AIRMASTER
HEATING & VENTILATION

PANEL HEATERS

DIGITAL LCD CONTROL - ELECTRONIC TIMER & THERMOSTAT

INTERIOR USE ONLY | WALL MOUNTING | 3 PRE-INSTALLED TIMER SETTINGS | THERMAL PROTECTION | IPX4 INGRESS PROTECTION | Class I | CE | UK CA

OPERATION MANUAL

Product Codes: SPH1
SPH1.5
SPH2

CED ELECTRICAL GROUP

UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX
EU: CED 46 Rosemount Business Park Dublin. D11 K26W

SAFETY INSTRUCTIONS

PLEASE READ SAFETY INSTRUCTIONS CAREFULLY BEFORE USING THE UNIT.

- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Children of less than 3 years should be kept away unless continuously supervised.
- Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- CAUTION — Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.

- If the power cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The appliance should not be placed immediately below a socket.
-  WARNINGS : In order to avoid overheating, do not cover the heater.
- Do not use this heater with a programmer, timer, separate remote control system or any other device that turns on the heater automatically because there is a risk of fire if the device is covered or placed incorrectly.
- CAUTION: To avoid hazard due to inadvertent resetting of the thermal cutout, this appliance must not be powered via an external switch, such as a timer, or connected to a circuit that is regularly switched on and off by the electricity supplier.
- This heater must not be disposed of with household waste; it must be taken to a local centre of recovery and recycling of electrical appliances.
- The heater must be installed so that switches and other control devices cannot be touched by a person in the bath or shower Zone 3
- A means of disconnection from the power supply having a contact opening distance of all poles must be included in the fixed wiring in accordance with the installation requirements.
- If being fitted in a bathroom, a 30mA RCD must

be used.
- With respect to the details of how to install the appliance onto the wall, refer to part "INSTALLATION".
- Regarding the detailed information on the connection of the electric cable, refer to the section "ELECTRICAL CONNECTION".

INSTALLATION

RECOMMENDATIONS IMPORTANT READ BEFORE INSTALLATION

- Do not install the unit directly below a socket.
- Do not use the appliance outdoors.
- Do not install the unit in an air current that could disrupt its regulation.
- Do not place the unit near a barrier limiting the airflow around it.
- Attach the heater vertically to the wall as described below.
- Choose screws and plugs suitable for the wall material and weight of the unit.

RECOMMENDATIONS FOR WALL MOUNTING

Do not make any changes to the unit or its mounting bracket on the Wall!
Before installing the device, check the condition of the wall on which it will be fixed: the wall must be in good condition, it must not show any damage (cracks, sagging, humidity, ...).
Do not drill holes near old holes, even when they are

closed.
It is imperative that you consult a building professional to use the anchoring system (screws, dowels, etc.) appropriate for the material that constitutes your wall, as well as the weight of the appliance. Observe the diameter of the fixing screws indicated in this manual.
Do not modify the holes for securing the unit or its mounting bracket to the wall.
Drill the wall with a drill of the appropriate size for the anchoring system. Remove debris and dust.
Regularly check the mounting points of the device on the wall. Tighten them if necessary.

ELECTRICAL CONNECTION

- Means for disconnection having a contact separation in all poles must be incorporated in the fixed wiring in accordance with the wiring regulations
- Warning: you need to connect the two conductors of the supply cable to a connection block in respecting the polarities as following:

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:
Blue – Neutral
Brown – Live
Green - Yellow – Earth wire
The blue wire must be connected to the terminal marked with an N or coloured black.
The brown wire must be connected to the terminal marked with an L or coloured red.
WARNING: Never connect live or neutral wires to

the earth terminal.
All fittings must be installed by a competent person in accordance with the current IET Wiring Regulations (BS7671). If in doubt, consult a qualified electrician.

INSTALLATION

To hang the heater on the wall:

1. Choose a suitable installation location for the heater. (Figure 1)
2. Disassemble the wall bracket by loosening the screw (do not remove, only loosen) and slide the metal plate out of the hole. Take out the bracket by pulling down (Figure 2).
3. Verify that the bracket is perfectly horizontal with a spirit level and mark the location of 4 holes on the wall. Drill 4 holes in the wall using a drill adapted to the diameter of wall plug. Insert the pegs into the holes, then screw securely wall mount bracket onto the wall. (Figure 3)
4. Place the heater against bracket (Figure 4):

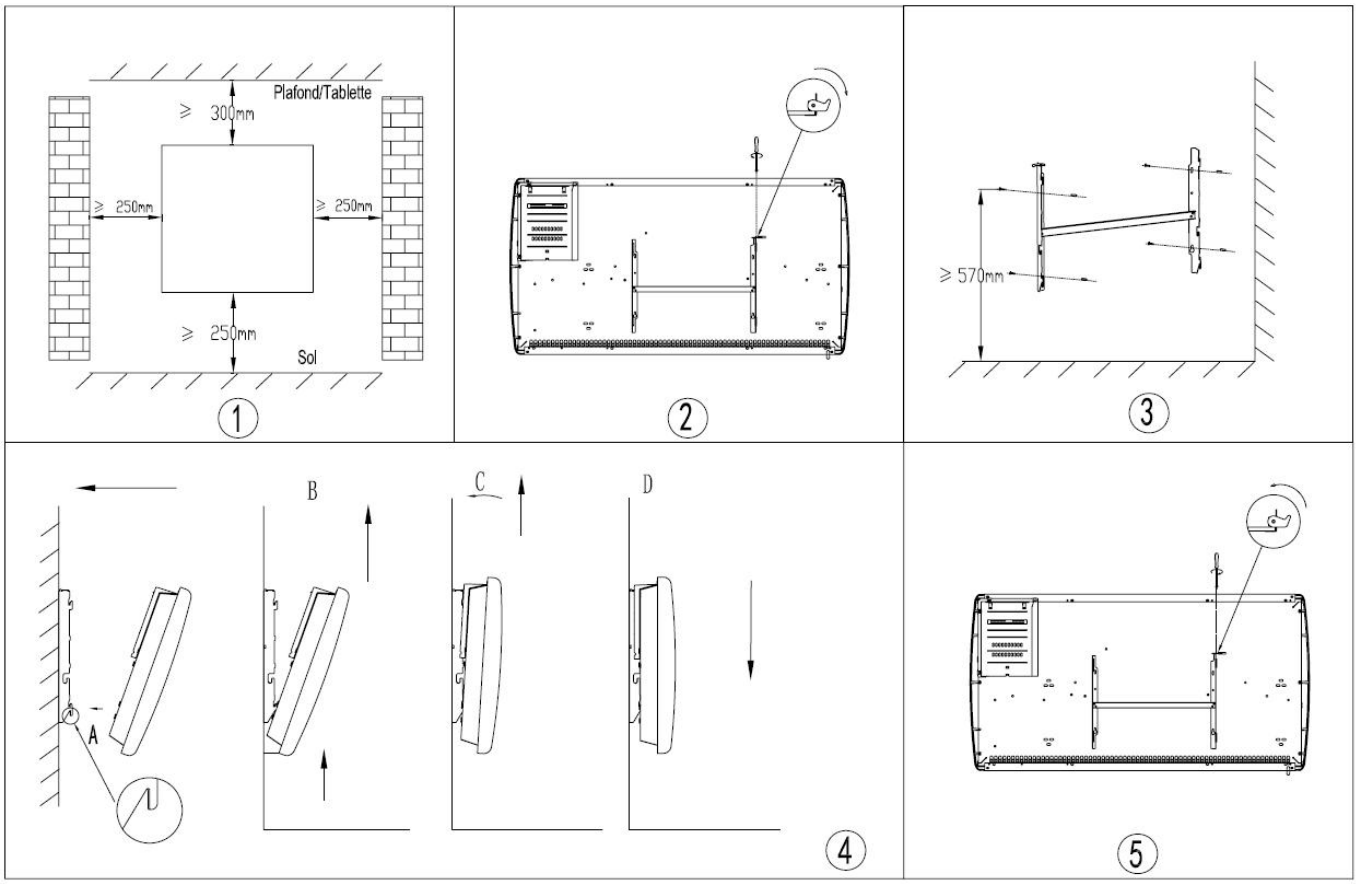
A : Align the heater on the lower hooks that are downwards.

B : Pull the heater upwards whilst retaining it in the lower hooks.

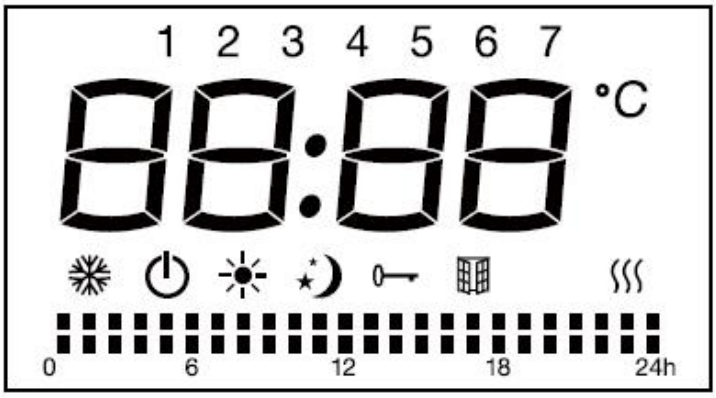
C : Align the heater on the upper hooks that are upwards.

D : Pull the heater down.

5. Slide the metal plate into the hole, and fasten the screw to lock the wall mount bracket (Figure 5).



LCD display:



Functions of the icons on the LCD:

Symbol	Function
	Mode Standby (the appliance doesn't work but with power on)
	Mode Anti-freeze (the appliance maintains the temperature around 7°C)
	Mode Comfort (set the desired temperature)
	Mode ECO (ECO maintains the temperature that is 3.5 ° C lower to comfort temperature. This mode reduces the temperature without disturbing the desired temperature in comfort mode)
P	Mode P (under this mode, control the appliance via external pilot device)
	keyboard lock
	Window detector function
	Heating indicator (When appliance is heating up, this icon will show on the screen. The icon will disappear when detected temperature reach the set temperature.)
°C	Temperature (centigrade)
	Mode Comfort active
	Mode ECO active
	Standby

CONTROL PANEL

“PLEASE REMOVE PLASTIC FILM OFF DISPLAY”

Button	Function
⏻	Standby
PRG	To choose the weekly personalized program
	To select Window detector function
M	Mode comfort / Mode eco Mode anti-freeze / P1 / P2 / P3 / P

Main power switch (I/O)

OPERATION

1. <u>Setting the time and turning on the device</u>

For the first time you use the device, after connection to the power supply:

Press ^ to toggle between hours / minutes / day of the week (1-7). Press the button

to set the hours / minutes / day of the week. Press the button to complete the setting and return to standby mode, otherwise after 5 seconds without action the unit will automatically return to standby mode.

If the device is in operation (changing the time setting):

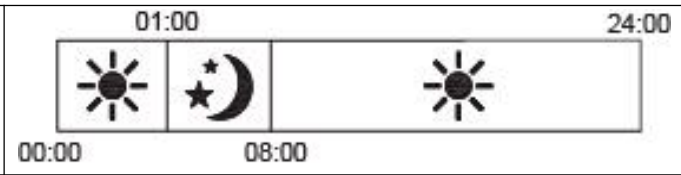
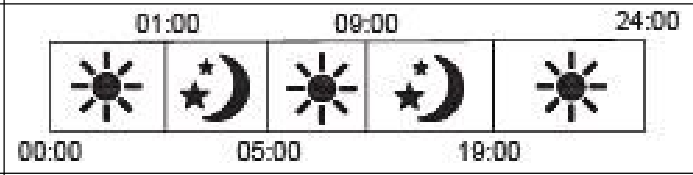
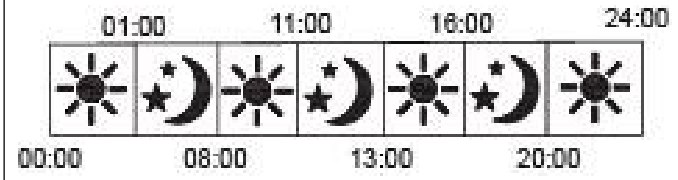
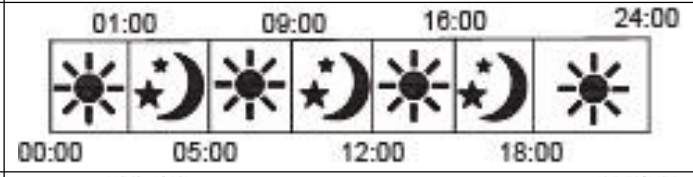
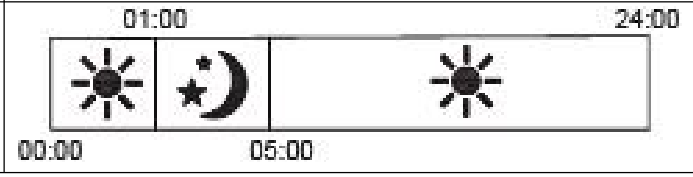
Press both and buttons at the same time and enter the time setting. Press to toggle between hours / minutes / day of the week (1-7). Press the button to set the hours / minutes / day of the week. Press any button other than or to save the setting, otherwise after 5 seconds without action the setting is automatically saved.

2. Touch M

Press M button to toggle among the modes: Comfort mode , Economic mode Antifreeze mode, P1/P2/P3/P.

Under mode P, the appliance will work at comfort mode as default.

Pre-installed programs P1/P2/P3:

P 1	Mon-Sun	
P 2	day workables	
	weekends	
P 3	day workables	
	weekends	

3. Touch PRG

Press the PRG button to choose one of the programs.

In PRG mode, Press PRG button to select between “day (1 for Monday -7 for Sunday)” and “heating mode of different periods (00:00-24:00)”.

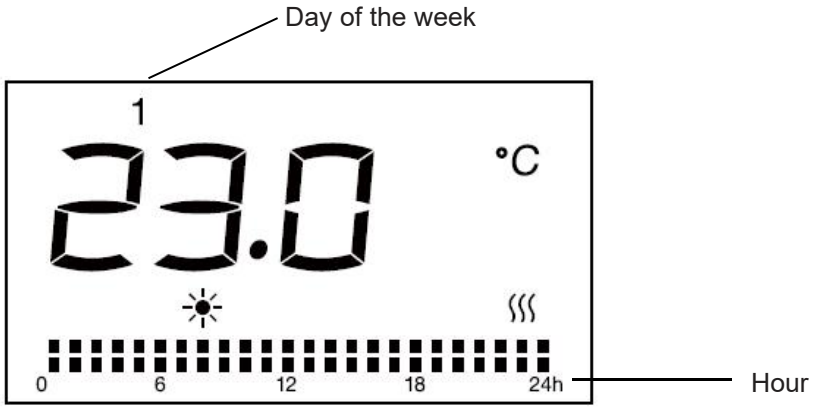
Select the desired day(1-7) by pressing ∧/∨ buttons.

Press the PRG button to set the "heating mode of different period(00:00-24:00)"

When setting “heating mode of different period(00:00-24:00)”, press button ∧ to choose hours, and ∨ to choose among function: comfort, economic, and standby mode. After 30 seconds it will automatically finish.

For example: to select the day 1, temperature of 23℃, comfort mode for 24 hours:

1. Press PRG, then ∧/∨ buttons to choose day 1.



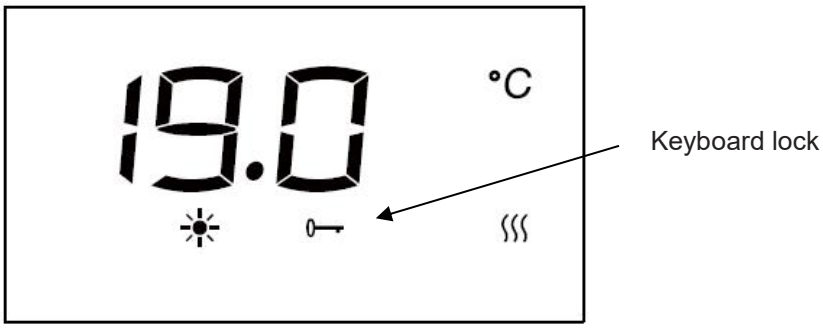
2. Press the PRG button again, press ∧ to choose the hour, to ∨ choose comfort mode and then repeat for the entire 24 hours.
3. After 30 seconds without action, the setting is saved.

4. Temperature setting

In comfort modes ☀, or pilote **P** or Eco ☾ (excluding anti-freeze mode ❄), press ∧ or ∨ to select the desired set temperature. The temperature range for comfort mode and pilot mode is between 5°C and 29°C and for Eco mode is between 1.5°C and 25.5°C. The temperature difference between the ECO mode and the COMFORT mode is 3.5°C. Each time you press the buttons to adjust the temperature, you increase or decrease the temperature by 0.5°C. Press any other button except ∧/∨ to finish the setting, otherwise after 5 seconds without action the setting is saved. The thermostat sets the room temperature, when the room temperature is higher than the set temperature, the device stops heating.

5. Keyboard lock

Press M button for three seconds to activate the keyboard lock function , in order to unlock, press M again for three seconds.



Remarks:

1. The keyboard lock function doesn't lock the standby button.
2. The keyboard lock function will automatically be deactivated under below circumstances.

1) the appliance is turned off by pressing standby button.

2) the appliance suffer power disconnection

You need to set again by pressing M for 3 seconds if you need this function.

6. Window detector function

Press to enter window detector function. Then press "/" to choose "ON" or "OFF".

If "ON" is selected, the window detection function is activated and icon will show on the screen. When temperature decrease detected, the appliance will automatically enter anti-freeze mode with icon flashing. If temperature rises up, the appliance will go back to previous mode with icon on. You can choose "OFF" to inactivate the window detection function.

Remarks: the window detector function is not available under anti-freeze mode.

7. In case of power failure

In case of power failure, the device keeps all the parameters: temperature, mode, programming (including days and hours). After power is restored, the device will return to the mode and setting temperature selected before the power off. But if power failure is over 7 days, when power is restored, the clock must be set again to operate the various programs correctly.

TECHNICAL CHARACTERISTICS

Model / Ref	SPH1	SPH1.5	SPH2
Nominal voltage	220-240V ~	220-240V ~	220-240V ~
Rated frequency	50Hz	50Hz	50Hz
Nominal power	840-1000 W	1250-1500 W	1680-2000 W
Class	I	I	I
IP	IPX4	IPX4	IPX4

Information requirements to (EU) 2015/1188, amended by (EU) 2016/2282

Model identifier(s): SPH1

Item	Symbol	Value	Unit		Item	Unit
Heat output					**Type of heat input, for electric storage local space heaters only (select one)**	
Nominal heat output	*Pnom*	0.9	kW		manual heat charge control, with integrated thermostat	NA
Minimum heat output (indicative)	P_{min}	NA	kW		manual heat charge control with room and/or outdoor temperature feedback	NA
Maximum continuous heat output	*Pmax,c*	0.9	kW		electronic heat charge control with room and/or outdoor temperature feedback	NA
Auxiliary electricity consumption					fan assisted heat output	NA
At nominal heat output	el_{max}	NA	kW		**Type of heat output/room temperature control (select one)**	
At minimum heat output	el_{min}	NA	kW		single stage heat output and no room temperature control	[no]
In standby mode	el_{SB}	0	kW		Two or more manual stages, no room temperature control	[no]
					with mechanic thermostat room temperature control	[no]
					with electronic room temperature control	[no]
					electronic room temperature control plus day timer	[no]
					electronic room temperature control plus week timer	[yes]
					Other control options (multiple selections possible)	
					room temperature control, with presence detection	[no]
					room temperature control, with open window detection	[yes]
					with distance control option	[no]
					with adaptive start control	[no]

		with working time limitation	[no]
		with black bulb sensor	[no]
Contact details	CED ELECTRICAL GROUP :	UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX EU: CED 46 Rosemount Business Park Dublin. D11 K26W	

Information requirements to (EU) 2015/1188, amended by (EU) 2016/2282

Model identifier(s): SPH1.5

Item	Symbol	Value	Unit		Item	Unit
Heat output					**Type of heat input, for electric storage local space heaters only (select one)**	
Nominal heat output	*Pnom*	1.4	kW		manual heat charge control, with integrated thermostat	NA
Minimum heat output (indicative)	P_{min}	NA	kW		manual heat charge control with room and/or outdoor temperature feedback	NA
Maximum continuous heat output	*Pmax,c*	1.4	kW		electronic heat charge control with room and/or outdoor temperature feedback	NA
Auxiliary electricity consumption					fan assisted heat output	NA
At nominal heat output	el_{max}	NA	kW		**Type of heat output/room temperature control (select one)**	
At minimum heat output	el_{min}	NA	kW		single stage heat output and no room temperature control	[no]
In standby mode	el_{SB}	0	kW		Two or more manual stages, no room temperature control	[no]
					with mechanic thermostat room temperature control	[no]
					with electronic room temperature control	[no]
					electronic room temperature control plus day timer	[no]
					electronic room temperature control plus week timer	[yes]
					Other control options (multiple selections possible)	
					room temperature control, with presence detection	[no]
					room temperature control, with open window detection	[yes]
					with distance control option	[no]
					with adaptive start control	[no]
					with working time limitation	[no]
					with black bulb sensor	[no]

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Information requirements to (EU) 2015/1188, amended by (EU) 2016/2282

Model identifier(s): SPH2

Item	Symbol	Value	Unit		Item	Unit
Heat output					**Type of heat input, for electric storage local space heaters only (select one)**	
Nominal heat output	*Pnom*	1.8	kW		manual heat charge control, with integrated thermostat	NA
Minimum heat output (indicative)	P_{min}	NA	kW		manual heat charge control with room and/or outdoor temperature feedback	NA
Maximum continuous heat output	*Pmax,c*	1.8	kW		electronic heat charge control with room and/or outdoor temperature feedback	NA
Auxiliary electricity consumption					fan assisted heat output	NA
At nominal heat output	el_{max}	NA	kW		**Type of heat output/room temperature control (select one)**	
At minimum heat output	el_{min}	NA	kW		single stage heat output and no room temperature control	[no]
In standby mode	el_{SB}	0	kW		Two or more manual stages, no room temperature control	[no]
					with mechanic thermostat room temperature control	[no]
					with electronic room temperature control	[no]
					electronic room temperature control plus day timer	[no]
					electronic room temperature control plus week timer	[yes]
					Other control options (multiple selections possible)	
					room temperature control, with presence detection	[no]
					room temperature control, with open window detection	[yes]
					with distance control option	[no]
					with adaptive start control	[no]
					with working time limitation	[no]
					with black bulb sensor	[no]

Contact details	CED ELECTRICAL GROUP :	UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX EU: CED 46 Rosemount Business Park Dublin. D11 K26W

Information requirements to (EU) 2024/1103

Model identifier(s): SPH1

Item	Symbol	Value	Unit	Item	Unit
Heat output				**Type of heat output/room temperature control (select one)**	
Nominal heat output	P_{nom}	0.9	kW	Single stage heat output and no room temperature control	No
Minimum heat output (indicative)	P_{min}	NA	kW	Two or more manual stages, no room temperature control	No
Maximum continuous heat output	$P_{max,c}$	0.9	kW	With mechanic thermostat room temperature control	No
Power consumption				With electronic room temperature control	No
In off mode	P_o	0.00	W	Electronic room temperature control plus day timer	No
In standby mode	P_{sm}	0.20	W	Electronic room temperature control plus week timer	Yes
In idle mode	P_{idle}	0.18	W	**Other control options (multiple selections possible)**	
In network standby	P_{nsm}	0.00	W	Room temperature control, with presence detection	No
Standby mode with display of information or status		yes		Room temperature control, with open window detection	Yes
Seasonal space heating energy efficiency in active mode	$\eta_{S,on}$	92.0	%	Distance control option	No
				Adaptive start control	No
				Working time limitation	No
				Black bulb sensor	No
				Self-learning functionality	No

		Control accuracy	No
Contact details	CED ELECTRICAL GROUP :	UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX EU: CED 46 Rosemount Business Park Dublin. D11 K26W	

Information requirements to (EU) 2024/1103

Model identifier(s): SPH1.5

Item	Symbol	Value	Unit	Item	Unit
Heat output				**Type of heat output/room temperature control (select one)**	
Nominal heat output	P_{nom}	1.4	kW	Single stage heat output and no room temperature control	No
Minimum heat output (indicative)	P_{min}	NA	kW	Two or more manual stages, no room temperature control	No
Maximum continuous heat output	$P_{max,c}$	1.4	kW	With mechanic thermostat room temperature control	No
Power consumption				With electronic room temperature control	No
In off mode	P_o	0.00	W	Electronic room temperature control plus day timer	No
In standby mode	P_{sm}	0.20	W	Electronic room temperature control plus week timer	Yes
In idle mode	P_{idle}	0.18	W	**Other control options (multiple selections possible)**	
In network standby	P_{nsm}	0.00	W	Room temperature control, with presence detection	No
Standby mode with display of information or status		yes		Room temperature control, with open window detection	Yes
Seasonal space heating energy efficiency in active mode	$\eta_{S,on}$	92.0	%	Distance control option	No
				Adaptive start control	No
				Working time limitation	No
				Black bulb sensor	No

		Self-learning functionality	No
		Control accuracy	No
Contact details	CED ELECTRICAL GROUP :	UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX EU: CED 46 Rosemount Business Park Dublin. D11 K26W	

Information requirements to (EU) 2024/1103

Model identifier(s): SPH2

Item	Symbol	Value	Unit	Item	Unit
Heat output				**Type of heat output/room temperature control (select one)**	
Nominal heat output	P_{nom}	1.8	kW	Single stage heat output and no room temperature control	No
Minimum heat output (indicative)	P_{min}	NA	kW	Two or more manual stages, no room temperature control	No
Maximum continuous heat output	$P_{max,c}$	1.8	kW	With mechanic thermostat room temperature control	No
Power consumption				With electronic room temperature control	No
In off mode	P_o	0.00	W	Electronic room temperature control plus day timer	No
In standby mode	P_{sm}	0.20	W	Electronic room temperature control plus week timer	Yes
In idle mode	P_{idle}	0.18	W	**Other control options (multiple selections possible)**	
In network standby	P_{nsm}	0.00	W	Room temperature control, with presence detection	No
Standby mode with display of information or status		yes		Room temperature control, with open window detection	Yes
Seasonal space heating energy efficiency in active mode	$\eta_{S,on}$	92.0	%	Distance control option	No
				Adaptive start control	No

		Working time limitation	No
		Black bulb sensor	No
		Self-learning functionality	No
		Control accuracy	No
Contact details	CED ELECTRICAL GROUP :	UK: 44-48 Freshwater Road, Dagenham, Essex RM8 1RX EU: CED 46 Rosemount Business Park Dublin. D11 K26W	

IN CASE OF PROBLEMS

Problem	Solution
The appliance does not heat	Ensure that the circuit breakers are switched on the installation, or the shedder did not cut the power supply (if the installation has one).
	Select the COMFORT mode.
	Increase the temperature setting.
The device heats permanently	Ensure that the device is not in a draft.
	Reduce the temperature setting.

CARE AND CLEANING

1. Before cleaning the appliance, switch off the appliance supply and wait until it is completely cooled.
2. Use a damp cloth to clean the housing of the device.
3. Clean grilles and air outlet regularly. Never immerse the appliance in water or allow water to enter the appliance.

ENVIRONMENTAL PROTECTION

This symbol is known as the 'Crossed-out Wheelie Bin Symbol'. When this symbol is marked on a product or battery, it means that it should not be disposed of with your general household waste. Some chemicals contained within electrical/electronic products or batteries can be harmful to health and the environment. Only dispose of electrical/electronic/battery items in separate collection schemes, which cater for the recovery and recycling of materials contained within. Your co-operation is vital to ensure the success of these schemes and for the protection of the environment