



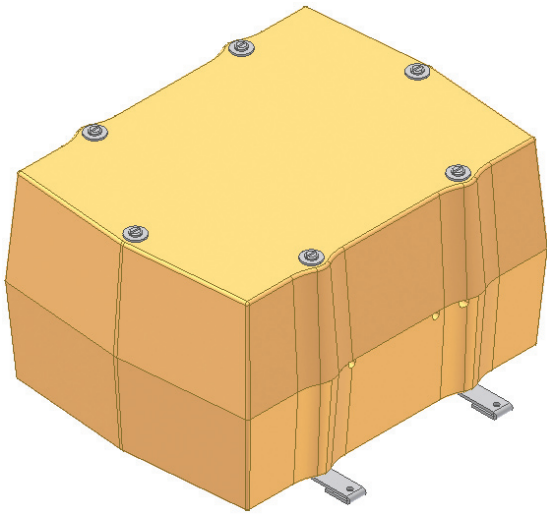
# Safeguard Systems

THE DAMPER SPECIALIST COMPANY



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

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.



The Safeguard H3PSFDI provides a complete Lonworks® communication device to control a single 24V modulating actuator (spring-return or drive-open/drive-close) that incorporates two auxiliary switches.

The Hot Three Position Smoke Fire Damper Interface is used to integrate to the Safeguard V3 System when the operation of balanced smoke extract or modulating smoke dampers is required for temperatures up to 300°C for one hour.

Installation Instructions and Datasheet

## Hot Three Position Smoke Fire Damper Interface (24V AC)



# Safeguard Systems

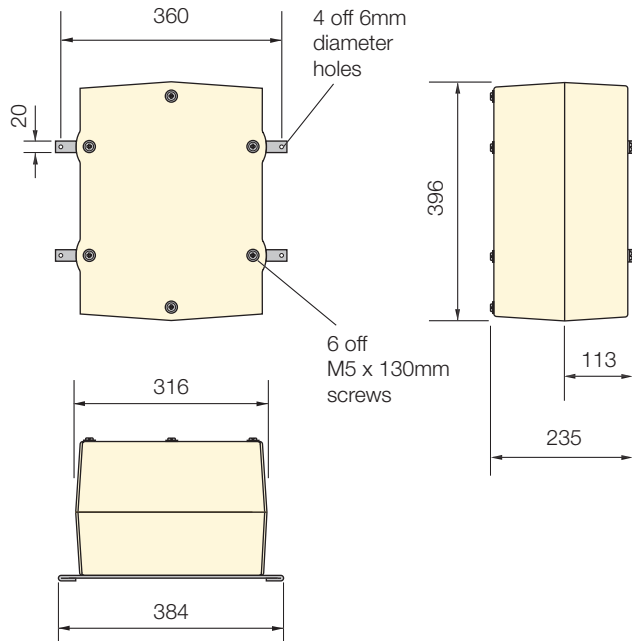
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## Typical Installation

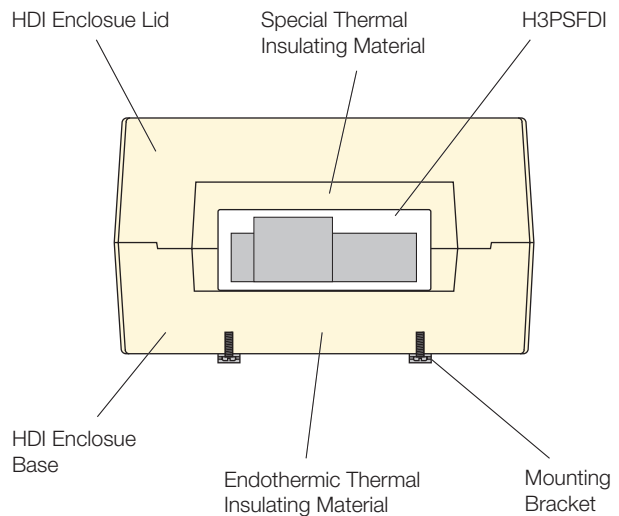
1. Fix the 2 off mounting brackets provided, to the underside of the HDI enclosure, by screwing into the threaded inserts with the M5 screws provided.
2. Allowing suitable cable access around the HDI enclosure, position it in desired location, and mark fixing positions using the bracket holes as a template.
3. Remove HDI enclosure lid by unscrewing the 6 off long screws/large flat washers
4. Securely mount the HDI base in its intended position. Hole specification and fixings by others.
5. Connect cables and programme/control locally depending on application (see page 4, 5 & 6). Please fit strain relief cable clamps, as supplied, on all incoming cables so that the clamp butts up against the inside of the HDI enclosure.
6. Refit HDI enclosure lid with the 6 off screws/large flat washers, taking care to position cables in grooves. The inside insulation is sufficiently soft to compress locally around cables when the lid is screwed down.

**Note:** HDI lid may need to be removed and refitted again during testing/commissioning.

## Mounting Diagram



## Sectional View of HDI Enclosure and H3PSFDI





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## 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 terminal 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.

## Installation

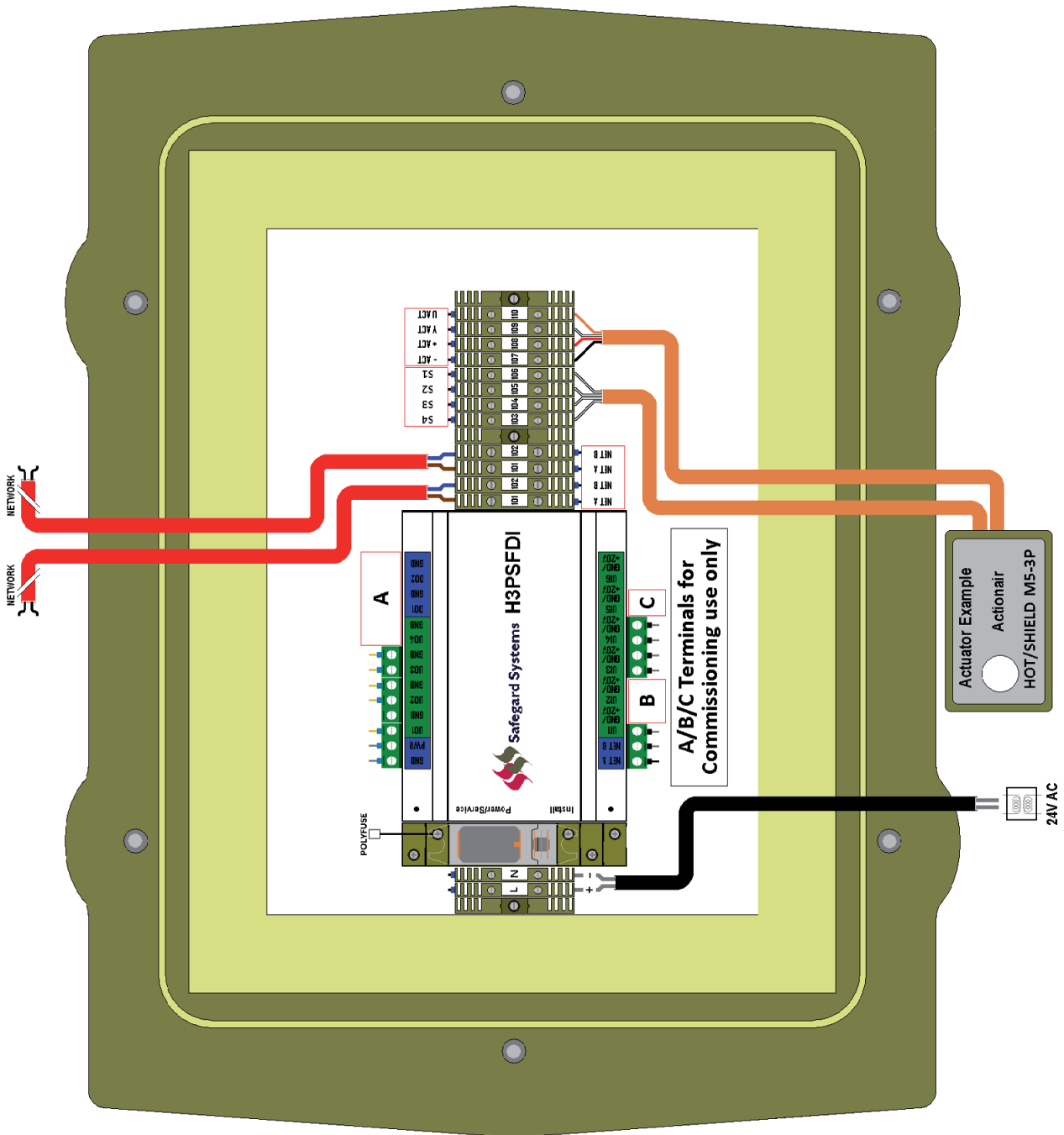
1. Disconnect the local supply before commencing any work on this equipment.
2. Please fit strain relief cable clamps, as supplied, on all incoming cables so that the clamp butts up against the inside of the HDI enclosure.
3. Wire the incoming supply in accordance with the wiring diagram shown on page 4.
4. It is 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.
5. Apply power to the unit and the green power LED should illuminate to indicate the presence of power.
6. Use the commissioning tool to programme the learn position for operating mode AUTO or remove link and wire for LOCAL as shown on pages 4, 5 & 6 respectfully.
7. The unit is now ready to be configured using a standard LonWorks tool such as LonMaker or the Safeguard system.



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## Wiring diagram with HDI enclosure lid not fitted - V3 Control





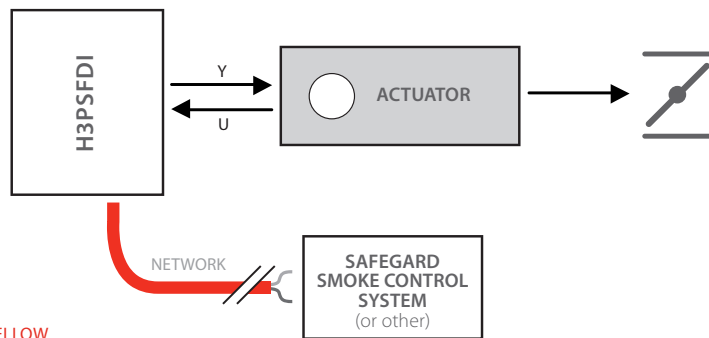


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## Operating Mode: AUTO

**N.B.** Remove link U16 GND/+20V from H3PSFDI (see page 4).



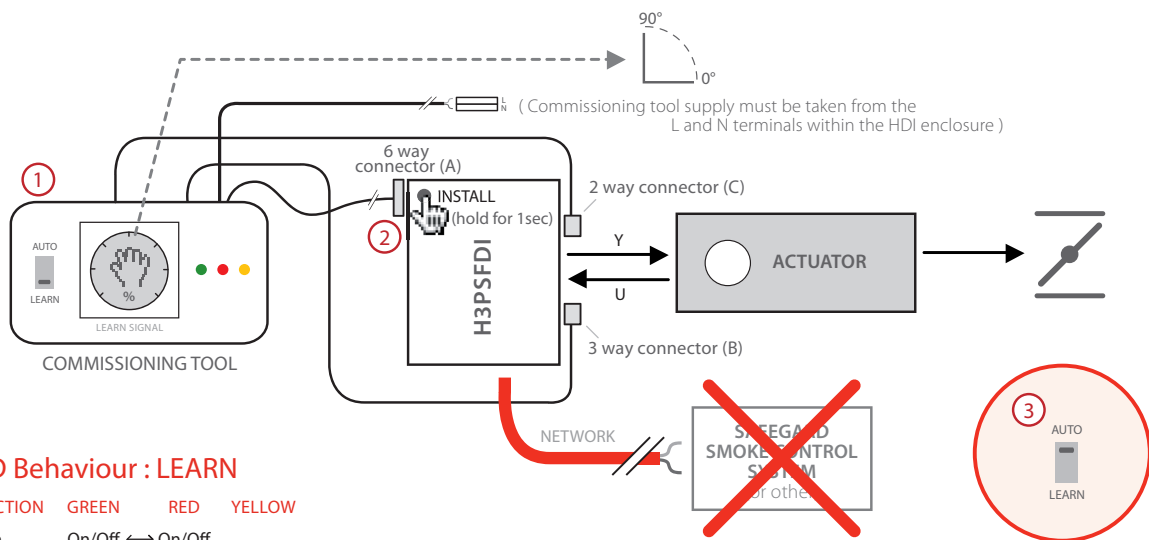
### LED Behaviour : AUTO

FUNCTION	GREEN	RED	YELLOW
Open	On	Off	
Closed	Off	On	
Balanced	On	On	
Travelling	Flashing	Flashing	
Fault			Flashing
Offline	On	On	On

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

## Operating Mode: LEARN

**N.B.** Remove link U16 GND/+20V from H3PSFDI (see page 4).



### LED Behaviour : LEARN

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

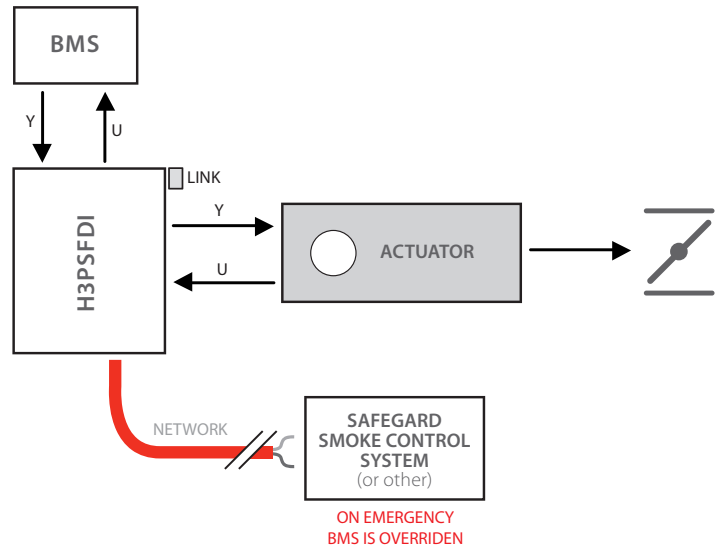


# Safeguard Systems

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## Operating Mode: LOCAL

**N.B.** Ensure link U16 GND/+20V in H3PSFDI is present (see page 4).



### LED Behaviour : LOCAL

FUNCTION	GREEN	RED	YELLOW
Local		On	

## Terminal Connections

TERMINAL NUMBER	DESCRIPTION
L	LIVE (24V AC)
N	NEUTRAL (24V)
101	NETWORK A
102	NETWORK B
103	ACTUATOR S6
104	ACTUATOR S4
105	ACTUATOR S2
106	ACTUATOR S1
107	ACTUATOR POWER -
108	ACTUATOR POWER +
109	ACTUATOR Y SIGNAL
110	ACTUATOR U SIGNAL
111	LOCAL Y SIGNAL -
112	LOCAL Y SIGNAL +
113	LOCAL U SIGNAL -
114	LOCAL U SIGNAL +



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## Specification

### LonWorks

Neuron chip	FT 3150 V13, 20 MHz
Transceiver type	TP/FT-10
Service functions	Service pin, service LED and neuron ID self-adhesive tag

### Supply

Input voltage	21-28 V AC, 50 Hz
Maximum power consumption	10 W

### Inputs

*Measuring voltage U	2-10 V DC
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### Outputs

Maximum load	10 VA at 24 V AC
*Control Signal Y	0-10 V DC

### Environmental

Operating temperature	300° C for 1 hour
Storage temperature	-20° C to 50° C
Humidity	80 % RH to 31 °C decreasing linearly to 50 % RH at 40 °C
Maximum altitude	2000 m

### Conformance

EMC	EN 55011: 1999 + A2: 2002 EN 61000-6-1: 2001
LVD	EN 61010-1: 2001

### Enclosure

Material	Pyrofund C
Dimensions	396 mm x 316 mm x 235 mm (L x W x D)

### Commissioning Tool *(c/w 3m leads)*

Dimensions	135 mm x 75 mm x 65 mm (L x W x D)
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\*Maximum cable distance 10 m

 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.**

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