Dukkaboard® HEATING
UNDERFLOOR HEATING SYSTEMS

Underfloor Heating Programmable Thermostat

Easy to programme touch screen display thermostat with multi day control, adaptive modes and floor & room temperature sensors, for use with electric underfloor heating systems.

PRODUCT DESCRIPTION

A simple touch screen thermostat tailored for electric underfloor heating systems. It provides easy programming, multi-day control, adaptive modes, and temperature sensors.

Striking a thoughtful balance between functionality and user-friendliness, it allows users to prioritize floor or room temperature based on their preferences.

The thermostat includes both manual and automatic programming modes to accommodate user choices.

Additionally, users can personalize display settings, adjusting screen brightness and colour themes, to enhance the overall user experience.

PRODUCT FEATURES

> Large touch screen display
> On / off override
> 5 + 2 day 6 event heating schedule
> Easy to use menu settings
> Straightforward temperature adjustment
> Temperature sensor options for floor and/or ambient
> Energy saving adaptive start and auto detect open window sensors
> IP20 Rated

Document Ref:　　　TDS-DHTP-24A1

PRODUCT SPECIFICATION

Product Description	Dukkaboard
Power Supply	220V/230V
Current Load	≤ 16A
Power Consumption	2W
Setting Range	5 ~ 35°C (Can adjust to 30 ~ 60°C)
Limitation Setting	5 ~ 60°C (Factory setting: 35°C)
Switch Differential	0.5 - 10°C (Adjustable)
Ambient Temperature	- 5 ~ 50°C
Protective Housing	IP20
Housing Material	Anti-flammable PC
Application	Built-in & floor sensor, floor limit sensor
Thermostat Resistance	10k Ohms

PRODUCT FORMATS AVAILABLE

STOCK CODE	COLOUR	EAN 13 CODE
6136	White	5065017007027

TECHNICAL TERMS

Cold Tail	The cold tail is the part of the heating mat or cable that does not heat up and is used for making the electrical connections to the thermostat or junction box.
Probe	Records floor temperature.
In Parallel	A parallel circuit is one in which both ends of each component are connected directly to the electricity with no other component in between. Electricity flows from the source directly to each component.
Commissioning	The systematic process by which the electrical cable and thermostat is tested to verify that it functions in accordance with the design intent and owner's operational requirements.

TROUBLE SHOOTING ERROR MESSAGES

E1: Built-in sensor short-circuited or disconnected.

E2: External sensor short-circuited or disconnected.

Note: When the thermostat display shows either an E1 or E2 error the thermostat must be checked till the error is eliminated.

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INSTALLATION

Installation should be carried out by a fully qualified electrician. To avoid electrical shock and to prevent damage to the thermostat, disconnect the power supply before beginning work, ensuring double-poled isolation.

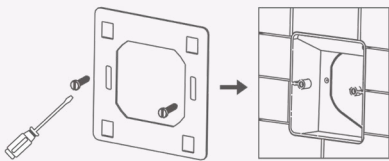**The supply to the thermostat should be on its own fused spur with dedicated 30mA protection.**

Your thermostat should be compliant with current electrical regulations and local standards, including:

- Installed 1.2-1.5m from the floor
- On an internal wall
- Outside any wet zones (IP20)
- Away from any draughts or heat influences

Note: Ensure substrates are fully cured before commissioning the underfloor heating. Refer to manufacturers recommendations.

Ensure heating cable cold tail, fused power supply and sensor probe cable reach the back box with sufficient excess length. Follow the instructions below once the fused spur and heating cable have been installed.
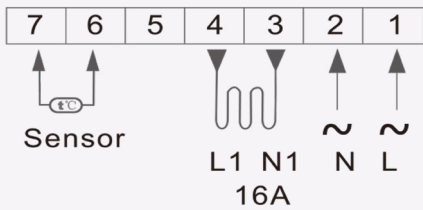
STEP 1: MOUNTING	**STEP 2:** WIRING DIAGRAM	**STEP 3:** MOUNTING

Feed the cables through the back plate and trim to length.

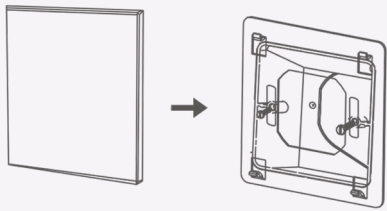Mount the backing plate on the back box with electrical screws provided.

Strip cable to expose 7mm of bare copper and wire up connections as shown:

	Wiring Key
1	Fused Power Supply (L)
2	Fused Power Supply (N)
3	UFH Load (N)
4	UFH Load (L)
5	Not Used
6	Sensor Probe *
7	Sensor Probe *
	* Polarity-free

Connect earth cable to back box earthing point.

Note: When using two heating cables to heat one zone, wire these cables in parallel to the thermostat.
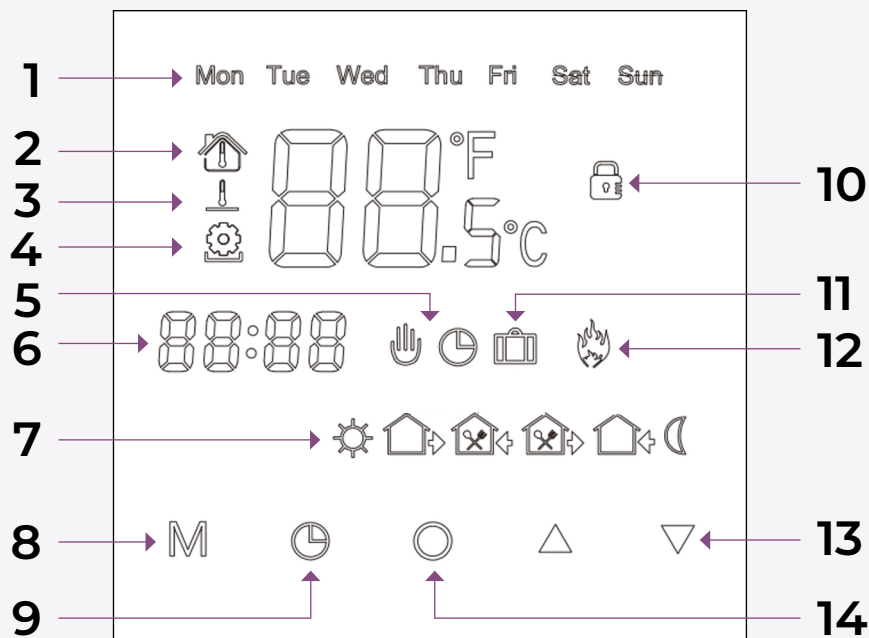
Clip thermostat body onto the mounting plate.

Warning: Refer to manufacturers recommendations before commissioning as many cementitious products (e.g. tile adhesives grouts, levelling compound and screeds) require extended curing times before the underfloor heating is switched on initially and for the first heating cycle.

This should be a gradual increase of heating temperature within the first weeks of installation.

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USER INTERFACE

Number	Function
1	Day Display
2	Room Temperature
3	Floor Temperature
4	Set Temperature
5	Mode
6	Time Display
7	1-6 Day Event
8	Menu Key
9	Set Time
10	Child Lock
11	Holiday Mode
12	Heating On
13	Up/Down
14	On/Off

Symbol	Function
○	On/Off
◷	Set the Day/Time
☼	Wake Up / Event 1
⌂	Leave Am / Event 2
⌂	Return Am / Event 3
⌂	Leave PM / Event 4
⌂	Return PM / Event 5
☾	Sleep / Event 6
✋	Manual Mode
◷	Clock Controlled Mode
▢	Holiday Mode
🔥	Heating On
⌂	Room Temperature
⌇	Floor Temperature
⚙	Set Temperature
🔒	Child Lock

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OPERATION

Initial Instructions

On/Off

To set date and time press and hold 'Clock' for 3 seconds, then press 'Clock' to cycle through adjustable segments. Press ▲ / ▼ to modify each segment.   Press 'O' to save and quit.

Programmed Heating Setup

Switch the heating control off by pressing the 'O' in the centre of the touch panel

Note: One week is divided into 7 days with 6 periods in days 1 - 5 and 2 periods in days 6 & 7.

1	Press 'M' key for 3 seconds to start programming setup and the set time for period 1 will begin to flash
2	Adjust the start time for this period by using the ▲ / ▼
3	Press 'M' and the set temperature for period 1 will begin to flash
4	Adjust the temperature for this period by using the ▲ / ▼
	Press 'M' and repeat steps 2-4 for the remaining periods
	See table below for default times and temperatures. To leave a period set time unused, set the temperature to match the previous period.

Event		Symbol	Period	Time	Temperature
Day 1 - 5	1		Wake Up	06:00	20
	2		Leave AM	08:00	15
	3		Return AM	11:30	15
	4		Leave PM	12:30	15
	5		Return PM	17:00	22
	6		Sleep	22:00	15
Day 6-7	1		Wake Up	08:00	22
	2		Sleep	23:00	15

Dukkaboard®
TECHNICAL DOCUMENTS

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PROGRAMME MODE

Manual Heating Setup

To toggle between Manual and Programmed mode, press 'M' while the heating control is switched on

In manual mode, the heating maintains a constant set temperature

Press '▲ / ▾' to adjust the set temperature

Additional Features

To activate child lock press and hold '▾' for 3 seconds and repeat step to deactivate

To activate holiday mode press and hold '▲' for 3 seconds and repeat step to deactivate

Advanced Setup

Press '▲' and '▾' keys together for 3 seconds when the heating control is off

Press 'M' to cycle the parameter list, then press '▲' and '▾' to edit each parameter

See table below for editable parameters:

Item	Parameter	Description	Options	Default
00	Room Temperature Calibration (-10°C ~ 10°C)	Refine accuracy of room temperature		00
01	Floor Temperature Calibration (-10°C ~ 10°C)	Refine accuracy of floor temperature		00
02	Sensor Mode	Select which thermistor device reads the current temperature	00: Built In Sensor 01: Floor Sensor 02: Both Sensors	02
03	Max Temperature Setting (30°C ~ 60°C)	Max allowed temperature		35°C
04	Min Temperature Setting (5°C ~ 15°C)	Minimum allowed temperature		5°C
05	Switch Differential Setting (0°C ~ 10°C)	Adjust lag time to temperature response time		1°C
06	Frost Protection Function	Overrides power off to activate set temperature above freezing	00: Yes 01: No	00
07	Week Day / Weekend Day Blend	Number of working days in the 7 day period	00: 5/2 Day Mode 01: 6/1 Day Mode 02: 7 Day Mode	00
08	Output Delay Time	Adjust period on time to desynchronise multiple units	0~10s	0
09	Floor Limitation Setting			35°C
10	Holiday Temperature Setting	Maintain temperature for period of absence		10°C
11	Temperature Unit	Switch as per user preference	00: Celsius 01: Fahrenheit	00
12	Reset to Factory Settings	Reset thermostat to default settings	00: No 01: Reset	00
13	Adaptive Function Limit	Set max duration of Adaptive Function	00: 0-30 Minutes	0
14	Adaptive Function	Calculates time taken to reach target temperature and predetermines warm up duration	00: Off 01: On	00
15	Open Window Function	Detects a rapid drop in room temperature of 3 C + and automatically shuts off heating for 30mins	00: Off 01: On	00

Warning: This thermostat provides an option to deactivate Floor Temperature Sensing and solely utilize Built-in Temperature Sensing. However, it is important to note that this action does not align with the specifications outlined in Section 753 of the 18th Edition Wiring Regulations, therefore, it is not advised.

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