

## FSDI INTELLIGENT LIFE SAFETY DAMPER INTERFACE

### APPLICATION

Ruskin model FSDI intelligent life safety damper interface was developed to help satisfy the NFPA and fire code requirements for scheduled testing of life safety dampers via Remote Monitoring and Testing. FSDI provides the necessary interface to allow communications between the damper and the Ruskin Inspector™ monitoring and testing panel (model FSDPC). Any life safety damper equipped with the FSDI is Ruskin Inspector™ ready. Up to 500 dampers may be installed on a single panel. The health and status of these dampers are continuously monitored and logged. All damper activity is recorded through the FSDI and displayed on the FSDPC panel screen for Authorities Having Jurisdiction (AHJ) verification. LED lights on the FSDI circuit give visual health and status of the damper at each device location. During a life safety event, the building fire control panel takes precedence over the FSDI and FSDPC devices.

### STANDARD CONSTRUCTION

#### NEMA 12 ENCLOSURE

Plenum rated, high impact ABS enclosure with tinted Polycarbonate cover, UL 94V-0

#### COVER FASTENERS

Captive screws

#### CIRCUIT

RoHS compliant, with surface mount LED lights indicating health and status

#### SUPPLY

120 VAC, 50/60 Hz

#### INPUTS

Non-isolated dry contacts  
Sense Current 19mA at 12 VDC

#### OUTPUTS

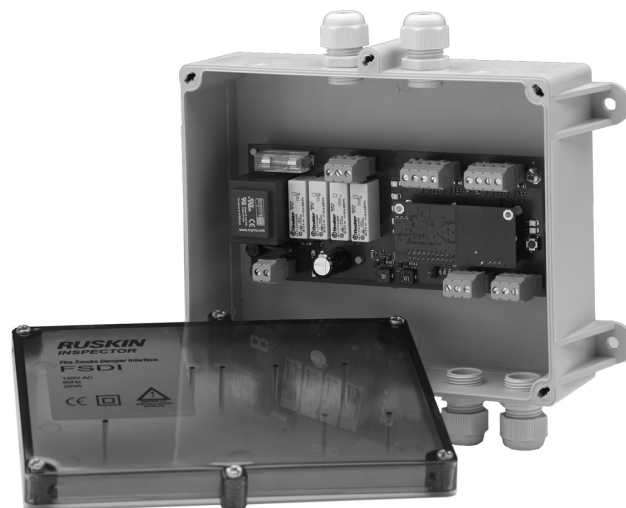
DPCO mechanical relay contacts  
Maximum switch load 10A @ 250V, Fused.

#### COMMUNICATIONS

Any building management network

#### ENVIRONMENTAL RATINGS

Operating 23° to 158° F (-5° to 70° C)  
Storage 5° to 158° F (-15° to 70° C)  
Humidity 25% to 90% RH 158° F (70° C), 6,562 ft. (2000m) maximum altitude



### VARIATIONS

- 24 VAC/DC power supply
- 230 VAC power supply
- Modulating interface (requires 0-10 or 2-10 VDC actuator)
- Three position interface (requires 0-10 or 2-10 VDC actuator)
- 42" (1067) flex conduit option when required for connections from FSDI enclosure to EFL

#### Notes:

1. Dimension values shown in ( ) indicate metric units
2. Refer to installation manual for additional details
3. US Patent No. 7,241,218

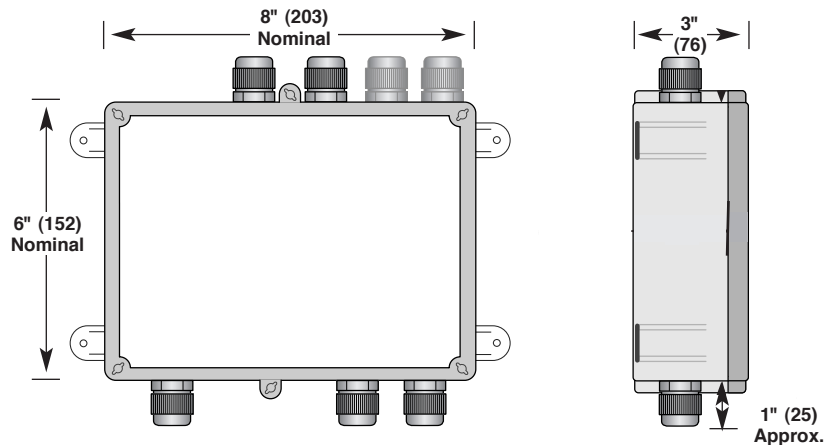
## DIMENSIONAL DETAILS

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

Ensure the FSDI is accessible when wired to the actuator it is controlling/monitoring. Select mounting location to ensure the FSDI is accessible for future maintenance purposes after walls and other equipment are built and installed.

Please note:

- Unused cable entries should be sealed with blind washers.
- Do not drill the enclosure as this will negate its rating.
- Dimensions in parenthesis ( ) indicate millimeters.



## INSTALLATION AND WIRING DETAILS

### PREPARATION

- Only trained and qualified personnel are 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 14 awg. It is recommended that all wires be landed on connectors provided.

### INSTALLATION

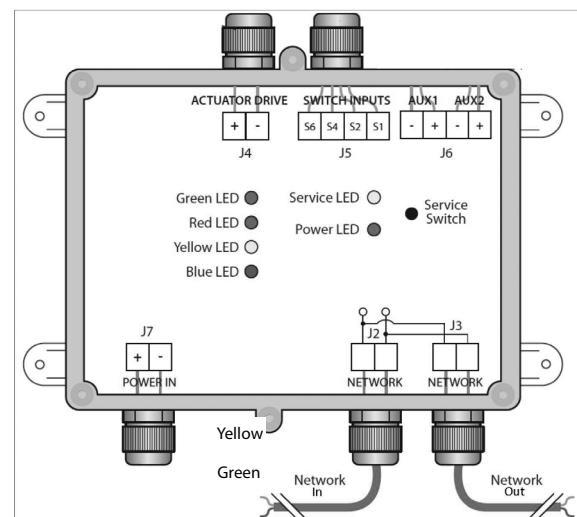
1. Disconnect the local supply before starting any work on the FSDI.
2. Wire the FSDI in accordance with the wiring diagram shown (right). If actuator is to be located more than 16 feet from the FSDI, then contact Ruskin for technical assistance.
3. Please be aware that the switch and auxiliary inputs 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 fail condition.

The network cables must not run along 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. Once wiring is complete, apply power to the FSDI. The green power LED should illuminate to indicate the presence of power.
5. Use Ruskin specified network cable only.
6. Maximum length between devices should not exceed 820 ft. Maximum per network channel is 1,500 ft. without Network Extender option.

### WIRING DIAGRAM

(FSDI in enclosure without lid fitted)



### LED BEHAVIOR

Wink function: Service LED flashes for 5s

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




## SUGGESTED SPECIFICATION

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To support NFPA and fire code requirements for scheduled testing, all life safety dampers shall be equipped with interface to facilitate communication with a central monitoring and testing panel. Interface shall be housed in a UL94V-0 rated enclosure. The enclosure shall provide a minimum protection equivalent to a NEMA 12 rating.

Interface shall continuously communicate damper health and status to the central monitoring and testing panel. Surface mount LED lights shall provide local health and status visual indication at each damper location. Damper interface shall be in all respects equivalent to Ruskin model FSDI.

### SYMBOLS

-  Compiles with European standards
-  IEC 60417-5172 Equipment protected throughout by DOUBLE INSULATION
-  Compiles to LonMark Interoperability Guidelines (ISO 7000-0434)

### 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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**RUSKIN**<sup>®</sup>

3900 Dr. Greaves Rd.  
Kansas City, MO 64030  
(816) 761-7476  
FAX (816) 765-8955

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