



# TALKBACK DAMPER CONTROL SYSTEM

## SPECIFICATION OVERVIEW



# TALKBACK DAMPER CONTROL SYSTEM

All ducts and airways in doors and walls can be protected against fire and hot smoke using Lorient intumescent air transfer grilles. However, these grilles will not prevent the passage of cold smoke which can be equally dangerous.

## Damper / Shutter Assembly

To address this problem Lorient has developed a smoke damper assembly for use in conjunction with Lorient intumescent air transfer grilles.\* The assembly comprises three slotted plates - two fixed plates sandwiching a central moving plate. The central plate is operated by a fail-safe motorised actuator. A movement of just 10mm changes the relative positions of the slots from "through flow" to "fully closed".

## Talkback Damper Control System

Most large buildings require a significant number of FD30S and FD60S fire doors (30 or 60 minute fire doors which also provide protection against cold smoke) within any one fire zone. These doors may be a considerable distance apart, or even on different floors.

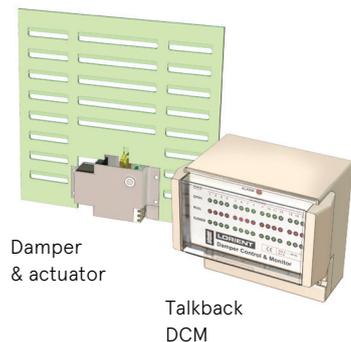
The Talkback system has been designed to control up to sixteen air transfer grille assemblies from one centralised status monitoring unit. A unique 2-way communication system operates between

the Damper Control and Monitor Unit (DCM) and the air transfer grille actuators. This facilitates a rapid assessment of the status of the installation and immediately identifies and locates any defective air transfer grilles.

Talkback is designed to give peace of mind to a building's occupants in that it:

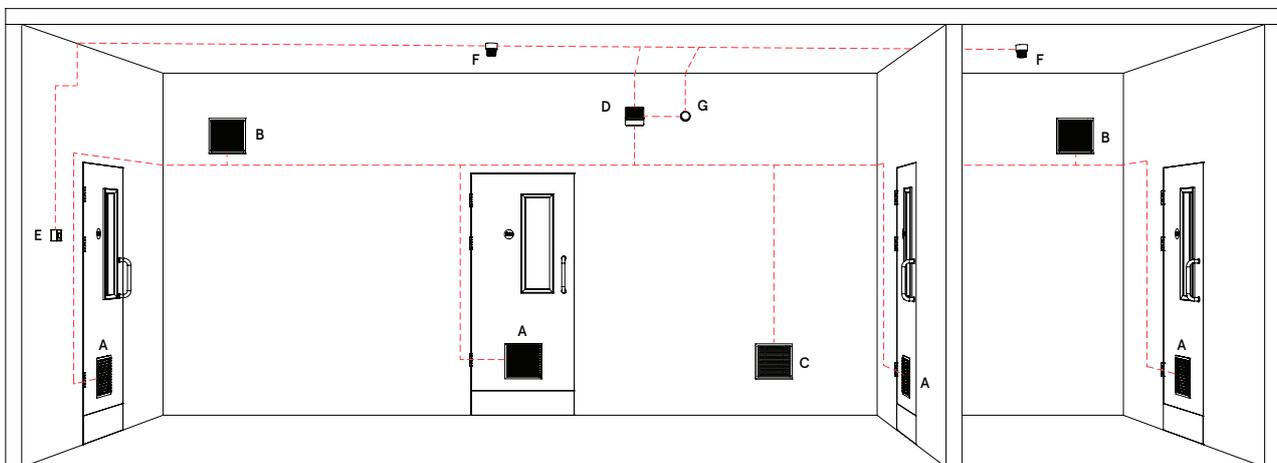
- ▶ is fail-safe – the smoke shutters will automatically close in the event of an alarm, power failure or damage to the wiring
- ▶ resets automatically – when the alarm is cancelled or power restored
- ▶ is self-testing – every 24 hours the dampers are automatically closed and opened to check they are working and to dislodge any dust and debris between the moving parts
- ▶ continuously monitors the status of each damper and displays this on the DCM
- ▶ is easy and quick to install – simple loop wiring is used and the damper units are supplied ready assembled and tested

- ▶ uses a safe 12V DC supply to open and close the dampers
- ▶ has been successfully tested in accordance with the requirements of the Electro Magnetic Compatibility and Low Voltage Directive and therefore bears the CE mark (copies of the relevant test reports are available on request).



*\*Note: 'S' suffix added to product code. Shutter assembly cannot be added to standard air transfer grilles retrospectively.*

## TYPICAL INSTALLATION OF THE LORIENT TALKBACK SYSTEM



- |  |  |                         |
|--|--|-------------------------|
| <b>A:</b> Door mounted fire + smoke air transfer grilles | <b>C:</b> Wall mounted fire + smoke air transfer grilles | <b>E:</b> Fire point    |
| <b>B:</b> End of duct fire + smoke air transfer grilles  | <b>D:</b> Power and monitor unit                         | <b>F:</b> Smoke sensors |
|  |  | <b>G:</b> Fire alarm    |

# TALKBACK DAMPER CONTROL SYSTEM

The talkback damper control system offers a number of operating features as standard, including:

FEATURE	DETAIL
<b>FAIL SAFE</b>	Designed to close automatically in the event of a fire alarm being activated, a power failure or wiring damage.
<b>AUTO RESET</b>	Will reset automatically to the open position when the fire alarm is cancelled or power restored.
<b>AUTO CYCLING</b>	Once in every twenty-four hours each air transfer grille/shutter is closed and re-opened to prevent a build up of dust or debris between moving parts.
<b>RING WIRING</b>	Up to 16 air transfer grilles/shutters can be connected via a 3-core cable that can be arranged in a ring. The Damper Control Monitor (DCM) powers the dampers/shutters using only safe low DC voltages.
<b>CONTINUOUS MONITORING</b>	"Talkback" air transfer grilles are monitored continuously by the Lorient DCM which identifies the status of each individual air transfer grille/shutter through its unique address.
<b>POSITIVE CLOSING</b>	Energy stored within a capacitor on each air transfer grille/shutter actuator is used to power the electric motor to the closed position in the event of a fire alarm being activated.
<b>SOLID STATE</b>	Solid state microchip technology is employed to provide versatility and reliability.
<b>ASSEMBLED / TESTED</b>	Each air transfer grille/shutter is assembled and fully tested at Lorient, therefore requiring no adjustment to the mechanism on site, facilitating simple installation. It is only necessary to confirm that each damper has been allotted its own address and resetting if required.
<b>COMPATIBILITY</b>	The "Talkback" system is designed to interface with any fire alarm panel and subsequent to the initial installation, additional air transfer grilles/shutters can be incorporated up to a maximum of 16 per DCM.
<b>CE MARKING</b>	Successfully tested in accordance with the requirements of Electro Magnetic Compatibility and Low Voltage Directive, and therefore bears the CE mark. (Conformité Européen).
<b>ADDRESSABLE ACTUATORS</b>	Each actuator address number can be set on site but air transfer grilles must not be allotted a shared number on the same DCM.

## OPTIONAL FEATURES:

<b>AUDIO WARNING</b>	An extra optional audio warning device (AMS) can be connected to the DCM wiring circuit. This device would be incorporated to draw attention to the DCM status display in the event of a fault occurring.
<b>B.M.S MONITORING</b>	The Audio Monitor can be used to communicate with a BMS or fire panel. A no volt contact (normally open) is provided for within the AMS in order to provide a fault indicator to the BMS.
<b>BATTERY BACK UP</b>	The DCM incorporates a connection for a battery back up option. An appropriate re-chargeable battery and enclosure is available from Lorient if required.

# TALKBACK SPECIFICATION

## ATG MODELS: LVN20S, LVH20S, LVH44S, LVV40S, LVHCTD, TALKBACK

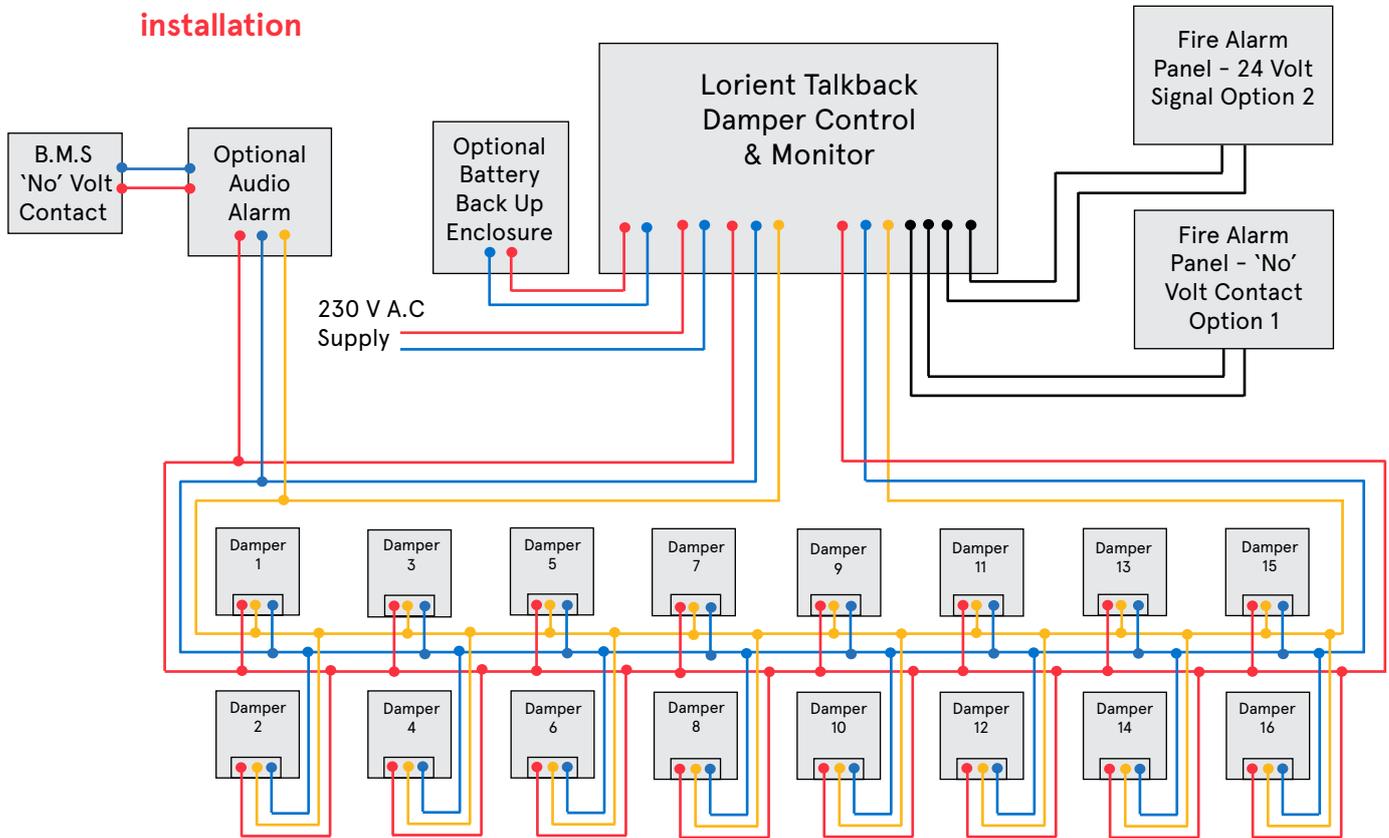
<b>TEST STANDARDS</b>	BS 476-31/31.1 BS 476-20/22 BS EN 1364-5 (LVV40S + LVH44S) AS 1530-4 (LVH20S) EN 58001-1:1992 EN 58002-1:1992 IEC 1010-1:1990, Amendment 1:1992 and Amendment 2:1995
<b>DESIGNATION</b>	Smoke control shutter system. Provides fire + smoke resistance in conjunction with intumescent air transfer grille.
<b>APPLICATION</b>	Door, wall + duct: Effective for cold smoke.
<b>SUPPLY VOLTAGE</b>	230 VAC 50/60 Hz
<b>OUTPUT VOLTAGE</b>	12.8 VDC
<b>INPUT TRIGGER FIRE PANEL</b>	24 VDC or No Volt Contact
<b>B.M.S TRIGGER</b>	No Volt Contact
<b>SHUTTER ACTUATOR</b>	5mA per actuator in open position / 200mA on opening
<b>BATTERY BACKUP</b>	Capacity 12 VDC 1.2 Ah
<b>CABLE RUNS</b>	Ring Circuit (Max 1 Circuit): 1.5mm <sup>2</sup> 3 core cable max 150m 2.5mm <sup>2</sup> 3 core cable max 250m Radial Circuit (Max 2 Circuits): 1.5mm <sup>2</sup> 3 core cable max 75m 2.5mm <sup>2</sup> 3 core cable max 125m
<b>DCM DIMENSIONS</b>	165 w x 155 h x 125 d mm
<b>BATTERY BACKUP</b>	160 w x 120 h x 72 d mm
<b>AMS DIMENSIONS</b>	105 w x 105 h x 55 d mm
<b>SMOKE SHUTTER DIMENSIONS</b>	Max size determined by air transfer grille choice and application. Various options covered under third party certification : Certifire CF564
<b>DCM CONNECTIONS</b>	Mains Supply: (+ve / -ve) Alarm Interface 1: 24V Normally On (+ve / -ve) Alarm Interface 2: 0 Volt Normally Closed (+ve / -ve) Supply/Signal 1: 12.8 VDC (+ve / -ve / Sig) Supply/Signal 2: 12.8 VDC (+ve / -ve / Sig) Battery Backup: (+ve / -ve)
<b>SYSTEM MONITORING</b>	Auto cycles each damper every 24hrs DCM displays damper status (Open/Closed/Fault or Not Connected) Communication between DCM & damper every 10s Fail Safe within 10s of signal loss Manual Test override for alarm simulation

# WIRING LAYOUT

## TALKBACK DAMPER CONTROL SYSTEM - SCHEMATIC WIRING INSTALLATIONS

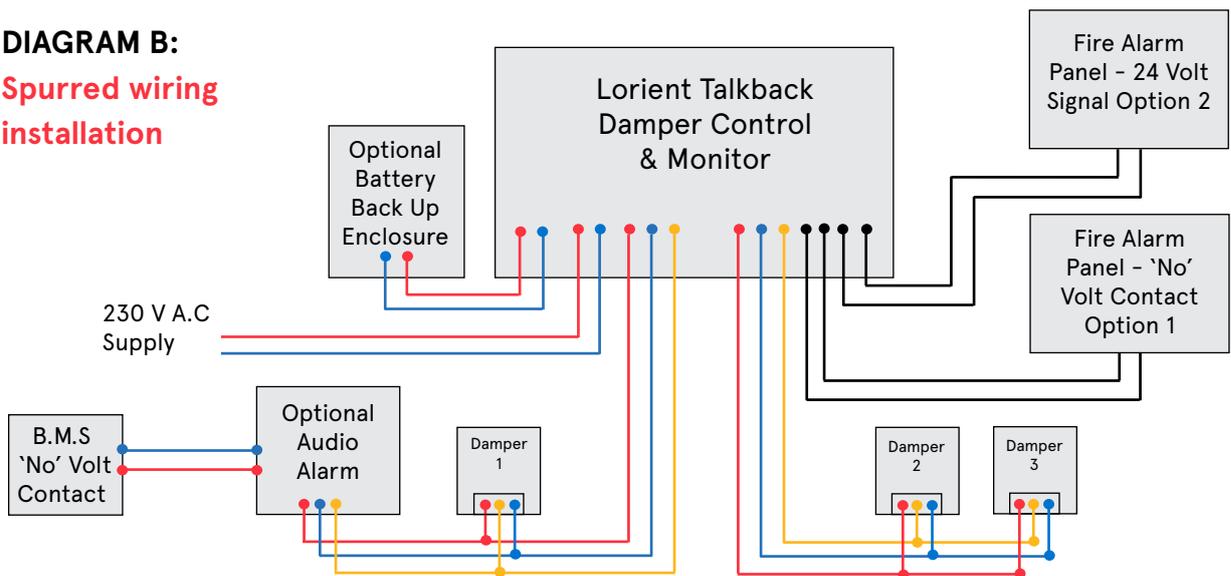
**DIAGRAM A:**

**Ringed wiring  
installation**



**DIAGRAM B:**

**Spurred wiring  
installation**





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