

## ***Installation and Operating Guide for SOLARIS electric radiators***

### ***Congratulations!***

*You have made an excellent choice with SOLARIS and we thank you for your confidence.*

*SOLARIS glass electric radiators are products which use the best technology to provide you with maximum comfort and safety. Each device is tested at several stages of its manufacture and has been tested by quality control before shipment.*

*Follow these easy installation and operating instructions to get the best out of your SOLARIS for many years to come.*

*Ref.*

# Table of contents



*Introducing* ..... page 1

*Table of contents* ..... page 2

1. INSTALLATION ..... page 3

    1.1 Precautions before installation ..... page 3

    1.2 Class, protective index, norms and safe distances ..... page 3

    1.3 Fitting the radiator ..... page 4

    1.4 Mounting the “towel drying rail” accessory ..... page 6

    1.5 Connecting the radiator ..... page 6

2. OPERATION ..... page 7

    2.1 Using the built-in electronic thermostat (VFI) ..... page 7

    2.2 Operating the remote electronic thermostat (VFR) ..... page 8

    2.3 Radio programmer operations (VFR) ..... page 9

3. OPERATION ..... page 10

    3.1 Protection from overheating and overloading ..... page 10

    3.2 Cleaning ..... page 10

    3.3 Removing the radiator ..... page 10

4. TROUBLESHOOTING ..... page 10

WARRANTY CERTIFICATE ..... page 11

**Carefully read this guide before installation and using.**

**For any inquiry, feel free to contact us :**

**CUSTOMER SERVICE FONDIS**

**☎ : (0)389.377.500 - Fax : (0)389.377.589**

**E-mail : [contact@fondis.com](mailto:contact@fondis.com)**

## **1. INSTALLATION**

**Warning : The radiator must be installed by a professional or someone competent who has first checked to make sure the electricity supply meets current norms.**

**Our responsibility is limited to the supply of the radiator.**

### **1.1 Precautions before installation**

- ◆ On the panel, make sure the power cable is not damaged. If it is, it must be replaced by a qualified person because special tools are needed.
- ◆ Never install the radiator just below a power outlet.
- ◆ Never connect the radiator using a power outlet plug. It must be connected directly to the power input in an electrical control box.
- ◆ Classified as a fixed heating device, the SOLARIS radiator must only be fixed to the wall.
- ◆ The radiator must not be installed if the glass is damaged.

### **1.2 Class, protective index, norms and safe distances**

⇒ Class



SOLARIS radiators are in class II, i.e. with double electric insulation: since there is no risk of contact they do not need to be earthed.

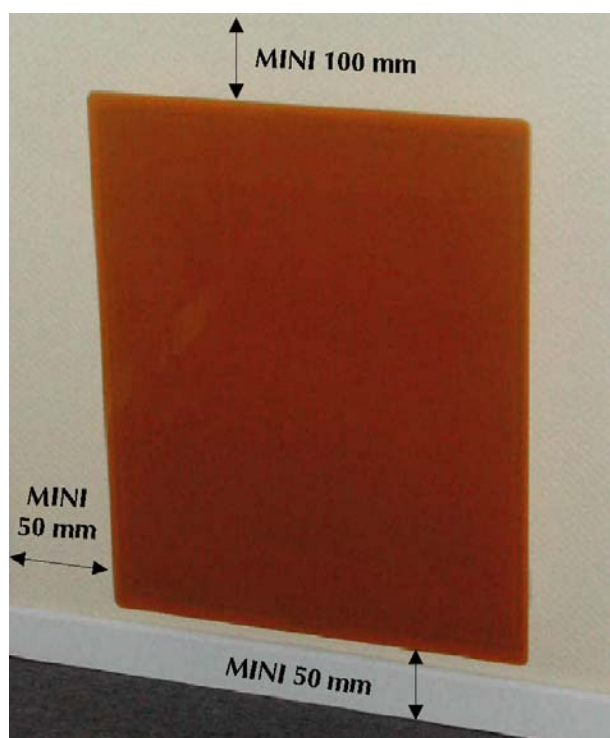
⇒ Protective index



SOLARIS radiators are protected against water spray. Nevertheless avoid spraying water on the hot radiator: risk of thermal shock

⇒ Norms and safe distances

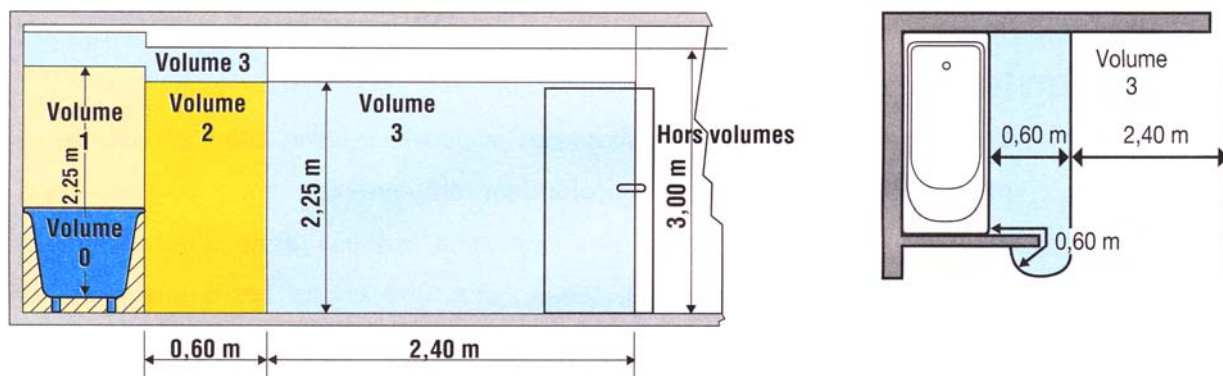
SOLARIS radiators comply with norm NF Electricité and, depending on the model, carry the NF Electricité Performance stamp: French quality norm awarded to devices for their safety (casing temperature limited).



***Kindly respect the minimal distances as per picture.***

SOLARIS radiators must be installed according to current norms. For bathrooms: see norm NFC 15-100. It requires the installation of a 30 mA differential protection (personal protection) for bathroom heaters.

SOLARIS radiators can be installed in the "volume 2" area of a wet room (from the corner of the bath or shower within a radius of 0.6 m for 2.25 m high) so that the thermostat controls cannot be reached by anyone in the bath or shower. Any heating appliance authorized within a volume is also allowed in volumes of a higher index. Therefore, SOLARIS radiators can also be installed in "volume 3".



### 1.3 Fitting the radiator

#### Warning :

**For fitting the radiator, only use the fastening elements supplied with the appliance which are specially designed for the purpose. The screws and plugs (not supplied) must be suitable for the solid material used for the support (brick, concrete, plasterboard wall, etc.); this must be perfectly flat and vertical.**

Depending on the type of radiator you purchased :

- Note the distances between mounts according to the table below
- mark, then drill the holes in the wall
- fit the 2 upper pins using the appropriate plugs and screws (the shorter side of the pin towards the wall)
- for vertical models, a 3rd pin is supplied so that the verticality of the radiator can be fixed.

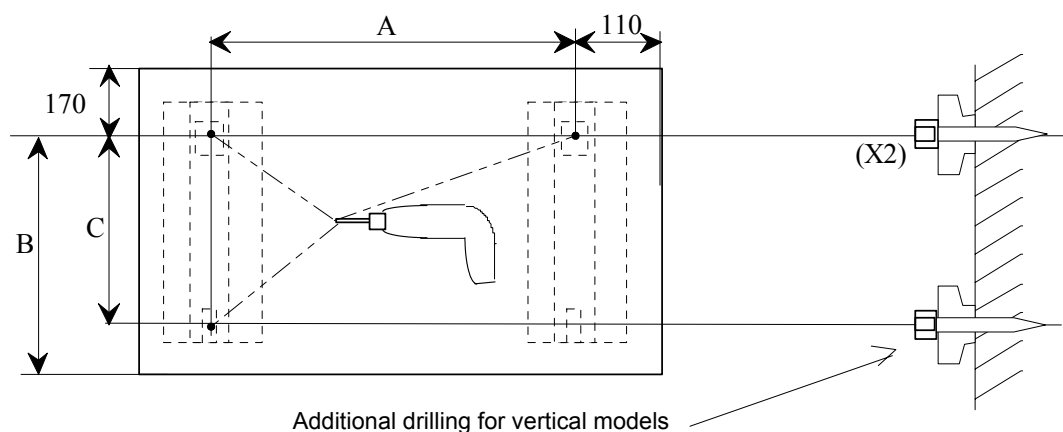
Fit this pin according to the indications given in the table.



**Important :****The pins are eccentric to allow the radiator to be levelled.**

- connect your radiator, following the instructions given below. (see part 1.5.)
- slot the radiator onto the mounting pins. A safety system prevents the radiator from being lifted off once it is installed. You should hear a click (metal sound) from the mounts when you perform this operation.
- make sure the radiator is in position fixed to the wall.

The bag containing the mounting pins also contains a self-adhesive cable tie. This is glued to the metal chassis behind the radiator (at the bottom), to guide the radiator power cable and help to hide it.



For vertical models, a third pin is supplied to enable the regulation of the radiator's plumb.

Type:	A (mm)	B (mm)	C (mm)
VF.H63..450	280	450	
VF.H63..750	530	450	
VF.H63..1000	830	450	
VF.V63..1000	410	870	730
VF.H45..1000	1 230	270	
VF.V45..1000	230	1 275	1 130
VF.H63..1200	1 030	450	
VF.V63..1200	410	1 070	930
VF.H63..1500	1 280	450	
VF.V63..1500	410	1 320	1 160

If you wish to remove the radiator, see chapter 3.3.

**Important :**

**A horizontal model (VF.. H) must only be mounted horizontally and a vertical model (VF..V) vertically, for technical reasons and accessibility to the thermostat.**

## **1.4 Mounting the "towel drying rail" accessory**

### **Warning :**

- ◆ **The towel drying rail must be mounted before the radiator is fastened to the wall.**
- ◆ **Use only the 4 screws supplied with the towel rail rods.**  
They fit the holes provided in the radiator metal framework perfectly.
- ◆ **Only one towel drying rail can be mounted on the radiator in the places provided for the purpose.**



The appliance fitted with this rail is only designed to hold hand towels which must only be hung on the towel rail.

## **1.5 Connecting the radiator**

An multipolar circuit-breaking device with an opening of at least 3 mm must be included in the installation. SOLARIS radiators can only be connected to 230V - 50 hz AC current. The appliance is connected directly to the power inlet provided for the purpose. An earth is not necessary given that the products are in class II (see paragraph 1.b).

### **Using the pilot-wire (black):**

This is a remote control wire fitted in modern houses. It links heating appliances to the programmer, which controls the temperature via the pilot-wire. The desired temperature is set by the user on the thermostat. The orders received via the pilot-wire are not visible on the appliance thermostat.

**Important : The pilot-wire must be properly isolated if it is not used.**

### **Power cut-off**

Only a circuit-breaker which acts on the pilot-wire can be used. If the installation uses the "VFR" radio system (see below), there is no compatibility with a cyclic circuit-breaker.

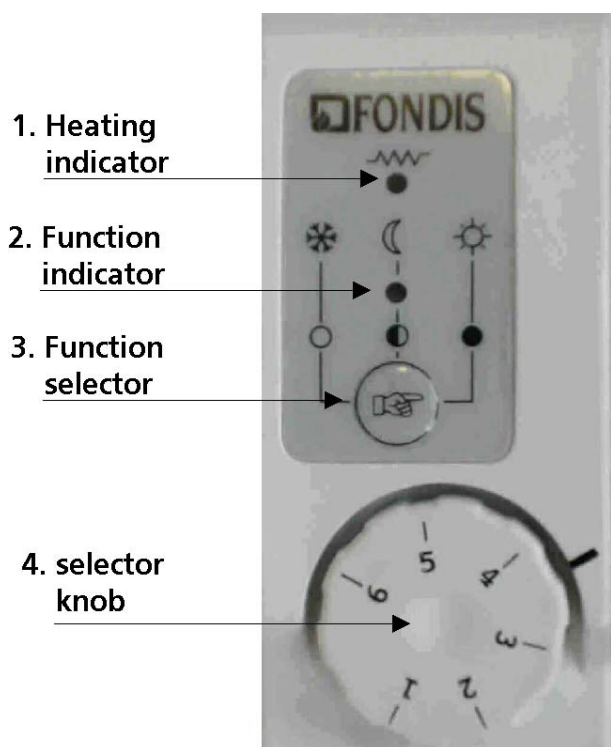
### **Carrier Current**

SOLARIS radiators are not compatible with a carrier current installation.

## 2 OPERATION

### 2.1 Using the built-in electronic thermostat (system VFI)

This system consists of an electronic thermostat with 6 orders programmable by pilot-wire, fixed behind the radiator. The front of the thermostat consists of (from the top down):



♦ **a heating indicator (red diode) (1)**: when the radiator is heating, the diode is light. When the diode goes out, the radiator is no longer heating.

**Warning** : even if the radiator is switched on, this diode may go out. This means that ambient temperature has been reached and the radiator is not actively heating.

♦ **A function indicator (green diode) (2)** : with the VFI system, the radiator can run in "comfort", "low" or "frost free" mode (or function). Thus:

- **if the green diode is permanently on**: the user has selected "comfort" mode on the thermostat. This means that the radiator will run so that the ambient temperature (for comfort) desired, once set via the knob, will be permanently maintained.

- **if the green diode is flashing**: the user has selected "low" mode on the thermostat. This automatically lowers the temperature by 3°C compared with the comfort temperature.

- **if the green diode is out**: the radiator is off. It will then automatically go into "frost free" mode and maintain a temperature of at least 6°C in the home.

♦ **A function selector (3)** :

press this button successively to choose the radiator function mode: comfort, low or frost free.

♦ **A selector knob (4)** : this is used to set the temperature you wish to have in the room housing the radiator.

#### Setting the temperature with the VFI system :

To set the comfort temperature, simply turn the graduated knob on the thermostat from 1 to 6 in a clockwise direction, until the red diode comes on. With an optimal configuration, when the knob is set to position 3, this corresponds to an ambient temperature of around 19°C.

#### Warning :

**If there are several radiators in the same room, the thermostats must be set to the same setting.**

#### Booster function( dry-towels):

Booster function is reachable by a long push on the button number 3 from "comfort " and " low " mode only. The heating is then continuous independent of ambient temperature or setting temperature. The red light is flashing quickly.

The heating stops:

- automatically after 2 hours.
- In case of shortage, the booster mode is never re-activated automatically when the electricity comes back.
- by the reception of a stop order from the pilot wire.
- By pressing the button 3 which come back to "comfort" mode.

## 2.2 Operating the remote electronic thermostat (VFR system)



This system consists of one ambient thermostat Caléo (transmitter) per room and a receiver fixed behind each radiator. This allows the thermostat, and hence room temperature detection, to be controlled remotely, by radio, since information is transmitted by radio waves.

### **Operation :**

- ⇒ the transmitter thermostat measures the ambient temperature and takes into the account the temperature set by the user via the selector knob (central part of the Caléo thermostat).
- ⇒ an order is sent to the receiver, as soon as the ambient temperature is lower than the set temperature.
- ⇒ on receiving the order, the receiver controls the radiator heating function.

### **Installation :**

Each radiator must be initialized so that the receiver recognises the information transmitted by the transmitter.

### **This takes place in 4 stages :**

- ◆ **make sure the Caléo thermostat transmitter is off** (selector set to "off" **o**)
- ◆ **pass a magnet over the label on the receiver box** fixed behind the radiator (label including the date of manufacture of the receiver). The rear of the Caléo thermostat has a magnet beside the rectangular opening at the bottom on the left, which is used for this operation. If the appliance was made before November 1999, the label is above the box and a flat magnet is needed for initialization. After November 1999, the label is under the receiver. Perform this operation until the red diode on the front of the Caléo thermostat flashes rapidly.



- ◆ **Turn the Caléo thermostat switch to "on" ●**. If it is properly connected, the receiver diodes and the thermostat flash at the same time.

- ◆ **repeat this operation for all the radiators** which are to be controlled by the same thermostat.
- ◆ **mount the thermostat on a wall in the room where the radiator(s) are**, so that the temperature measurement will not be disturbed by an external factor (sun's rays, draught...). Range of the Caléo thermostat: about 20 m clear range.

The thermostat transmits a command to the receiver at regular intervals : the red diode on the thermostat and the receiver indicator flash at the same rhythm, indicating good radio transmission.

### **Specifics :**

- . several radiators in the same room can be controlled using the same transmitter.
- . outside heating periods, it is recommended to switch off radio transmission by turning the thermostat switch to "off" **o**.

## **2.3 Radio programmer operations (VFR system)**

Linked to the Caléo thermostat, the Chrono programmer independently changes the heating levels of radiators to the rhythm of life in 4 living zones.

This type of programming is used to manage zones separately (a zone can be one or more rooms) (e.g. zone 1 for living room + kitchen, zone 2 for the bedrooms, zone 3 for the bathroom, zone 4 for the office). On a weekly basis, you choose a temperature for each zone according to time and day. This programming is repeated week after week (unless a new choice is made).



### **Operation :**

- the Caléo thermostat sets the required temperature and measures the ambient temperature
- the programmer gives the level of heating
- the receiver controls the radiator heating on the basis of the information received

### **Installation :**

When all the receivers are initialized with the Caléo thermostat, the radiators can be coupled with the Chrono programmer. The principle is the same as the one described previously.

### **Warning :**

**It is recommended to turn the Caléo thermostat switch to "off" during this operation.**

**For further details and to use the programmer, see the instructions enclosed with the programmer.**

## **3 OPERATION**

**Warning** : Never cover the radiator: risk of overheating!

### **3.1 Protection from overheating and overloading**

The radiator has an overheating protection device which can cut the heating off if the appliance is accidentally covered (by clothing, a towel,...).

When this cuts the heating, the radiator cannot be turned back on again immediately. You must remove the clothing from the radiator and then switch off the power via the circuit-breaker on the electrical control panel. This circuit-breaker can then be switched back on when the radiator has cooled completely, at least two hours later.

### **3.2 Cleaning**

**Warning:** Never use abrasive or corrosive products

**Important:**

**It is essential to perform all cleaning operations only when the radiator is cold (risk of thermal shock) using window-cleaning detergent or soapy water.**

### **3.3 Removing the radiator**

Remove the radiator as shown in the following diagrams



- Put a screw driver between the wings.
- pull up the 2 security clips with the screw driver, than hang up the radiator.

## **4 TROUBLESHOOTING**

- ◆ check the power supply
- ◆ cut the radiator power supply by switch the fuse on the electrical control panel until the radiator is cold
- ◆ if using a radio system, change the batteries when necessary
- ◆ call a technician

# *Warranty Certificate FONDIS SOLARIS*

In order to validate your 2 year contractual warranty in accordance with the specified warranty conditions stated in the Solaris user manual, please complete and return this warranty certificate within 15 days from the date of purchase to the following address :

**FONDIS SA  
F-68801 THANN Cédex**

For more facilities, this document enables you to subscribe for 4 units.

To be fulfilled	<i>SOLARIS</i> radiator n°1	<i>SOLARIS</i> radiator n°2	<i>SOLARIS</i> radiator n° 3	<i>SOLARIS</i> radiator n°4
Type : VF...				
Sérial number :				
Purchase date :				
Installation date :				

Point of sale stamp	Informations about the user
<p><u>If different installer, please advise :</u></p>	<p><u>First name :</u></p> <p><u>Last name :</u></p> <p><u>Address :</u></p> <p>-----</p> <p><u>Postal code :</u></p> <p>-----</p> <p><u>City :</u></p> <p>-----</p> <p><u>Country :</u></p>

### INFORMATIONS

↪ *How did you learn about FONDIS Solaris ?*

↪ *Your comments :*