Mode 6) in a single zone

Actionpac EMS 30-230

For the control/monitoring of up to 30 off 230V Smoke Shield Damper Actuators (Mode 6) in a single zone or two zones of up to 15 off each



Mounting

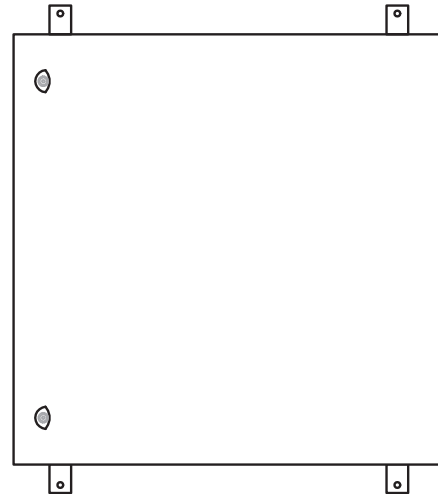
- Only use the mounting brackets provided.
- The height of the unit above the floor level should be chosen so that the centre of the panel is just above normal eye level (approximately 1.5 m).
- The unit should be placed in a naturally vented area and this area should be considered fire safe and free 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

There are two panel sizes:

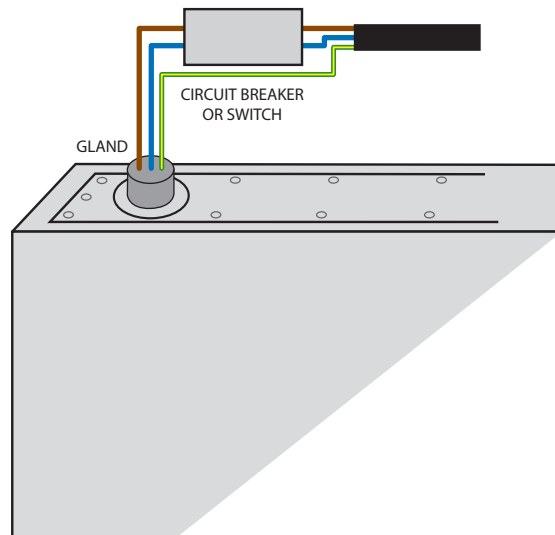
	H x W x D(mm)	Weight(aprx)	Handling
EMS 15-24:	500 x 400 x 210	20 kg	One person
EMS 15-230:	500 x 400 x 210	15 kg	One person
EMS 30-24:	600 x 600 x 210	33 kg	Two people
EMS 30-230:	600 x 600 x 210	26 kg	Two people

Wire mains supply feed in left hand side of top gland plate

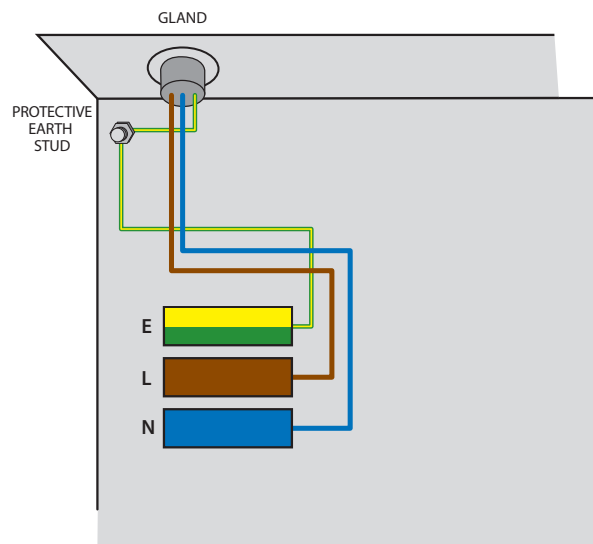
Installation

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 4mm² 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)



Dampers

- Wire the first damper actuator supply as shown below and repeat for subsequent dampers.
- Wire the first damper actuator end position switch wiring as shown below 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, 1mm² - 2.5mm² solid core wiring.

Actionpac EMS 15-24 and Actionpac EMS 30-24: be aware of voltage drop when using 24V (Mode 5) actuators.

A blank damper location form is provided inside the panel and is located on the left hand side

Please note:

All panel terminals (except mains supply) accept max 2.5mm² wiring

Damper actuator supply wiring




DAMPER	TERMINALS
DAMPER 1	L1, N1
DAMPER 2	L2, N2
ETC.	

EMS 15: L1 N1 - L15 N15

EMS 30: L1 N1 - L15 N15 (Zone 1)
L16 N16 - L30 N30 (Zone 2, if required*)

Damper actuator end position switch wiring

Actuator End position switches:

	S4+S1* (common)	S2 (closed indication)	S6 (open indication)
Panel Screw Terminals:			
Damper 1 Terminals:	1	2	3
Damper 15 Terminals:	43	44	45
Damper 16 Terminals:	1	2	3
Damper 30 Terminals:	43	44	45

EMS 15: Terminals 1-45 identified ACT 1-15

EMS 30: Terminals 1-45 & 1-45 identified ACT 1-15 & ACT 16-30

* Connection made at junction box (by others)
or Actionair DCB (optional)

Operation

Main isolator key switch

Off - Switches off all power to the panel.
 On - Switches on all power to the panel.

Fire Alarm Signal key switch

(assuming main isolator key switch is on)

Normal (under the control of the Fire Alarm) - Dampers are energised to their Reset state (open)

Test (simulating Fire Alarm) - Dampers are dennergised to their Released state (closed)

Override - If fire alarm signal is active it is overridden and dampers are energised to their Reset state (open)

Note: If panel is left in Override and Fire Alarm goes active then dampers will remain in their Reset state (open).

Alarm input

If the closed contact volt free alarm input(s) open(s) the dampers are dennergised to their Released state (closed).

EMS 15 has one input and EMS 30 has two inputs, if required, - see Alarm Input(s) Wiring.

General Fault Output

Should any damper fail to reach its Released state (closed) then a changeover contact is provided to signal same - see General Fault Output Wiring.

LED's

Damper Released - Red, dampers are dennergised to their Released state (closed)

Damper Reset - Green, dampers are energised to their Reset state (open)

Test Lamps - press to test all damper LED's which will flash for approx. 2 seconds

Fire Alarm Normal - Green, Volt free alarm input(s) is (are) closed i.e. not active

Override On - Red, fire alarm signal key switch is in override position and dampers are energised to their Reset state (open)

Power On - Green

Alarm Input(s) Wiring

- The volt free alarm input is a closed contact that opens in alarm
- The input cable diameter should be 1mm² or 1.5mm²
- Limit cable runs to 100m and avoid running input cables near sources of mains or noisy environments.

INPUT	TERMINAL NUMBER
EMS 15 & 30	201, 202
EMS 30 (if required)*	203, 204

**If two zones are required, remove jumpers below alarm input terminals 201,202, 203 & 204.*

General Fault Output Wiring

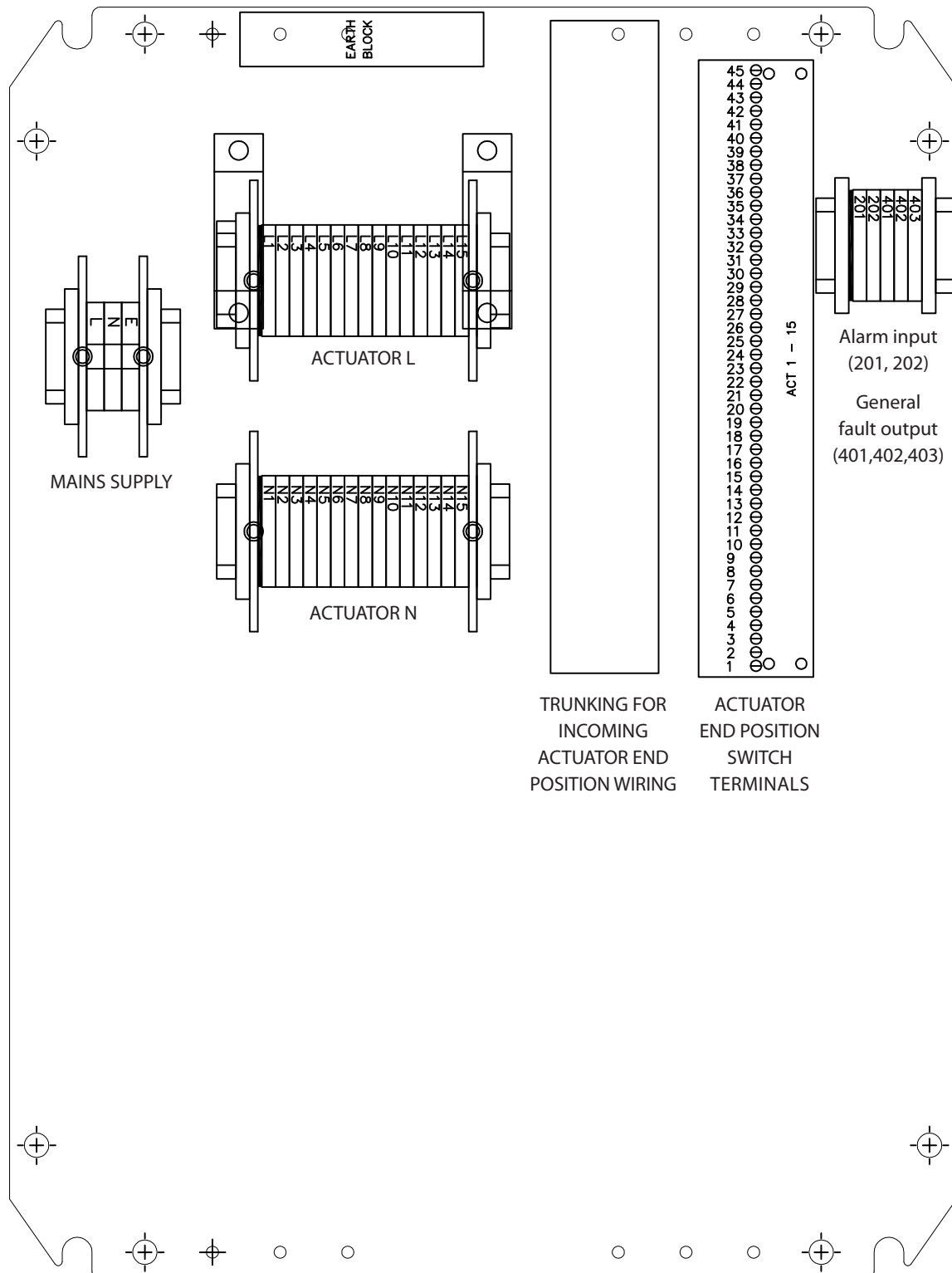
- It is the user's responsibility to ensure the switched equipment is adequately protected.

OUTPUT	TERMINAL NUMBER
Common	401
Fault	402
Normal	403

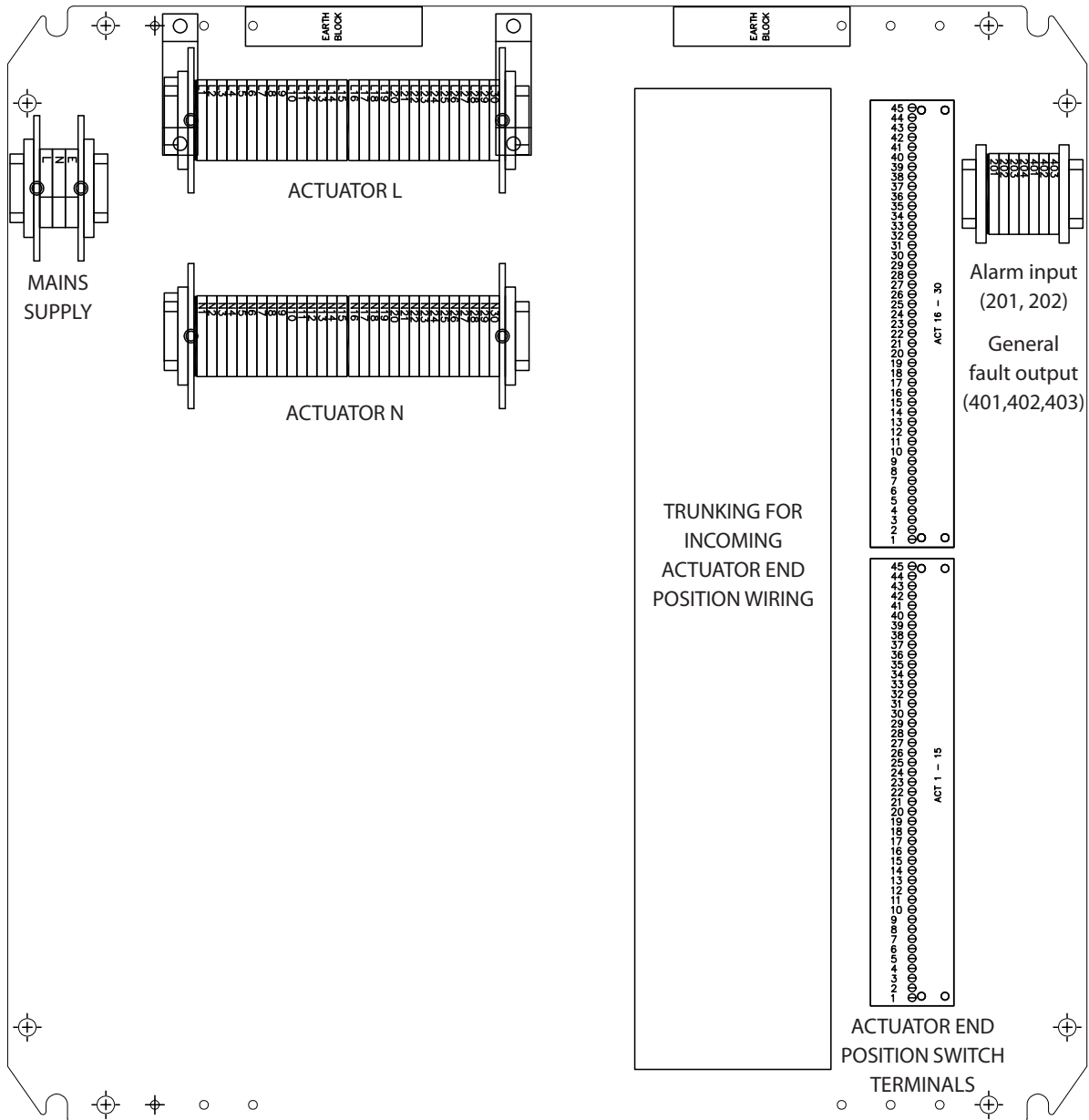
Please note:

All panel terminals (except mains supply) accept max 2.5mm² wiring

Actionpac EMS 15 - Panel Wiring

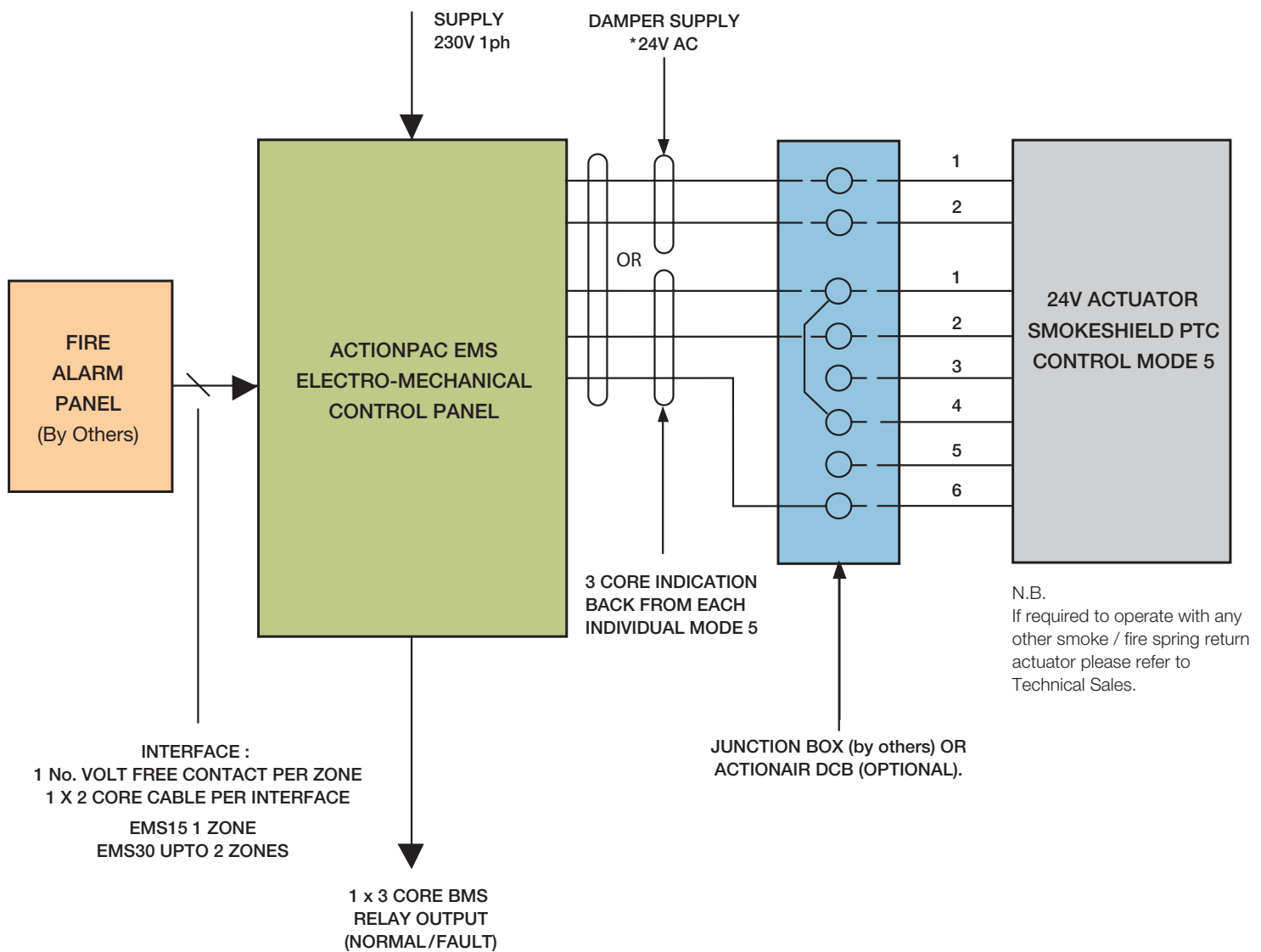


Actionpac EMS 30 - Panel Wiring



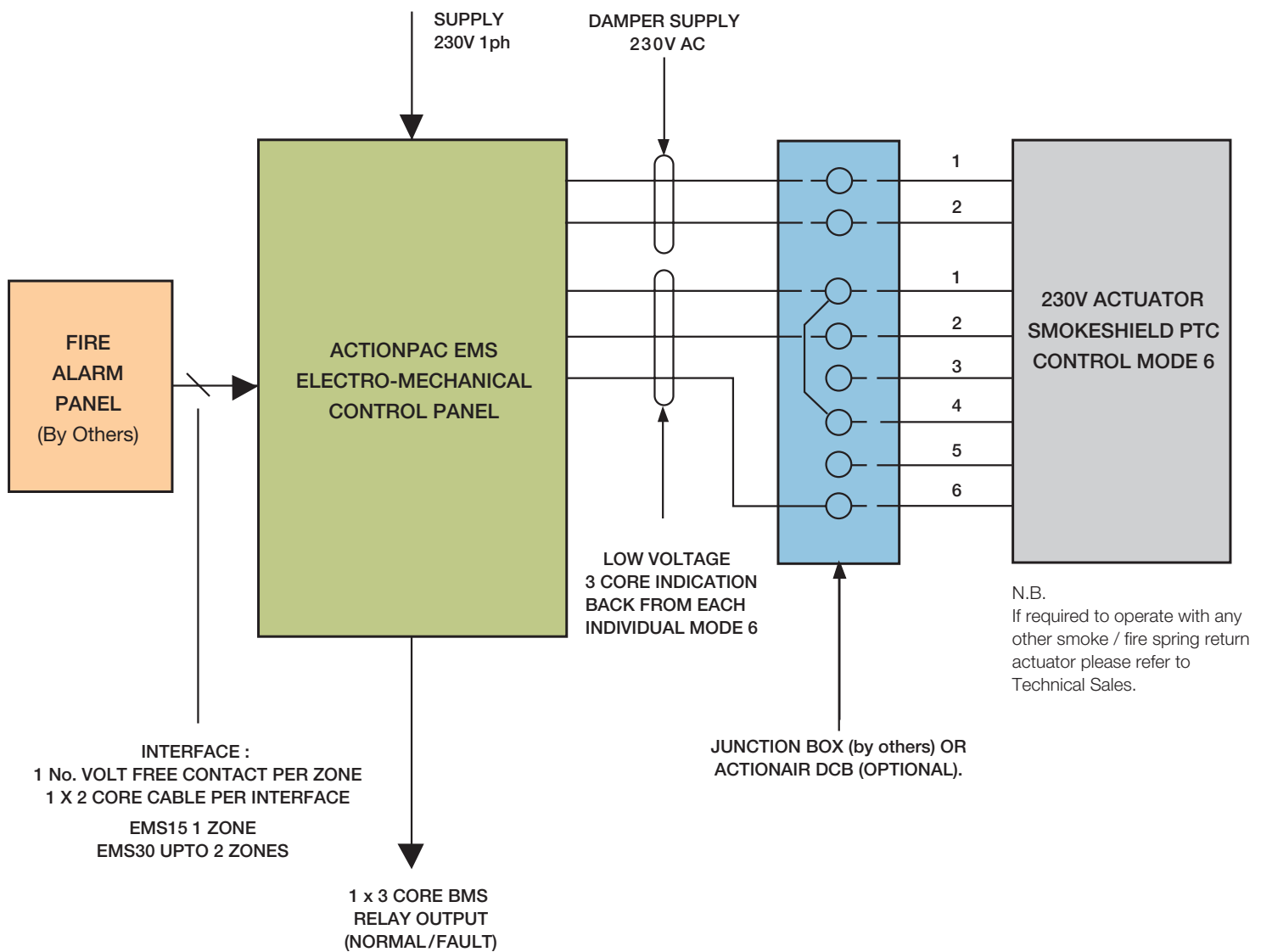
Typical Actionpac EMS Electro-Mechanical System Schematic

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

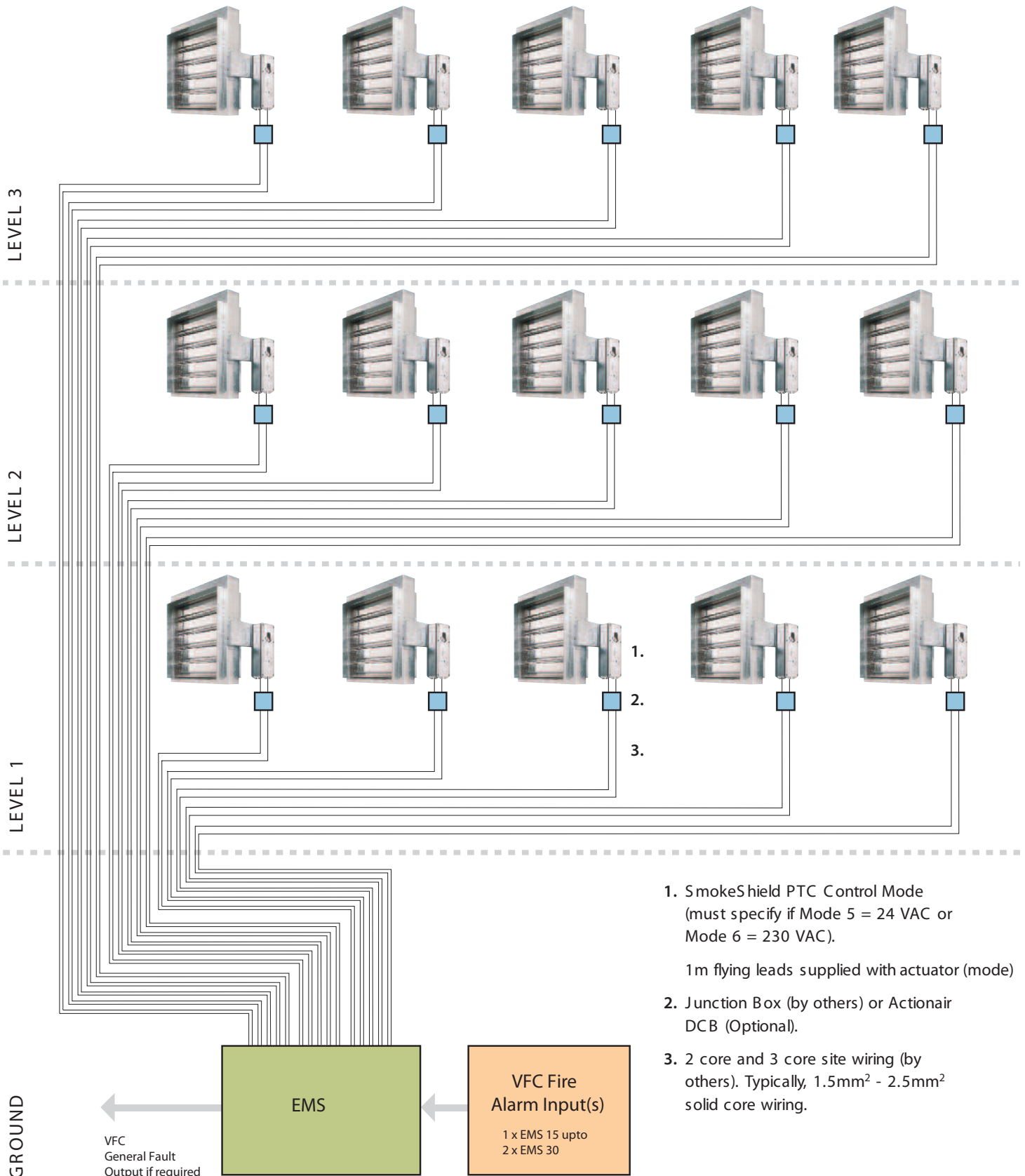


Typical Actionpac EMS Electro-Mechanical System Schematic

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
Maximum power consumption	EMS 15 300VA
	EMS 30 500VA

Alarm Input(s)

Contact type	Non-isolated dry contacts
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General Fault Output

Contact type	SPCO mechanical relay contact
Maximum switched load	1 A at 230 V AC
	1 A at 30 V DC

Environmental

Operating temperature	0 °C to 35 °C
Storage temperature	-15 °C to 45 °C
Humidity	80 % RH to 25 °C decreasing linearly to 50 % RH at 35 °C
Maximum altitude	2000 m

Conformance

EMC	EN 61326-1: 2013
LVD	EN 61010-1: 2010 +Corr 1: 2011

 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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