



INSTALLATION AND USAGE MANUAL

Manufacturer: CIAT Sp. z o. o. – ul. Langiewicza 62 – 95-050 Konstancin Łódzki, POLAND

CX-5C SMOKE CONTROL DAMPER EI 120 ($v_{ew} - h_{ow} - i \leftrightarrow o$) S1500C₁₀₀₀₀ AAmulti

CERTIFICATE OF CONSTANCY OF PERFORMANCE No. 1391-CPR-0104/2014-O1

1 – INSTALLATION

Installation should be done by a professional who has been trained in the installation of fire safety elements.

1.1 – OVERALL DIMENSION

To install the damper properly in vertical partition of brick or concrete the required overall dimension is D+50 mm.

1.2 – FIXING AND INSTALLATION

Place the damper axially in the opening. In order to provide partition with fire resistance, it is absolutely necessary to respect damper installation border line which is clearly marked on the label to be found on the damper casing. In case of installation in the brick or concrete walls, filling should be made of masonry mortar or non-shrink grout.

NOTE:

- While installing damper it is inadmissible to grime a control mechanism of the damper with mortar, glue or paints. The control mechanism of the damper has to be absolutely protected until the masonry and painting works are completed.
- The damper blade has to remain closed during installation and until mortar is hardened. The damper casing cannot be burdened during installation in partition wall. It can result in deformation of the casing and damage of the damper blade.
- Minimum clearance of 200 mm should be left for service between the nearest element of the building and the mechanism.

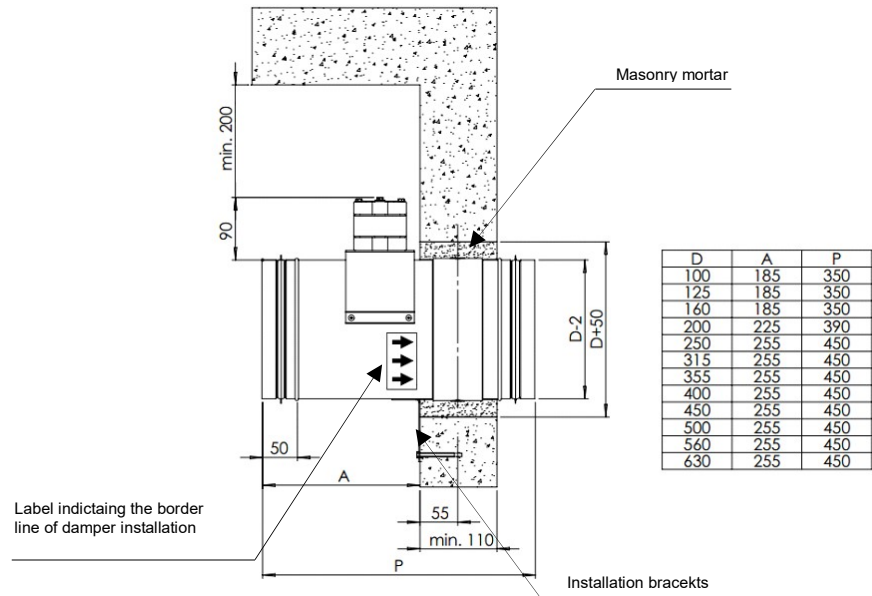
1.3 – INSTALLATION METHOD

CX-5C can be installed in the following vertical and horizontal spaces:

- concrete walls thickness min. 110 mm,
- wall from full bricks thickness min. 110 mm,
- walls from aerated concrete thickness min. 110 mm,
- concrete ceilings thickness min. 150 mm.

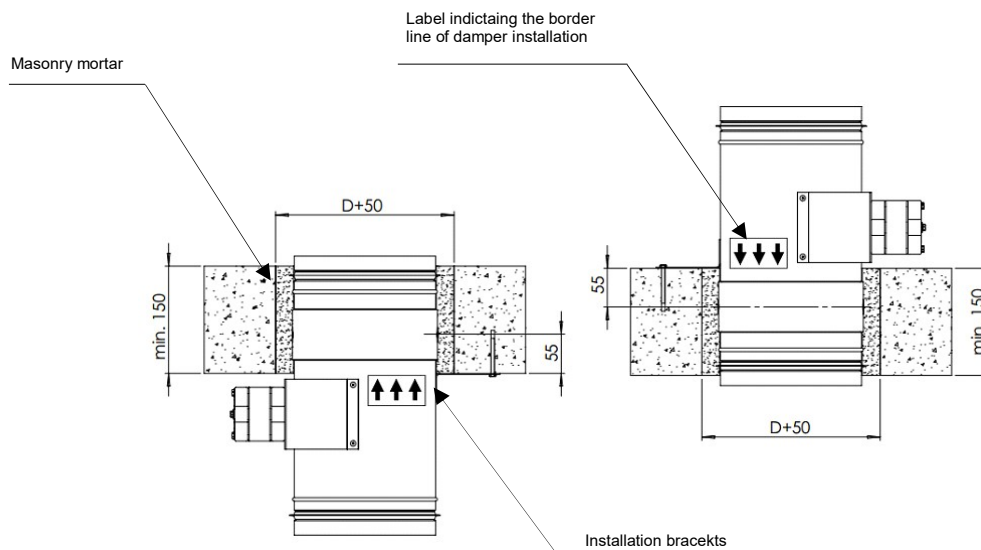
1.3.1 – VERTICAL PARTITION

Minimum thickness of concrete, aerated concrete or brick vertical partition is 110 mm. It is recommended to use optional UM installation brackets to facilitate installation. Installation brackets are delivered flat and have to be bended before installation of the product.



1.3.2 – HORIZONTAL PARTITION

Minimum thickness of concrete ceilings horizontal partition is 150 mm. It is compulsory to use UM installation brackets. Installation brackets are delivered flat and have to be bended before installation of the product.



1.4 – CONNECTION TO VENTILATION DUCT

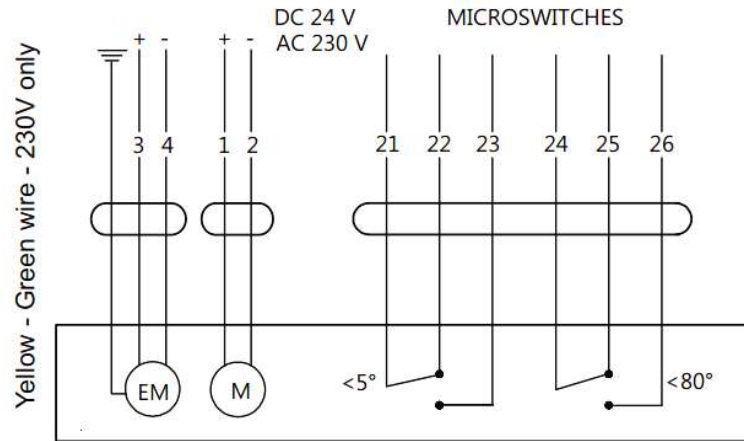
During the installation, the damper casing cannot be damaged, in particular, can not take place deformation or ovalisation. When the damper is connected to the ventilation duct, it is necessary to carry out a test of closing and opening.

NOTE: Connection of the damper to ventilation or air-conditioning duct has to be done coaxially in order to avoid knocking the damper blade against the duct's walls during rotation. This is the necessary condition for the appropriate working of the damper. The damper should be installed firmly. Mechanical tightening and free vibrations of ventilation system cannot be transferred onto the damper casing.

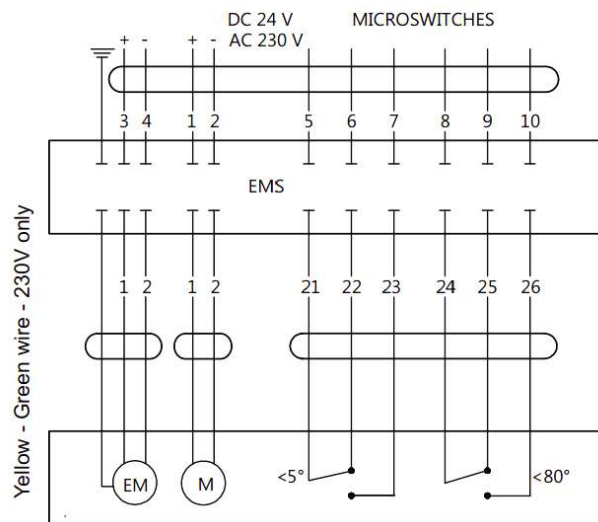
1.5 – ELECTRICAL CONNECTION

Connect power supply cable and microswitches cables according to the table and electrical wiring diagram. Perform the test of power connections.

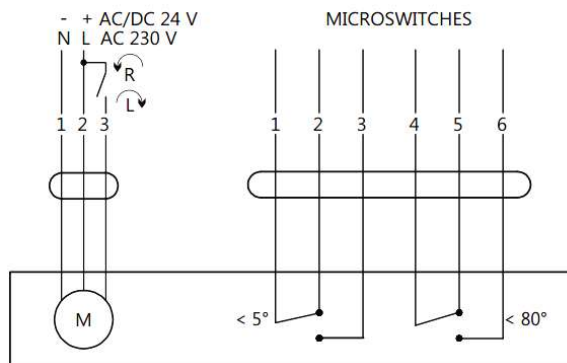
1.5.1 – CX-5C SMOKE CONTROL DAMPER with electromagnet and FDG-8 actuator



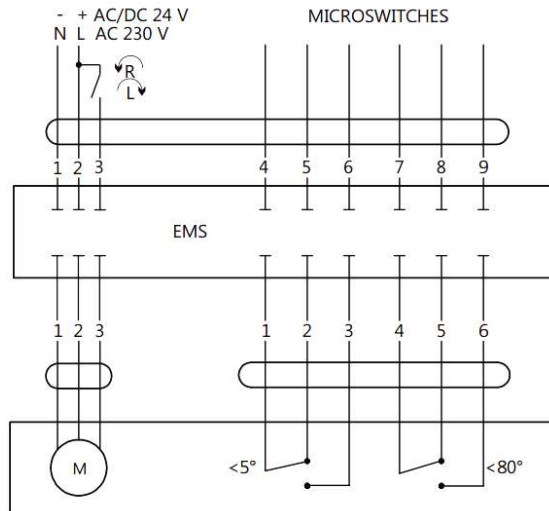
1.5.2 –CX-5C SMOKE CONTROL DAMPER with electromagnet, FDG-8 actuator and EMS



1.5.3 – CX-5C SMOKE CONTROL DAMPER with SDG actuator



1.5.4 – CX-5C SMOKE CONTROL DAMPER with SDG actuator and EMS



1.6 – ELECTROMAGNETS AND ACTUATORS CHARACTERISTICS

ACTUATOR CHARACTERISTICS				
Actuator type	FDG-8-24	FDG-8-230	SDG-15-24	SDG-15-230
Supply voltage	24 V AC or DC	230 V AC	24 V AC/DC	230 V AC/DC
Power input during tensioning the spring	3,5 W	9,2 VA	7 W	7 W
Power input during stand-by	0,5 W	6,9 VA	1,5 W	1,5 W
Time of movement – engine	55 - 71 s		<30s	
Time of movement – spring	20s		N/A	N/A
Protection class	II		III	II
Protection level	IP 54		IP 54	
Sound power level	<52 dB(A)		<55 dB(A)	
Working temperature range	-20 ... +50°C		-30 ... +50°C	

ELECTROMAGNET CHARACTERISTICS		
Supply voltage	24 or 48V impulse	230 V AC impulse
Power input	3,5 W	5,5 VA

Tolerance of voltage is –10% + 10%

2 – USAGE INSTRUCTION

2.1 – REMOTE CLOSING AND OPENING OF CX-5C SMOKE CONTROL DAMPER

2.1.1 – CX-5C WITH ELECTROMAGNET AND FDG-8 ACTUATOR OR WITH OPTIONAL EMS MODULE

To close smoke control damper CX-5C make sure the electromagnet is de-energised and apply voltage to the actuator. The damper will close in less then 71s. Once it is closed remove the voltage supply from the actuator. To open smoke control damper CX-5C apply impulse to the electromagnet (recommended from 1s up to 3s), which will trigger the mechanism and close the damper within not longer than 30s. Once the mechanism was triggered it is necessary to fully close the damper in order to re-arm the mechanism.

2.1.2 – CX-5C WITH SDG ACTUATOR OR WITH OPTIONAL EMS MODULE

To close smoke control damper CX-5C apply voltage at actuator wires marked as 1 and 2. The damper will close after less then 30s. To open smoke control damper CX-5C apply voltage at actuator wires marked as 1 and 3. The damper will open after less then 30s.

NOTE:

- If the damper has been exposed to fire, it should be replaced with a new one.
- While returning the damper to the closed position, it is recommended to switch off the smoke extraction system fans.

3 – MAINTENANCE AND SERVICE

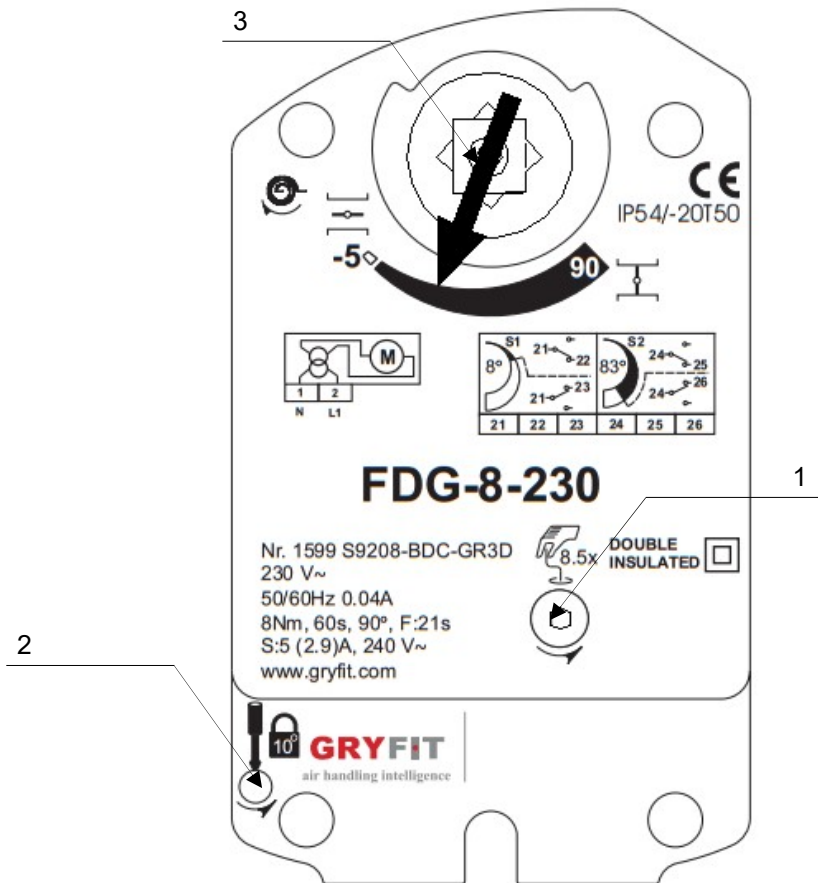
The damper does not required special maintenance. However, it is advisable to control the proper working of the damper and make a written report once a year. Maintenance and service should be carried out by authorized personnel who have been trained in maintenance by Manufacturer or its local Distributor.

4 – STORAGE

The damper is delivered in the closed position, with the complete control mechanism installed and blocked by the mechanical lock (in case of FDG actuator) that has to be removed before commissioning. While installing the damper on the building site, the industrial safety regulations should be respected and this manual should be followed in order to avoid damage of the damper.

The dampers should be protected from moisture and mechanical shock or impact. It is forbidden to store more than two dampers one on top of the other. In case of storage on the ground, the dampers should be put on protective pads in order to avoid damage or deformation of the casing.

During the transport, the damper should be always in the closed position and in case of FDG actuator it should be blocked. To do it, use the hex key in slot (1) and rotate it in the direction indicated by the arrow below the slot until display under the main indicator (3) of the actuator reaches 90 degrees position i.e. damper in closed position. To block the actuator in this position, turn the screw (2) using screwdriver in the direction indicated by the arrow below.



Label of the FDG-8-230 actuator.

To unblock the FDG actuator, rotate the hex key with 10° in the direction indicated by the arrow below the socket and then let the actuator rotate freely until the indicator shows the -5 degrees position – damper in open position.

5 – GUARANTEE

The product is subject to a three-year guarantee from the date of sale, provided that product was checked and necessary maintenance was carried out by personnel authorized by the Manufacturer at least once in the year and it is documented by the written report delivered to Manufacturer or its local Distributor without delay after product check. If this condition was not met, a guarantee period would be limited to one year. Distributor is allowed to extend guarantee conditions to its own risk.

Warranty does not apply to claims for malfunction resulting from non-compliance with this Installation and Usage Manual. The Manufacturer is not responsible for the components that are installed outdoors and exposed to weather conditions.

Distributor is the sole responsible entity for execution of guarantee to customers.