RF1A-OT - Wireless Receiver
with RFRP-HW-OT

Operating Instructions

Contents

Important: Keep this document

Prior to operation, it is neccessary to complete all required settings described in this section.

CAUTION!

Before commencing any work on the electrical connections, you must first disconnect the device from the mains. None of the 230V connections must be live until the installation has been completed and the housing is closed. Only qualified electricians or authorised service staff are permitted to open the terminal box.

There are parts that carry mains voltage behind the cover. The terminal box must not be left unsupervised when open. (Prevent non specialists and especially children from gaining access to it.)

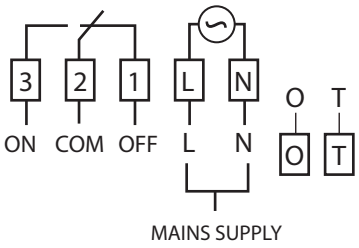
Ensure that this wireless enabled receiver is installed 1 metre from any metalic object, television, radio or wireless internet transmitter.

1. Specifications & wiring

Power Supply: 200 - 240Vac 50-60Hz
Contact Rating: 250 Vac 10(3)A
Ambient Temp: 0~45°C
Automatic Action: Type 1.C.Q

Class II appliance ⧈
Pollution degree: Pollution degree2
Rated Impulse Voltage: Resistance to voltage surge 2500V; as per EN 60730
IP Rating: IP20

Internal wiring diagram for RF1A-OT



* *If mains voltage output is required, terminals L & 2 must be electrically linked.*
Important: *Do not connect Mains Voltage to OpenTherm® terminals.*

2. Mounting

The RF1A-OT receiver should be wall mounted in an area within 20 metres distance of the wireless thermostat.

It is important that the receiver is mounted more than 1 metre away from metal objects as this will affect communication with the thermostat.

The receiver should also be installed at least 1metre from any electronic devices such as radio, TV, microwave or wireless network adaptor.

The unit can be fitted to:
1. Recessed conduit boxes
2. Surface mounting boxes

3. Installation

Slacken the fastening screw on the bottom of the receiver with a philips screwdriver.

The receiver is hinged and can be opened 180 degrees. Mount the unit as described in section 2. Wire the unit as described in section 1. Close the receiver and tighten the fastening screw.

4. Button / LED description

Wireless connect: Once voltage has been applied this button may be pressed to initialise the pairing process with the wireless thermostat. Once pressed the red and green LED will begin to flash.

Manual override: This button will manually override the system.

LED description:

OT Connection Normal Operation	Green LED	Red LED
RF1A-OT On	ON	OFF - will flash when communicating via RF
RF1A-OT Off	OFF	ON - will flash when communicating via RF

OT Communication Error	Green LED	Red LED
RF1A-OT On	Constant Flash	OFF
RF1A-OT Off	Constant Flash	ON

RF Communication Error	Green LED	Red LED
RF1A-OT On	ON	Constant Flash
RF1A-OT Off	OFF	Constant Flash

Summary	Green LED	Red LED
RF Communication Error	OFF or ON	Constant Flash
OT Communication Error	Constant Flash	OFF or ON
Normal Operation RF1A On	ON	OFF or Flashing
Normal Operation RF1A Off	OFF	ON or Flashing

EPH CONTROLS

EPH Controls Ireland
sales@ephcontrols.com www.ephcontrols.com

EPH Controls UK
sales@ephcontrols.co.uk www.ephcontrols.co.uk

5. Resetting the RF1A-OT receiver

Press the ■ RESET button located on the side of the receiver. The RF1A-OT receiver is now reset.

6. To connect the RFRP-HW-OT thermostat to an RF1A-OT receiver

Please note, If you are installing a CP4-HW-OT, the RFRP-HW-OT thermostat and the RF1A-OT receiver will have a pre-established RF connection so it is not necessary to carry out the RF connection process below.

On the RF1A-OT receiver:

Press the Connect button on the RF1A-OT receiver.

The red light will begin to flash.

On the RFRP-HW-OT thermostat:

Press the ■ Connect button.

The thermostat will show "nOE" followed by "---"

Once an RF connection has been established the thermostat will show '**r01**' on the LCD screen.

Press the '**OK**' button to finish the process.

The thermostat is now connected to the RF1A-OT receiver.

7. To disconnect the RFRP-HW-OT thermostat from an RF1A-OT receiver

This can be done from either the thermostat or the receiver.

7.1 On the RFRP-HW-OT thermostat:

Press the ■ Connect button.

The thermostat will begin to search through the RF channels.

Press and hold the '**Copy**' button for 10 seconds.

'**Adr**' will appear on the screen of the thermostat.

Press the '**OK**' button twice to complete the unpairing process.

The thermostat RFRP-HW-OT is now disconnected from the receiver RF1A-OT.

7.2 On the RF1A-OT receiver:

Press the Connect button, the red light will flash.

Red & green lights if using as a hub receiver.

Press and hold connect for about 10 seconds, the receiver will then stop flashing.

The RF connection is now cleared.

RFRP-HW-OT
Cylinder Thermostat Wireless

Installation Instructions

For use in normal environments.

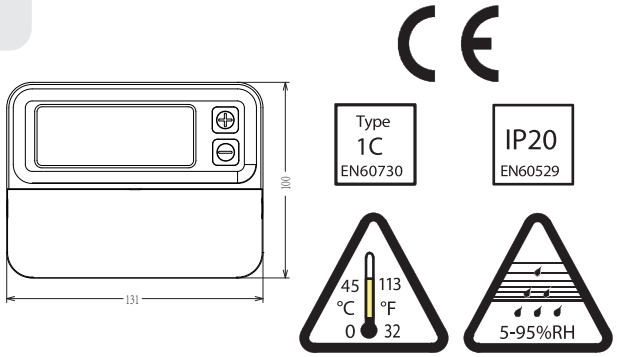
CAUTION! Installation and connection should only be carried out by a qualified person.

- Only qualified electricians or authorised service staff are permitted to open the thermostat.
- If the thermostat is used in a way not specified by the manufacturer, its safety may be impaired.
- Prior to setting the thermostat, it is neccessary to complete all required settings described in the section.

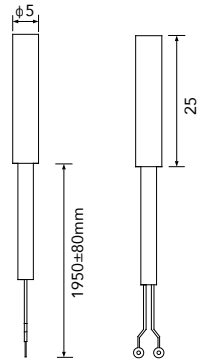
This thermostat can be mounted derectly on wall.

Important: Keep this document

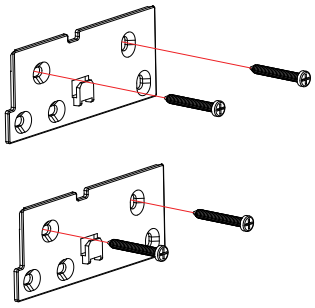
1



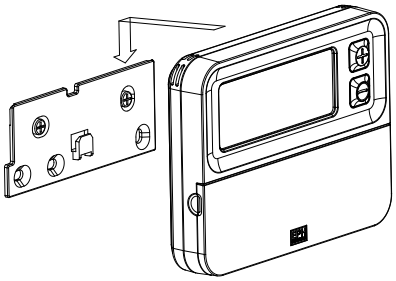
2



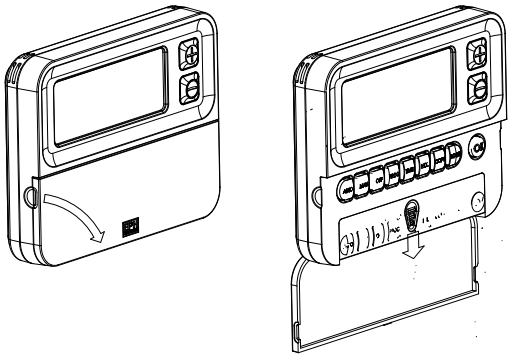
3



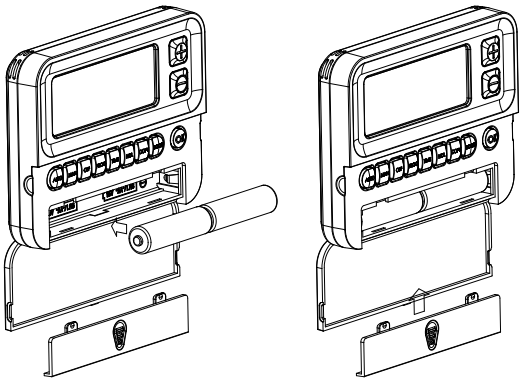
4



5



6



EPH Controls Ireland
sales@ephcontrols.com www.ephcontrols.com

EPH Controls UK
sales@ephcontrols.co.uk www.ephcontrols.co.uk

RFRP-HW-OT OpenTherm® Instructions

Operating Instructions

1. Installer menu (with OpenTherm® connected)

P0 1 - P0 5 as per RFRP standard

P0 7: OpenTherm® Information

Exit

P0 7: OpenTherm® Information

This menu allows the installer to view information received from the OpenTherm® boiler. It may take a few seconds to load information relating to each parameter. The information that can be shown from the boiler is outlined in the table below.

Displayed on screen	Description	Remark
tSEt	Target water temp	
tFLO	Outlet water temp	
trEt	Return water temp	
tFLU	Flue gas temperature	Dependent on boiler
tESt	Outdoor temperature	Dependent on boiler
nOdU	Modulation percentage	
PrES	Water pressure	Dependent on boiler

Exit:

This menu allows the installer to return to the main interface.

It is also possible to exit the installer menu by pressing AUTO, MAN or OFF whilst in the installer menu.

2. Controlling an OpenTherm® Boiler with multiple CombiPack4-OT / CP4-HW-OT

It is possible to have 6 CombiPack4-OT controlling 1 OpenTherm boiler. To do this it is necessary to make one of the RF1A-OT receivers into a Hub Receiver. This Hub Receiver will receive data from all of the RFRP-OT / RFRP-HW-OT thermostats and relay this information to the boiler via OpenTherm®.

Note: The Hub Receiver should have a wired OpenTherm® connection to the boiler.

Making your RF1A-OT receiver into a Hub Receiver

1. Press the Reset button ■ RESET on the receiver that you wish to make the Hub Receiver – Red and Green lights are both solid.
2. Immediately press and hold the Connect and Manual buttons for 5 seconds, the red light will start blinking.
3. Press the Connect button and the Green light will be solid – this is now the hub receiver.
4. Press the Manual button to exit to the normal interface.

Identifying if a receiver is a Hub Receiver

1. Press the Connect button.
2. The Hub receiver will flash Green and Red.
3. The Normal receiver will just flash Red.
4. To exit to main interface press the Manual button.

Pairing the RF1A-OT receivers together

1. Press the Connect button on the Hub receiver.
   Red and Green lights will begin to flash.
2. Press the Connect button on the next receiver to be paired.
   The Red light will flash 3 times and then stop.
3. Repeat this process to pair more receivers, up to a maximum of 6 receivers.

Once all units have been paired, allow time for the receivers to begin to communicate and receive OpenTherm® information from the boiler. This may take approximately 2 – 5 minutes.

You will see the red light flash on the Hub receiver and see a corresponding flash on the other receivers paired to the Hub Receiver when they are sharing information.

You may need to pair the receivers to the thermostats again.

If so, please refer to section 17 of RFRP-HW-OT Operating Instructions.

You can tell if your thermostat is receiving OpenTherm® information from the boiler by entering the installer menu of the thermostat (Hold Prog and OK buttons for 10 Sec) and go to P07 - Info.

If the installer menu is only showing P01 – P05, the thermostat and/or receiver has not been successfully paired.

Disconnecting the RF1A-OT receiver from Thermostats and other Receiver

1. Press Connect on the Receiver – the red light will flash (red and green light if using a hub receiver)
2. Press and hold Connect for about 10sec and the receiver will then stop flashing.
3. The RF connection is now cleared.

3. System Architecture

Example A 1 no. Thermostat controlling OT Boiler

RFRP-OT Thermostat | RF1A-OT Receiver | OpenTherm® Boiler

Example B 3 no. Thermostats controlling OT Boiler

Note: A maximum of 6 thermostats can be used in the system.