



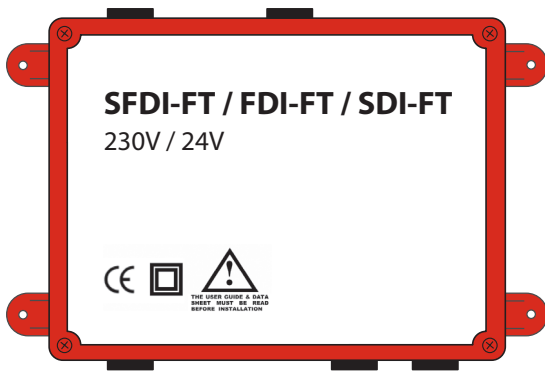
# Actionpac LNS4 & Safeguard V4 Damper Interface Catalogue

Two Position, Three Position & Hot 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.



## Two Position Damper Interface

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

Safeguard developed the LonMark® Functional Profile (11001) for smoke fire dampers and this has been adopted worldwide .



ELECTROSTATIC SENSITIVE DEVICE

### TWO POSITION SMOKE FIRE DAMPER INTERFACE OPTIONS:

#### SFDI-FT

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

#### FDI-FT

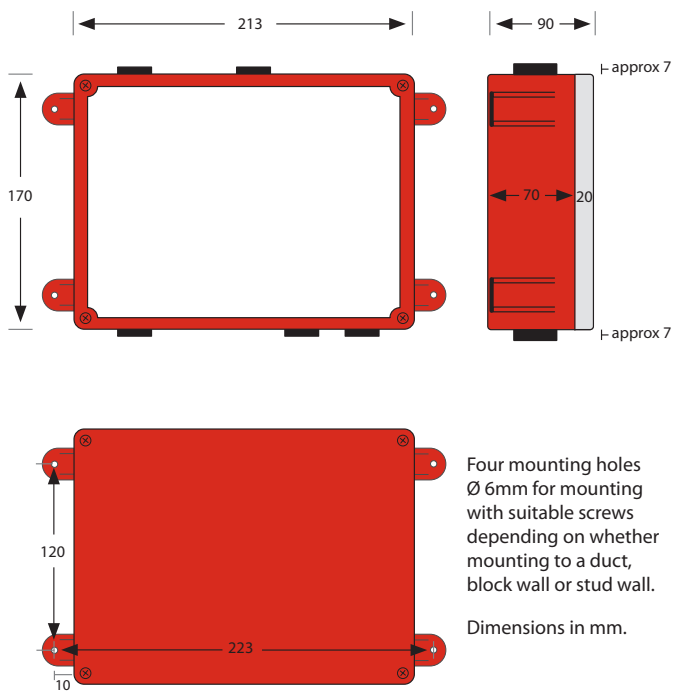
The Safeguard **Fire Damper Interface** provides a complete LonWorks® communication device to failsafe, via an electromagnet, any spring-return fire damper. Monitoring of the open and/or closed position is optional.

#### SDI-FT

The Safeguard **Smoke Damper Interface** provides a complete LonWorks® communication device to control any open/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.

## Mounting Diagram



## Dimensions and Mounting

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

Ensure the Interface is located close enough to the actuator/damper it is controlling/monitoring. Normally, actuator/electromagnet 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 with blind washers.
- Do not drill the enclosure as this will affect its IP rating.

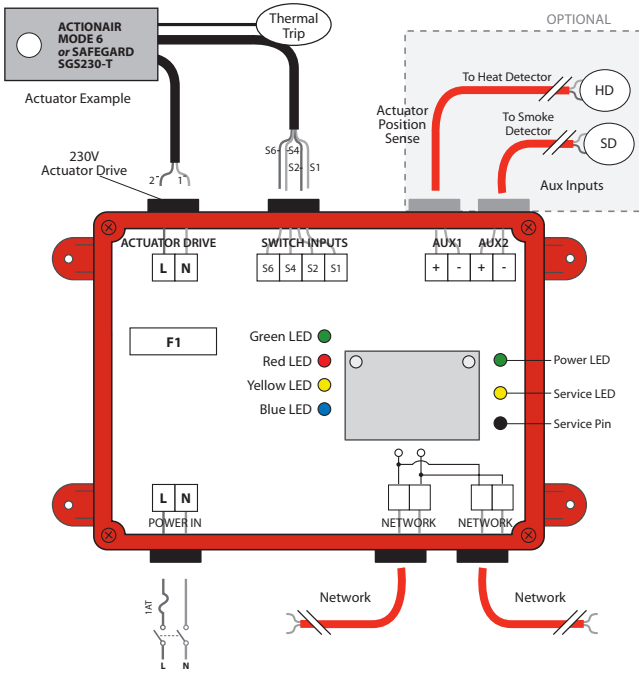
## Preparation

- 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 diameters up to 2.5mm<sup>2</sup>. It is recommended that all wires be crimped to ease installation and replacement of the product.
- 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

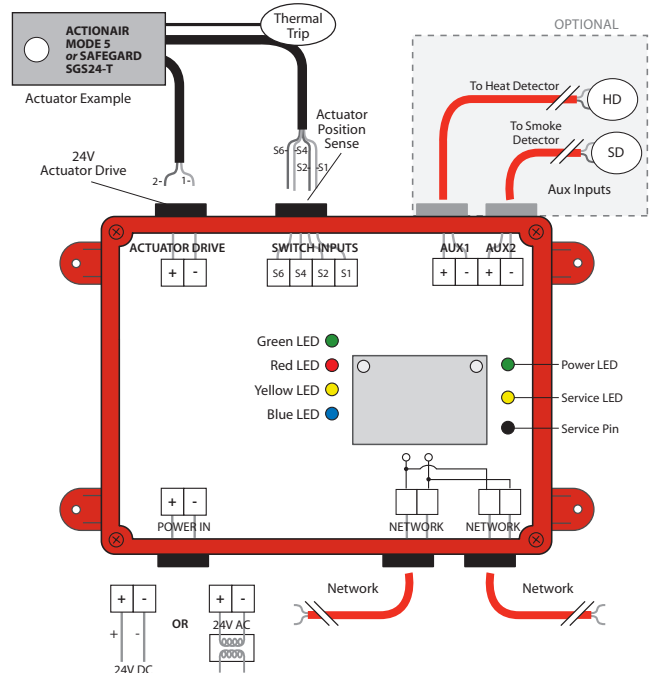
## Installation

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 to guarantee their detection in the event of a fault condition. It is also recommended that the network cables are not run alongside any high voltage or high frequency sources. Also, network cables must not be mixed on an individual network as they have very different electrical characteristics and could render the system unreliable.
4. If FDI-FT, the electromagnet failsafe release is optional. If used, the electromagnet must be protected by a suitable snubber device.
5. If FDI-FT, the monitoring of the damper positions is optional.
6. Once wiring is complete, apply power to the DI-FT. The green power LED should illuminate to indicate the presence of power.
7. The Interface is now ready to be configured using a standard LonWorks tool such as LonMaker or the Safeguard system.

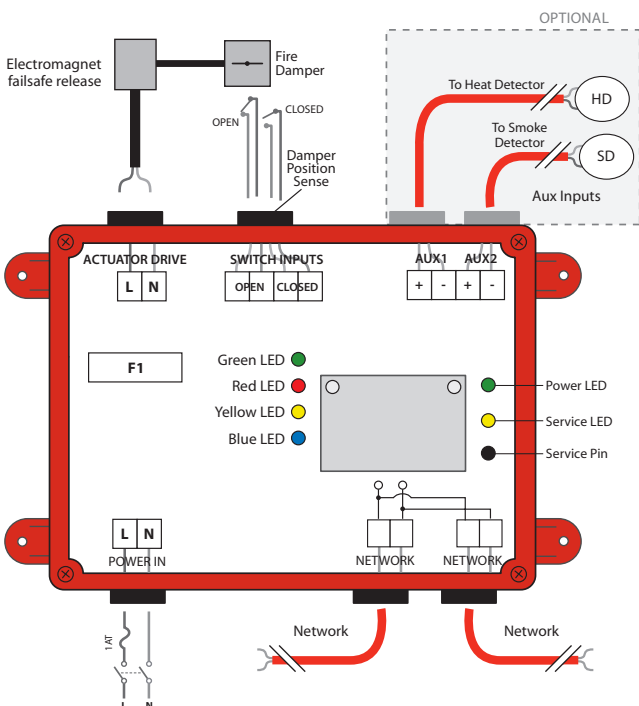
## SFDI-FT Wiring: 230V



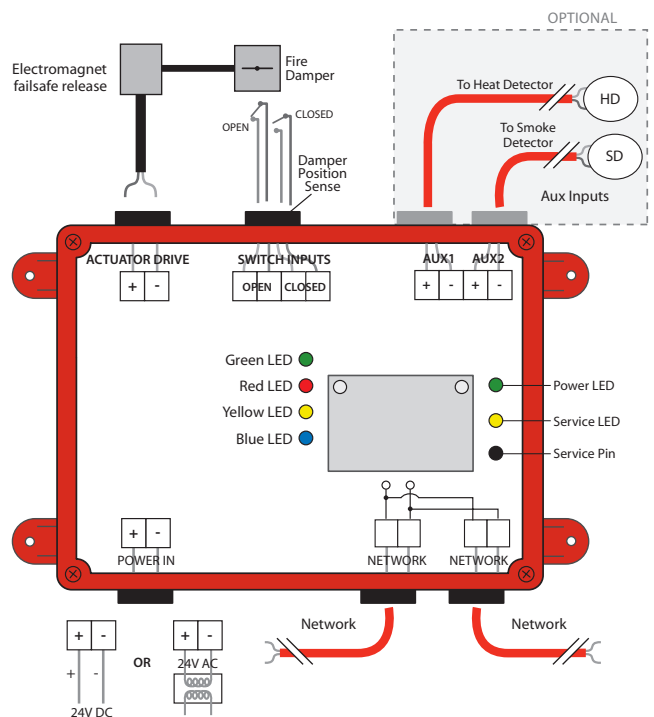
## SFDI-FT Wiring: 24V



## FDI-FT Wiring: 230V

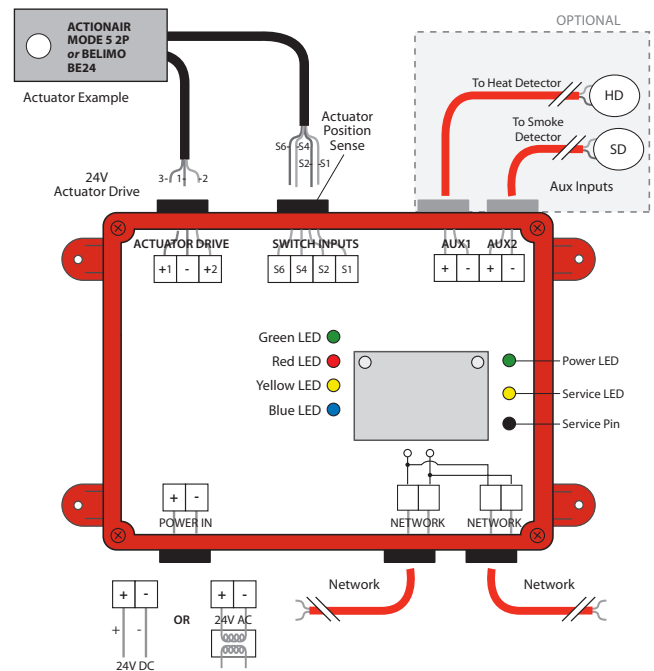
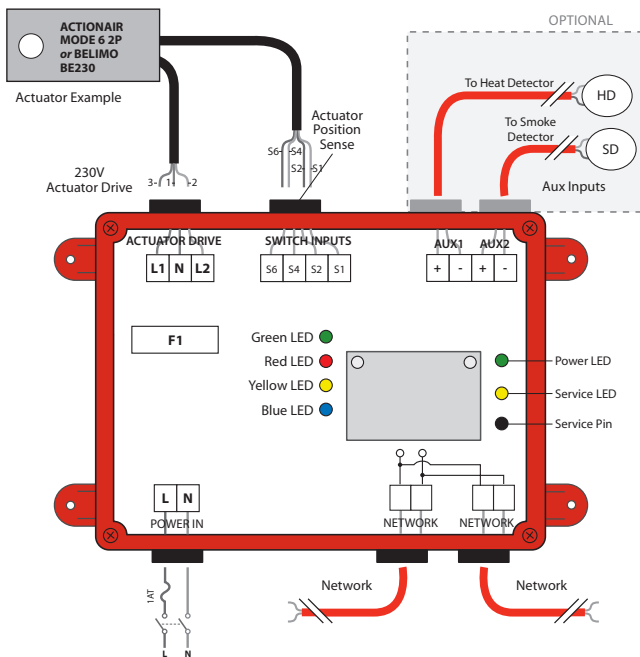


## FDI-FT Wiring: 24V



## SDI-FT Wiring: 230V

## SDI-FT 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

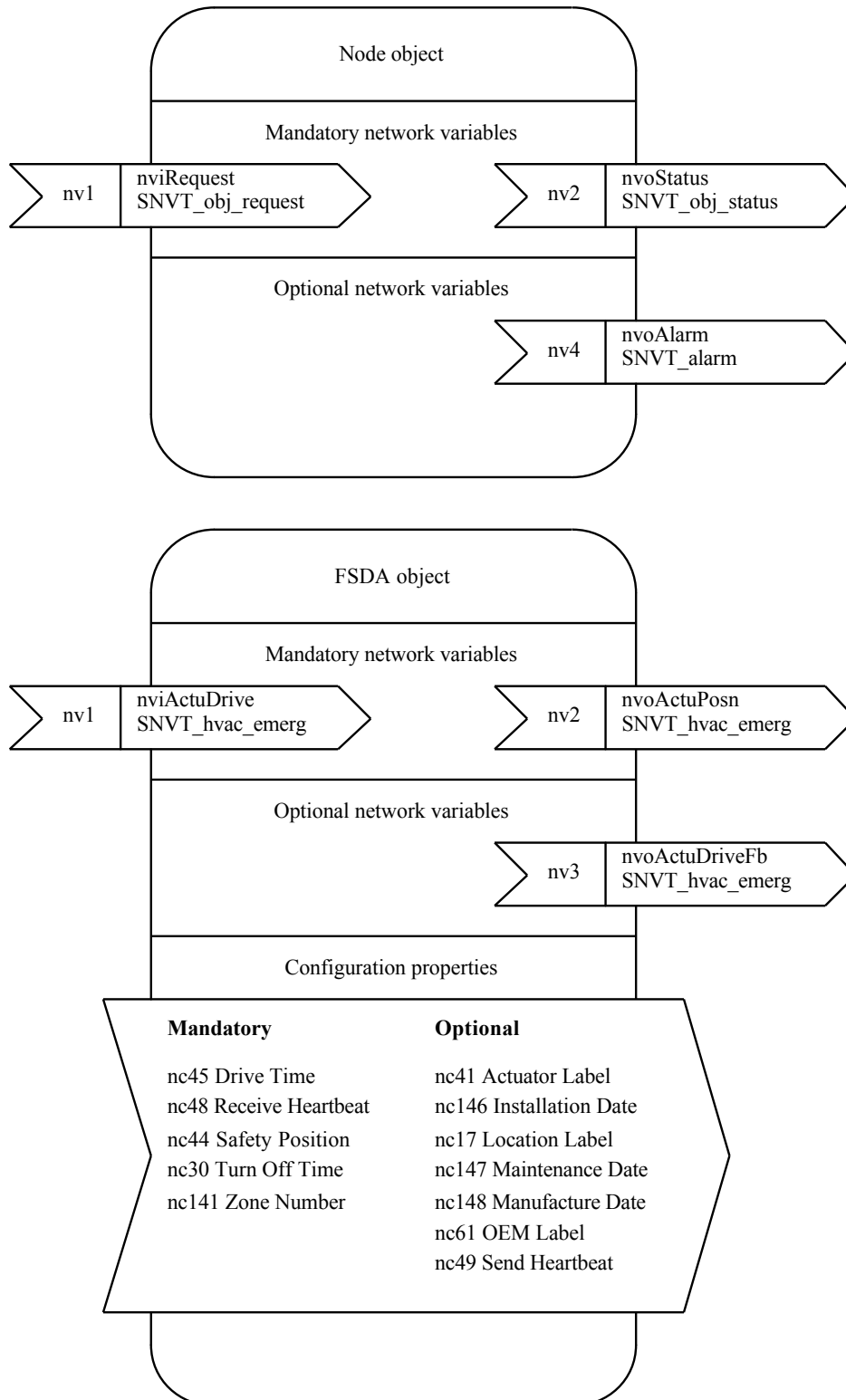
5 x 20mm, Time-Lag Fuse, 1A rated (see F1 on wiring diagrams); for example Littlefuse 215 series

## 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

Wink function: Service LED flashes for 5s

## LonMark Objects



## Two Position Smoke Fire Damper Interface Specifications

### LonWorks

Neuron chip	FT5000
Transceiver type	FT-X2
Service functions	Service pin, service LED and neuron ID self-adhesive tag

### 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 ± 2.4) V DC
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Maximum power consumption 2.5 W

### Output

Contact type	DPCO mechanical relay contacts
Maximum switched load	25 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

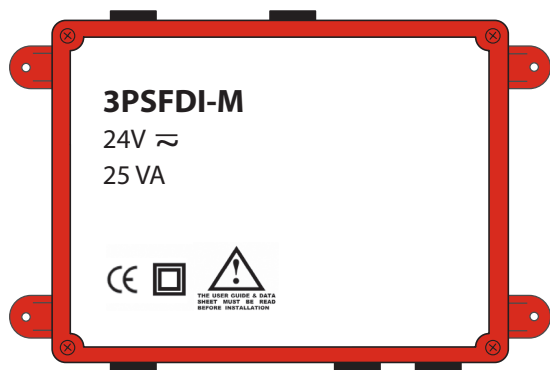
Agency Listings	CE
EMC	EN60730-1:00+A1:04+A2:08 +A16:07 CISPR 22 / FCC part 15, cl. B
LVD	EN60730-1:2005 + ... + A2:2008
LonMark	11001

### 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 90 mm (L x W x D)

### Note:

Optional HDIE available: 300°C for 2 hour or 600°C for ½ hour applications.  
Please refer to Hot Enclosures Catalogue or contact Safeguard Systems for details.



## Three Position Damper Interface

The Safeguard Systems 3PSFDI-M provides a complete LonWorks® device to control a single modulating actuator that incorporates two auxiliary switches.



ELECTROSTATIC SENSITIVE DEVICE

### THREE POSITION SMOKE FIRE DAMPER INTERFACE OPTIONS:

#### Auto Mode

Damper can be set to a balance position or drive open/closed and failsafe via spring-return or drives to the failsafe position.

#### Local Mode

Damper can be modulated via a 2-10V signal from the BMS and only instructed to failsafe by the system in the event of a fire alarm/fireman's override input.

## Dimensions and Mounting

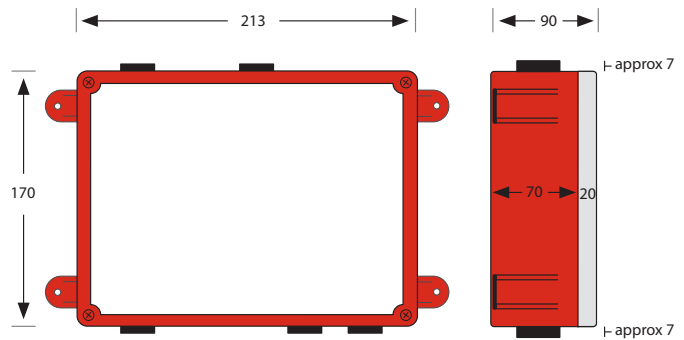
The compact and robust design of the interface enclosure allows the unit to be mounted to a duct, block wall, or stud wall.

Ensure the interface is located close enough to the actuator it is controlling/monitoring. Normally actuator leads are 1 m in length. 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 with blind washers.
- Do not drill the enclosure as this will affect its IP rating.

## Mounting Diagram



Four mounting holes Ø 6mm for mounting with suitable screws depending on whether mounting to a duct, block wall or stud wall.

Dimensions in mm.

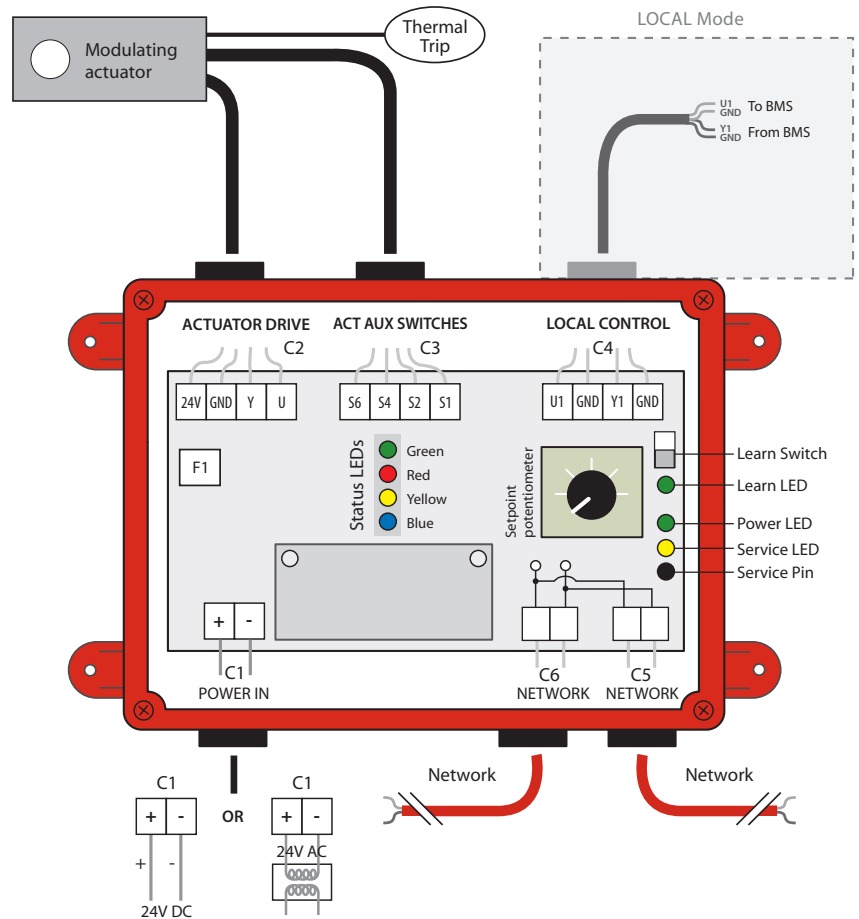
## Preparation

- 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 diameters up to 2.5 mm<sup>2</sup>. It is recommended that all wires are crimped to ease installation and replacement of the product.

## Installation

1. Disconnect the local supply before commencing any work on the interface.
2. Wire the interface in accordance with the wiring diagram shown across. If the actuator is located more than 5 m from the interface, then contact Safegard Systems for technical assistance.
3. It is recommended that the network cables are not run alongside any high voltage or high frequency sources. Network cables should not be mixed on an individual network as they have very different electrical characteristics and could render the system unreliable.
4. Once the wiring is complete, apply power to the interface.
5. The interface is now ready to be configured using the Safegard Builder installation tool.

## Wiring Diagram 3PSFDI-M in enclosure without lid

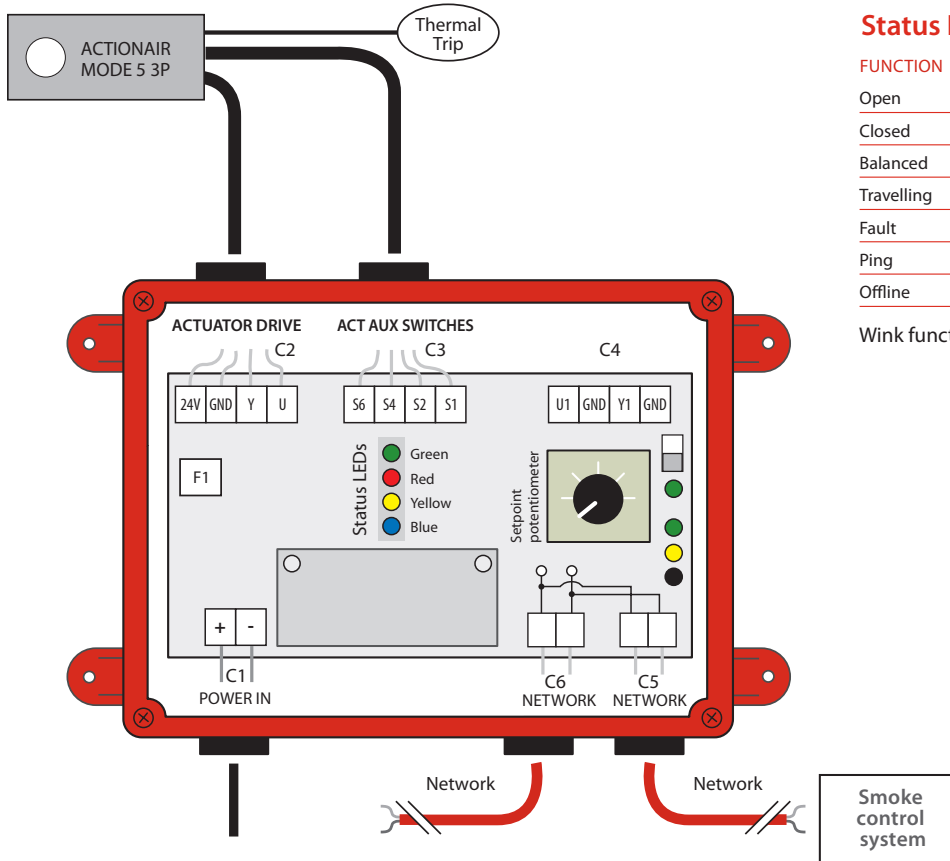


## Replacement Fuse

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

CONNECTOR	DESCRIPTION	CONNECTOR	DESCRIPTION
C1-1	24 V power	C4-4	U1 to BMS
C1-2	GND	C4-3	GND to BMS
C2-4	Actuator 24 V	C4-2	Y1 from BMS
C2-3	Actuator GND	C4-1	GND from BMS
C2-2	Actuator Y signal	C5-1	GND (do not connect)
C2-1	Actuator U signal	C5-2	Network
C3-4	S6	C5-3	Network
C3-3	S4	C6-1	GND (do not connect)
C3-2	S2	C6-2	Network
C3-1	S1	C6-3	Network

## Auto Mode

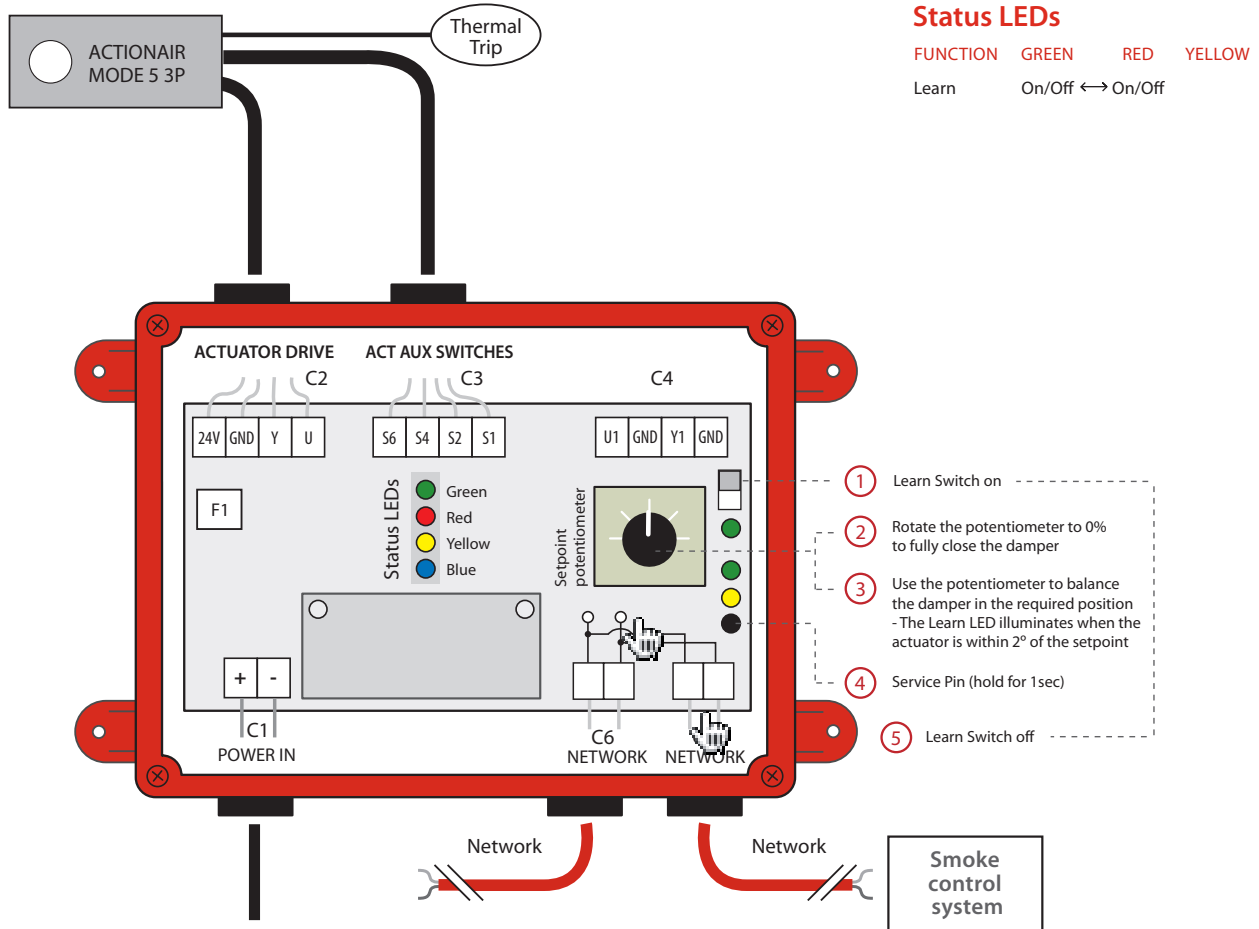


### Status LEDs

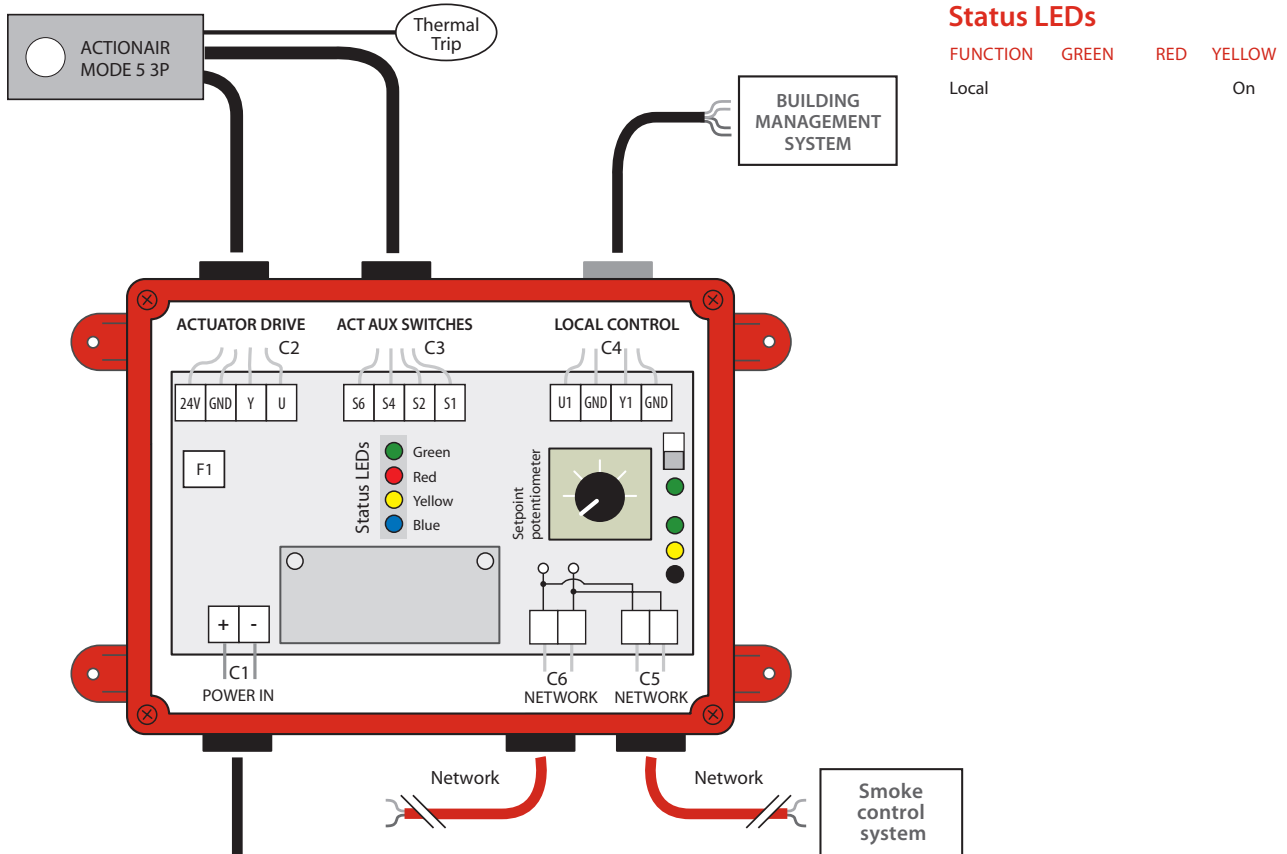
FUNCTION	GREEN	RED	YELLOW	BLUE
Open	On	Off		
Closed	Off	On		
Balanced	On	On		
Travelling	Flashing	Flashing		
Fault			Flashing	
Ping				One-shot
Offline	On	On	On	On

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

## Learn Mode



## Local Mode



## Three Position Smoke Fire Damper Interface Specifications

### LonWorks

Neuron chip	FT 5000
Transceiver type	FT-X2
Service functions	Service Pin, Service LED, and Neuron ID self-adhesive tag

### Supply

Input voltage	(24 ± 4.8) V AC, 50 Hz (24 ± 2.4) V DC
Max power consumption	1.3 W

### Output

Contact type	SPST mechanical relay contact
Max switched load	25 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

EMC	EN 60730-1:00+A1:04+A2:08+A16:07
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 90 mm (L x W x D)

#### Note:

Optional HDIE available: 300°C for 2 hour or 600°C for ½ hour applications.  
Please refer to Hot Enclosures Catalogue or contact Safeguard Systems for details.

 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.  
Product warranty 12 months from date of delivery.*

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

Swegon Air Management, South Street, Whitstable, Kent, CT5 3DU, UK  
T: 01227 276100 F: 01227 264262 E: sales@actionair.co.uk [www.actionair.co.uk](http://www.actionair.co.uk)

**actionair**

Unit 33, Southern Cross Business Park, Bray, Co. Wicklow, A98 HT99, Ireland  
T: +353 1 2761600 F: +353 1 2761611 E: info@safeguard.ie [www.safeguard.ie](http://www.safeguard.ie)

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