

Datasheet

TP9000 Programmable Room Thermostat with DHW Time Control

Features



The TP9000 is a programmable room thermostat with remote temperature sensor. The TP9000 allows the user to select up to 6 different temperature levels per day and the times which the changes occur.

The TP9000 can be set at installation to operate both heating and hot water independently in either 7 day mode - individual times and temperatures for each day of the week, 5 day/2 day mode, which allows different programmes to be set for the weekend, or in 24 hour mode, in which case the programmed events are repeated every 24 hours.

Accessed via the APM (Advanced Programming Menu), settings made by the installer or the end user are stored for the life of the product in a non-volatile memory chip which does not require power.

Using the APM, the operating temperature range, which is factory preset to 5-30°C, can also be preset by the installer for any min/max temperature between 5-40°C. This makes the TP9000 a safe solution for use in sheltered accommodation where hypothermia may be of concern.

For installation convenience, the TP9000 is supplied with a remote room sensor which can be mounted up to 50 metres away from the programming unit.

In addition to the programmable room thermostat function, TP9000 also incorporates a Domestic Hot Water time control channel which allows up to 3 Domestic Hot Water on/off events to be programmed each day.

The TP9000 has the ability to be set in Holiday mode. Using the Holiday mode, the Hot Water is switched off and the Central Heating is placed in frost protection mode. Upon reaching the set holiday return date, normal operation is resumed.

The inclusion of an information button on the unit allows quick viewing of items like the next timed event, service due date (if activated), and outdoor temperature (if outdoor sensor is fitted).

Designed to be fully compliant with Part L and Best Practice requirements, the TP9000 is the obvious choice for new and retrofit applications.

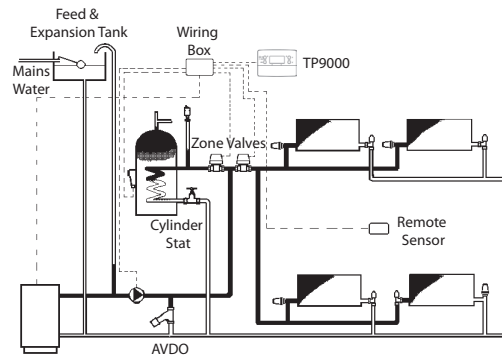
The TP9000 incorporates convenient user overrides which allows the user to:

- Obtain an extra 1, 2, or 3 hour's Hot Water or Central Heating.
- Temporarily override room temperatures up or down.
- Select Heating and Water Off, with frost protection for periods away from home.
- Up to 6 time/temperature changes per day for heating.
- Can be set at installation for 24 hour, 5 day/2 day or 7 day operation.
- Remote sensor for installation convenience.
- Integrated DHW time control.
- Convenient user overrides.
- Clear, easy to read LCD display and LED status indicators.
- Wallplate construction for ease of installation.

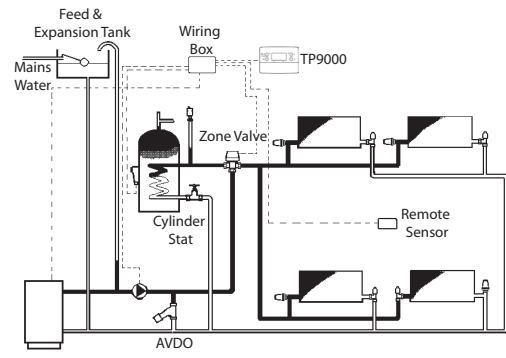
Datasheet

TP9000 Programmable Room Thermostat

Application



Heatplan Control System



Heatshare Control System

Specifications

		TP9000		
Code Number	087N789200			
Factory set clock	●			
Room time and temperature changes	up to 6 per day			
Room temperature control range (°C)	5-30°C			
Remote room temperature sensor	●			
Selectable 7 day, 5/2 day or 24 hour operating mode	●			
Fully independent Hot Water and Central Heating times	●			
DHW time control events	up to 3 on/off events per day			
Frost protection override option	●			
+1, +2, +3 hour DHW and/or CH override	●			
Room temperature overrides	●			
Holiday mode	●			
Heating Programme Factory preset times and temperatures for every day in 24 hour mode or Mon-Fri 5/2 day or 7 day mode.	Event 1	20°C	6:30am	NB All may be changed as required.
	Event 2	15°C	8:30am	
	Event 3	20°C	11:30pm	
	Event 4	15°C	1:30pm	
	Event 5	21°C	4:30pm	
	Event 6	15°C	10:30pm	
Heating Programme Factory preset times and temperatures Saturday and Sunday in 5/2 day or 7 day mode.	Event 1	20°C	7:30am	NB All may be changed as required.
	Event 2	20°C	9:30am	
	Event 3	20°C	11:30pm	
	Event 4	20°C	1:30pm	
	Event 5	21°C	4:30pm	
	Event 6	15°C	10:30pm	
Hot Water Programme Factory preset times for every day in 24 hour mode or Mon-Fri in 5-2 day or 7 day mode	Event 1	On	6:30am	NB All may be changed as required.
	Event 2	Off	8:30am	
	Event 3	On	11:30pm	
	Event 4	Off	1:30pm	
	Event 5	On	4:30pm	
	Event 6	Off	10:30pm	
Hot Water Programme Factory preset times for Saturday and Sunday in 5-2 day or 7 day mode	Event 1	On	7:30am	NB All may be changed as required.
	Event 2	Off	9:30am	
	Event 3	On	11:30pm	
	Event 4	Off	1:30pm	
	Event 5	On	4:30pm	
	Event 6	Off	10:30pm	
Optional service interval operation	●			
Voltage rating	230 Vac, 50Hz			
Switch action	2 x SPDT (linked internally)			
Switch current rating	3 (1) A			
Maximum ambient temperature	45°C			
Memory back-up	Retained for life of product			
Dimensions - Controller (mm)	135 wide x 88 high x 32 deep			
Dimensions - TS2 Remote Sensor (mm)	61 wide x 45 high x 22 deep			

Datasheet

TP9000 Programmable Room Thermostat

Installer Advanced Programme Options

Option	Description	Factory Setting		Other Setting	
Installer Advanced Programming Options Use + or - key to scroll between options, use Λ or V keys to select option setting					
30	Set range upper limit		30°C		40°C - 5°C
31	Set range lower limit		5°C		5°C - 40°C
32	Enable/disable Off function at lower limit	1	Enabled	0	Disabled
33	Enable/disable On function at upper limit	0	Disabled	1	Enabled
34	Set chrono-proportional cycle rate	6	6 cycles per hour	3	3 cycles per hour
				9	9 cycles per hour
				12	12 cycles per hour
35	Set integration time	2.5	2.5%	5	5%
				10	10%
36	Set temperature override limit	0	No limit	1	Limited to $\pm 2^\circ\text{C}$
				2	Disabled, no override
37	Set time duration of override	0	Next event	1	1 hour
				2	2 hours
				3	3 hours
				4	4 hours
40	Number of events per day (heating)	6	Six switching events	1	Stat mode
				2	Two switching events
				4	Four switching events
41	Heating events - days per week	7	7 day programming	5-2 or A-B	5-2 day or A-B programming
				24	24 hour programming
60	Number of events per day (hot water)	3	3 on/off events per day	1	1 on/off event per day
				2	2 on/off events per day
61	Hot water events - days per week	7	7 day programming	24	24 hour programming
				5-2	5-2 day programming
70	Keyboard lock type	0	Normal lock	1	Full lock
71	Random start rules	0	Disabled	1	Enabled
72	Site ID number (user defined)		00		01 to 99
73	Thermostat ID number (user defined)		000		001 to 999
74	Date format for calendar clock	0	European (dd/mm/yy)	1	North American (mm/dd/yy)
80	Enable/Disable +Hrs/Boost	1	Enabled	0	Disabled
81	Thermostat calibration bias		0		$\pm 1.5\text{K}$
90	Remote sensor configuration	0	Disabled	1	Room/duct
				2	Limit, (floor)
				3	Start-up (digital input)
				4	Outdoor
93	Limit sensor set point adjustment (Only accessible if Option 90 is set to 2)		27°C		20-50°C
94	Start-up (digital input) NO or NC (Only accessible if Option 90 is set to 3)	0	NC, open circuit to change to thermostat mode	1	NO, close circuit to change to thermostat mode

Advanced User Settings

Option	Description	Factory Setting		Other Setting	
User Advanced Programming Options Use + or - key to scroll between options, use Λ or V keys to select option setting					
1	Enable/disable A/B block programming	0	Disabled	1	Enabled
2	Enable/Disable Advanced Copy	0	Disabled	1	Enabled
3	Automatic summer/winter time change	2	European rules	0	Disabled
				1	Manual time change
				3	USA rules, post 2007
				4	USA rules, pre-2006
4	Time zone offset - UST models	00:00	Use UST clock setting	-12 to +14	Hours offset
	Time zone offset - CET models	01:00	Use CET clock setting		
10	Set frost protection default temperature		5°C		5-40°C
11	Start-up type	0	Fixed time start-up	1	Optimum start control
				2	Delayed start-up
12	Optimum start control setting, maximum pre-heat period based upon 4°C deviation from next event temperature (Only accessible if option 11 is set to 1)	1:00	60 minutes	0:15	15 minutes
				0:30	30 minutes
				0:45	45 minutes
				1:15	75 minutes
				1:30	90 minutes
				1:45	105 minutes
13	OSC or delay start function active (Only accessible if option 11 is set to 1 or 2)	0	First event of day only	1	All events

Datasheet

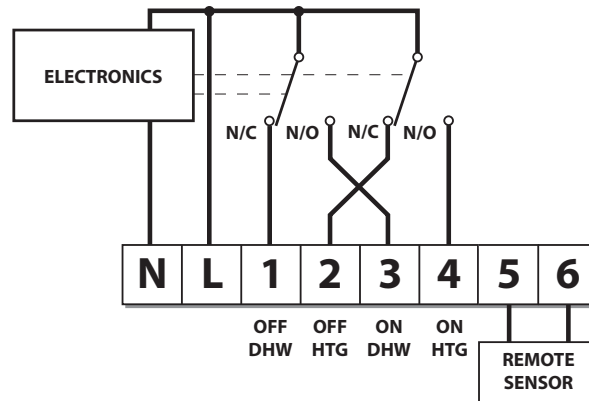
TP9000 Programmable Room Thermostat

ErP Class



ERP Class		
The products represented within this document are classified according to, and allow completion of, the Energy Related Product (ErP) Directive System Package fiche and the ErP system data label. ErP Labelling obligation is applicable from 26th September 2015.		
ErP Class	Product Function and ErP Description	Additional efficiency gain
IV	TPI Room Thermostat, for use with on/off output heaters An electronic room thermostat that controls both thermostat cycle rate and in-cycle on/off ratio of the heater proportional to room temperature. TPI control strategy reduces mean water temperature, improves room temperature control accuracy and enhances system efficiency.	2%

Wiring Details



DIL Switch Settings

Sw. No.	OFF	ON
1	Keyboard disabled	Keyboard enabled
2	Reset disabled	Reset enabled

Danfoss Ltd.

Amphill Road
Bedford MK42 9ER
Tel: 01234 364621
Fax: 01234 219705
Email: ukheating@danfoss.com
Website: www.heating.danfoss.co.uk

Danfoss can accept no responsibility for possible errors in catalogues, brochures, and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.