

RUSKIN **Inspector**™



MONITORING & TESTING

**PROTECTING LIVES AND PROPERTY
WITH INTELLIGENT DAMPER SOLUTIONS**

Smoke... the silent killer

Introduction

Consultants in the field of fire engineering have long recognized the danger to human life and damage to property that can be caused by smoke spreading through buildings, even when the fire is confined to a small area.

Fire/smoke protection saves human lives as well as keeping damage to property and contents to an absolute minimum.

Control measures for fire/smoke protection, in old and new buildings, comprise a wide variety of systems and devices that must be carefully integrated in order to ensure maximum safety.

One of the most important tasks is performed by the automatic fire and smoke dampers that are incorporated into HVAC systems. In an emergency they must close to contain the fire and smoke and prevent their spread through the duct, or open to allow smoke extraction to take place.

The Ruskin Classic Inspector™ represents a new generation fire/smoke damper system. It has been designed with the user in mind, providing an advanced tool that simplifies installation and commissioning of fire/smoke dampers. The (FSDPC) Panel PC operates on an embedded platform and utilizes solid state technology for optimum reliability.

Its server architecture delivers new benefits such as reduced commissioning time and simplified operation for continuous monitoring and automated testing of fire/smoke dampers.



TOP 6 BENEFITS

- Automatic scheduled sequential test or user activated testing of all or by zone, meeting the requirements of the NFPA code and minimizing on site disruption and cost
- All activity logged, including a separate test log to meet the NFPA documentation requirements
- Cost effective 24/7 monitoring of dampers so that in the event of a damper failure immediate action can be taken, especially when serving a hospital isolation ward or operating theater and the implications thereof
- All damper details available from PC touch screen, including detailed damper location saving major time on site in the event of a failure due to not having to locate and rely on "as built" drawings
- Regular exercising of actuators minimizes future maintenance issues and costs
- One source for fully commissioned dampers & monitoring/test system

TYPICAL APPLICATIONS

- Airports
- Hospitals
- Hotels
- Office Buildings
- School Campuses
- Retrofit



Specification

Control Panel (FSDPC)

The Ruskin Classic Inspector™ consists of a Panel PC, UPS and pre-loaded software. The system communicates with damper interfaces to provide intelligent monitoring of motorized fire/smoke dampers and fire dampers. The data network cabling enables substantial reduction in cost when compared with conventional systems.

The FSDPC Panel PC is supplied with Ruskin Classic Inspector™ software and operates on an extremely user friendly embedded platform. The server architecture delivers new benefits such as reduced commissioning time, ease of configuration, simplified operation and automatic scheduled damper testing.



Fire Smoke Damper Interface (FSDI and 3PFSDI)

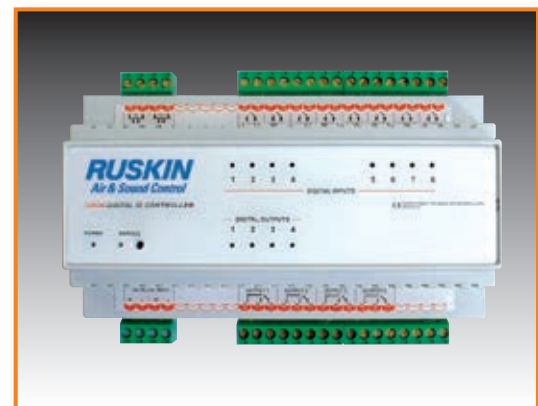
Model FSDI is required for each fire/smoke damper used with the Ruskin Classic Inspector™ System. The FSDI monitors and tests motorized fire/smoke and fire dampers. The device ensures correct operation and status of each damper and provides an alarm at the FSDPC Panel PC in the event of damper failure.

Model 3PFSDI is required with a 0-10VDC or 2-10VDC actuator, the 3P FSDI functions as either a modulating or three position damper. This feature is field selectable and makes the damper suitable for full control or balancing applications.

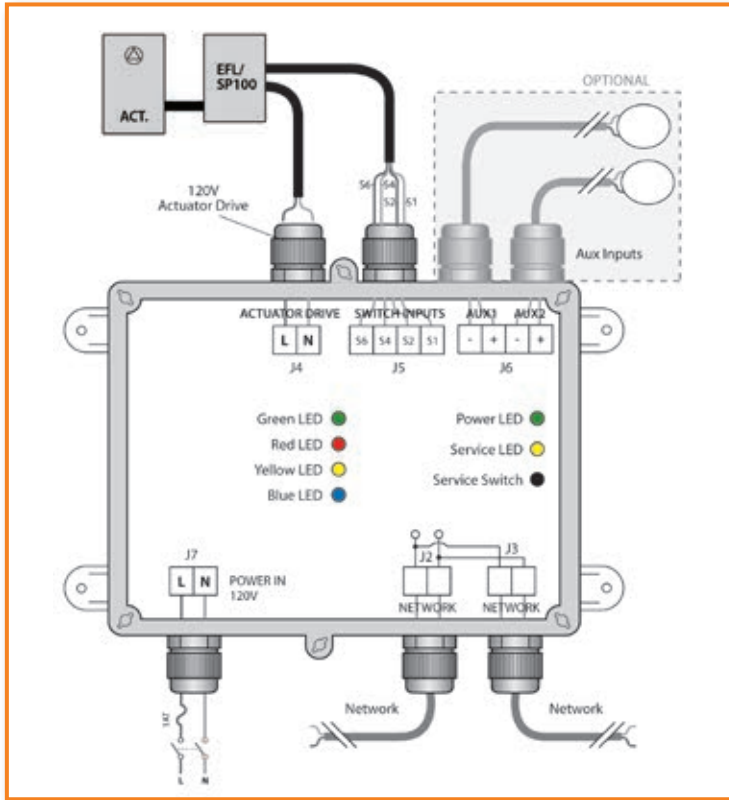


Digital Input / Output Device (DI804)

This device accepts eight volt free contact inputs and provides four relay outputs to be driven from the Ruskin Classic Inspector™ System. Environmental strategies can be driven from this input / output device which is located within the FSDPC Panel PC enclosure.



FSDI Wiring Detail (120V Shown)



TYPICAL OPERATION

- Power On – Damper resets
- Power Off – Spring release
- Release Time – 75 secs. max
- Reset Time – 75 secs. max

24VAC or VDC

Connect 24V via a safety isolating transformer.

120VAC 60Hz

1 amp fused spur to be provided. NEC or local wiring regulations to be observed.

POWER CONSUMPTION

24VAC or VDC 120VAC

Maximum power consumption for each damper combined FSDI plus 24V or 120V actuator is 15W.

LED BEHAVIOR						
FUNCTION	GREEN ●	RED ●	YELLOW ●	BLUE ●	SERVICE (YELLOW) ●	POWER (GREEN) ●
Open	On	Off				On
Closed	Off	On				On
Travelling	Flashing	Flashing				On
Fault			Flashing			On
Ping (Communicating)				One-shot		On
Offline	On	On	On	On		On
Wink					Flashes for 5 seconds	

Network Cable Specification

1 Pair 22AWG stranded, unshielded, Level 4 Plenum Echelon/Lonworks, Blue Jacket, TYPE CMP/CSA FT6 (optional RS232/485, BacNet or Modbus BAS Link available).

Refer to the full Inspector™ installation instructions for complete network wiring details.

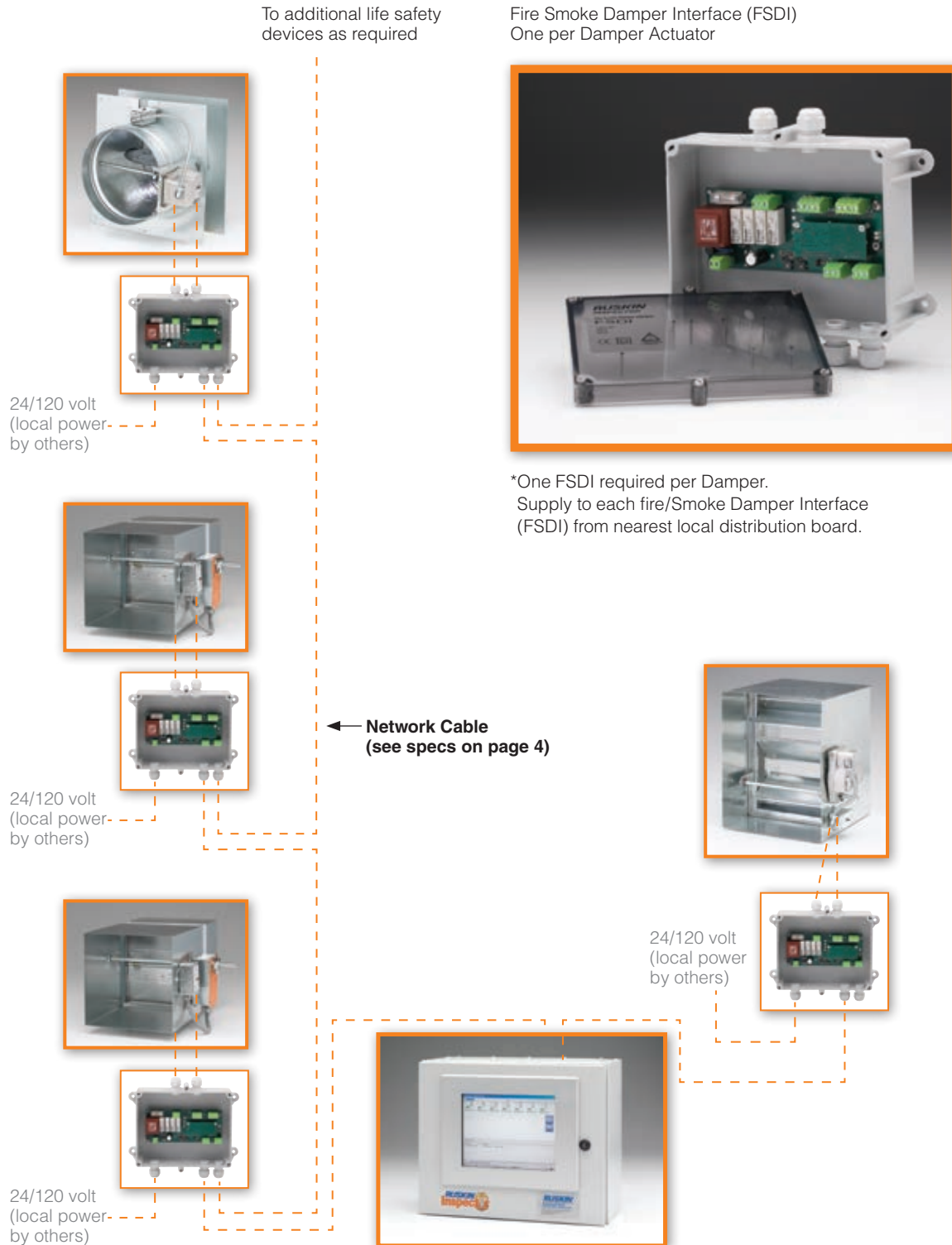
Failure to adhere to these specifications will result in unstable and unreliable network communications and will void all warranties.

1. Up to 4 network channels per panel.
2. Maximum number of devices* per network channel is 60. If >60 and/or >1,650 ft., a network extender is required.
3. If wired as a loop, the network is polarity sensitive. In all other instances, the network is polarity insensitive.
4. Networked devices are wired in a simple 'daisy chain', (in and out). No cable stubs permitted.

* A device is one of the following:
FSDI, Network Extender or a Network digital input/output.
For multiple damper arrangements contact Ruskin Technical Sales.

Typical Network Schematic

General Schematic of Ruskin Classic Inspector™ Monitoring and Test System



Range and Features

- Ruskin Classic Inspector™ for the continuous monitoring and automated testing of fire/smoke dampers.
- All life safety product activity is logged and viewable for diagnostics and preventative maintenance.
- Solid State Panel PC. No moving parts.
- Simple Graphical User Interface (GUI) displays all live details/status.
- Factory programming is job site specific.
- Test facility from touch screen GUI.
- Twisted-pair network cable, utilising daisy chain method of wiring to all devices, offering reduced wiring cost.
- Devices powered by closest distribution board.
- Off-the-Shelf Product-proven Design

System Commissioning

Ruskin offers a comprehensive after sales service to include pre-commissioning checks and a complete commissioning service for all products.

Standard Commissioning service includes the following:

- Attendance at all necessary induction courses and site familiarization.
- Final connections of each damper interface unit, electrical contractor to have ensured all necessary cables are terminated in FSDI-Enclosure.
- Establishing communication to each damper interface unit.
- Viewing of damper blade movement to check operation.
- Demonstration / witnessing of 10% of dampers installed. Full witnessing available by special request.
- Client training of the system.
- 12-month check up.

Customer Service

Ruskin provides quality products backed by a dedicated team committed to providing the very best in customer service.

We also offer experienced technical backup, comprehensive sales and administrative customer support, product commissioning and maintenance service.

Ruskin Classic Inspector™ Ready Dampers



Not enough money in your current budget? Your Ruskin fire/smoke damper and switch package can be outfitted with our FSD Inspector™ Ready (IR) junction box and matching FSDI power card. When the timing is right for your building, purchase our Inspector™ Commissioning Field Kit and turn your standard FSD system into a fully operational Testing and Monitoring System. The kit includes the FSDPC and the smart interface card for the FSDI.

All dampers in the Ruskin Inspector™ network can be continuously monitored by the building management system through the Inspector™ control panel. To the right are four of the most specified products typically used in conjunction with the Ruskin Inspector™ System. These models are highly specified due to their energy saving features.

"This is a fantastic product. Can I put it in our budget for next year?"

FSD60

Ruskin's FSD60 series ultra-low leak combination fire/smoke dampers provide point of origin fire and smoke containment. Airfoil blades ensure the lowest pressure drop performance in applications designed up to 4000 fpm (20.3 m/s) and 8 inches of water column (2kPa). The FSD60 damper is the most specified damper in the world and has become the gold standard for effective life safety performance and dependability. Ruskin FSD's can be ordered for two position, three position or modulating and balancing applications.



FSD60LP

Ruskin FSD60LP ultra low leakage, low profile, and low pressure drop combination fire and smoke damper is provided with an integral sleeve/frame design. The aerodynamic single blade design provides superior air performance with up to 30% less pressure drop than any other damper in its class.



FSDR25

Model FSDR25 is a round combination fire/smoke damper designed to penetrate metal stud, wood stud or masonry fire and smoke rated partitions and concrete floors. The cinch plates facilitate installation in a square opening, simplifying the rough-in framing. The damper assembly is 1 ½ hour UL555 and class 1 UL555S rated and is intended for use in applications with a maximum velocity of 3000 fpm (15.25 m/s) and 4 inches of water column (1 kPa). The FSDR25 is the lowest pressure drop solution for round duct applications and ensures energy savings when compared to rectangular multi-blade designs with round transitions.



SD50

The SD50 is a UL555S leakage class I rated smoke damper that is suitable for applications up to 4000 fpm (20.3 m/s) and 8 inches of water column (2 kPa). The actuator is factory installed and commissioned and moves to the fail position upon loss of power. When equipped with the FSDI, the panel PC continuously reports the damper status and health. The airfoil shaped blades promote energy savings through lower pressure drop. Model SD50 is a perfect solution for dampers required in horizontal or vertical duct runs that penetrate smoke rated barriers



LOW PROFILE Integral Sleeve FSD



Ruskin's FSD60LP is Low Profile and High Performance!

Its single blade and unique blade seal design means that the FSD60LP has the Lowest Pressure Drop of any FSD in the industry including typical airfoil blade dampers.

Improving Life Safety While Saving Building Owners Money

Yearly energy costs due to static pressure drop for a 12" tall damper in a system's longest duct run:

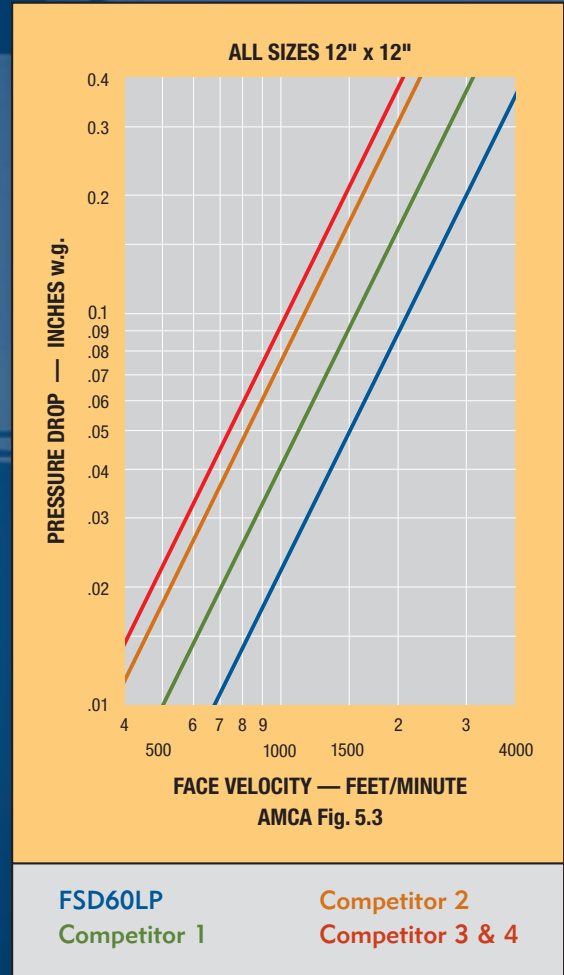
FSD60/37LP 0.056" Ps = \$5,997.64*

COMPETITOR: 0.2" Ps = \$6,259.04*

OWNER SAVES \$261.40/YEAR

THE ENERGY SAVINGS PAY FOR THE DAMPER IN ONE YEAR!

*ASSUMPTION - 15,000 CFM AIR HANDLER @ \$0.10/KWH, 1500 FPM.



RUSKIN®

Air & Sound Control
Specified by Many — Equaled by None

RUSKIN.com

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RIB-913 replaces RIB-112