Modbus Damper Interface Catalogue

Two 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.
Two Position Damper Interface

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

ELECTROSTATIC SENSITIVE DEVICE

TWO POSITION SMOKE FIRE DAMPER INTERFACE OPTIONS:

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

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

SDI-M
The Actionair Smoke Damper Interface provides a complete Modbus 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**

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.

**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.

**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 Safegard 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-M, the electromagnet failsafe release is optional. If used, the electromagnet must be protected by a suitable snubber device.
5. If FDI-M, the monitoring of the damper positions is optional.
6. Once wiring is complete, apply power to the DI-M. 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 Safegard system.
**MODBUS DAMPER INTERFACE CATALOGUE**

**SFDI-M Wiring: 230V & 120V**

- SAFEGARD SGS230-T
- Actuator Drive
- Actuator Position Sense
- Optional Aux Inputs
- To Heat Detector (HD)
- To Smoke Detector (SD)
- Network
- Power IN
- Actuator Example
- Damper Position Sense
- Electromagnet
- Fail safe release

**FDI-M Wiring: 230V & 120V**

- SAFEGARD SGS24-T
- Actuator Position Sense
- To Heat Detector (HD)
- To Smoke Detector (SD)
- Optional Aux Inputs
- Network
- Power IN
- Electromagnet
- Fail safe release

**SFDI-M Wiring: 24V**

- Actuator Example
- Damper Position Sense
- Electromagnet
- Fail safe release

**FDI-M Wiring: 24V**

- Electromagnet
- Fail safe release
**SDI-M Wiring: 230V & 120V**

![Diagram of SDI-M Wiring: 230V & 120V]

**SDI-M Wiring: 24V**

![Diagram of 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

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>GREEN</th>
<th>RED</th>
<th>YELLOW</th>
<th>BLUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
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<td>Off</td>
<td></td>
<td></td>
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<tr>
<td>Closed</td>
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<tr>
<td>Travelling</td>
<td>Flashing</td>
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<tr>
<td>Fault</td>
<td>Flashing</td>
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<tr>
<td>Ping</td>
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<td></td>
<td></td>
<td>On</td>
</tr>
<tr>
<td>Offline</td>
<td>On</td>
<td>On</td>
<td>On</td>
<td>On</td>
</tr>
</tbody>
</table>

Wink function: Service LED flashes for 5s
### Two Position Smoke Fire Damper Interface Specifications

**Modbus**
- Chip: Arm Cortex-M3
- 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 ± 2.4) V DC
- Maximum power consumption: 2.5 W

**Outputs**
- 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

**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 Safegard Systems for details.

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**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.

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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