KEY FEATURES

- Easy ‘single side fix’ installation, no insulation required.
- Choice of Actuators
- Electrical Thermal Release for ultimate safety
- CE marked fulfilling the requirements of EN 15650
- Approved by LPCB and conforms to LPS1162 issue 4
- Fire tested to EN 1366-2
- Classified to EN 13501-3
- Corrosion tested to EN60068-2-52
- Tested installation method to suit concrete/masonry floors & walls and dry wall
- Halogen Free low smoke and fume cabling
- Suitable for standard or 50mm insulated circular ductwork
- Sizes available to suit 100, 125, 150, 160, 200, 250, 300, 315, 350 and 355mm circular ductwork
- Designed to work with ACTIONPAC Control Systems
- E 60 (v_i→o) S
- E 90 (v_i→o)
- E 120 (Ho i→o) S
Contents

Technical Description ........................................... 3
CSS Dampers ................................................................. 3
Casing Features ............................................................... 3
Blade Features ............................................................... 3
Actuators ................................................................. 3
  COMPACT M5 Specification ........................................... 3
  COMPACT M6 Specification ........................................... 3
  ETR (Electronic Thermal Release) ........................................ 3
Application Parameters .................................................. 3

Installation .................................................. 4
Wiring Diagrams ............................................................... 4
  COMPACT M5 (24V) .................................................. 4
  COMPACT M6 (230V) .................................................. 4
  Maintenance ............................................................... 4

Technical Data ................................................... 4
Testing and Classification .................................................. 4

Accessories .................................................... 4
SFDI ................................................................. 4
ACTIONPAC ................................................................. 4
Second Flange ............................................................... 4
Electrical and Communication Accessories ........................................... 4
  Damper Test Unit ........................................................ 5
  Damper Status Indicator ............................................... 5
  Damper Control Unit .................................................... 5
  Damper Release and Indication ....................................... 5
  Damper Connection Box ................................................. 5

Dimensions and weights ........................................... 5
  Dimensions ............................................................... 5
  Weights ................................................................. 5

Ordering Key ....................................................... 6
Specification Text .................................................... 6
**Technical Description**

**CSS Dampers**
- CE Marked Circular Fire Damper.
- Fire tested to EN 1366-2
- Classified to EN 13501-3
- Corrosion tested to EN60068-2-52
- Tested installation method to suit concrete/masonry floors & walls and dry walls.
- Choice of actuators to suit 24v or 230v operation.
- Single flange design for single side fixing.
- Sizes available to suit 100, 125, 150, 160, 200, 250, 300, 315, 350 and 355mm circular ductwork.

**Casing Features**
- The CSS Damper is housed in a galvanized case complete with one installation flange for easy fitting concrete/masonry floors & walls and dry wall applications. Optional second coverall flange available if required.

**Blade Features**
- A single 430 stainless steel blade incorporating patented seal to provide both ambient and fire rated low leakage.

**Actuators**
- Two Actuator options are available for CSS: COMPACT M5 - 24V (Open / Fail-Safe Close); COMPACT M6 - 230V (Open / Fail-Safe Close);
- Actuators are located outside of the ductwork for easy installation and access.
- Actuators are motor open, spring return with remote reset/release facilities.
- Volt free contacts for provision of external indication, monitoring and control by means of an ACTIONPAC damper control system, or by a suitable alternative.
- COMPACT M5/COMPACT M6 can be fitted in 3 positions through 180° allowing maximum on-site installation flexibility. (Position 2 is supplied as standard).

**COMPACT M5 Specification**
- Power On – Damper motors open.
- Power Off – Spring closure.
- Electrical Thermal Release.
- External mechanical position indicator with pointer.
- Release Time ≈ 20 secs. Reset Time ≈ 60 secs.
- To isolate from main power supply, the system must incorporate a device which disconnects the phase conductors, with a least a 3mm contact gap.
- Nominal voltage: AC 230 V
- Nominal voltage frequency: 50/60 Hz
- Power consumption in operation: 5 W
- Power consumption in rest position: 2.1 W
- Power consumption for wire sizing: 10 VA
- Power consumption for wire sizing note: Imax 4 A @ 5 ms
- Auxiliary switch: 2 x SPDT
- Switching capacity auxiliary switch: 1 mA…3 (0.5 inductive) A, AC 250 V
- Ambient temperature normal operation: -30…55°C

**ETR (Electronic Thermal Release)**
- COMPACT M5 and COMPACT M6 fail-safe by means of a unique and patented electrical thermal release which operates at 72°C or if the power supply is interrupted, complying with BS 9999:2017.
- ETR incorporates triple safety features, including an ingenious device that ensures the fail-safe status of the damper if the ETR is not correctly fitted on to the damper case. CSS Dampers come with a factory fitted ETR.
- A manual test switch allows periodic operation of the damper for testing purposes simulating actual fail-safe release under smoke/fire conditions.
- The ETR is designed to operate once the set activation temperature is reached.
- After activation, it will then need replacing with a new replacement ETR72. Note: You can only replace the ETR probe, not the ETR head.
- As standard, a green LED lamp is built into the ETR housing. This gives the user a simple and clear visual check that the Actuator is receiving power, the ETR is correctly fitted and the thermal fuse is intact.

**Application Parameters**
- CSS ‘ES’ Rated Fire Dampers are available in 100, 125, 150, 160, 200, 250, 300, 315, 350 and 355 circular sizes manufactured to BS EN 1506.
- The CSS dampers can be incorporated into systems
using SMOKESHIELD dampers or, within circular ventilation systems, as an alternative to the SMOKESHIELD 601 fire dampers.

- CSS dampers can be used where the operating total system pressure is up to 1500 Pascals and duct velocities to 15 m/second.
- The CSS damper blade is normally open and Fail-Safe returns to the closed position.
- CSS dampers are designed for applications in normal dry filtered air systems.
- If exposed to fresh air intakes / or inclement conditions please discuss your application with our technical team.

**Installation**

- Full installation details are available on our website and installation documents are sent out with each damper purchased.

**Wiring Diagrams**

- For detailed specifications, refer to the ‘Actuator’ section under ‘Technical Descriptions’

**Technical Data**

**Testing and Classification**

- CE marked to Product Standard EN 15650:2010
- Fire tested to EN 1366-2 and classified to EN 13501-3 – ES Rated in vertical and horizontal installations.
- 20,000 cycle tested.
- Corrosion tested to EN 60068-2-52:
- Meets the requirements of LPS 1162.
- Thermal fuse tested to ISO 10294-4.
- Complies with the DW144 casing leakage specification.
- The Electrical Actuators satisfy requirements of the following standard(s), EN60730-1 / EN 60730-2-14.
- E 60 (v_i→o) S* / E 90 (v_i→o) / E 120 (Ho i→o) S
- *test carried out installed into a 60 minute rated wall in accordance with BS EN 1363-1

**Accessories**

**SFDI**

- Dedicated Smoke Fire Damper Interfaces will provide a communication interface between the damper actuator and dedicated ACTIONPAC damper control panels (or alternative panels) to control the damper in accordance with the programmed cause and effect.

**ACTIONPAC**

- We recommend using an ACTIONPAC panel with CSS. A range of intelligent and hard wired panels are available. See our website for full details of all accessories available for CSS dampers.

**Second Flange**

- Second, non functional aesthetic flange available to order.
Electrical and Communication Accessories

Damper Test Unit
- Reset (open) and release (closed) indication.
- Spring bias (power OFF) test switch. Power normally ON.
- Part number: DTU24 24V AC/DC / DTU230 230V AC

Damper Status Indicator
- Reset (open) and release (closed) indication.
- Part number: DSI24 24V AC/DC / DSI230 230V AC

Damper Control Unit
- Switch ON/OFF function.
- Reset (open) and release (closed) indication.
- Part number: DCU24 24V AC/DC / DCU230 230V AC

Damper Release and Indication
- This is designed for control and monitoring of the electrically operated CSS Fire and Smoke dampers. It will operate from 24V or 230V supplies, 50 or 60 Hz. Selection of the operating voltage is by use of internal links on the PCB, prior to installation and connection of actuator and supply.
- The DRIM may be used singly to provide local damper control, or in pairs to provide control from either side of a damper. It can also operate 2 actuators when dampers are provided in 2 multiple sections.
- LED position and operation indication is provided. Operation is by push button to close and twist to reopen damper.
- Tested to BS EN 61010 -1: 2001 and is CE compliant.
- IP44 rated.
- Operating range 5 - 40 °C.
- DRIM 24V – 230V AC/DC

Damper Connection Box
- The Damper Connection Box is in galvanised steel.
- DCB 24V – 230V AC/DC

Dimensions and weights

Dimensions
- Control can be mounted in one of three positions vertically down, horizontally (factory std) or vertically up.
- CSS ‘ES’ Rated Fire Dampers are available to fit 100, 125, 150, 160, 200, 250, 300, 315, 350 and 355mm circular ductwork.
- The blade on CSS dampers will exceed the casing on 350/355mm diameter dampers by 6.5/9mm.
- **ADD - Actual Duct Diameter (mm)

Weights
- Dia (mm)/ Weight (kg)
  - 100/3.5
  - 125/3.9
  - 150/4.5
  - 160/4.7
  - 200/5.4
  - 250/6.5
  - 300/7.5
  - 315/7.9
  - 350/8.6
  - 355/8.7
### Specification Text

Swegon ACTIONAIR CSS, CE Marked ‘ES’ Rated Fire Dampers with a single 430 stainless steel blade incorporating patented seal to provide both ambient and fire rated low leakage. Damper conforms to EN 15650 fire tested to EN1366-2 and classified to EN 13501-3 - E60S/E90 in vertical installation and E120S in horizontal installation. Damper casings conform to BSEN1506 for both horizontal and vertical application. One 1.2mm galvanised steel hinged installation flange is provided with each damper. Factory fitted COMPACT-M5 (24v) or COMPACT-M6 (230v) electrical actuator with thermal sensing to provide Fail-Safe-Closed operation.

Electrical actuators are fitted with halogen free low smoke and fume cables. They have 60 second reset time and a 20 second release time. Each actuator has a 72°C rated electrical thermal release (ETR). The ETR incorporates a safety electrical interlock that only permits actuator operation when correctly fitted.

A green healthy indication lamp is built into the ETR to give a simple and clear visual check that the actuator is receiving power, the ETR is correctly fitted and the thermal fuse is intact. A manual test switch allowing periodic operation of the damper for testing purposes simulates actuator fail-safe release under fire/smoke conditions. End switches are provided with each mode for reset and release monitoring.