



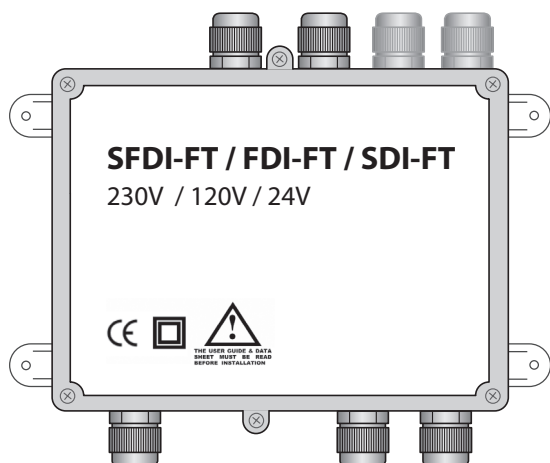
Lonworks® Damper Interface Catalogue

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 Actionair 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 Actionair **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

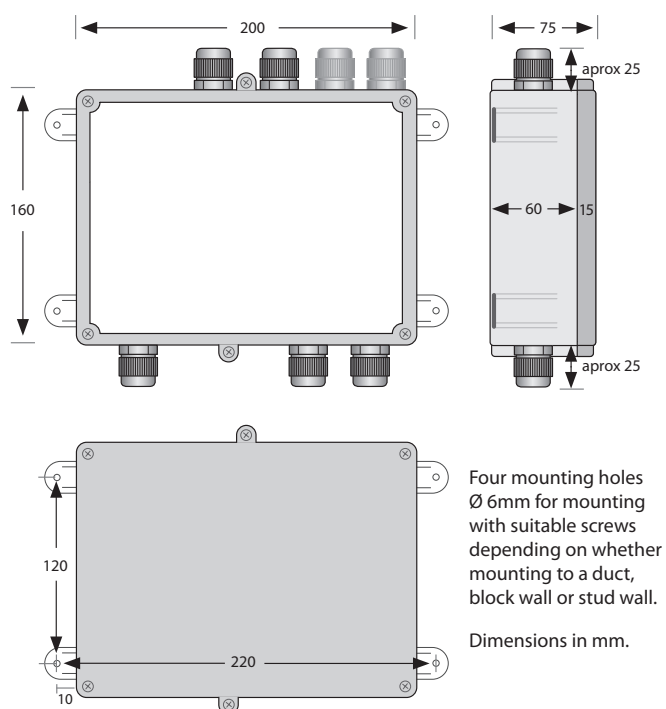
The Actionair **Fire Damper Interface** provides a complete LonWorks® communication device to failsafe, via an electromagnet, any spring-return fire damper. Monitoring of the open and/or closed position is optional.

SDI-FT

The Actionair **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, 120V, 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.

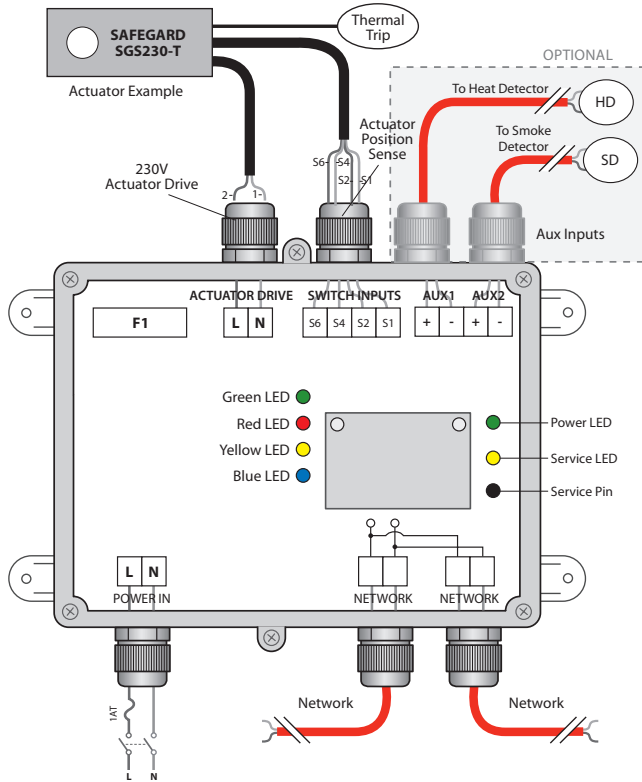
Preparation

- 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 2.5mm². 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

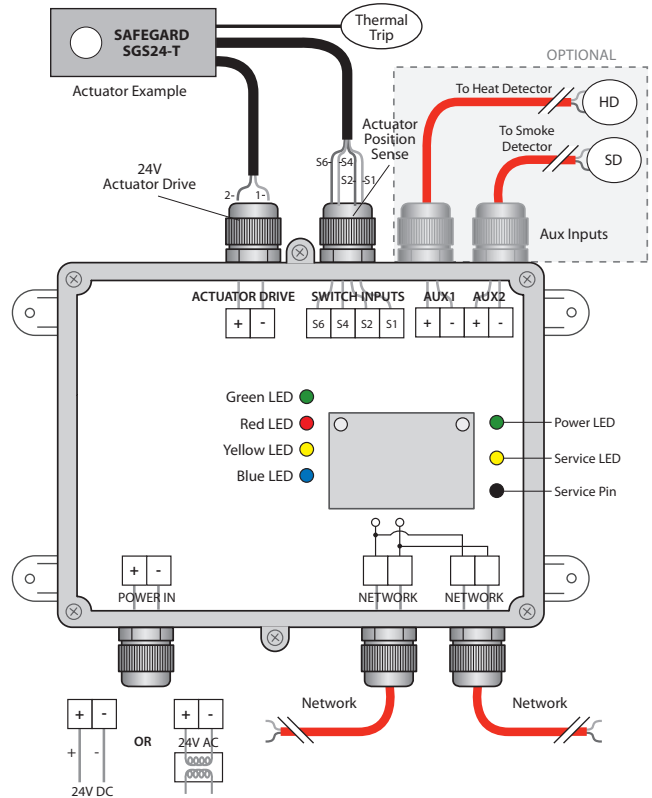
Installation

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 Actionair 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 Actionair system.

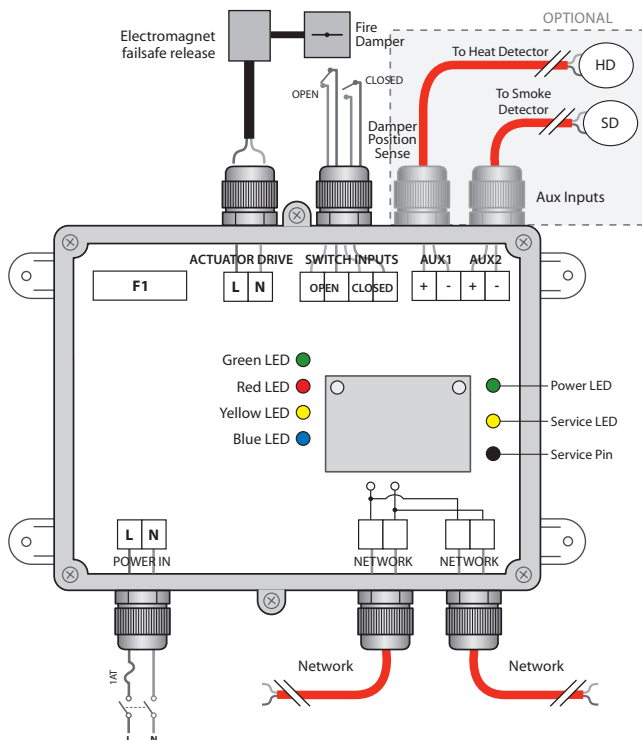
SFDI-FT Wiring: 230V & 120V



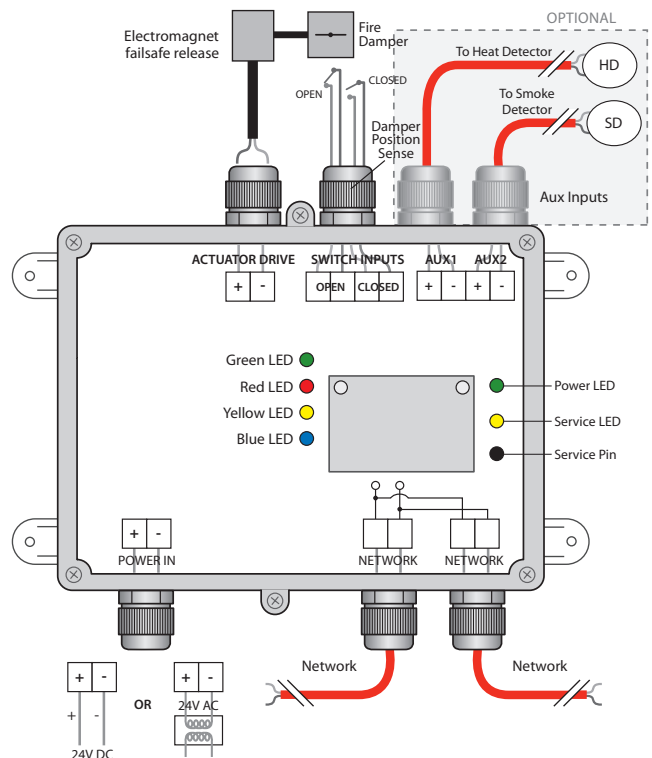
SFDI-FT Wiring: 24V



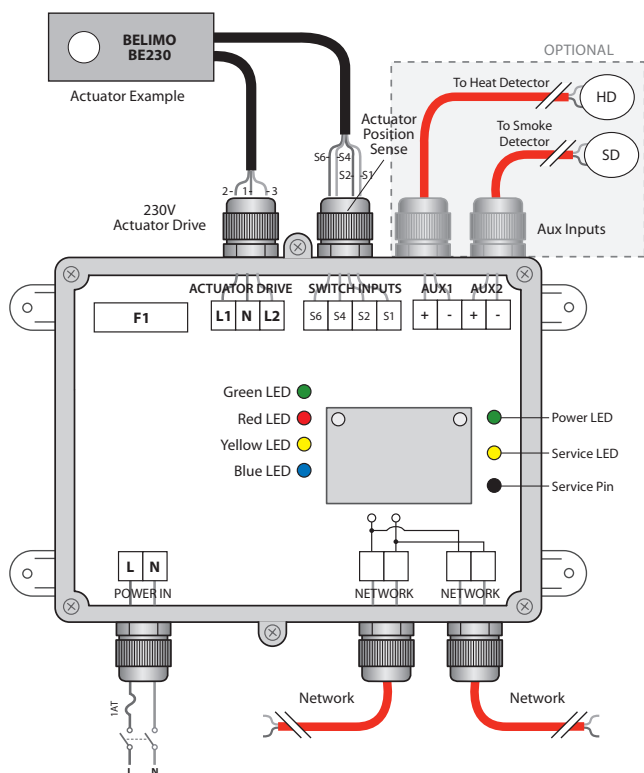
FDI-FT Wiring: 230V & 120V



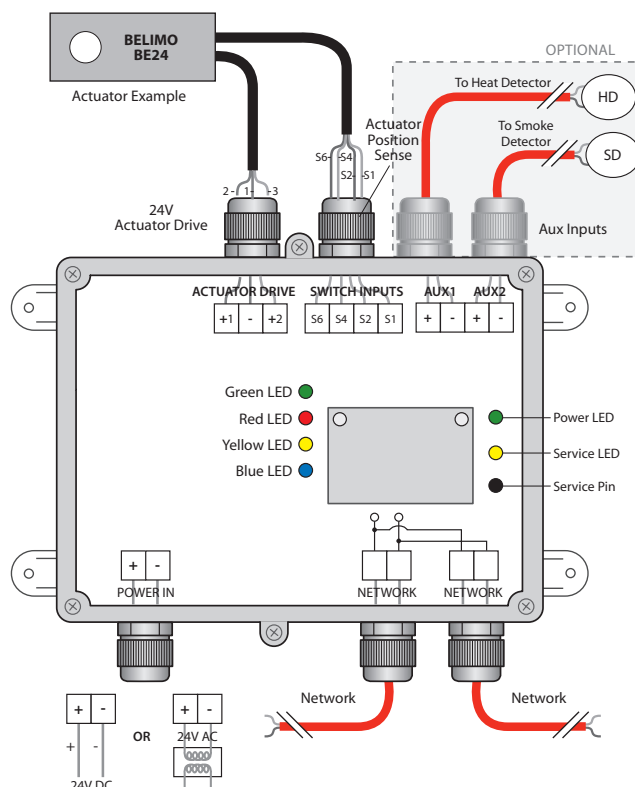
FDI-FT Wiring: 24V



SDI-FT Wiring: 230V & 120V



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

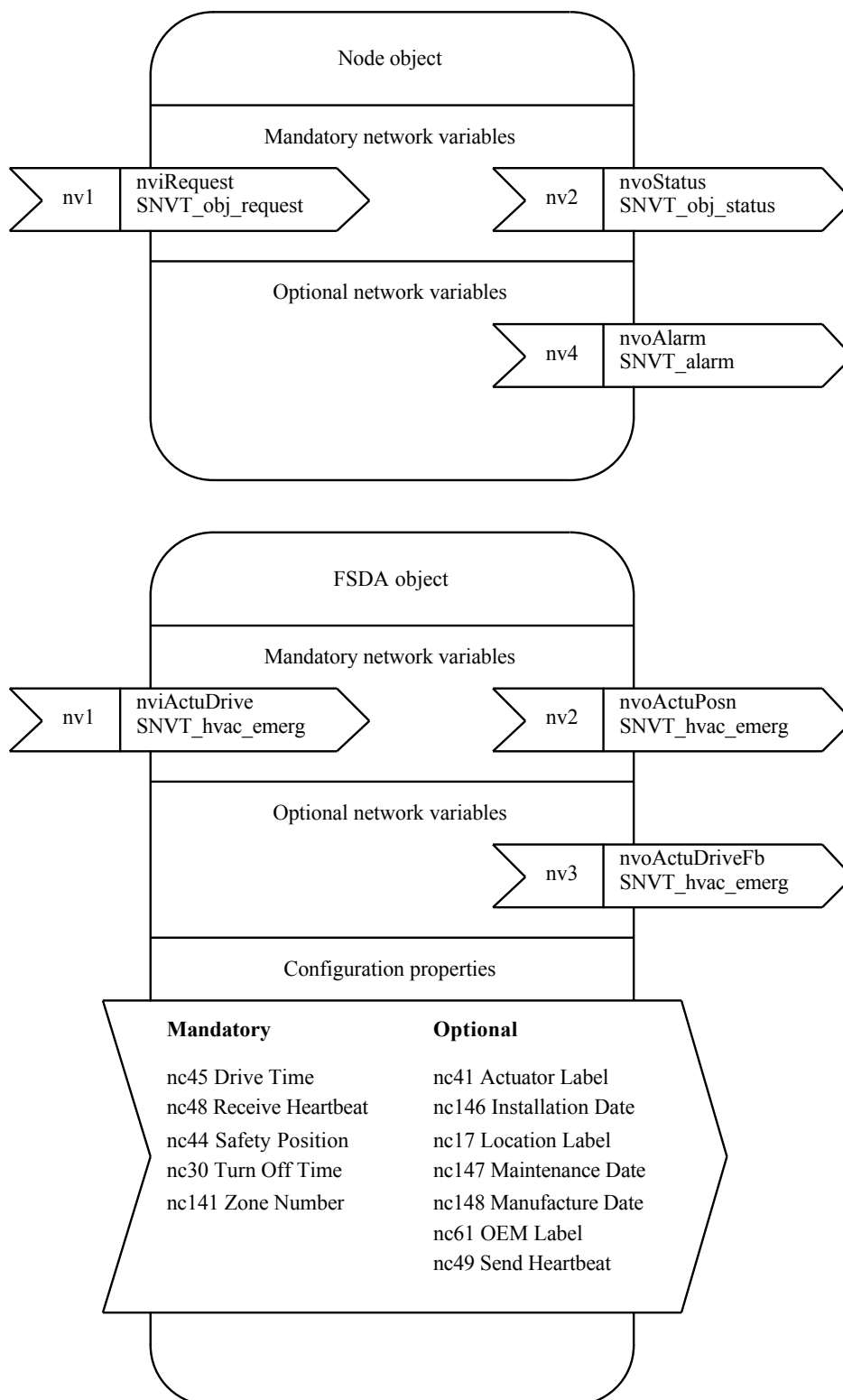
5 x 20mm, Time-Lag Fuse, 1A rated (see F1 on wiring diagrams); for example Littlefuse 215 series

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 |
|----------------|---|

| | |
|---------------------------|-------|
| 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

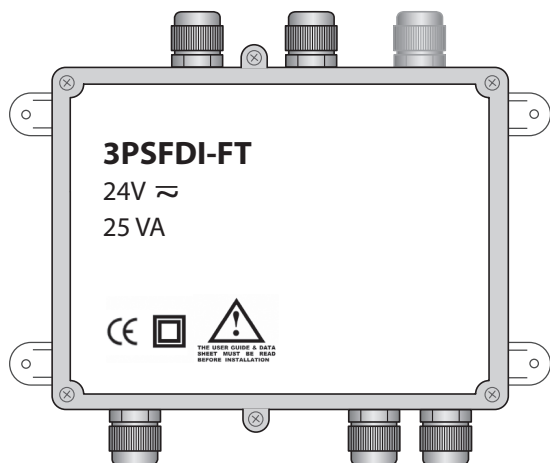
| | |
|-----------------|--|
| Agency Listings | CE |
| EMC | EN60730-1:00+A1:04+A2:08 +A16:07 CISPR 22 / FCC part 15, cl. B |
| LVD | EN60730-1:2005 + ... + A2:2008 |
| LonMark | 11001 |

Enclosure

| | |
|--------------------------|--|
| Material | ABS base with polycarbonate lid |
| IP rating | IP 54 |
| Flammability | UL 94V-0 |
| Pollution | Category 2 |
| Dimensions (excl glands) | 200 mm x 120 mm x 75 mm (L x W x D) |
| Dimensions (incl glands) | 200 mm x 170 mm x 75 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 Actionair for details.



Three Position Damper Interface

The Actionair 3PSFDI-FT 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

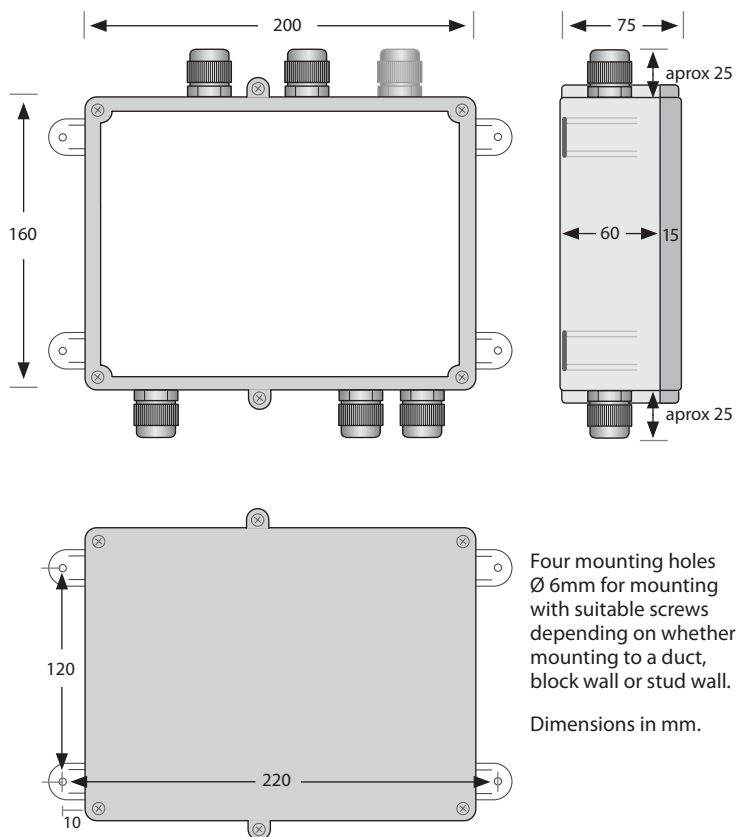
The compact and robust design of the interface enclosure allows the unit to be mounted to a duct, block wall, or stud wall.

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



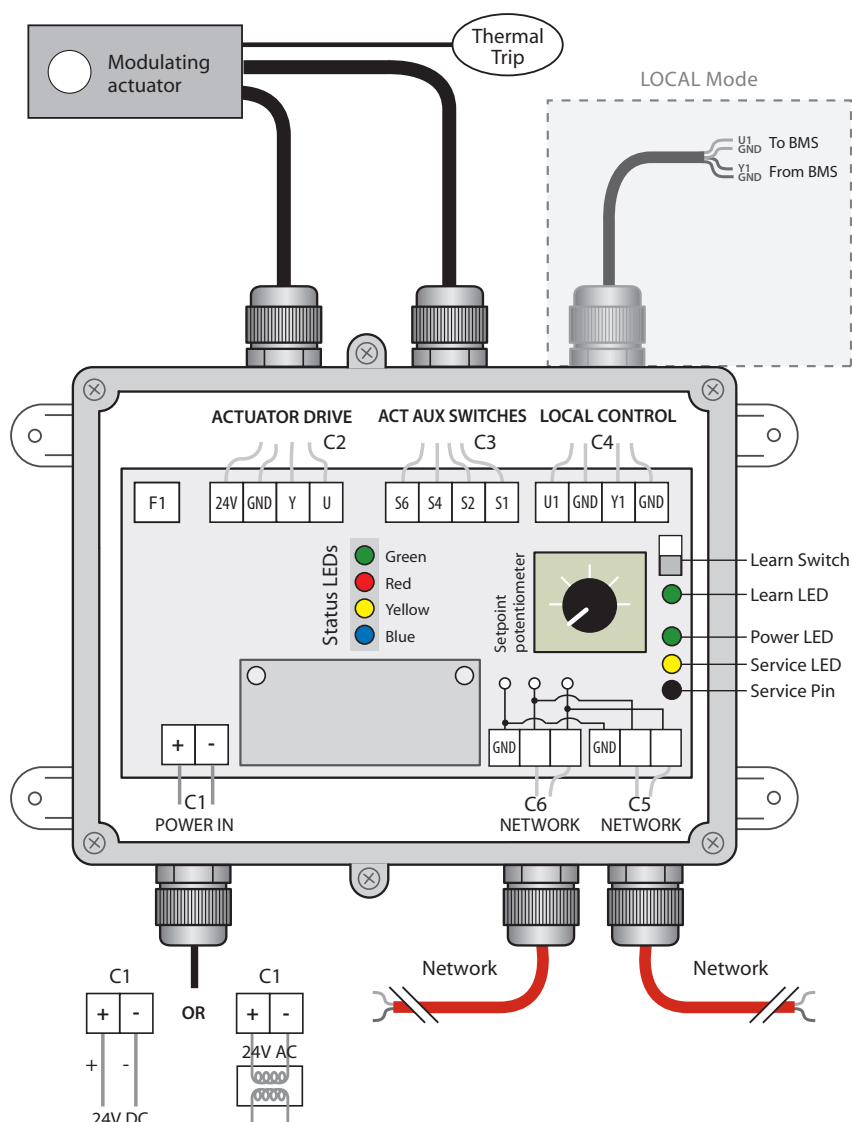
Preparation

- 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 mm². It is recommended that all wires are crimped to ease installation and replacement of the product.

Installation

- Disconnect the local supply before commencing any work on the interface.
- 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 Actionair for technical assistance.
- 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.
- Once the wiring is complete, apply power to the interface.
- The interface is now ready to be configured using the Safeguard Builder installation tool.

Wiring Diagram 3PSFDI-FT in enclosure without lid

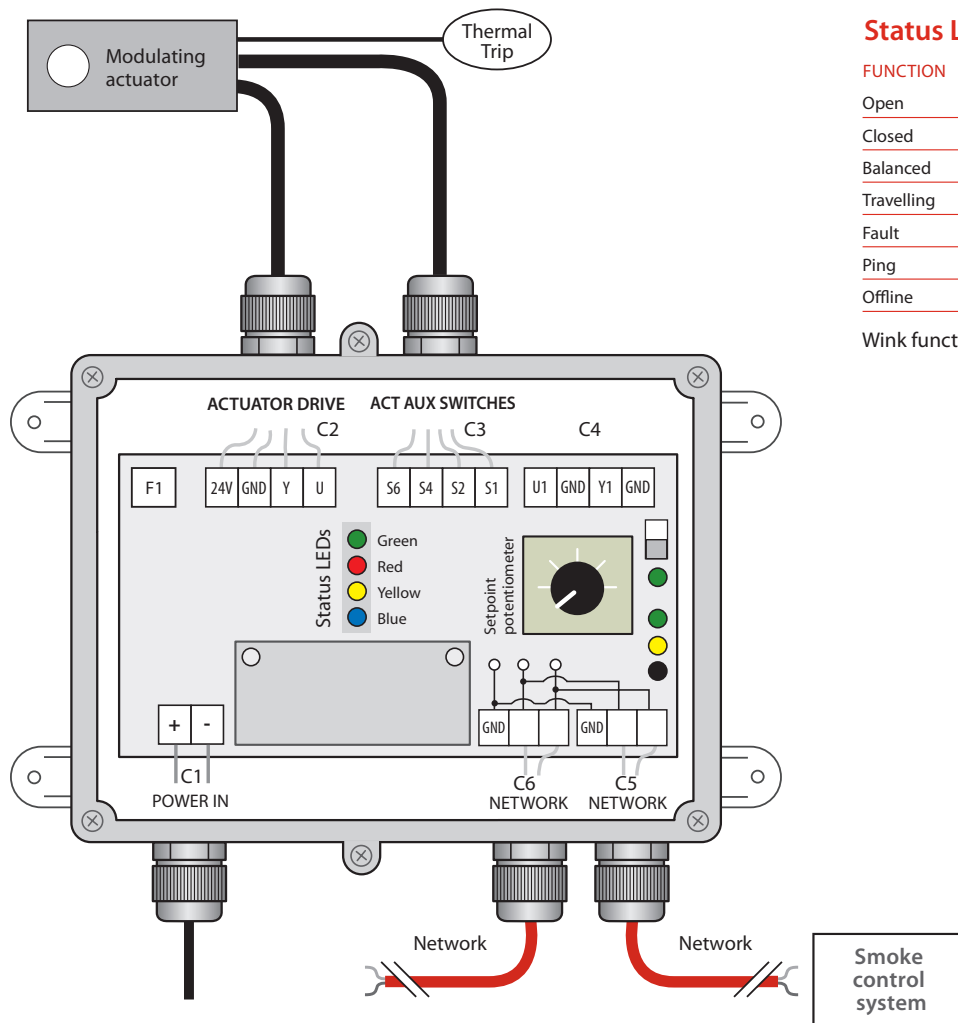


Replacement Fuse

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

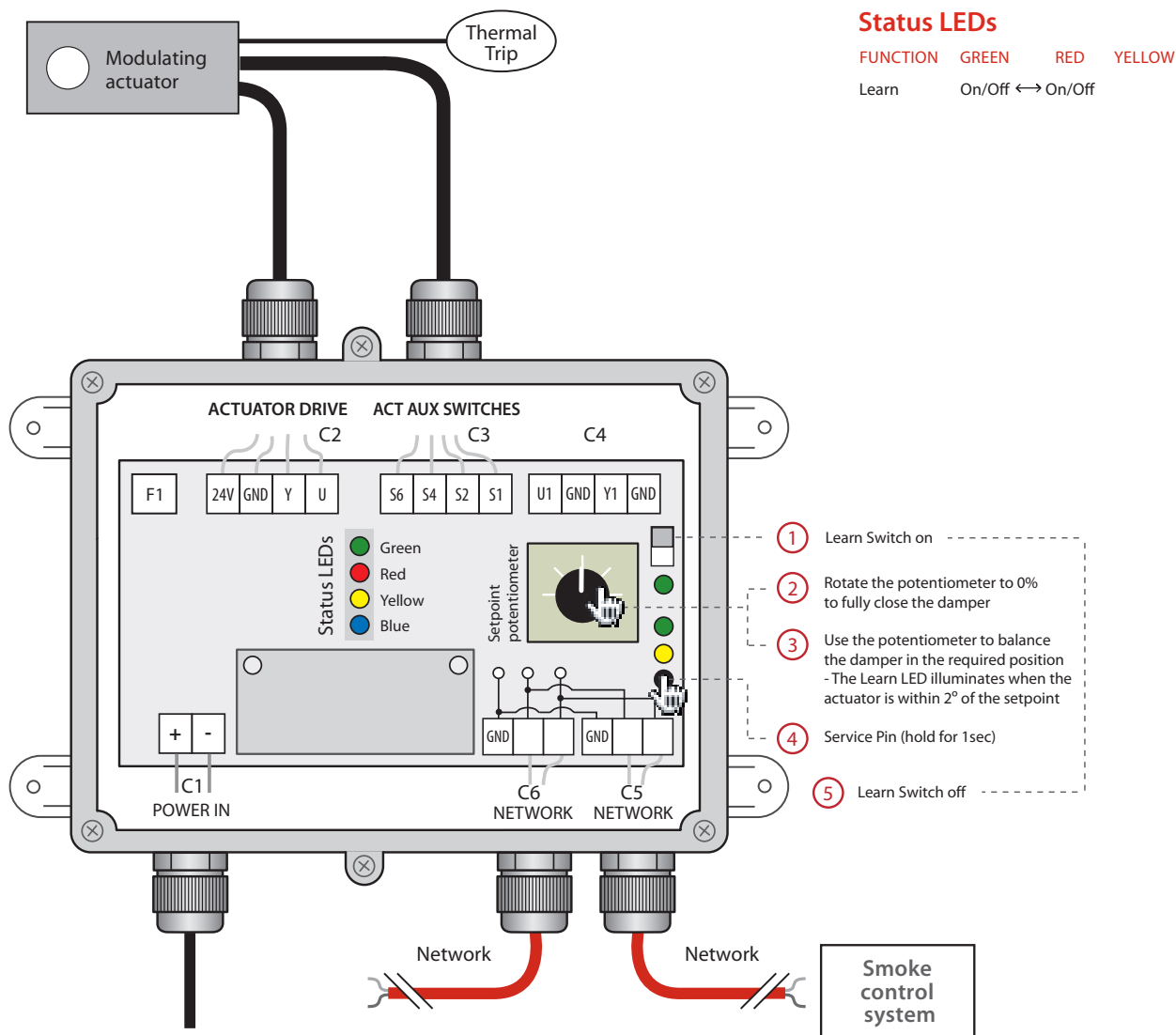


Status LEDs

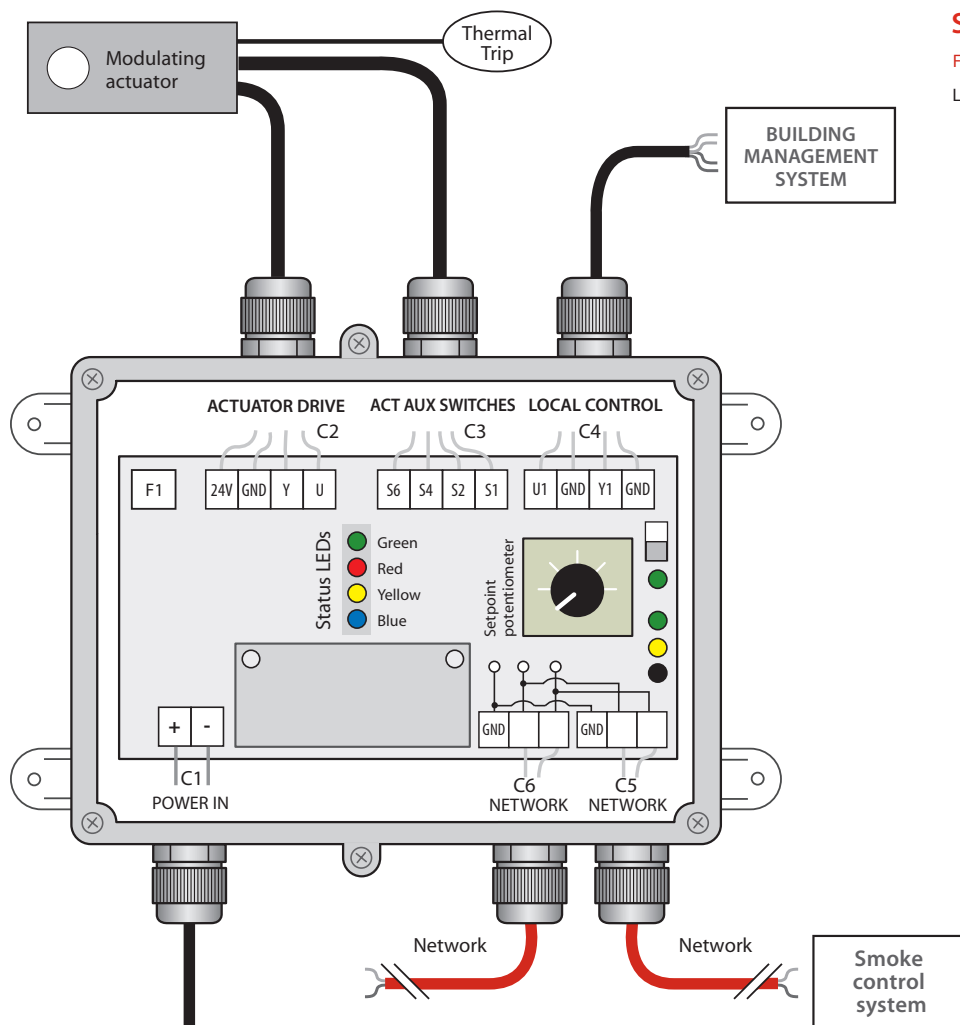
| FUNCTION | GREEN | RED | YELLOW | BLUE |
|------------|----------|----------|----------|----------|
| Open | On | Off | | |
| Closed | Off | On | | |
| Balanced | On | On | | |
| Travelling | Flashing | Flashing | | |
| Fault | | | Flashing | |
| Ping | | | | One-shot |
| Offline | On | On | On | On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

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 (excl glands) | 200 mm x 120 mm x 75 mm (L x W x D) |
| Dimensions (incl glands) | 200 mm x 170 mm x 75 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 Actionair for details.

ALSO AVAILABLE FROM SAFEGARD



DAMPERS

- Smoke/Fire dampers
- Fire dampers
- VCD's
- Shut-off dampers
- Access doors
- Industrial & heavy duty dampers (UL approved)



DAMPER CONTROL PRODUCTS

Actionair have been the market leaders in this area of damper control & monitoring systems and offer a comprehensive range of control panel solutions for every project size and application.

From our top specification V3 addressable system to our new low cost Smart system for up to 36 dampers, we have a control panel solution to meet all requirements. We also offer standard electro-mechanical panels where low damper quantity and simple control is required.

 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 Actionair standard terms and conditions.

Product warranty 12 months from date of delivery.

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

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