



Actionpac LNS5 & Safeguard V5 Damper Modbus Interface Catalogue

Two Position & Three Position Smoke Fire Damper Interface

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.

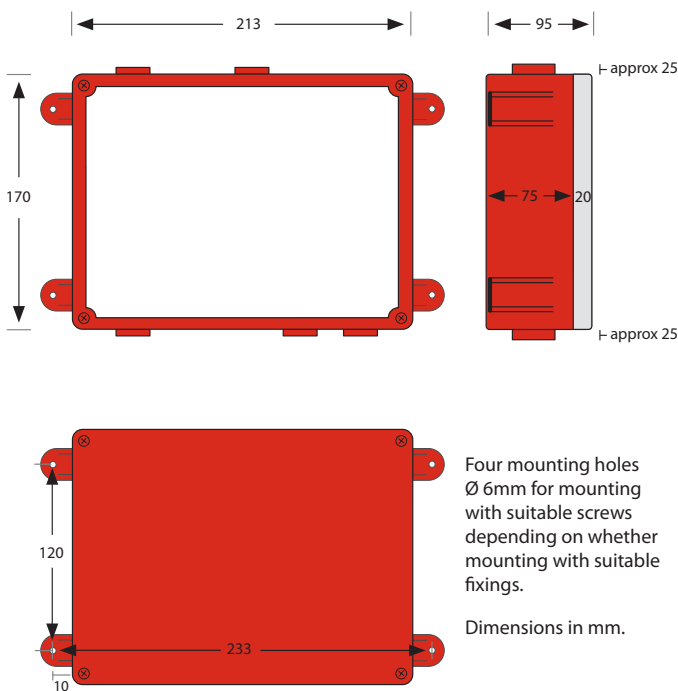


ALWAYS READ THIS DOCUMENT BEFORE
INSTALLATION. PLEASE RETAIN FOR
FUTURE REFERENCE.



DAMPER INTERFACE (SFDI-M / FDI-M / SDI-M / 3PSFDI-M / 3PSDI-M)

Mounting Diagram



Dimensions and Mounting

The compact and robust design of the interface enclosure allows the unit to be mounted to a block wall or stud wall.

Ensure the Interface is located close enough to the actuator/damper it is controlling/monitoring. Normally, actuator leads are 1m in length. Also, ensure the Interface is accessible for future maintenance purposes.

Please note:

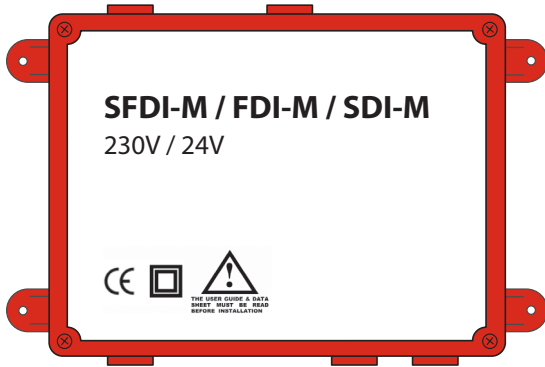
- 150mm clearance required for lid removal and at cable entry points.
- Unused cable entries should be sealed.
- Do not drill the enclosure as this will affect its IP rating.

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 connectors can accommodate cable conductor diameters up to 1.5mm². It is recommended that all stranded wires be crimped to ease installation and replacement of the product.
- The mains wiring should comply with IEC and local electrical regulations.
- A fused spur and circuit breaker should be included as part of the installation and should meet the relevant requirements of IEC 60947-1 and IEC 60947-3.
- The fused spur or circuit breaker should be in close proximity to the equipment and be within easy reach of the operator.
- The fused spur or circuit breaker should be marked as the disconnecting device for the equipment.

Installation

1. Disconnect the local supply before commencing any work on the Interface.
2. Wire the interface in accordance with the wiring diagrams shown following. If the actuator is to be located more than 5m from the Interface then contact Safeguard Systems for technical assistance.
3. Please be aware that the switch and auxiliary inputs are not optically isolated. It is recommended that the optional detectors (smoke or heat) use failsafe open contacts.
4. It is also recommended that the network cables are not run alongside any mains voltage or high frequency sources. Also, network cables should not be mixed on an individual network.
5. If the electromagnet failsafe release option is used, the electromagnet should be protected by a suitable snubber device.
6. Once wiring is complete, apply power to the damper interface. The green power LED should illuminate to indicate the presence of power.
7. The Interface is now ready to be configured using a standard Modbus tool or the Safeguard system.



Two Position Damper Interface

The Safeguard Damper Interface provides a complete Modbus communication device to control dampers.



ELECTROSTATIC SENSITIVE DEVICE

TWO POSITION SMOKE FIRE DAMPER INTERFACE OPTIONS:

SFDI - M

The Safeguard **Smoke Fire Damper Interface** provides a complete Modbus communication device to control a failsafe spring-return smoke fire damper actuator that incorporates two auxiliary switches.

FDI - M

The Safeguard **Fire Damper Interface** provides a complete Modbus communication device to monitor the open and/or closed damper position.

SDI - M

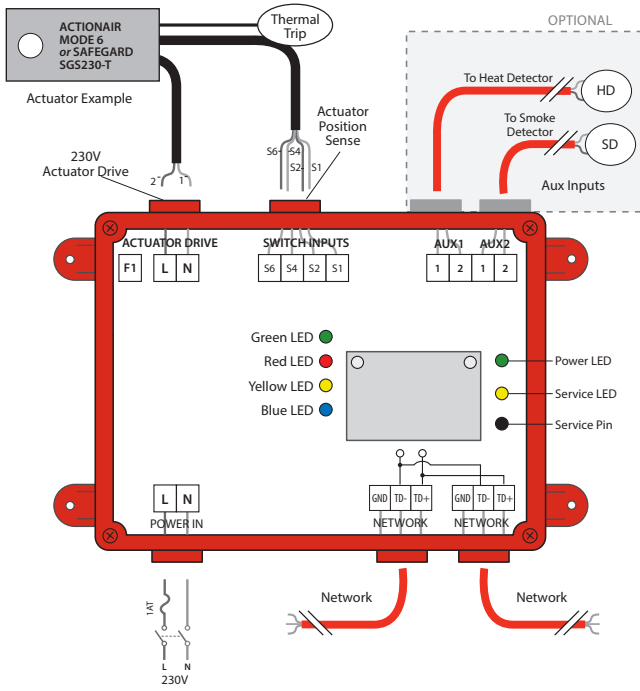
The Safeguard **Smoke Damper Interface** provides a complete Modbus communication device to control any drive open/ drive closed smoke damper actuator that incorporates two auxiliary switches.

Please note: Each interface is available in 24V or 230V. Please specify a voltage at time of order.

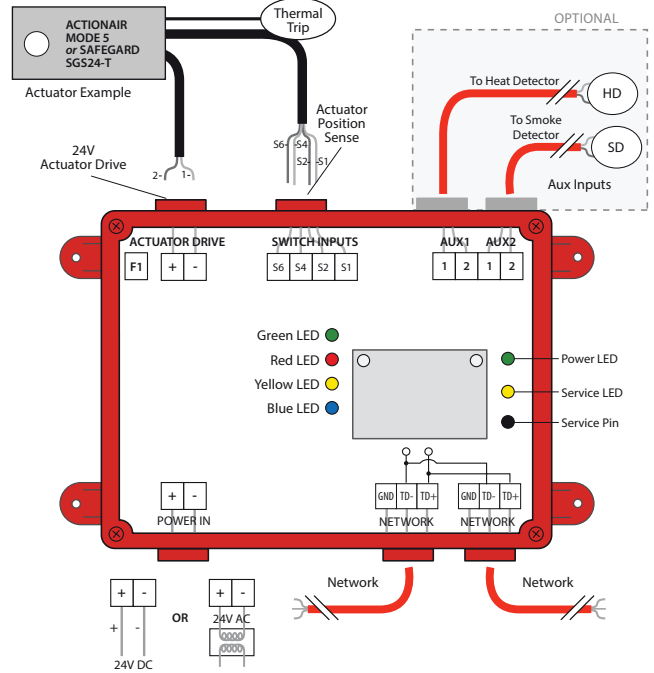


TWO POSITION SMOKE FIRE DAMPER INTERFACE (SFDI-M / FDI-M / SDI-M)

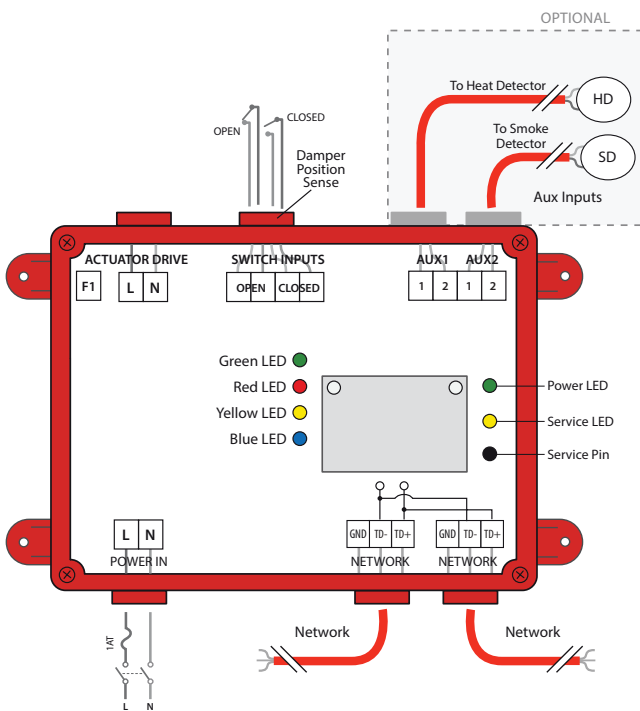
SFDI-M Wiring: 230V



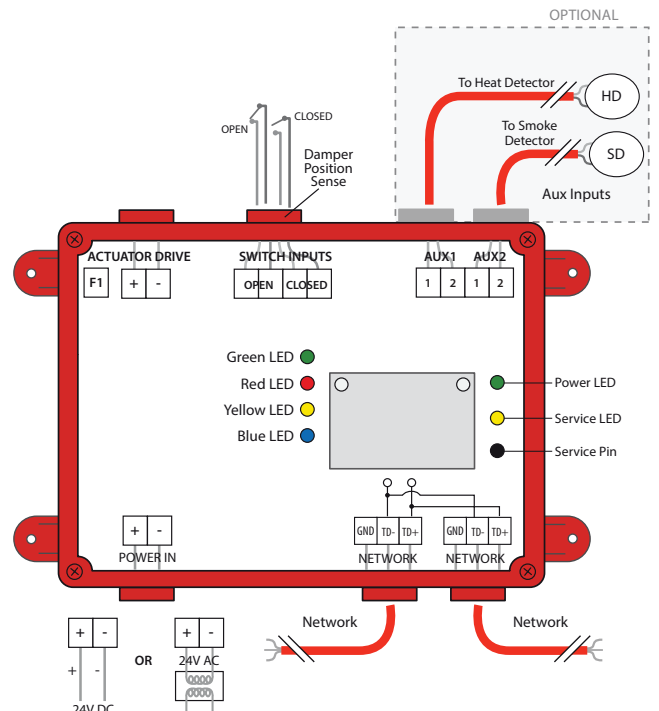
SFDI-M Wiring: 24V



FDI-M Wiring: 230V



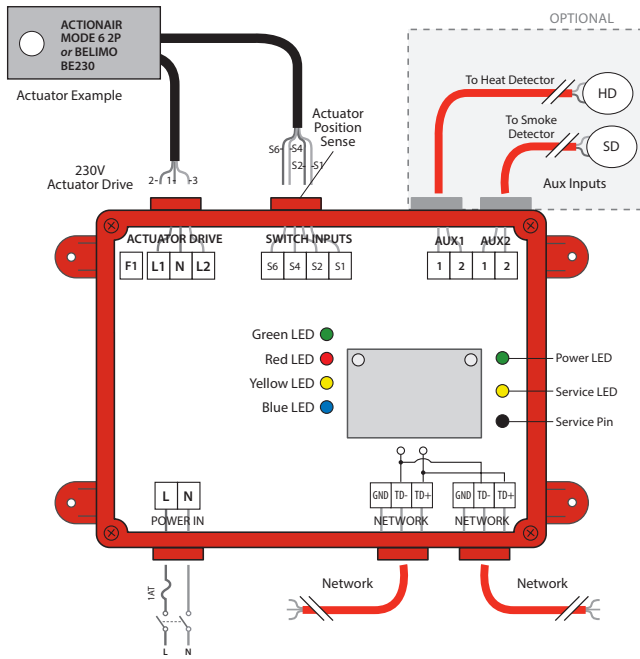
FDI-M Wiring: 24V



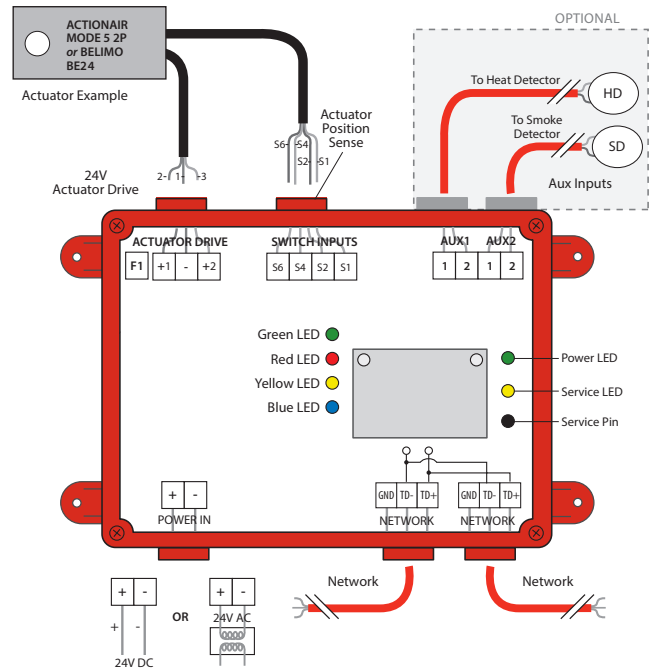


TWO POSITION SMOKE FIRE DAMPER INTERFACE (SFDI-M / FDI-M / SDI-M)

SDI-M Wiring: 230V



SDI-M Wiring: 24V



Maintenance

24V AC/DC version

5 x 20mm, Time-Lag Fuse, 2A rated (see F1 on wiring diagrams); for example Littlefuse 215 series

120/230VAC versions

5 x 20mm, Time-Lag Fuse, 1A rated (see F1 on wiring diagrams); for example Littlefuse 215 series

LED Behaviour

FUNCTION	GREEN	RED	YELLOW	BLUE
Open	On	Off		
Closed	Off	On		
Travelling	Flashing	Flashing		
Fault			Flashing	
Ping				One-shot
Offline	On	On	On	On
Save Mode		Flashing		

Wink function: Service LED flashes for 5s



TWO POSITION SMOKE FIRE DAMPER INTERFACE (SFDI-M / FDI-M / SDI-M)

Specifications

Modbus

Chip	Arm Cortex-M4
Service functions	Service pin and service LED

Supply

(please specify at time of order)

Input voltages	(230 ± 23) V AC, 50 Hz
	(120 ± 12) V AC, 60 Hz
	(24 ± 4.8) V AC, 50 Hz
	(24 +4.8 /24 -2.4) V DC

Maximum power consumption	2.5 VA 24V AC/DC
	4.5VA 230V AC

Output

Contact type	DPCO mechanical relay contacts
Maximum switched load	200 VA

Inputs

Contact type	Non-isolated dry contacts
Sense current	10 mA

Environmental

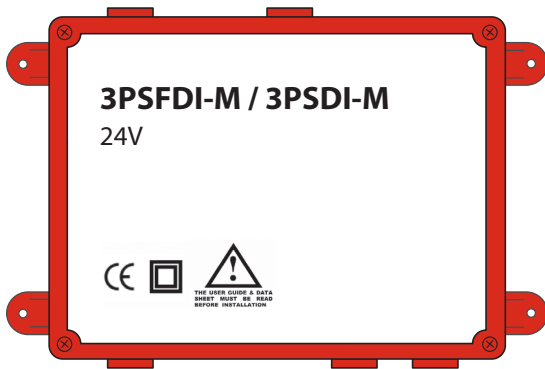
Operating temperature	-5 °C to 70 °C
Storage temperature	-20 °C to 70 °C
Humidity	25 % RH to 90 % RH at 70 °C
Maximum altitude	2000 m

Conformance

Agency Listings	CE
EMC	EN60730-1:00+A1:04+A2:08 +A16:07 CISPR 22 / FCC part 15, cl. B
LVD	EN60730-1:2005 + ... + A2:2008

Enclosure

Material	ABS base with polycarbonate lid
IP rating	IP 54
Flammability	UL 94V-0
Pollution	Category 2
Dimensions	213 mm x 170 mm x 95 mm (L x W x D) Excluding Glands



Three Position Damper Interface

The Safeguard Systems 3P Damper Interface provides a complete Modbus communication device to control a single modulating actuator that incorporates two auxiliary switches.



ELECTROSTATIC SENSITIVE DEVICE

THREE POSITION DAMPER INTERFACE OPTIONS:

Auto Mode

Damper can be set from the control system to a balanced position or to drive open or closed (damper configuration mechanically set) or failsafe via spring-return.

Learn Mode

Damper can be set to its required balanced position via the set point potentiometer.

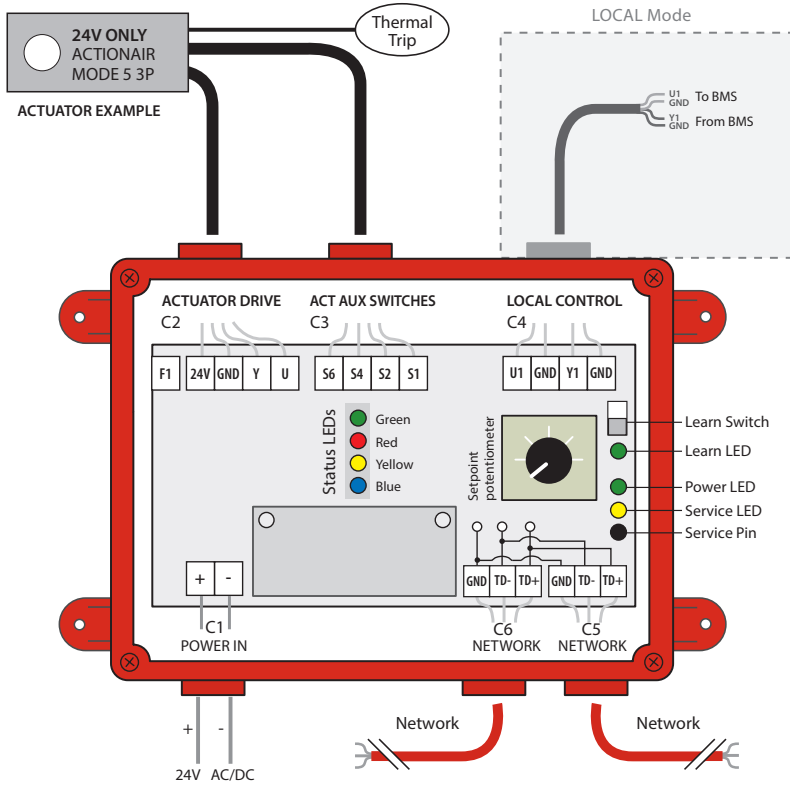
Local Mode

Damper can be modulated via a 2 -10V signal from the Building Management System (BMS). In the event of a fire alarm/firefighters override input the damper control system will take control away from the BMS and react according to the input(s).

Please note: The interface is available in 24V or 230V supply (both driving a 24V actuator).
Please specify a voltage at time of order.



THREE POSITION SMOKE FIRE DAMPER INTERFACE (3PSFDI-M-24)

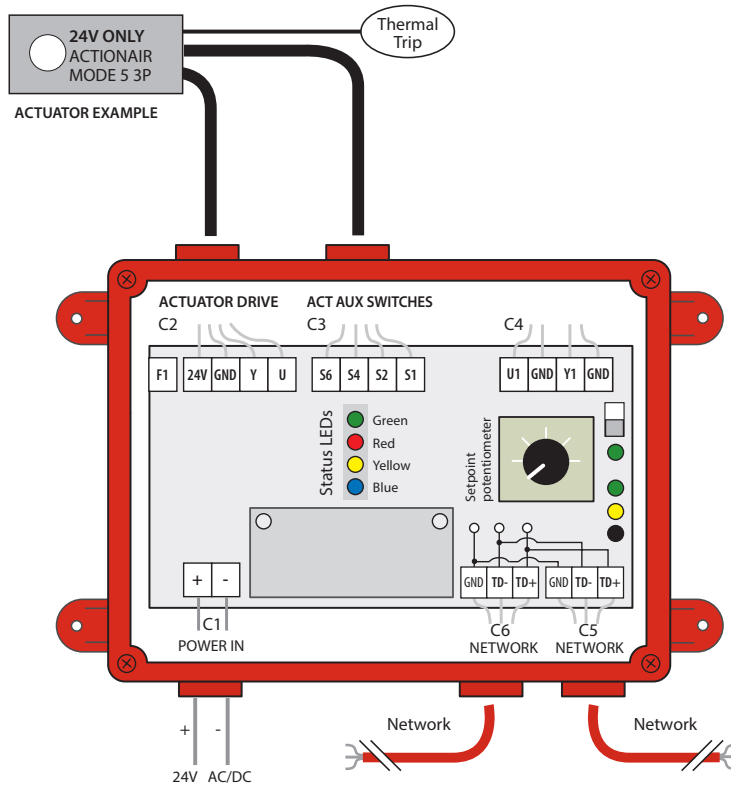


**24V SUPPLY
DRIVING 24V ACTUATOR**

Wiring Diagram enclosure without lid

Replacement Fuse

2 A time-lag fuse (see F1 on wiring diagram).
Suggested replacement: Littelfuse 215 series.



Auto Mode

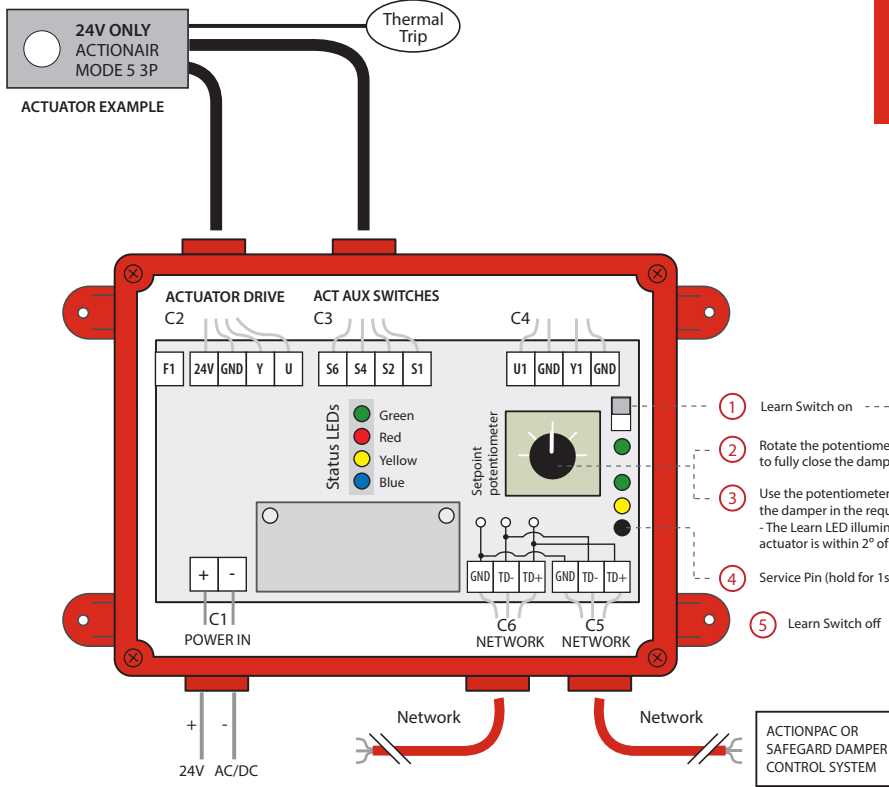
Status LEDs

FUNCTION	GREEN	RED	YELLOW	BLUE
Open	On	Off		
Closed	Off	On		
Balanced	On	On		
Travelling	Flashing	Flashing		
Fault			Flashing	
Ping				One-shot
Offline	On	On	On	On
Save Mode		Flashing		

Wink function: Service LED (yellow) flashes for 5s



THREE POSITION SMOKE FIRE DAMPER INTERFACE (3PSFDI-M-24)

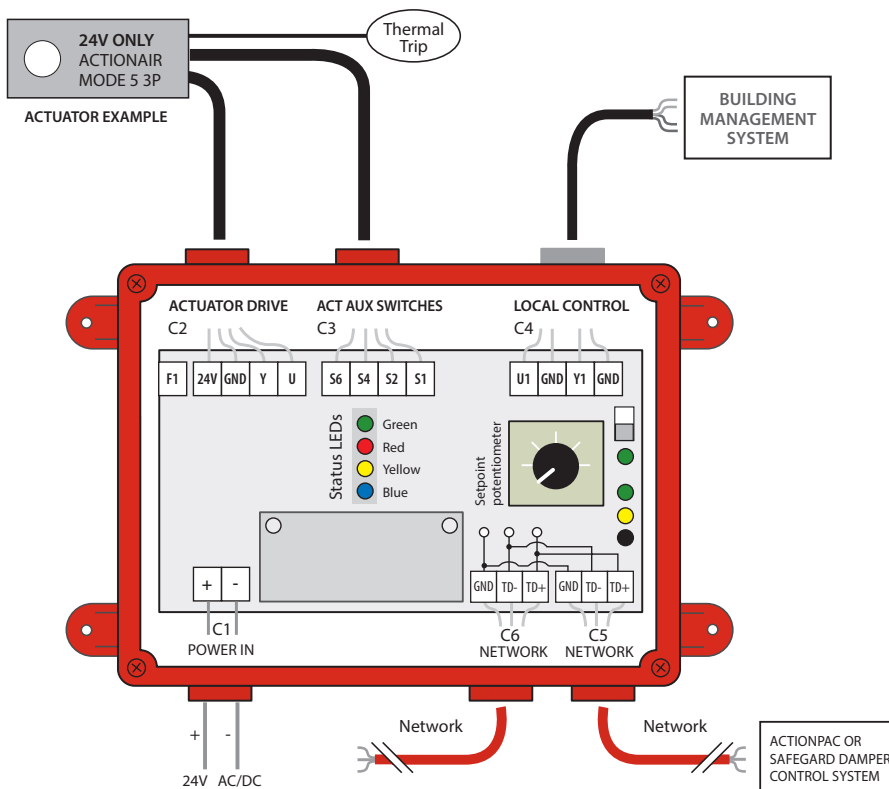


**24V SUPPLY
DRIVING 24V ACTUATOR**

Learn Mode

Status LEDs

FUNCTION	GREEN	RED	YELLOW
Learn	On/Off ↔ On/Off		



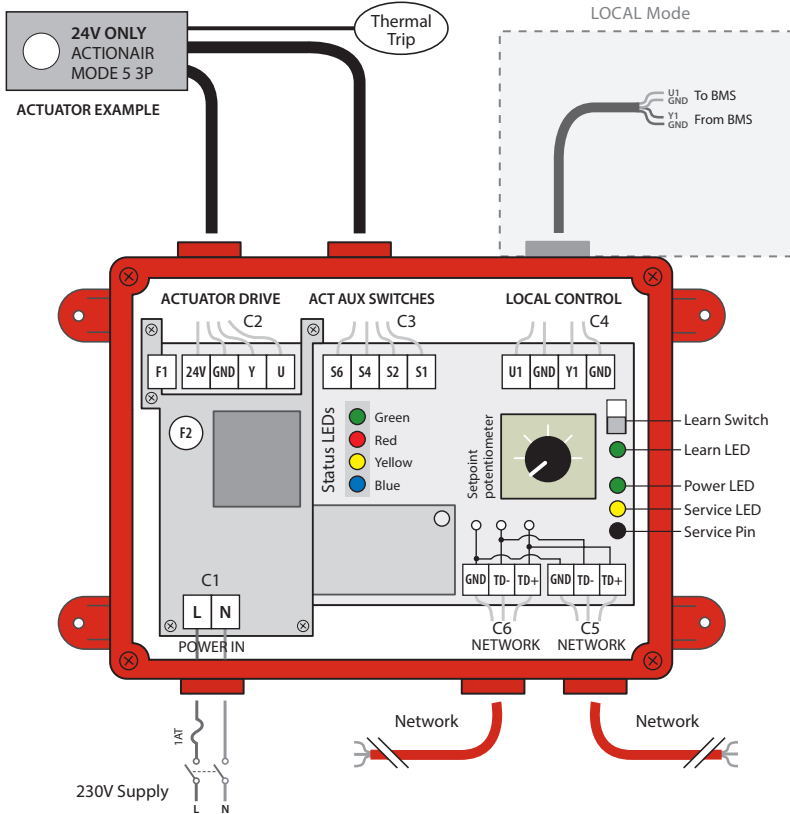
Local Mode

Status LEDs

FUNCTION	GREEN	RED	YELLOW
Fault		Flashing	
Local			On



THREE POSITION SMOKE FIRE DAMPER INTERFACE (3PSFDI-M-230)

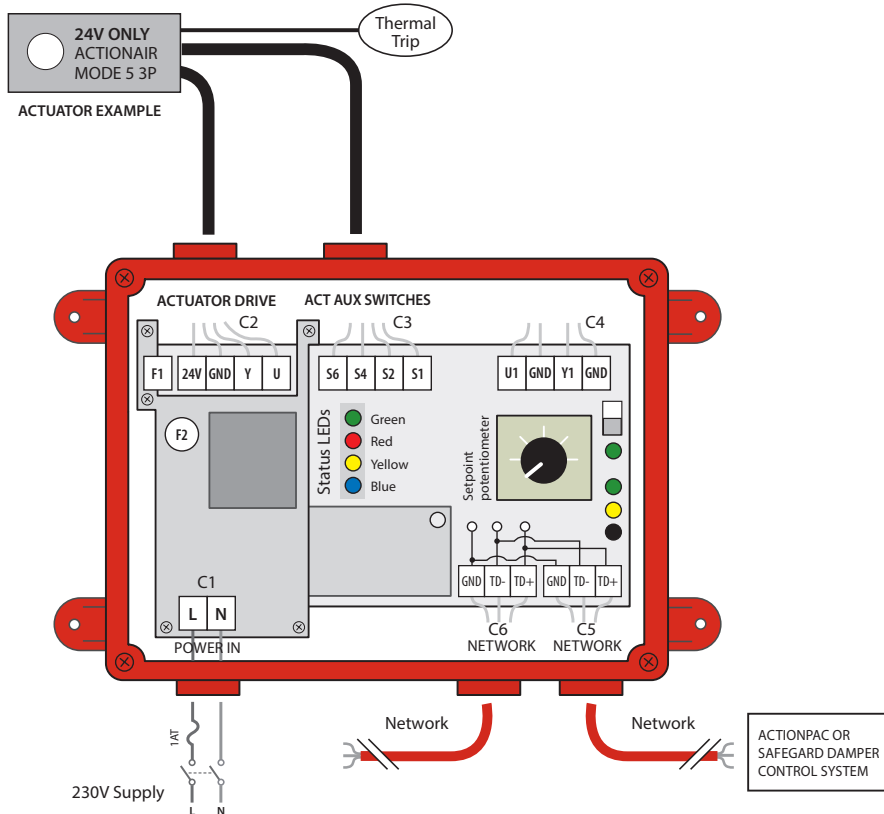


**230V SUPPLY
DRIVING 24V ACTUATOR**

Wiring Diagram enclosure without lid

Replacement Fuses

2 A time-lag fuse (see F1 & F2 on wiring diagram).
Suggested replacement: Littelfuse 215 series.



Auto Mode

Status LEDs

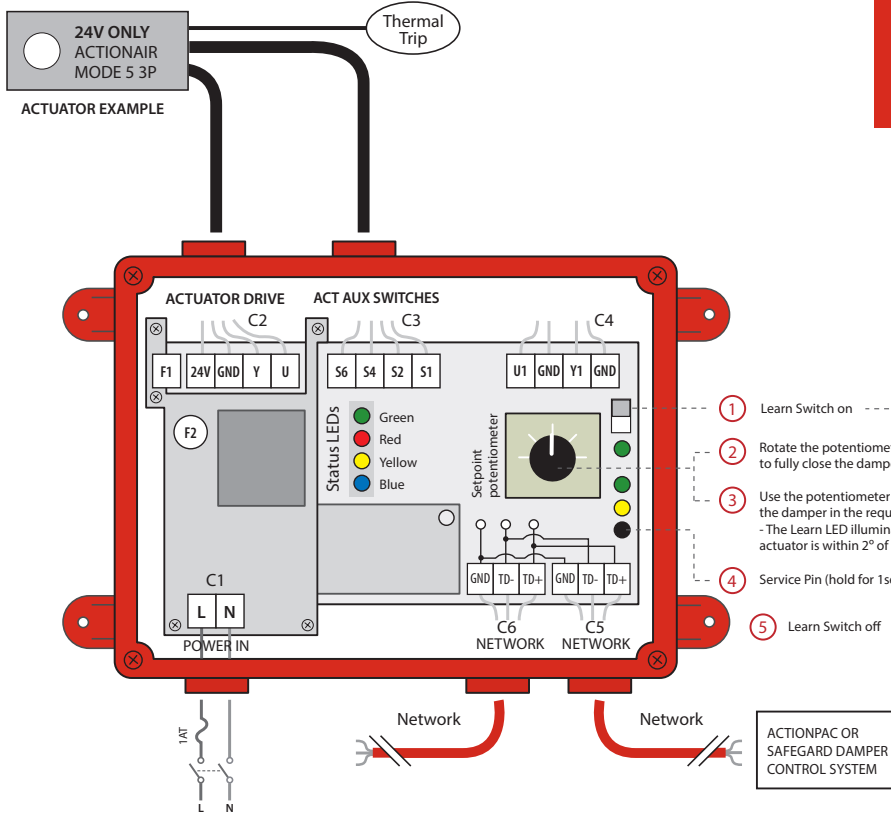
FUNCTION	GREEN	RED	YELLOW	BLUE
Open	On	Off		
Closed	Off	On		
Balanced	On	On		
Travelling	Flashing	Flashing		
Fault			Flashing	
Ping				One-shot
Offline	On	On	On	On
Save Mode		Flashing		

Wink function: Service LED (yellow) flashes for 5s



THREE POSITION SMOKE FIRE DAMPER INTERFACE (3PSFDI-M-230)

**230V SUPPLY
DRIVING 24V ACTUATOR**

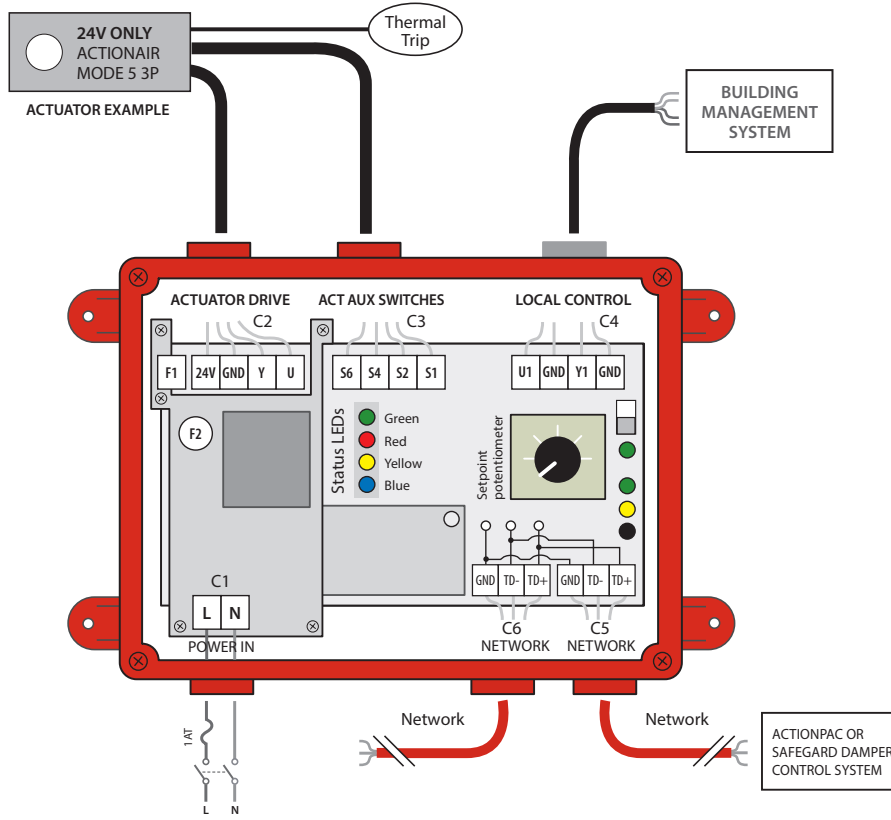


Learn Mode

Status LEDs

FUNCTION	GREEN	RED	YELLOW
Learn	On/Off	↔	On/Off

- 1 Learn Switch on
- 2 Rotate the potentiometer to 0% to fully close the damper
- 3 Use the potentiometer to balance the damper in the required position - The Learn LED illuminates when the actuator is within 2° of the setpoint
- 4 Service Pin (hold for 1sec)
- 5 Learn Switch off



Local Mode

Status LEDs

FUNCTION	GREEN	RED	YELLOW
Fault	Flashing		
Local		On	



THREE POSITION SMOKE FIRE DAMPER INTERFACE (3PSFDI-M)

Specifications (utilises 24V actuator only)

Modbus

Chip	Arm Cortex-M4
Service functions	Service pin and service LED

Supply

Input voltage	(230 ± 23) V AC, 50 Hz (24 ± 4.8) V AC, 50 Hz (24 +4.8 /24 -2.4) V DC
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Max power consumption	1.3 W
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Output

Contact type	SPST mechanical relay contact
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Max switched load	50 VA
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Inputs

Contact type	Non-isolated dry contacts
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Sense current	10 mA per input
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Environmental

Operating temperature	-5 °C to 70 °C
Storage temperature	-20 °C to 70 °C
Humidity	25 % RH to 90 % RH at 70 °C
Maximum altitude	2000 m

Conformance

EMC	EN 60730-1:00+A1:04+A2:08+A16:07
LVD	EN60730-1:2005 + ...+ A2:2008
Agency listings	CE

Enclosure

Material	ABS base with polycarbonate lid
IP rating	IP 54
Flammability	UL 94V-0
Pollution	Category 2
Dimensions	213 mm x 170 mm x 95 mm (L x W x D) Excluding Glands

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 Safeguard Systems standard terms and conditions.

Actionair and Safeguard are brand names of Swegon Air Management and Safeguard Systems respectively and both companies are part of the Swegon Group.

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