



# GUARD ONE

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**Operation and Maintenance Documentation GUARD ONE**

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**Dokumentacja techniczno-ruchowa GUARD ONE**



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SONNIGER S.A.

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Sąd Rejonowy Gdańsk-Północ, VIII Wydział Gospodarczy Krajowego Rejestru Sądowego, KRS 0000966611, NIP 586 227 35 14  
Regon 22154369 kapitał zakładowy: 1.655.000 PLN

## 1. PURPOSE OF THE DEVICE

The GUARD ONE air curtain is a compact and modern device dedicated to protecting against heat loss in buildings by directing an airstream across the entrance to prevent cold air from entering the heated space. In summer, the curtains may be used as cooling devices preventing the entry of hot air and pollutants from outside. The GUARD ONE is a "Plug & Play" device, the air curtain has built-in controls and motion sensor. The curtain is equipped with a three-speed motor, the full speed range is available only with the use of additional control.

## 2. BASIC TECHNICAL PARAMETERS

TECHNICAL PARAMETERS		GUARD ONE C	GUARD ONE E
Length of unit	m		1,1
Max range of airflow	m	2,9	2,5
Air output I / II / III speed*	m <sup>3</sup> /h	1200/1600/2100	1050/1400/1950
Heat output	kW	-	3 kW
Motor power supply, consumption	V/Hz A		230/50 0,7A
Motor power	W		100
Electric heater power supply, consumption	V/Hz A	-	230/50 13,1
weight	kg	11,7	12,9
Volume level I / II / III	dB (A)	43 / 48 / 56	42 / 46 / 56
Protection class IP			IP20

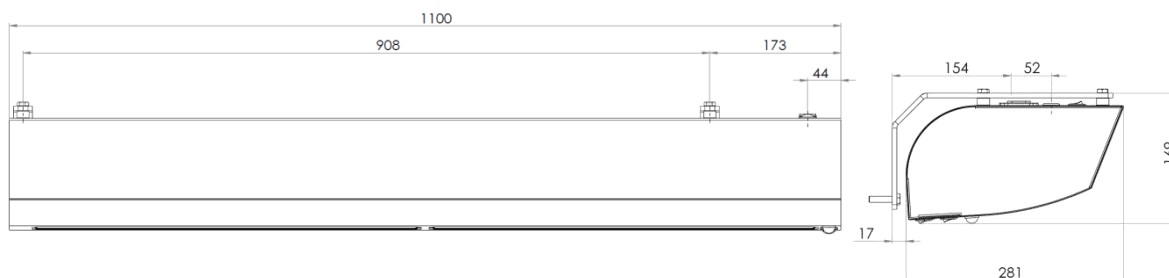
\* speed II available only with the COMFORT NEW controller

Noise level measured at a distance of 3 m in open space building

Tested according to ISO 27327-1 and ISO 27327-2

The range of airstream can be smaller in building with significant pressure difference

### DIMENSIONS OF THE GUARD ONE



## 3. GENERAL AND SAFETY PRINCIPLES

The GUARD ONE air curtains are manufactured in compliance with the rules and standards concerning quality, ecology, utility, and work comfort. Before starting the device be sure to read the Manual carefully.

The GUARD ONE air curtains are delivered ready-to-use in a cardboard package that is to protect from any mechanical damage. The package consists of the device, the Manual (Operation and Maintenance Documentation), and the Guarantee. If the optional automatic control is ordered, it shall be delivered in a separate package. Make sure all the aforementioned elements are in the package immediately after delivery. In the absence of any element, please fill in the suitable carrier document.

### NOTICE!

- ❶ Before mounting the device, read the manual carefully and adhere to the rules concerning the mounting procedures. Not applying to the rules may result in the inappropriate functioning of the device and the loss of the guarantee rights.
- ❶ Pay special attention when working with electrical elements of the device.
- ❶ Only suitably qualified staff well acquainted with the safety regulations concerning handling an electrical device must be employed when the device is being installed, started, and operated.

## 4. INSTALLATION

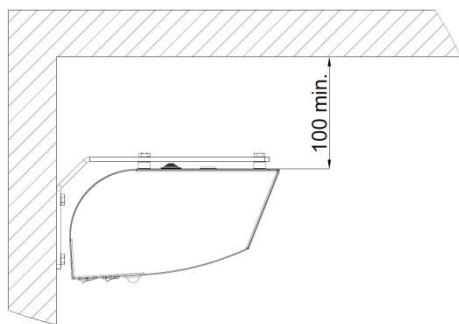
When deciding on the air curtain position you should take into account such factors as:

- 🔧 Ease of access for servicing,
- 🔧 Access to electricity supplies

It is recommended to install the air curtain in position above the entrance opening, on the wall or under the ceiling, on support pins or horizontal mounting brackets.

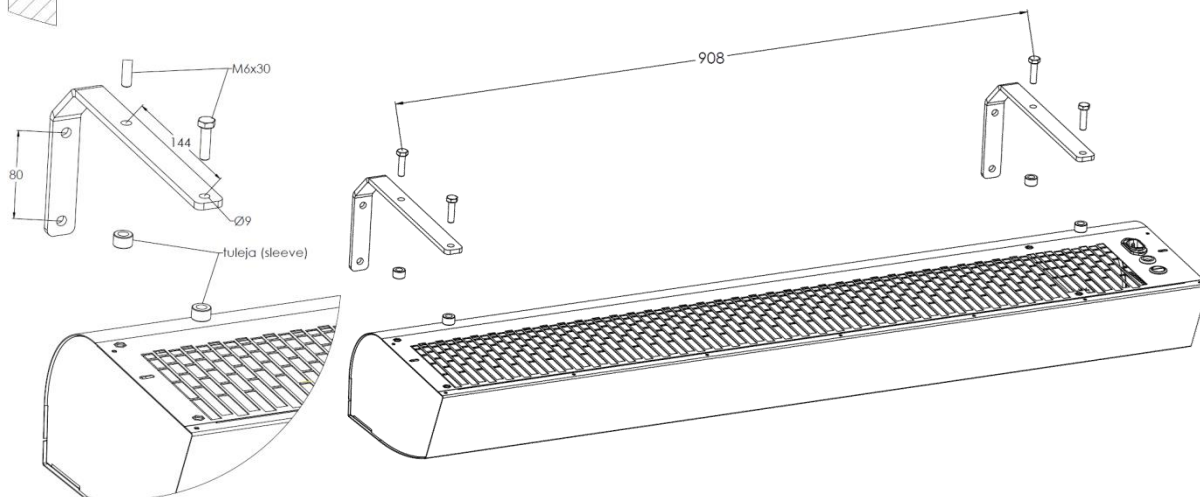
It's important to make sure that the unit is properly leveled. In case of positioning in a different way than horizontally, during installation, damage to the fan may occur and as a consequence malfunction of the unit.

Inlets and outlets cannot be blocked by any objects. When installing the curtains, keep in mind that you will have free access to the control panel. With larger door openings, it is possible to mount more curtains of the same type one next to the other, to create an uninterrupted airflow. The curtain is permanently mounted in a horizontal position (either on the left or right side of the entrance)



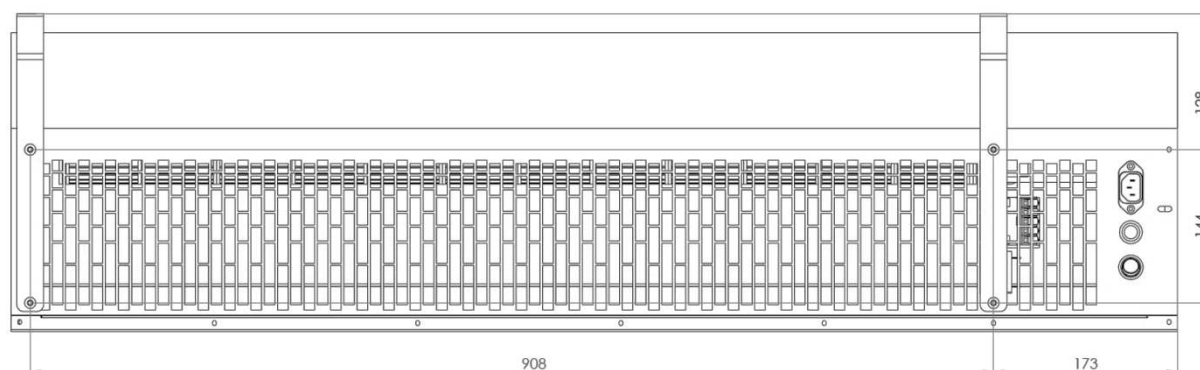
#### Wall installation by means of horizontal brackets

The curtain can be mounted to the wall in a horizontal position using 2 mounting brackets to the horizontal system. In the brackets there are Ø9mm holes for M6 screws. Then insert the spacer sleeves into the holes and fix the brackets. Screw the remaining screws into the nuts under the steel intake grille so that both grips are in one plane.



#### Horizontal installation under the ceiling using mounting pins

Installation under the ceiling is done by using 4 M6 pins. The pins should be screwed into the nippers at a depth of 10 to 14 mm. The exact location is indicated on below drawing



#### NOTICE!

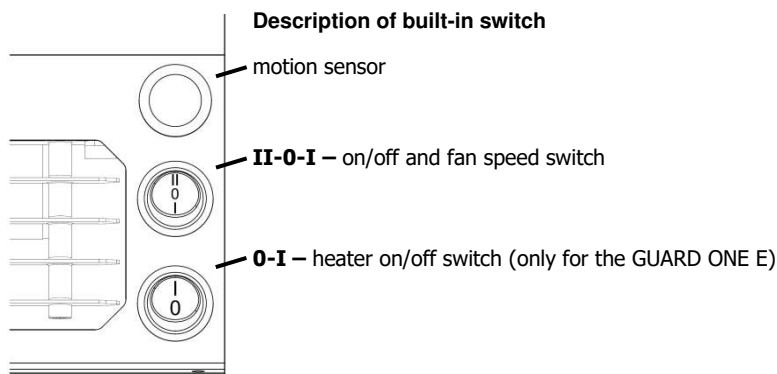
- ❶ It is necessary to ensure that the unit is properly leveled. When it is mounted in a position other than horizontal there is a risk of fan damage and unit malfunction

## 5. AUTOMATIC CONTROL

The GUARD ONE air curtain is equipped with a three-position switch, motion sensor and power supply cable with plug. Additionally, there is possibility to connect an external control panel with thermostat and/or GUARD door switch. Additional accessories are not part of the set. The functions of the controls are shown below:

	Built-in controls	Additional controls
On/off	✓	✓
COMFORT NEW	-	✓
Speed support	I / III	I / II / III
Modes of operation	HEAT / FAN	HEAT / FAN / COOL
Motion sensor	✓	✓
Magnetic switch	-	✓
Thermostat	-	✓

### 5.1. BUILT-IN CONTROLS



### 5.2. PANEL COMFORT NEW



#### COMFORT NEW panel description

**OFF-I-II-III** - switch and fan speed regulation

**HEAT** - the thermostat gives an operation signal to the actuator and fan, the fan turns off when the set temperature is reached, the heaters turn off

**FAN** - device fan operation according to the thermostat, electric heaters do not work

**COOL** - the thermostat gives an operation signal to the heaters and fan, the device starts to work when the set temperature is reached

It is possible to use an additional change of the SR1 to SR1 CONST jumper position, in this case the fan can operate regardless of the thermostat. Thermostatic operation is only for heaters. In this case:

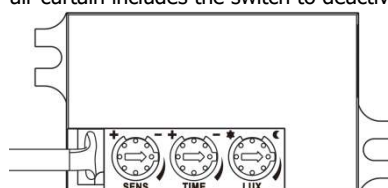
**HEAT** - fan operation regardless of the thermostat, heaters work up to the set temperature

**FAN** - device fan operation, regardless of the thermostat, valves do not work

**COOL** - fan operation regardless of the thermostat, heaters work from the set temperature

### 5.3. MOTION SENSOR

Built-in motion sensor is a part of the device. After detecting movement, the sensor turns on the air curtain: thanks to this feature, there is no need to turn on and off the device. The sensor parameters can be adjusted after removing the cover. The air curtain includes the switch to deactivate the sensor.



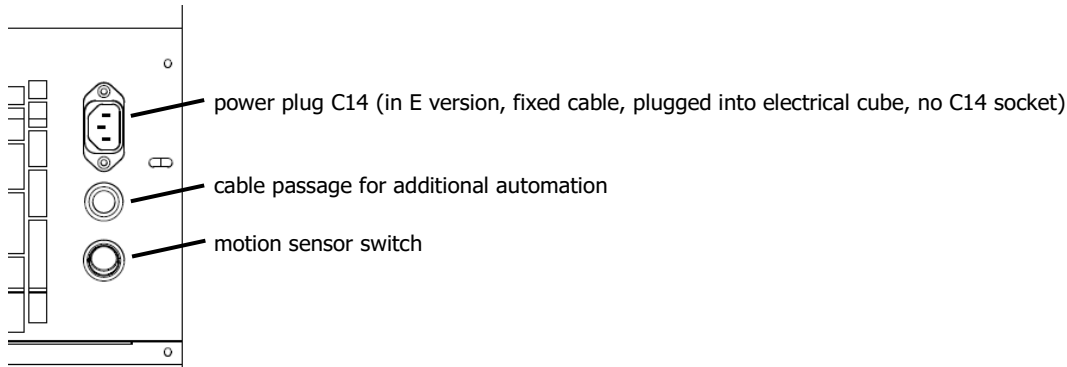
**SENS** – regulation of sensitivity

**TIME** – time delay from 10 s up to 7 min

**LUX** – light sensitivity

### 5.3.1. TURNING OFF THE MOTION SENSOR

The curtain is equipped with a switch that makes the operation of the device independent of the motion sensor. The switch is located on the top of the device, next to the power plug. In the "on" position, the curtain works bypassing the motion sensor or door switch.



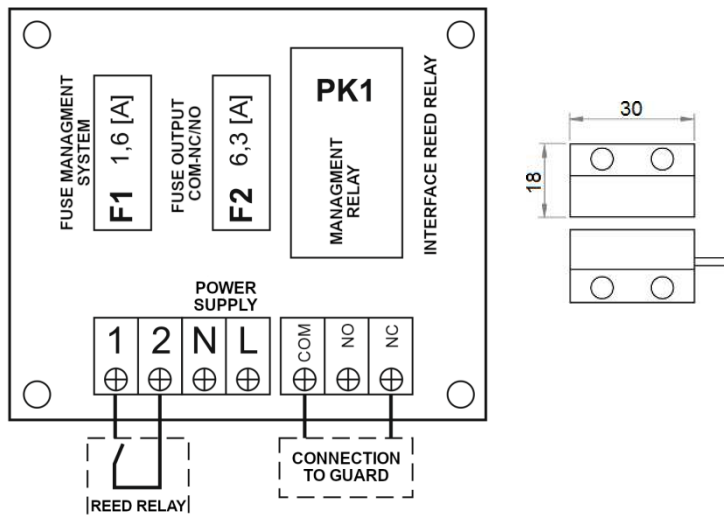
### 5.4. GUARD DOOR SWITCH

The GUARD (DC) door switch is an additional element for switching the curtain on/off, depending on the opening of the door. It is designed for indoor installation. It includes:

- Relay cabinet - reed relay switchboard
- Reed relay - Reinforcement for door-fitting, hermetic magnetic switch, consisting of a movable and fixed element.

The air curtain includes the switch to deactivate the sensor.

Scheme of the relay cabinet – reed relay interface



## 6. DIAGRAMS OF ELECTRICAL CONNECTIONS

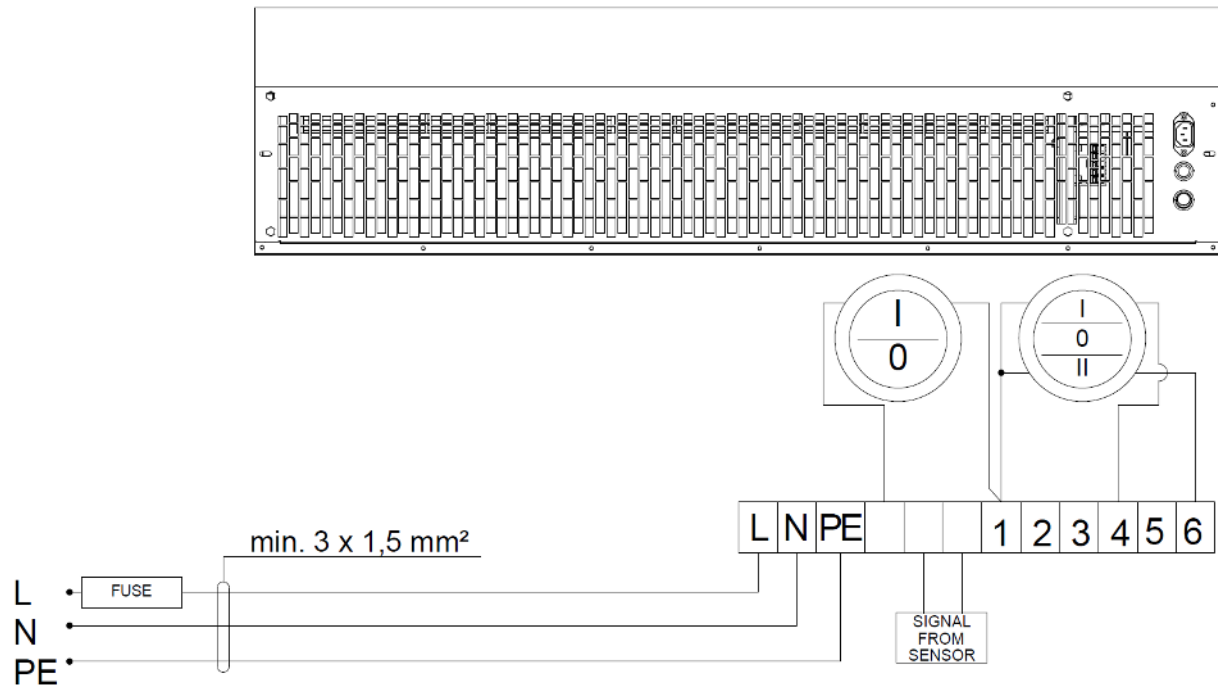
The electrical network to which the curtain will be connected should protect against overheating and short-circuiting. It is necessary to protect the air curtain by grounding. Electrical installation and connection to the air curtain must be following applicable building codes and regulations, electrical connection should be carried out by a qualified person familiar with the above instruction. The fan motor has standard internal thermal protection to protect the motor from overheating.

The air curtain is equipped with a 1m power cable and C14 plug (for GUARD ONE E air curtains, connection directly to the electrical cube in the air curtain), the curtain also includes integrated controls. For the external control panel or any other power cable, the wire must pass through the cable gland

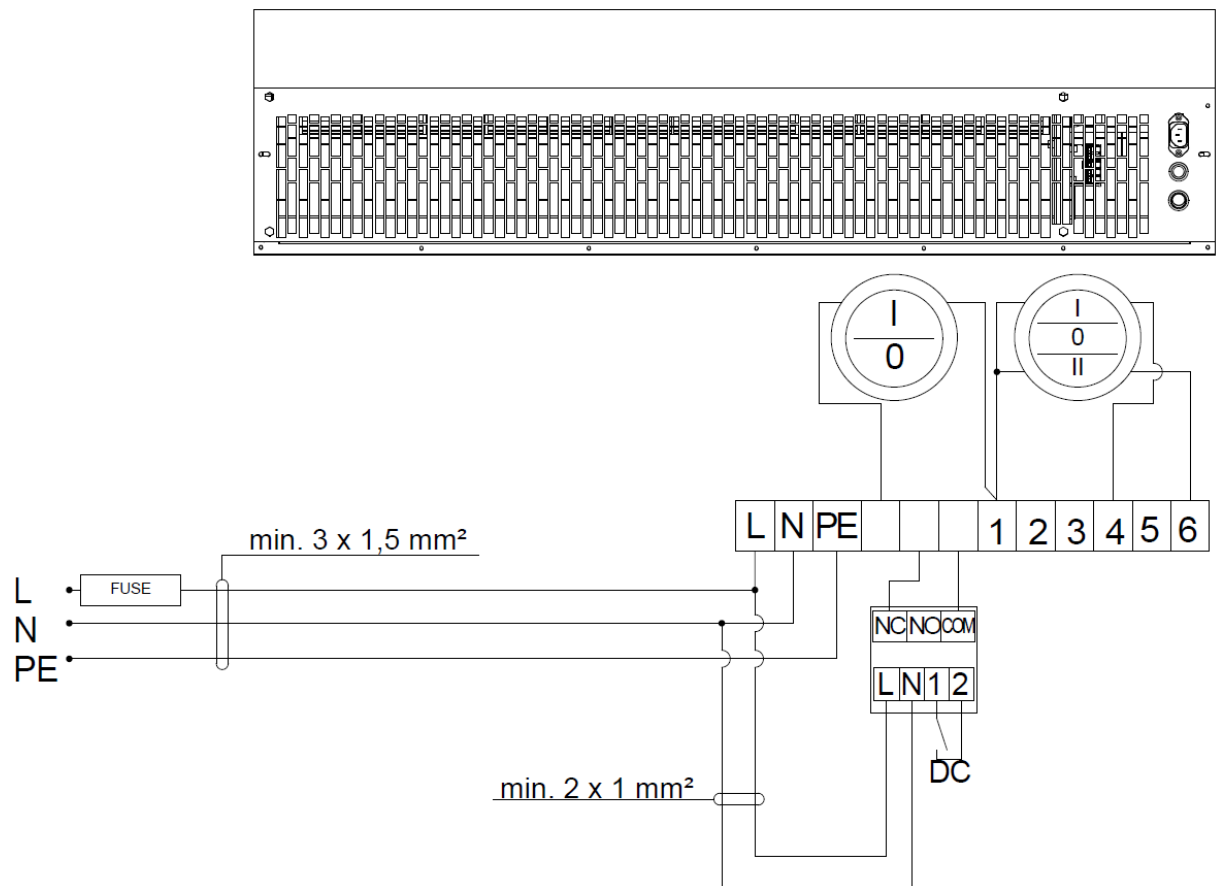
#### NOTICE!

- ❶ Any repair and maintenance work must be conducted with the power off.
- ❶ Pay special attention when working with electrical elements of the device.
- ❶ Only suitably qualified staff well acquainted with the safety regulations concerning handling an electrical device must be employed when the device is being installed, started, and operated.

### 6.1. Connection diagram of GUARD ONE C with basic control



### 6.2. Connection diagram of GUARD ONE C with DOOR SWITCH



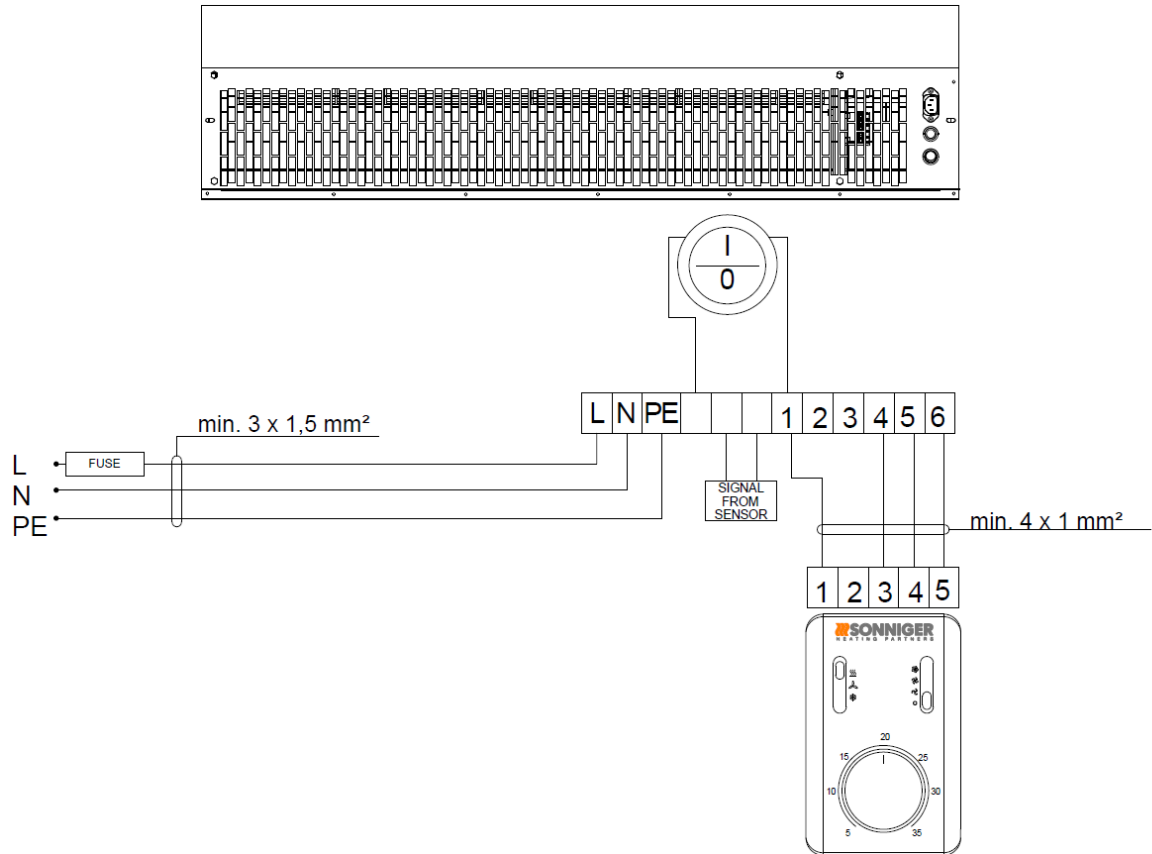
When working with the DOOR SWITCH, the motion sensor must be disconnected.

### 6.3. Connection diagram of GUARD ONE C with COMFORT NEW panel

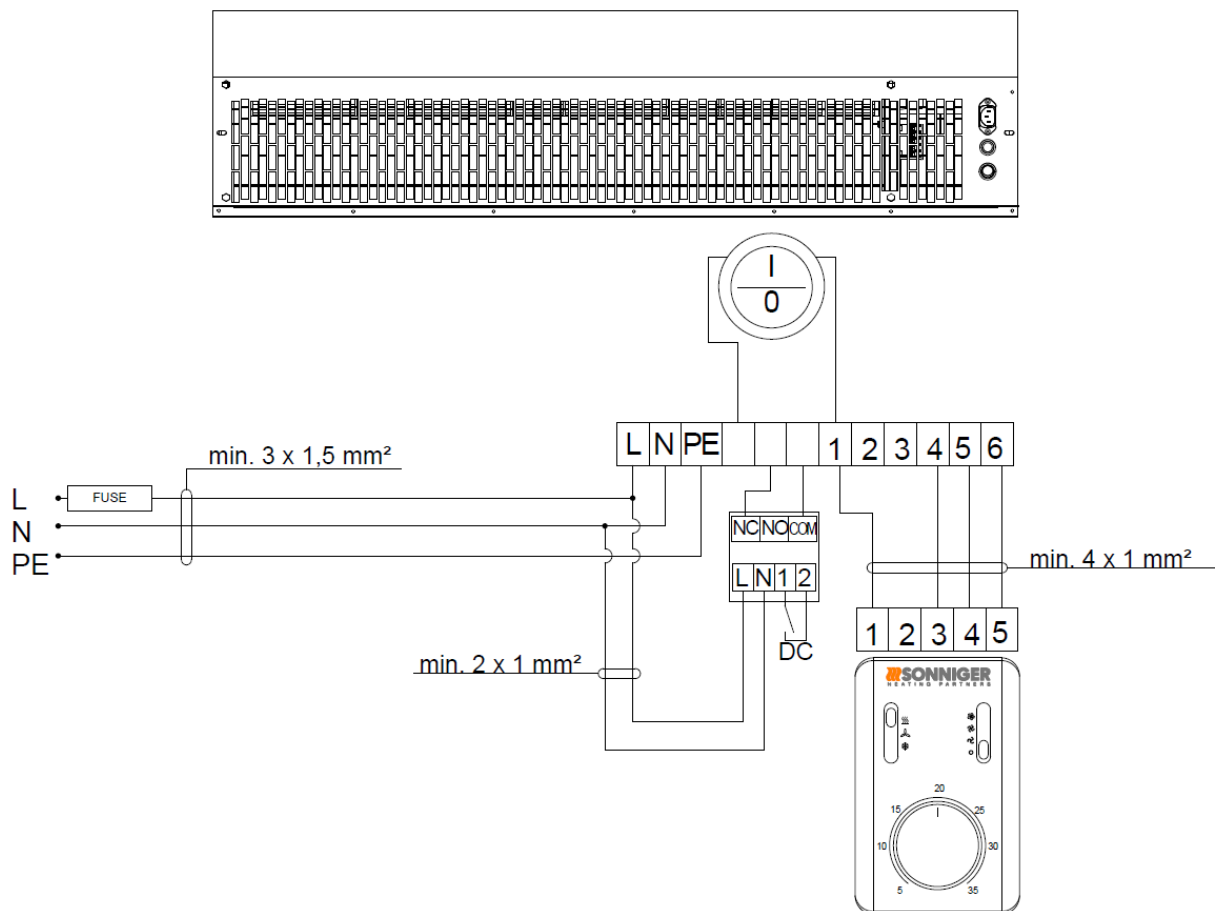
#### NOTICE!

- ① When working with an external thermostat, it is necessary to disconnect and secure the three-position switch.
- ① When working with the DOOR SWITCH, the motion sensor must be disconnected and secured.

### 6.3.1. With motion sensor



### 6.3.2. With DOOR SWITCH

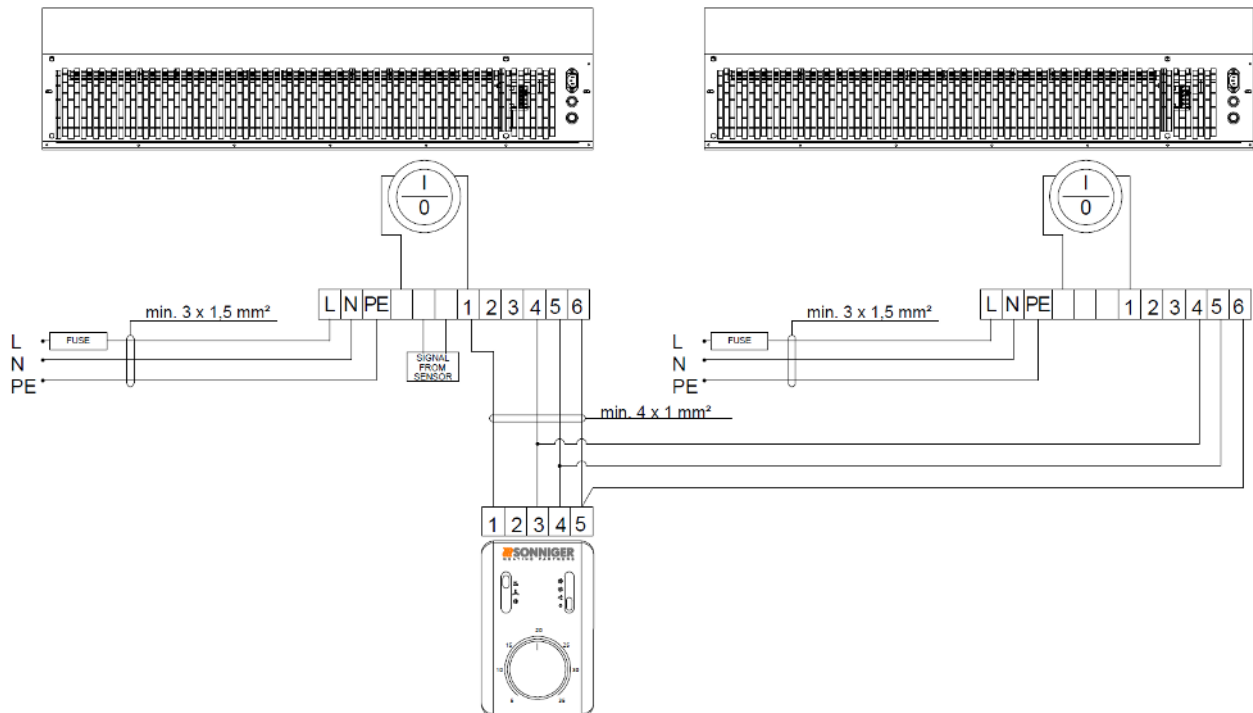


When working with DOOR SWITCH, the motion sensor must be disconnected.

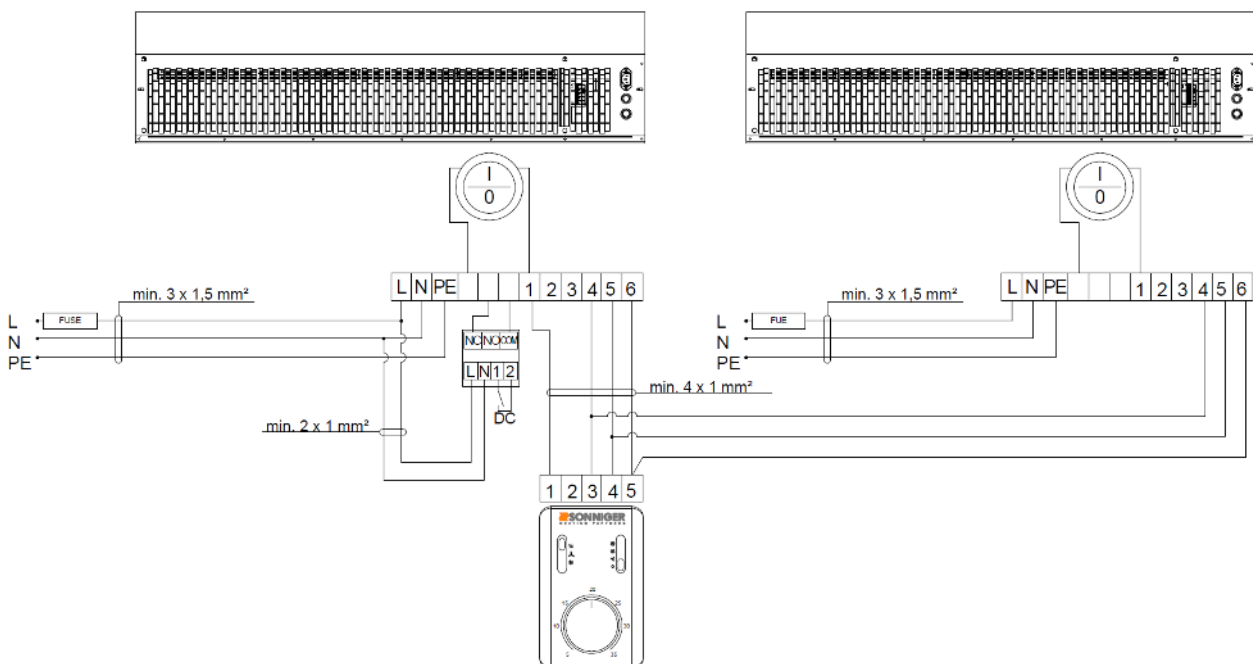
#### 6.4. Connection diagram for multiple GUARD ONE C air curtains with COMFORT NEW controller

Multiple GUARD ONE C air curtains can only be connected to the COMFOR NEW panel, it is allowed to connect up to 5 units. If multiple air curtains are connected, the devices are controlled by a sensor connected to air curtain number one. The power supply to the air curtains must be provided from a single phase

##### 6.4.1. With motion sensor



##### 6.4.2. With DOOR SWITCH



When working with DOOR SWITCH, the motion sensor must be disconnected



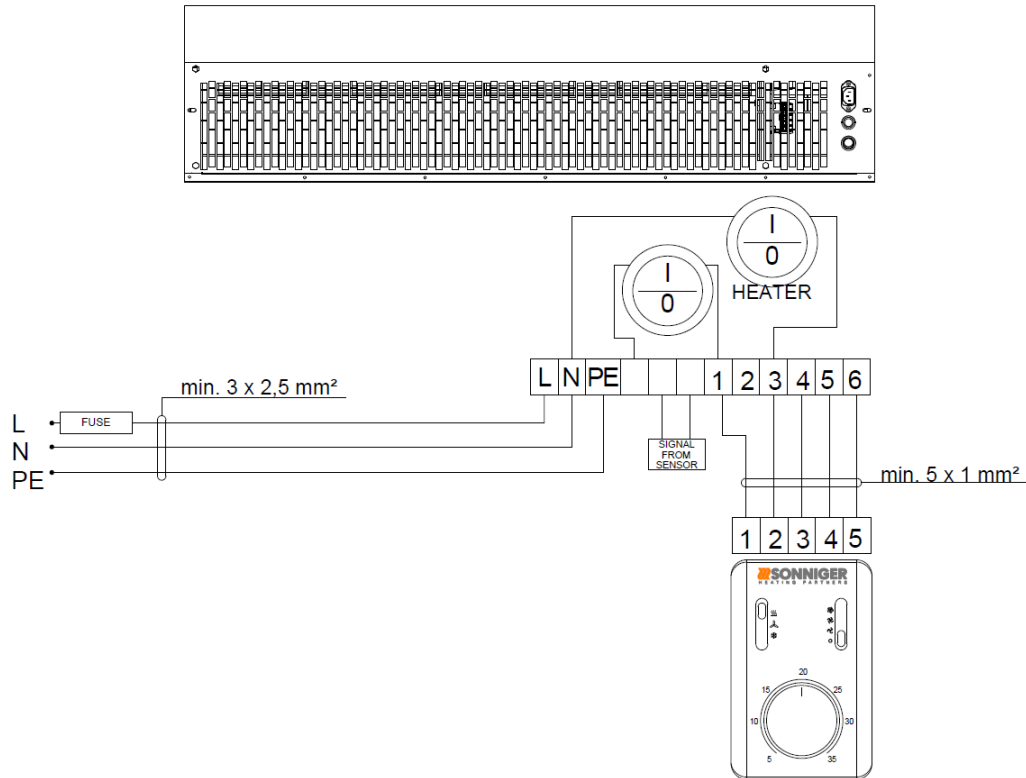
### 6.5. Connection diagram of GUARD ONE E with basic control

## 6.7. Connection diagram of GUARD ONE E with COMFORT NEW panel

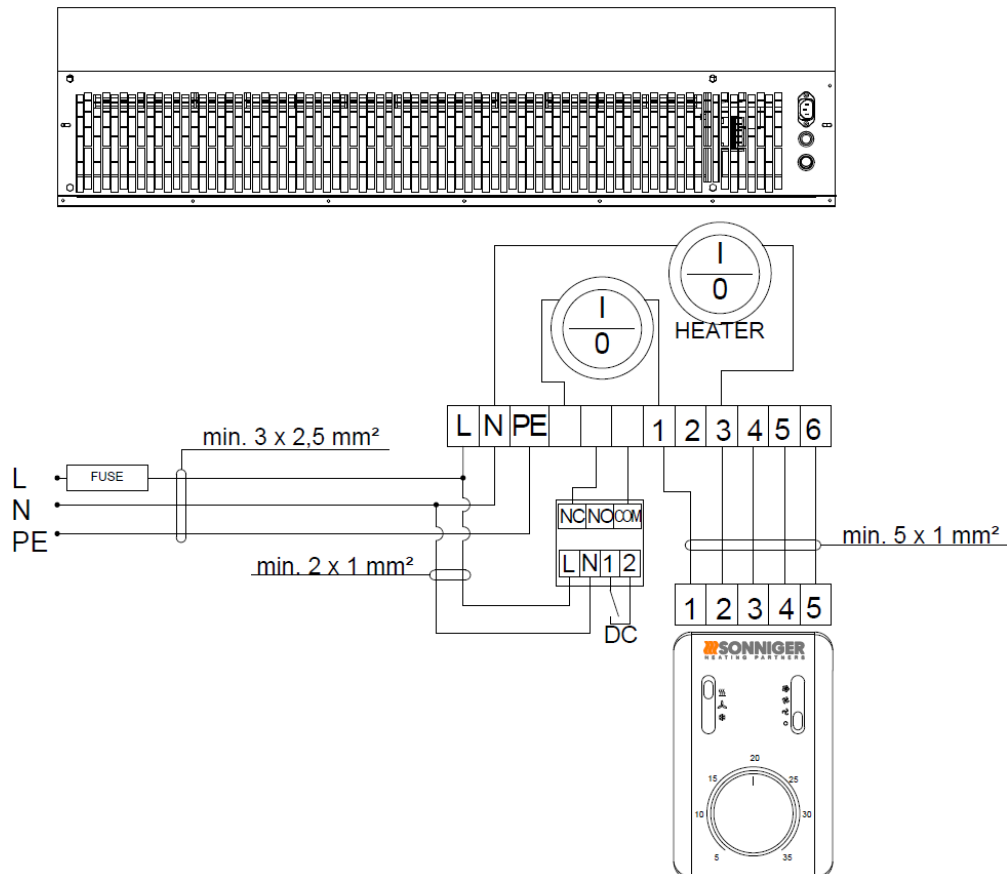
### NOTICE!

- ① When working with an external thermostat, it is necessary to disconnect and secure the three-position switch.
- ① When working with the DOOR SWITCH, the motion sensor must be disconnected and secured.

### 6.7.1. With motion sensor



### 6.7.2. With DOOR SWITCH



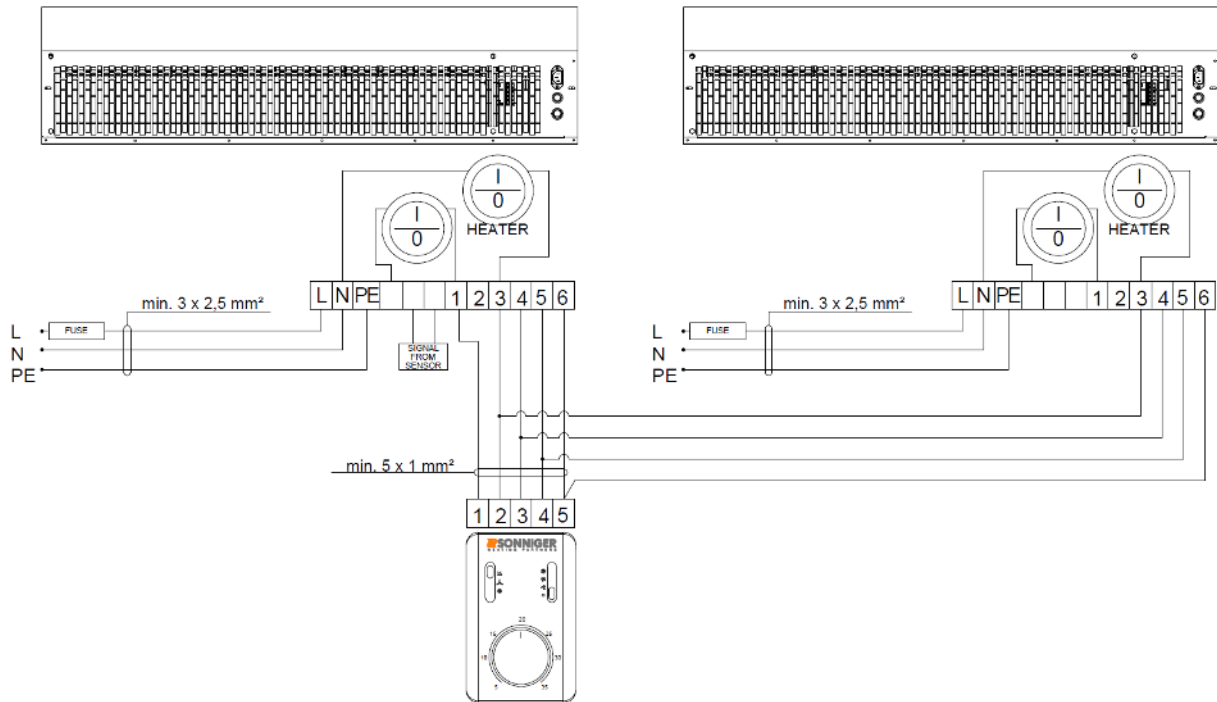
## 6.8. Connection diagram for multiple GUARD ONE E air curtains with COMFORT NEW controller

Multiple GUARD ONE E air curtains can only be connected to the COMFOR NEW panel, it is allowed to connect up to 5 units. If multiple air curtains are connected, the devices are controlled by a sensor connected to air curtain number one. Due to the need for power supply for the electric heaters, each air curtain must have an independent power connection. The power supply to the air curtains must be provided from a single phase

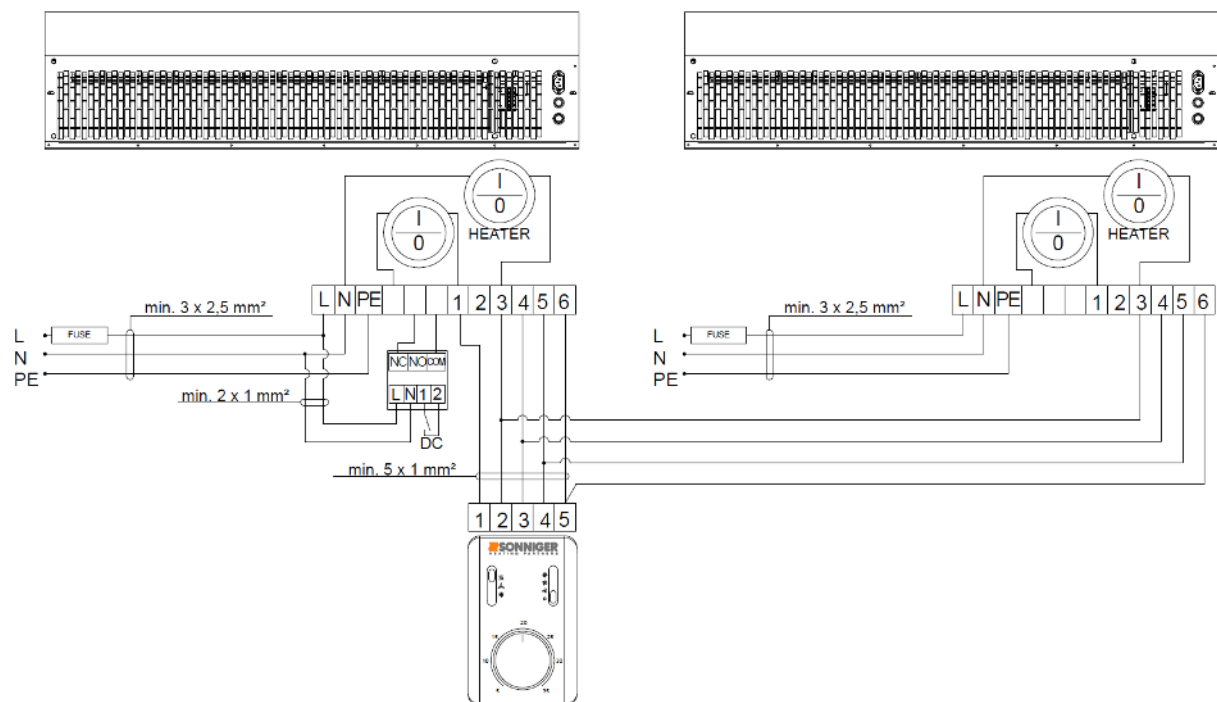
### NOTICE!

- ❶ When working with an external thermostat, it is necessary to disconnect and secure the three-position switch.
- ❶ When working with the DOOR SWITCH, the motion sensor must be disconnected and secured.
- ❶ Due to the power consumption, it is necessary to check the wire cross section and fuse on the main power supply line

### 6.8.1. With motion sensor



### 6.8.2. With DOOR SWITCH



## 7. OPERATION AND MAINTENANCE

The engine and fan of the GUARD air curtains are maintenance-free devices but regular check-ups are advised, especially the motor and bearing (the fan's rotor should rotate freely, free from any axial and radial throws/run-outs and undesired knocks/rattles).

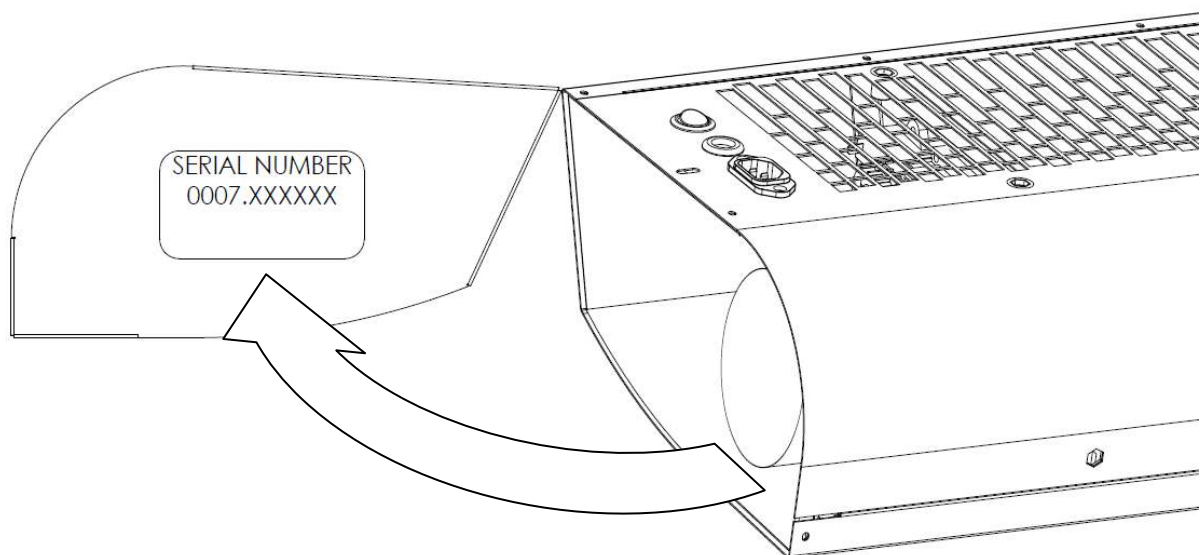
The heat exchanger requires systematic cleaning of all dirt/impurities off. The heat exchanger is equipped with fire protection device. In case of activation of the safety thermostat, it is necessary to re-arm it, and check the correct operation of the motor. Curtains with electric heaters are equipped with contactors responsible for conducting electricity to the heaters during curtain operation. Due to the nature of the element's operation, the wires in the terminals may loosen, it is necessary to check the electrical connections regularly, at least every 12 months.

### NOTICE!

- ❶ Any repair and maintenance work must be conducted with the power off.
- ❶ Only suitably qualified staff well acquainted with the safety regulations concerning handling an electrical device must be employed when the device is being installed, started, and operated.
- ❶ If the device being operated gives a metallic clatter, or vibration or the level of noise is increasing, check if the mounting of the fan has not become loose – in case of any problems contact the installer of the device or the SONNIGER Authorized Service immediately.

## SERIAL NUMBER

The serial number of the device is located on the inside of the housing, covering the connection strip.



## COMPLIANCE WITH WEEE 2012/19 / EU

In accordance with applicable legal regulations, at the time of purchasing new electrical or electronic equipment with the following mark:



REMEMBER IT IS FORBIDDEN TO PLACE THE WORN EQUIPMENT WITH OTHER WASTE

For information on the waste collection system of electrical and electronic equipment, please contact your distributor

## GUARANTEE TERMS AND CONDITIONS

### § 1 Guarantee Scope

1. This Guarantee covers material defects of the device which make its functioning impossible. This Warranty does not extend to the installation and maintenance works.
2. The Guarantee for the product sold by the Seller covers 24 months. The guarantee period commences upon the delivery of the device to the Buyer specified in the sales invoice. The warranty covers any parts/components specified in the scope of the delivery.
3. Products delivered by third persons are not guaranteed by this supplier.
4. Devices may be started and serviced only by qualified persons trained in the areas of maintenance and operation of the device. Any operations related to starting, maintenance, and repairs must be noted that such operations have occurred in the Guarantee Card.
5. The precondition for issuing the Guarantee by the manufacturer is the assembly and activation of the device following the Operation and Maintenance Documentation not later than 6 months after the date of the purchase.
6. The product is guaranteed for a full period of warranty only if service works implied in the Operation and Maintenance Documentation for the device specified in the 'Maintenance' section are carried out. All services related to the maintenance of the device are carried out at the User's cost and expense.
7. The provision of warranty services does not cease or suspend the duration of the Warranty. The warranty for replaced or repaired parts/elements shall end with the expiry of the Guarantee for the device.

### § 2 Warranty Exclusions/Disclaimers

1. The Warranty does not extend to the mechanical damages and damages to electrical parts caused by improper use, transport, abnormal voltage, or other damages arising from a product defect. For the above reasons, the Warranty is solely limited to the replacement of parts/components having construction defects that shall be delivered without any additional costs only if the defective part/component has been returned.
2. The Warranty for devices does not apply when technical mistakes occurred during the procedures concerning installation, regulation, and control including any of the following:
  - a) Defects caused by connecting a device to an inappropriately designed ventilation system that allows additional heat loads that do not meet any standards and decrease the efficiency of the heat exchanger.
  - b) Defects caused by connecting to the components or parts that are part of the heating system but have not been delivered by the Seller and whose inappropriate functioning harms the device's functioning.
  - c) Defects caused by connecting spare parts to components that are not original parts.
  - d) Defects incurred by reselling the product by the first buyer/user to another buyer who dismantles/installs the device that was previously installed and operated in a specific building and its conditions.
  - e) Defects caused by improper expertise and insufficient knowledge of the installer and technical staff who, improperly carry out after-sale service of the device
  - f) Defects caused by special conditions of use that differ from typical/standard applications unless the parties (the Seller and customer's technical staff) have previously agreed otherwise in writing.
  - g) Defects incurred by natural disasters such as fire, explosions, and other incidents that may result in damages to mechanical, electrical, and protection devices
  - h) Defects are caused by inappropriate cleaning of the technical facility or place where the device has been installed; cleaning must take place periodically to suit the specific working conditions and the amount of dust.
  - i) Defects arising from the absence or improper cleaning of heat exchangers; cleaning must be done periodically to suit the specific working conditions and the amount of dust.
  - j) Defects incurred by the inappropriate installation - inadequate for the low outside temperature of working conditions.
  - k) Defects incurred by the low temperature if no protection device is installed by the installing contractor to avoid:
    - low temperatures on electrical and mechanical parts such as valves, electric and electronic controlling devices,
    - water condensation and frost/ice near the device,
    - thermal shock of the heater and heat exchanger caused by sudden changes of the outside temperature.

### §3. SONNIGER Poland is not liable to:

1. Current maintenance works, and inspections follow from Operation and Maintenance Documentation and device programming.
2. Defects caused by banking of a device while waiting for the warranty service.
3. Any defects caused to the company's property.

### §4. Complaint Procedure

1. In the event of a complaint under the Warranty conditions, the user may complain directly to the Distributor.
2. All repairs covered by the warranty shall be done as part of the activity of an installation company and Factory Service. All repairs ensuing from the guarantee shall be done in a place where the device is installed.
3. Any services under the Warranty are to be carried out within 14 days from the date of request. In exceptional cases, the deadline may be extended, especially if the warranty service requires ordering parts or components from subcontractors.
4. The user concerning the service activities is obliged to:
  - Allow having full access to the rooms where the devices were installed and provide the necessary facilities allowing direct access to the device (lift, scaffolding, etc.) to do all the servicing covered by the guarantee.
  - Present the original of the Guarantee Card and VAT invoice recording the purchase,

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- Ensure safety while doing the servicing,
  - Allow starting works immediately after the arrival of the Service.
5. In order to make a complaint under the warranty it is necessary to deliver to the Distributor's address the following documents:
    - a) correctly filled-in complaint form that is available at the website of [www.sonniger.com](http://www.sonniger.com)
    - b) copy of the Guarantee Card
    - c) copy of the proof-of-purchase - the sales invoice
  6. The repair service including the replacement of the parts shall be done free of charge only if the representative of the installing contractor or the Service claims that the defect or malfunctioning of the device is caused by the fault of the producer.
  7. Any costs (cost of repair, travel, and exchanged components) incurred due to the unjustified complaint, especially in the situation when the representative of the Installing Contractor of the Factory Repair Service claims that defect/damage was caused as a result of breaching the guidelines provided in the Operation and Maintenance Documentation or notices the exclusions under §2 (Warranty exclusions) will be requested from the Buyer/Customer who reported the failure.
  8. The Claimant is obliged to give a written confirmation of the service provided.
  9. Sonniger Poland is entitled to refuse the warranty service if Sonniger Poland has not received full payment for the product complained about under the Guarantee or any previous servicing activities.