

Data Sheet

Eco™, Intelligent Radiator Thermostat

Application



Eco™ is a stand-alone intelligent electronic and programmable radiator thermostat for residential use.

Eco™ is easy to install, in a short period of time. Adapters are available for all thermostatic valves manufactured by Danfoss and most other radiator valve manufacturers.

Eco™ is battery powered, compact and very easy to operate with only three buttons.

Features:

- Energy savings
- Easy to install
- Easy to operate - only three buttons
- Provides high comfort
- Open-window function
- Valve exercise function
- PID control (precise control)
- Adaptive learning
- Weekly programs with adjustable temperature set-backs
- Min./max. temp. range
- Child lock
- Travel Programme
- Frost protection
- Backlit display

Ordering

Series	Description	Code no.
Danfoss Eco™	Programmable radiator thermostat with RA2000 adapter	014G0065




Accessories

Type	Code no.
Adapter for RA2000 valves	014G0251
Adapter for K (M30 x1.5) valves	014G0252






Data Sheet

Eco™, Electronic Radiator Thermostat

Specifications

Thermostat type	Programmable electronic radiator valve controller
Recommended use	Residential Hot water
Actuator	Electromechanical
Display	Grey digital with backlight, Celsius, 24hr
Software classification	A
Control	PID
Power supply	2 x 1.5 V alkaline AA batteries (not included)
Power consumption	3 μ W in standby 1.2 W when active
Battery life	Up to 2 years
Low battery signal	Battery icon will flash in display. If battery level is critical, the whole display will flash.
Ambient temperature range	32 to 104 °F (0 to 40 °C)
Transportation temperature range	-13 to 149 °F (-20 to 65 °C)
Maximum water temperature	194 °F (90 °C)
Temperature setting range	39 to 82 °F (4 to 28 °C)
Measurement interval	Measures temperature every minute
Clock accuracy	+/- 10 min/year
Spindle movement	Linear, up to 4.5 mm, max. 2 mm on valve (1 mm/s)
Noise level	<30 dBA
Safety classification	Type 1
Open-window function	Activated at temperature decrease of approx. 0.9 °F (0.5 °C) over 3 minutes
Weight (incl. batteries)	0.4lbs (177g) with RA adapter
Installation Environment	Not to be used in hazardous installations or in places where it will be exposed to water, very high temperatures and or installed within a confined enclosure.
Approvals, markings etc.	  

Pre-installed
Programmes

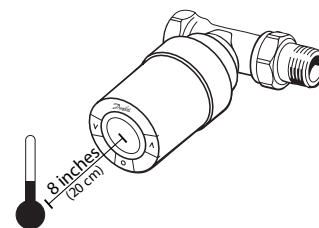
	Program without automatic temperature reduction. This program maintains the comfort temperature of 69 °F (21°C) constant all day and night.
	Saving program which as default lowers the temperature to 62 °F (17°C) at night (22:30 - 06:00 hrs). Time and temperature are configurable.
	Extended saving program which as default lowers the temperature to 62 °F (17°C) at night (22:30 - 06:00 hrs), and during the day on weekdays (08:00 - 16:00 hrs). Time and temperature are configurable.
	Travel program which lowers the temperature when you are away. Time and temperature are configurable.
	Frost protection program. The thermostat will maintain a constant temperature of 39 to 50 °F (4 to 10°C) in the room, ensuring frost protection.

Measuring the room temperature

Eco™ is measuring the temperature with two built-in sensors - one behind the display and one near the valve.

Based on both readings the room temperature is calculated for an area approx. 8 inches (20 cm) in front of the display. This allows Eco™ to control the actual room temperature very accurately.

Be aware that sources of cold or heat, e.g. fire-place, direct sun or draft, might affect the function of Eco™.



Note! The displayed temperature is always the set temperature, not the actual room temperature.

Main features

Open-window function

Eco™ features an Open-window function, which closes the valve if the room temperature is falling dramatically, thus reducing the heat loss. The heat is turned off for up to 30 minutes, before Eco™ returns to its original settings.

The Open-window function remains activate for a period of 45 minutes before reverting to normal operation.

Adjusting to the valve

During the first night of operation Eco™ will shut off the radiator heat and then open again to detect the exact opening point of the valve. This will allow Eco™ to control the heat as efficiently as possible. If necessary, the procedure is repeated once a night for up to a week.

You might experience the valve being warm during the adjustment procedure, regardless of the room temperature.

Child lock

Activating the child lock feature will protect the settings from tampering.

Intelligent Control (Forecast)

During the first week of operation Eco™ learns when it is necessary to start heating the room in order to reach the correct temperature at the correct time.

The intelligent control will continuously adjust the heating time compared to seasonal temperature changes.

Automatic valve exercising

To keep the radiator valve functional and at its best, Eco™ automatically exercises the valve every Thursday at approx. 11:00 hrs by opening it fully and then return to normal setting.

Daylight saving time

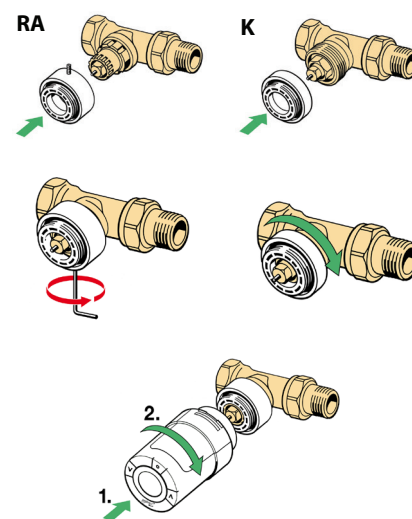
As default Eco™ will automatically shift between daylight saving time and normal time.

If necessary, the daylight saving time function can be disabled.

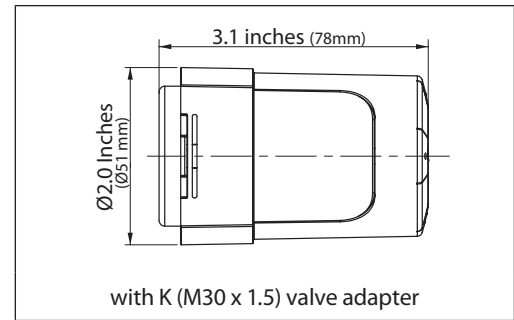
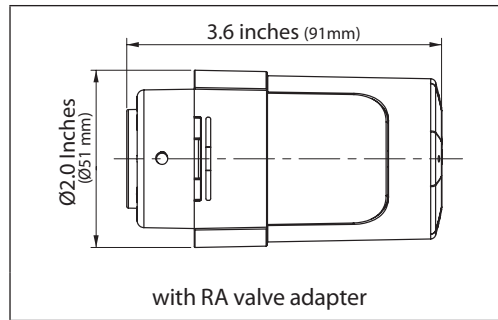
Installation

must be flashing on the display before installation.

1. Start by mounting the appropriate adapter.
2. Tighten RA adapter using the 2 mm Allen key. Hand-tighten K adapter.
3. Screw the thermostat onto the adapter and tighten by hand (max. 5 Nm).
4. Press for 4 seconds to deactivate the mounting mode. (An adapter guide is included to identify the correct adapter to mount.)



Dimensions



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