

# WIRELESS ENABLED TIMER AND THERMOSTAT

## SUNDIAL RF<sup>2</sup> PACK 1

### FEATURES

- Energy saving †TPI control
- Wireless enabled upgrade
- Two way wireless communication
- Wireless signal strength indicator

### ST9120C Wireless Enabled Timer

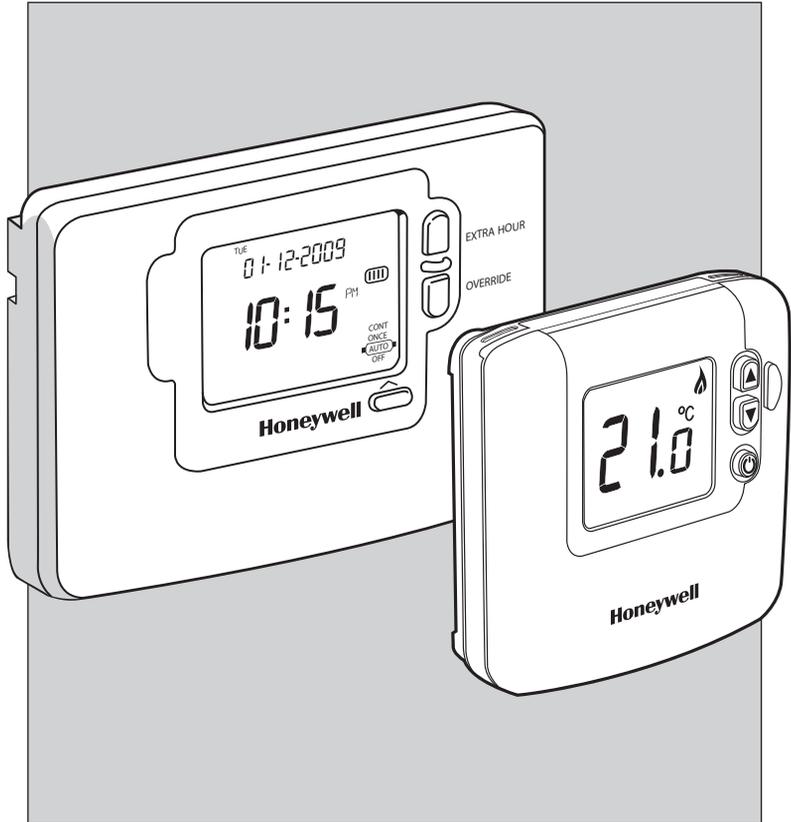
- Built in Economy or Comfort programmes
- LoT™ display for easy programming
- Fits on industry standard backplate
- Direct replacement for ST9100 and ST6100 models

### DT92E Wireless Thermostat

- ECO setback function
- Frost protection
- Tabletop stand supplied
- Battery powered - no wiring

### OPTIONS

- Remote Boiler control with wireless relay box (BDR91 supplied separately)
- \*Optimum Start, \*\*Delayed Start and \*\*\*Optimum Stop
- 'OFF' setting adjustable from 5 to 16°C
- Service Interval reminder with variable levels of action
- Installer set up mode - controls can be matched to the system and user



### APPLICATION

In a heating system with a combination boiler or added zones, with no room thermostat. The existing wiring can be used to provide Boiler Interlock by fitting Sundial RF<sup>2</sup> Pack 1.

This has a timer to control heating and a built in wireless transceiver to enable a wireless room thermostat, maintaining the traditional layout of separate time control and room thermostat. It can also be used on new systems.

Because the room thermostat and the timer communicate, energy saving and operating benefits are also enabled:

Timeswitch override from the thermostat.

†TPI control: Time Proportional and Integral (TPI) control is a method of calculating the demand from a room thermostat, controlling the boiler so that it fires for shorter periods as the temperature approaches the set point. This can offer savings of up to 10% of energy consumption (in a single cycle steady state test).

\*Optimum Start: To save energy, let the controls work out when to come on to suit when you want to be warm. Every day the boiler will start at the latest possible moment depending on the weather.

\*\*Delayed Start: Once you have programmed your earliest start time, the controls will delay the boiler firing time on warmer days, when it is possible to save energy.

\*\*\*Optimum Stop: Saves energy and money by switching off before the normal programme time whenever possible.

# Honeywell

WIRELESS ENABLED CONTROLS

## Ordering Specification

### Y9120H2009

ST9120C Wireless enabled timer  
DT92E Wireless room thermostat

## Optional Extras

BDR91T1004 Receiver

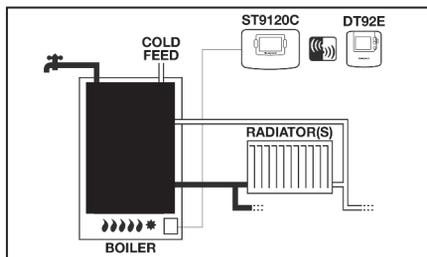
## Installation

Simply remove the old timer and replace with ST9120C. This enables the wireless thermostat (DT92E) to be added to the system.

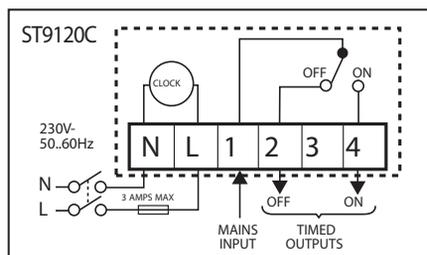
The ST9120C and DT92E are radio frequency devices and for best performance should be installed in a clear space. Where possible leave the ST9120C at least 30cm distance from any metal objects including wall boxes and at least 1m from any other electrical equipment.

The DT92E is free to be installed in a suitable location when the signal strength is high.

## Schematic Layout



## Wiring



Just replace existing timeswitch, fits directly on to many other timeswitch backplates. No power supply required to thermostat.

For dimensions see catalogue pages for the ST9100 and DT92E models. ST9120C dimensions are the same as the ST9100 models.

## Specification

### Pack 1

RF Operation Band : ISM (868.0 to 868.6) Mhz, 1% duty cycle

RF Communication Range : Typically 30m in residential building

RF Communication Technology : Two way short, high rate transmissions to minimise air time/avoid interference

RF Blocking Immunity : Receiver class 2

Operating Temperature Range : 0 to 40°C

Operating Humidity Range : 10 to 90% r.h, non-condensing

Storage Conditions : -20 to 55°C

: 10 to 90% r.h, non-condensing

Standards : CE marked

IP Rating : IP30

### ST9120C

Switch Rating : 3(3)A max at 230Vac, 10mA minimum at 12Vdc

Switch Type : 1x Single pole, double throw (SPDT) potential free relay

Power Supply : 230Vac 50Hz 10W

Power Reserve : Built in battery maintains factory set date & time. Backup super capacitor retains real time for more than 1.5 hours  
: All settings and parameters stored in NVRAM will be retained indefinitely

Wiring : Wiring terminals with captive cage clamps, accepting two wires each up to 2.5mm<sup>2</sup>

Time Setting : Time of day – 1 minute

Resolution : Programme time changes – 10 minutes

Time Display : 24 hour or 12 hour AM/PM format

Timing Accuracy : Typically better than 10 minutes per year  
: Time and date factory set

### DT92E

Power Supply : Two AA size, 1.5V alkaline batteries

Temperature Setting Range : 5 to 35°C in 0.5°C steps  
can be limited between 5 and 35°C

OFF Setpoint Temperature : 5°C (default) can be set between 5 & 16°C or turned off

ECO Setpoint Temperature : 18°C (default) can be set between 5 & 35°C (in 1°C steps), for 1 to 24 hours

Temperature Control Accuracy : ± 0.5K at 20°C (50% load, 3K/hr)