

ENGINEERING
TOMORROW

Danfoss



**Z-Wave Electronic Radio-Frequency
Receivers (1, 2 or 3-Channel)**

RXZ 1, 2, 2C and 3

Danfoss Heating

User Guide

**For a large print version of these instructions
please call Marketing on 0845 121 7400.**

Hereby, Danfoss A/S declares that the radio equipment type RX21, RX22, RX22C and RX23
is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet
address: http://heating.danfoss.co.uk/wordpress14_CADC-2_A94517437125_51313.Mxd

This product complies with the following EU Directives:
Electromagnetic Compatibility
2014/30/EU
Low Voltage
2014/35/EU
Restriction of the use of certain Hazardous Substances
2011/65/EU
Radio Equipment
2014/53/EU



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RXZ1, 2, 2C and 3

Z-Wave Electronic Radio Frequency Receiver
(1, 2 or 3-Channel)

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1.0 What is Z-Wave?

Z-wave is an ideal solution for installations of all kinds where a wired heating solution is undesirable or not possible. Using 2 way communication each component of the system can 'talk' to each other creating a network of Z-Wave enabled devices. In a domestic heating system this can consist of as little as a wireless thermostat and a wireless receiver up to an entire home controlled using Z-Wave technology. Everything from lighting, burglar alarms, home entertainment systems and many more can be controlled using Z-Wave.

Look for the Z-Wave logo on products to ensure compatibility with other Z-Wave devices.

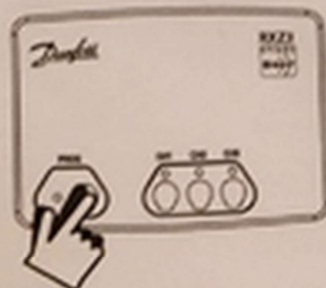


2.0 Operating Modes

The RXZ unit has two operating modes:

PROGRAMME Mode: used to configure and set-up the RXZ by the installer.

NORMAL OPERATION Mode: should be set in this mode to allow the RXZ to work correctly, once installed into system.



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3.0 Initial Startup

On initial startup the RXZ will start up in one of two modes with the PROG LED indicating which mode it is in.

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- PROG LED continuously ON GREEN:** The unit is in a READY STATE. This will be the default startup state for the RXZ if it was supplied with an RET-8Z unit.
- PROG LED slowly flashing GREEN:** The unit is in RESET STATE and has no previous bindings/devices associated with it – the RXZ is ready for inclusion into an existing system or to be the base station in a new system. This will be the default startup state for the RXZ if it has been purchased individually.

If on power up you have the PROGRAMME LED illuminated in any other way, proceed to page 11 to perform a full reset.

When the RXZ is in the READY or the RESET STATE the CHANNEL LED(s) will be in one of the following modes:

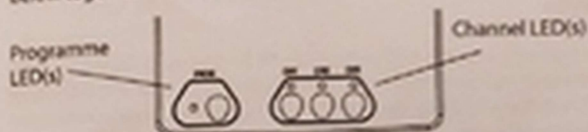
Red Channel LED flashing quickly: The channel is pre-bound to a controller and is waiting for communication from the associated device. Once the remote device communicates with the RXZ the LED will either go out indicating there is no demand from the remote unit, or turn green to indicate the output is active.

Red Channel LED on continuous: No device is bound to the channel. In this situation, please see page 8 in the installer instructions for details on establishing a link with required remote device such as an RET-8Z.

4.0 Understanding your RXZ

The RXZ receiver unit uses a combination of coloured LEDs to indicate the current operating mode/output status. For the purpose of this document the indicator lights will be split into two distinct groups: CHANNEL LED(s) and PROGRAMME LED. More information is listed below together with explanations of each of the LED colour states.

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Programme LED

Off	Awaiting Bind/Unbind button press request
Green	Normal Run Mode
Green (slow flash)	Factory Reset State
Red	Programme Mode
Red (slow flash)	Binding/association in progress
Orange (fast flash)	Failed to bind

Channel LED(s) - Programme Mode

Off	Channel Bound/Associated
Red	Channel not Bound/Associated
Red (slow flash)	Channel in process of being bound/associated

Channel LED(s) - Run Mode

Off	Output OFF
Green	Output ON
Red	Channel not Bound
Red (fast flash)	Channel Bound but no communication
Red (slow flash)	Channel manually overridden to an OFF state
Green/Orange (slow flash)	Channel manually overridden to an ON state

5.0 Manual Override

To manually override a channel on the RXZ receiver you need to press the associated channel button. Depending on the output state at time of override the Channel LED will operate in a set manner:

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If the channel is already bound/associated with a wireless device:

If channel output is **ON** and needs to be manually switched **OFF**, Press the channel button, the channel will switch off and the Channel LED will **flash RED slowly** to indicate it has been manually overridden into the off state.

If the channel output is **OFF** and needs to be manually switched **ON**, Press the channel button, the channel will switch on and the Channel LED will **flash GREEN/ORANGE**.

If the channel is not bound/associated with a wireless device:

If the channel output is on and needs to be manually switched off: The channel LED will show **RED** to indicate output is off.

If the channel output is off and needs to be manually switched on: The channel LED will be **ORANGE** to show that it is not associated with a device but is overridden manually to the on state.

Manual override is cancelled if at any time the channel button is pressed again, or the RXZ receives a signal from an associated device to counteract the override.

If a service interval capable unit is connected to the RXZ receiver, the manual override button may be disabled.

6.0 Factory Reset

If for any reason you need to return the RXZ unit to its factory reset state, or you need to wipe all network information from the unit it is advisable to perform a factory reset.

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1. Press PROG to place the receiver in PROGRAMME mode (Red LED illuminated continuously).
2. Press and hold CH1 button for at least 15 seconds.
3. The PROG LED will flash rapidly orange and green. Press and hold down the PROGRAMME button for at least 15 seconds.
4. If reset was successful, the channel LEDs will show as RED and the PROG LED will flash slowly green to indicate that the unit is now in its factory reset state.

* if after step 1, the PROG button is not held down within 30 seconds, the unit will return to its previous state and the full reset will not have been applied.

7.0 Z-Wave supported and controlled classes

Basic	Support
Binary switch	Support
Association	Control
Multi-instance	Support
Multi-instance Association	Control
Multi-command	Control and Support
Protection Vn2	Support
Version	Support
Wakeup	Control
Battery	Support
Thermostat Set Point	Support

8.0 Glossary

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Binding	The act of linking a remote wireless unit (i.e. thermostat or time controller) to the RXZ receiver channel.
Channel	The output of the RXZ unit. RXZ1 has one channel, RXZ2 and RXZ2C have two channels, the RXZ3 has three channels. Each of these channels can be used to control a device that requires switching on.
Include/Exclude Initiator Button	On every Z-Wave product there will be a button or process to tell the device to send out a request to join or leave an existing or new network.
LED	Light Emitting Diode. The RXZ has tri-colour LEDs to indicate the different states the control can be in.
Programme State	The RXZ is ready to include or exclude other Z-Wave compatible devices from the network.
Ready State	When the RXZ is in ready state the GREEN PROG LED is lit and the device is waiting for instructions to switch on or off its output(s).
Reset State	In the Reset State the RXZ is reset back to factory defaults and is ready to either be added into an existing network as a secondary controller or to be used to create a network as a primary controller.
Z-Wave	A wireless communication protocol designed for low-power and low-bandwidth appliances, such as home automation and sensor networks.