cosytoes®

underfloor heating

Installation and User Guides

Mats and Cable
Trademat Plus+
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Gloss Touch-Screen Stat
Touch-Screen Stat
Wireless Timerstat
Manual Thermostat

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Mats and Cable

Control Units

Cosytoes® Underfloor Heating

Cosytoes® is a British company and all our products are manufactured to the highest standards for quality and safety.

Key Features

1. Control units will make your floors warm just when you need it.

2. Our systems keep energy costs to a minimum.

3. When heating a modern home, TradeMat+ uses approximately 1p/hour, per square metre.

4. Our products are simple to install, extremely tough, resilient and truly exceptional quality.

Trademat Plus+

Technical Information
Underfloor heating mats are constructed using insulated, twin core heating cable, which includes high performance insulation, around the heater wires and either a braided or wrapped metal earth screen, with a further outer layer of polymer insulation. This is then fixed into a special fibre mesh, with the cable spaced at 75mm. To give a regulated heating output of 150w/sqm for TMP. The cable complies with industry guidelines for safe use on timber as well as solid sub-floors. All mats have been rigorously tested and surpass all European standards requirements. The mats are normally installed under ceramic, quarry or natural stone tiles. For use under other surfaces, such as hardwood and laminate flooring, simply screed over the cable and lay the alternative flooring as normal.

The heating cable of each mat is terminated at one end with a 4 metre long cold power supply cable, for connection to the combined timer/ thermostat control unit. Each heating cable has a fixed resistive length and cannot, therefore, be shortened. There are 12 sizes of mat available, which can be used singly or in a combination to accommodate any floor area by connecting in parallel.

Controls
16 amp combined timer/thermostat unit (Timerstat) (sold individually). Note: a 16 amp timerstat unit can be used to control a maximum of 3500 watts.

Electrical Installation
We strongly recommend that all electrical work is carried out by a qualified electrician and must conform to current IEE wiring regulations. The heating mats should be installed in conjunction with a floor temperature sensing Timerstat control and be connected via a RCD (residual current device) protected circuit.

TMP1.0 (150w/0.7amp) - 0.5m x 2m = 1sq/m | 353Ω
TMP1.5 (225w/1.0amp) - 0.5m x 3m = 1.5sq/m | 235Ω
TMP2.0 (300w/1.3amp) - 0.5m x 4m = 2sq/m | 176Ω
TMP2.5 (375w/1.6amp) - 0.5m x 5m = 2.5sq/m | 141Ω
TMP3.0 (450w/2.0amp) - 0.5m x 6m = 3sq/m | 118Ω
TMP4.0 (600w/2.6amp) - 0.5m x 8m = 4sq/m | 88Ω
TMP5.0 (750w/3.3amp) - 0.5m x 10m = 5sq/m | 71Ω
TMP6.0 (900w/3.9amp) - 0.5m x 12m = 6sq/m | 59Ω
TMP7.0 (1050w/4.6amp) - 0.5m x 14m = 7sq/m | 50Ω
TMP8.0 (1200w/5.2amp) - 0.5m x 16m = 8sq/m | 44Ω
TMP9.0 (1350w/5.9amp) - 0.5m x 18m = 9sq/m | 39Ω
TMP10 (1500w/6.5amp) - 0.5m x 20m = 10sq/m | 35Ω

Preparing the Electrical Supply
We recommend that this work be carried out prior to preparing the sub-floor and laying the heating mat. This work should be carried out by a qualified electrician and comply with IEE regulations.

Having decided on the position for the timerstat control, ideally on an inside wall within the room to be heated (outside a bathroom to comply with I.E.E. regulations) and suitably positioned above floor level for easy viewing. Install a single deep (min 47mm) back box. On bathroom installations, the regulations require that the controls must not be sited within the bathroom and the timerstat should, therefore, be fitted on the outside of an internal wall as near to the underfloor heating as possible. A Wireless Timerstat has the receiver unit outside the bathroom and the transmitter (3volts) can go inside the bathroom.

If more than 2 mats are to be installed, a junction box will be required to connect up the heaters in parallel as the connections on the timerstat are too small in diameter for more cables. Run an RCD protected mains supply via a fused isolator switch taking into account the total load requirements. A maximum of 4.8Kw of heating can be connected to a 30 milliamp RCD. (Please note that the system guarantee is only valid when connected to a correctly rated RCD protected circuit). All wiring should be chased into the wall and protected by either conduit or plastic trunking.

Preparing the Sub-Floor
The most important consideration when installing a tiled floor, whether it is to be heated or not, is the preparation of the sub-floor prior to tiling. It is essential that it is sound and level and will support the weight without movement or deflection. The following recommendations are a general guide only and you should seek further advice from the Tiler and the tile and adhesive manufacturer.

Timber Floors
The existing floorboards must first be securely fixed and level. This should then be over boarded with either a suitable insulated tile backer board or 18mm W.B.P. plywood. The back and edges of the plywood should be sealed before laying and then, with plated screws, fixed to the floor joists at 200mm centres, plus additional fixings at the board edges. If using a tile backer board, this should be installed following the manufacturer's instructions. (Use 150w or 160w mats on a timber floor.)

Solid Floors
Concrete floors should be completely dry, which, with newly laid concrete, can take many weeks to fully cure and dry. Remove all traces of old floor coverings and adhesive and ensure that the surface is smooth and level. Although the heating mats can be laid directly onto a sound, dry concrete floor, we recommend the use of insulated tile backer board for improved performance and efficiency of the heating system. For example, the worst case scenario, is to fit an under floor heating system to a ground level non-insulated concrete slab. Unless the requisite amount of insulation is included, the heater will try to heat up planet earth as well as the floor surface! To a much lesser degree, fitting an under floor heating system to a properly insulated concrete floor as per current building regulations, means the heater will need to bring the floor mass to the required temperature so use 160w or 200w mat for quicker

heat up time. The heat up time will be much slower, as will the cool down period but allowances can be made with the Timerstat. We do not recommend installing underfloor heating on uninsulated concrete floors.
On some older properties asphalt or bitumastic compounds were used as a damp-proof membrane. As the heat from the cable may affect the floor membrane, it would be advisable to fit an insulated tile backer board before fitting the heating system.

Timber and Solid Floors
Having now determined the position of the control unit and the direction in which you intend to lay the mat, it is now advisable to cut a groove in to the sub-floor to accommodate the cold power supply cable, as they are slightly larger diameter than the heating cable.

The sub-floor should now be thoroughly cleaned to remove all dust and debris and primed if recommended by the adhesive manufacturer.

Planning the Installation
To calculate the free area available for heating, simply allow for a 100mm (0.1 metre) margin around the full perimeter of your room and any fixed objects and deduct the sum of this from the total area. You should then choose a mat or combination of mats that is equal to or less than this figure. (Remember mats can not be shortened). The mats should not be laid over or close to any existing hot water service or central heating pipes and bear in mind that all mats are 0.5 metres wide and that opposing runs of matting should be laid approximately 80mm apart, equal to the cable spacing, to maintain a consistent output and avoid hot or cold spots. Remember that areas under fixed objects, such as baths, toilets, shower trays, kitchen units, cookers etc. should not be heated and thought should be given to the final fixing of kitchen units and sanitary ware etc., to avoid fixing screw damage to the heating element.

Testing the Continuity and Resistance
Prior to installing the heating mat always check the continuity and resistance with an Ohmmeter, to ensure that there is a circuit and that the cable is not damaged. The readings should be approximately similar to that on the ratings label on the mat, or as shown in the table on the previous page under electrical installation. The test should also be repeated periodically during installation and prior to, during and on completion of tiling or installing the finished floor.

Installing the Heating Mat
It is a good idea to lay out the installation without securing the mat, to ensure that you have the correct size. Take care not to cut or damage the cable with sharp tools and wear soft soled shoes throughout. Never cross the heating

element wire or cross the cold leads or temperature sensor wire underneath or over the top of the mat. The heating cable should not be closer than 50mm to avoid hot spots.

Starting with the cold connection lead as near to the electrical connection point as possible and the mat 100mm (0.1 metre) away from the wall, roll the mat away from you to the end of the area, when you reach the end of the room, cut across the fabric (taking care not to damage the cable) and roll the mat back towards you, keeping the gap between opposing runs at approximately 80mm, until the area to be heated is completed. Note: the mat should always be laid cable up, with its flat face to the sub-floor.

Securing the Heating Mat
The heating mat should now be secured to the sub floor using the in built self-adhesive tape by removing the protective strip and sticking the mat to the floor. When the mesh is fixed in place, it will help reinforce the tile adhesive or self levelling compound. Alternatively, the mesh can be secured using a hand stapler on a timber subfloor. Under no circumstances should the heating cable be fixed down using staples as this will cause it to deteriorate with time and will void any guarantee. A layer of self levelling compound will protect the heating cable from access damage, or cover the area with thick cardboard until tiling.

Installing the Timerstat and Floor Probe
The floor probe is packaged with the timerstat. The timerstat will not work with a probe from a different model. The floor probe has a 3m lead attached, that can be shortened or lengthened with suitable wire. Tape the probe end down to the floor midway between 2 heating wires (40mm from each wire) and run the cable up to the timerstat back-box.

Test the Heaters
Before completing the electrical installation, it is advisable to check that the heater is working correctly. This can be done by temporarily wiring the heater cable to a 3-pin plug. Connect the blue and black wires to the live and neutral terminals of the plug, they are not polarised so either can be used as positive/live. The braided earth screen is connected to the earth terminal; the plug should be correctly fused. This can then be connected to an extension lead or convenient 13amp socket. After a few minutes, the heater cable should be warm to the touch. If more than one heater is being installed, repeat the test with each heater. The heater should not be left connected for more than a few minutes during this test.

Final Connection
The probe and power supply cables can now be connected to the timerstat as per the instructions; a maximum of two heaters can be connected directly. If installing multiple heaters they should be wired via a junction box as previously described. Note: Multiple heaters must only be connected in parallel - i.e. blue wire to blue wire and brown wire to brown wire and should never be wired in series to the timerstat or junction box. A

Obstacle Cut

Plain Wall Cut

single 16amp timerstat may be used to control a maximum of 3500 watts of heater load/23sqm of mat. The timerstat can now be finally connected to the previously prepared RCD protected supply and the installation completed. This work is required to be carried out by a properly qualified electrician.

Note: At this point and prior to tiling, it is advisable to do a sketch of the floor area, showing the position of the heating mat(s) and noting the resistance readings for the mat(s). This should be left with the homeowner for future reference. Once the system is installed, homeowners should ensure that the floor is not penetrated where the mat is located.

Tile and Grout

Only use a flexible tile adhesive and grout that is suitable for use with underfloor heating systems, and always follow the manufacturers instructions. Having ensured that the heating mat is firmly fixed to the sub-floor, the mat can either be covered by a layer of flexible tile adhesive or a self levelling latex compound, which is allowed to dry before tiling, or lay the tile adhesive and tiles in one operation. Make sure that the tiling covers the whole area of the heating mat. Care should be taken not to disturb or damage the heating mat during tiling, if possible cut and trim the tiles in a separate area. Ideally, using a plastic

trowel spread the adhesive in straight lines, following the run of the matting. Ensure sufficient thickness of adhesive to completely cover the heating mat and allow the tiles to be fully bedded down, without the possibility of any air gaps underneath. If any tiles need to be lifted for adjustment, care should be taken not to damage the heating cable. Grout the floor as soon as possible after tiling, following the manufacturers instructions. Be careful if any tile joints need raking out as part of this operation so as not to cut through or damage the heating cable. Note: the tile adhesive should be allowed to fully cure naturally, before turning on the heating, normally a minimum of 7 days. Finally set the timerstat to the desired daily program as per the instructions.

Alternative Flooring

Underfloor heating mats have been especially designed to be installed under hard surfaces such as ceramic tiles, marble etc. but can be successfully used under most floor finishes such as hard wood and laminate (follow manufacturers advice), carpet and vinyl. Simply cover the heating cable with suitable self levelling compound - ideally a minimum of 5mm thickness of cover and lay the flooring as normal. Thought should be given to carpet grip strips for example so that their fixing doesn't affect the heating cable.

Softmat

Important Guidelines
Please read this instruction leaflet thoroughly before commencing installation:

DO:
- Space the heaters evenly across the floor to produce a uniform heat output.
- Ensure that all the heating wire is fitted beneath the floor covering.
- Ensure your floor base has no sharp debris or objects such as nail heads protruding before starting the installation.
- Install the Under-laminate System beneath floating laminate floors and engineered board.
- Ensure there is a gap of at least 2cm between each run of heating mat
- Use a multi-meter to test each heater before, during and after covering with the final floor covering.
- Connect multiple heaters in parallel and ensure that both earth leads for each heater are connected to the earth ring.
- Plan where to place your heaters before commencing installation.
- Consider additionally insulating your sub-floor before installing the underfloor heating system.
- Use a thermostat to control your system and limit the floor temperature.
- Ensure that all electrical works conform to Part 'P' of the Building Regulations and current IEE Wiring Regulations.
- Consult with your builder or electrician to ensure your BTU requirements can be met by the system if using the heating system as your primary heat source.
- Use 6mm depron insulation boards that are an integral part of the installation.
- Ensure the system is protected by a suitable dedicated RCD (30mA)

DO NOT:
- Do not cut, shorten, strain or cross the heating cables
- Do not bend the joint between the element wire and the black cold tail.
- Do not turn on the system to maximum power once the floor covering is down, you should increase the temperature of the system slowly over a course of weeks.
- Do not lay the system so that any cables are closer than 5cm to each other.
- Do not place heaters closer than 5cm away from conductive items such as walls, metal pipework or drains.
- Do not install the system beneath floor coverings with a thickness greater than 15mm.
- Do not install the system directly beneath wooden floor coverings that have to be glued, screwed in place or mechanically fixed into position in any way.
- Do not walk unnecessarily on the heating system during installation.
- Do not place thermal blocks onto your finished floor covering above your heaters when they are in use. Such items include large bean bags, thick rugs or floor flush furniture.
- Do not install the system if the ambient temperature is below 5°C as the cables can become less flexible.
- Do not install the heaters in walls or ceilings.
- Do not install the heaters where internal walls or partitions will be added later.
- Do not install the floor temperature sensor close to other heat sources such as hot water pipes.
- Do not lay the final floor covering on top of the heaters without first testing it with a multi-meter

230V Cat#	Heated Area (m²)	Mat Dims (m)	Watts (140W/m²)	Amps	Ohms
SM1	1.0	0.5x2.0	140	0.61	377.9
SM1.5	1.5	0.5x3.0	210	0.91	251.9
SM2	2.0	0.5x4.0	280	1.22	188.9
SM2.5	2.5	0.5x5.0	350	1.52	151.1
SM3	3.0	0.5x6.0	420	1.83	126.0
SM4	4.0	0.5x8.0	560	2.43	94.5
SM5	5.0	0.5x10.0	700	3.04	75.6
SM6	6.0	0.5x12.0	840	3.65	63.0
SM7	7.0	0.5x14.0	980	4.26	54.0
SM8	8.0	0.5x16.0	1120	4.87	47.2
SM9	9.0	0.5x18.0	1260	5.48	42.0
SM10	10.0	0.5x20.0	1400	6.09	37.8

Cable Construction	Twin Conductor
Rated Voltage	230V
Output	140W/m2
Cable Spacing	50mm
Cable Diameter	1.0mm
Conductor Insulation	Fluoropolymer
Cold Lead	2-wire plus ground braid; 4m length

Floor Preparation
Preparation of the sub floor is an extremely important requirement. It is essential that the floor is solid, level and dust free. In the case of wooden floors the existing floorboards must be securely fixed. There should be no sharp debris or objects protruding from your base. Concrete floors should be completely dry and all traces of old floor coverings and adhesive should be removed to ensure that the surface is smooth, clean and level. The use of insulated tile backer boards can improve performance and efficiency of the heating system. The insulated backer board should be secured with flexible adhesive and reinforcement tape should be used across the joins. (This is extra to the 6mm Depron insulation that is part of the heating system). We recommend that the entire floor base is the same construction to ensure the system performs evenly and it is important that the sub-floor is insulated to current building regulations. (e.g. part concrete/part timber floor construction will give an unequal heat output).

Testing the Heating Mat

It is important that you test each mat with a multi-meter before unpacking to ensure that you have received your product in full working order.

When connecting the Live to Neutral wires the readings should be approximately similar to that on the ratings label on the mat. The cable resistance reading should be -5% to +10% of the value stated on the label. When connecting Live to Earth and Neutral to Earth the reading should be infinity (insulation test). These tests should be performed periodically during the installation and prior to flooring installation.

Installation of the Under-laminate Heating System

To ensure a completely even floor surface you should cover the entire floor base with 6mm Depron soft insulation board, even where no heating is going to be laid. The 6mm boards should be laid out in a tessellating pattern similar to the way house bricks are placed in walls (see fig. 1). The boards can easily be cut with scissors or a Stanley knife and, once they are laid out on the floor. You should tape the joints between the boards with duct tape or similar. (Tape not supplied). The boards should not be secured to the floor base itself. You should now roll out your under laminate heating mats (see fig. 2), cable side down. The mats should not be bent or twisted and they should lie flat on the floor. As you roll out your first heating mat onto the floor continue until you reach an obstruction such as a wall. You should now lift up the end of the heating mat and, being careful to avoid cutting the cable, you should cut through the aluminium foil from one side of the mat to the other (see fig. 3). You should ensure that you do this between the correct cable run to allow the mat to turn the way you desire. The mat can then hinge back on itself at the point where the heating cable now joins the two sections of the heating mat and you can start rolling out your mat in the opposite direction (see fig. 4).

Once you have successfully placed all of your heating mats and cold tails onto the floor you should cut out the insulation beneath the manufactured connections (where the heating cable meets the black cold tail) and the cold tail leads with a sharp knife so that they do not stand proud of the insulation. You can use double-sided tape to hold the heating mats and loose cable in position if you wish. Using a thermostat with a wired floor sensor you should now lay the sensor between two runs of

1

2

3

4

5

the heating cable in one of the mats. To obtain the most accurate temperature reading you should position the floor sensor at least 30cm from the edge of the room in an area where no items will be placed on top of the flooring. Cut a channel in the insulation where you wish to lay the floor sensor and line this with aluminium foil before placing the floor sensor on top. You should then use a section of aluminium tape to hold the floor sensor in position and this will ensure that the sensor picks up an accurate temperature reading from the floor (see fig. 5).

Finally, you should tape down the edges of all of the heating mats and also cover all of the connection wires and the floor sensor wire with tape to protect them during the installation of the flooring. Use the foil tape provided to ensure earth continuity between runs of heating mat and this will further assist the heat transfer of the system.

Now the system is fully installed, carry out your electrical checks on each heating mat to ensure that they are in full working order. If the heating system is suitably protected with a dedicated RCD at this point then a competent person can turn on the heating system for 10 minutes to ensure that it is heating up as expected.
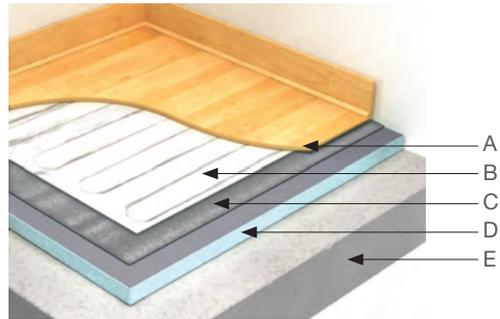
A. Wood Laminate Floor
B. Softmat
C. Underlay
D. Insulation Board
E. Subfloor (Concrete or Timber)

Laying your Floor

Your floor covering can now be laid. Please take care when working above the system by wearing soft soled shoes and by using cardboard or carpet to protect the system when you need to stand or kneel on it. Should any of the heating mats/wires be damaged during the installation of the flooring then stop the installation immediately and contact our helpline for assistance.

If you are not laying your floor covering straight away the system should be covered by a layer of cardboard or carpet and you should avoid walking over the system where possible. Your electrical checks should then be carried out again before installing your final floor covering. The Under-laminate Heating system is particularly suitable for use beneath floating laminate floors and wooden floors where its low build height, fully earthed wire and ease of installation without any wet trade make it a simple to

fit solution. It's not suitable for use beneath floor coverings that need gluing or bonding in position or need to be screwed or nailed into position.

When installing this system beneath a floating laminate or wooden floor you should confirm with the flooring manufacturer/installer that their flooring is suitable for use directly above an electric underfloor heating system. We recommend the flooring is laid directly onto our heating system, however if you are installing some form of acoustic insulation or a membrane on top of the heating system before laying your flooring you should ensure that this insulation/membrane allows heat through efficiently.

Electrical Connections

All work must comply with current IEE wiring regulations and installations must comply with Part P of the Building Regulations. Consult your Local Authority Building Control department regarding their requirements for certification or check with an electrician qualified to issue Part P certification regarding your individual installation.

The heating mat/s have to be wired into a thermostat with floor temperature limitation. Please see the separate instructions enclosed with the thermostat.

Run the cold tail connections and floor sensor cable in separate plastic conduit or trunking from your heated floor to the thermostat position. A maximum of two heating mats can be wired into a single thermostat. A connection box will be required if installing 3 or more heating mats. Ensure that multiple mats are wired in parallel, not in series.
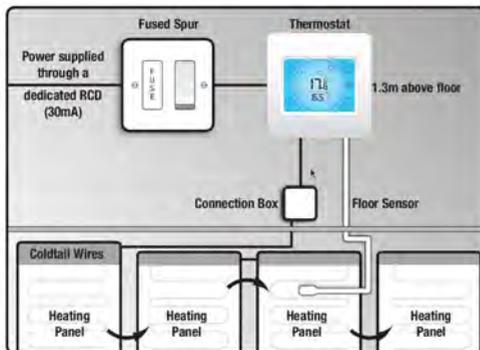
Typical Wiring Diagram of an Under-laminate Heating System All electrical works must be carried out by a qualified electrician.

The mains power supply must be protected by a suitable dedicated RCD (30mA and up to 4.8kW).

The thermostat should be connected to the power supply via a suitably rated fused spur or circuit breaker.

Check the current rating of the thermostat. Typically it will be rated at 16A and if the total loading from a combination of heating mats exceeds this value then the system will require further thermostats or need to be connected via a suitable rated switch contractor (consult with the electrician).

The thermostat should be positioned on an inside wall within the room to be heated approximately 1.3m above the floor level. On bathroom installations regulations require that he thermostat must not be sited within the bathroom and should be fitted on the outside of the internal wall as near to the under floor heating as possible.

Further Considerations

To ensure that your system works to its full capacity for the lifetime of the flooring, please ensure that thermal blocking is avoided above the heating system.

Thermal blocking occurs when the heat produced by the system warms the floor surface but is then trapped and has no way of escaping from the surface of the floor. This can cause the system to overheat in the thermally blocked area and, in extreme cases, affect the integrity of the floor covering and heating system. The heating mats are fully earthed and IPX7 rated, which means systems can be installed in bathrooms and other 'wet areas'.

When you first turn on your underfloor heating system after installing your floor covering you should take care to increase the floor temperature slowly over a number of weeks. If your floor manufacturer has instructions on the process they recommend these should be followed. In the absence of any manufacturer's instructions we would suggest limiting the floor temperature to below 25°C and gradually increasing this to the maximum setting of 32°C over the course of two weeks. This process should ensure that the floor does not rapidly heat to too high a temperature which could lead to movement within the floor.

If you have particular concerns that your floor may suffer from thermal blocking once the heating is installed, you should consider using conventional heating mats covered with self levelling compound as this compound is very efficient at dissipating the heat that can build up under a thermal block.

Loose Cable

Product/Length (Metres)	Output	Resistance (Ohms)	Area Covered (Square Metres)
A150	150w/0.7amps	353	0.75-1.25
B300	300w/1.3amps	176	1.5-2.5
C450	450w/2.0amps	118	2.25-3.75
D600	600w/2.6amps	88	3.0-5.0
E750	750w/3.3amps	71	3.75-6.25
F900	900w/4.0amps	59	4.5-7.5

Loose Cable Installation

Use loose cable where the floor area to be heated is an awkward shape and not easily accommodated by a heating mat. The floor and electrical preparation is similar to that for mat installation, the only difference is that the heating cable needs to be fixed down along its entire length. Always remember that it is important to achieve consistent cable spacing for an even heat over the floor surface and to avoid hot and cold spots. Under no circumstances should any cable be closer than 50mm to its neighbour to avoid long term overheating and deterioration.

Planning the installation

To calculate the free area available for heating, simply allow for a 100mm (0.1 metre) margin around the full perimeter of your room and any fixed objects and deduct the sum of this from the total area. You should then choose a cable size or a combination of cable sizes that is equal to or less than this figure. (Remember that heating cables can not be shortened). The cable should not be laid over or close to any existing hot water service or central heating pipes and bear in mind that the heating cable should be laid approximately 80mm apart or as the following spacing chart. Remember that areas under fixed objects, such as baths, toilets, shower trays, kitchen units, cookers etc. are not normally heated and thought should be given to the final fixing of kitchen units and sanitary ware etc., to avoid damaging the heating element.

Planning and laying the heating cable

Following on from the floor preparation for installing mats, once the primed floor is completely dry, you can plan and mark out the layout of the heater cable. Having already calculated the floor area and chosen the cable size, use the following table to work out your cable spacing.

Cable spacing and heater output

Adjusting the space between the cable runs will vary the output of the heating cable per square metre. For example spacings of 100mm give an output of 120 w/sqm, 75mm gives 150 w/sq.m and 55mm gives 200 w/sq.m. Note these are the preferred outputs and spacings, but on no account should the cable be laid with spacings less than 50mm which can cause overheating and deterioration of the cable.

For Example: - your heated area* is 5.00 square metres and the product is an E750. From the table the spacing is 75mm to give 150w/sqm. Or if the product is D600, the spacing is 100mm to give 120w/sqm* (The heated area is the total floor area minus fixed objects and 100mm-perimeter strip). Note: - the dimensions shown in the chart are approximate and may change slightly due to the configuration of the room and the way that the cable is laid. Any surplus cable can be run around the perimeter of the room.

Product Output (Watts)	Spacing (mm)	100	95	90	85	80	75	70	65	60	55
	Cable Length (Metres)	Area Covered (Square Metres)									
A150 - 150w	13	1.25	1.20	1.15	1.10	1.05	1.00	0.93	0.87	0.81	0.75
B300 - 300w	26	2.50	2.40	2.30	2.20	2.10	2.00	1.88	1.75	1.63	1.50
C450 - 450w	41	3.75	3.60	3.45	3.30	3.15	3.00	2.94	2.75	2.44	2.25
D600 - 600w	54	5.00	4.80	4.60	4.40	4.20	4.00	3.75	3.50	3.25	3.00
E750 - 750w	68	6.25	6.00	5.75	5.50	5.25	5.00	4.69	4.38	4.06	3.75
F900 - 900w	83	7.50	7.20	6.90	6.60	6.30	6.00	5.63	5.25	4.88	4.50
	Watts/sqm	120	126	132	138	144	150	163	175	188	200

Marking the layout
Having decided on the required spacing, using a marker pen, mark a perimeter line 150mm in from the edge of the room and any fixed objects. Then starting at the closest corner of the room, adjacent to the timerstat, (the starting point), mark out the spacing intervals for the heater cable. Endeavour to keep all spacing as uniform as possible.

Laying the heating cable
Once you have completed marking the floor, the heating cable can now be laid out. Gently unwind the power supply cable from the cable reel until the joint with the heating cable is reached, this should then be taped to the floor at the start point using the adhesive tape supplied. At this point it is a good idea to check the electrical resistance of the cable, so as to ensure that there is a circuit,

In the unlikely event that there is a fault. The reading should be approximately similar to that on the ratings label on the reel, or as shown in the chart. Now lay the cable in parallel lines, back and forth across the floor area, following the spacing marks and fixing it lightly at intervals with short pieces of adhesive tape. Continue to the end of the cable and adjust cable if necessary. Any excess cable can be run along the centre of the perimeter space ensuring that equal spacing is maintained between cable runs. Ensure that the heating cables are never allowed to touch or cross, are not twisted, knotted, kinked or coiled and are not shortened or modified in any way. Also the heating cable should not be laid up stairways or wall areas. Please contact the technical help line if you need assistance. When the layout has been completed and any adjustments made, the entire length of cable should now be taped to the floor to provide protection during tiling. Ensure that it is straight and in full contact with the floor and by running your thumb and forefinger along the tape either side of the cable, remove any air gaps. Now remove any debris and unless the floor is to be tiled immediately, it should be covered to protect the heating cable.

Installing the timerstat and floor probe
The floor probe is packaged with the timerstat. The timerstat will not work with a probe from a different model. The floor probe has a 4m lead attached, that can be shortened or lengthened with suitable wire. Tape the probe end down to the floor midway between 2 heating wires and run the cable up to the timerstat back-box.

Test the heaters
Before completing the electrical installation, it is advisable to check that the heater is working correctly. This can be done by temporarily wiring the heater cable to a 3-pin plug as per the installation for mat installation.

Gloss Touch-Screen Stat [CGW/CGB]

Technical Data

Consumption:	<2W
Power Supply:	85~265VAC 50/60Hz
Output Switch:	Active contact (NO) and passive contact (NO)
Max. Current:	20Amp MAX (Resistive load)
On/Off Differential Temp:	0.5~5ºC
Transport and Storage Temp:	-20~60ºC
Relative Humidity:	10~90% (No Condensation)
Setting Temp:	5~35ºC/0.5ºC per step
Accuracy:	1ºC
Temp Limitation:	30~60ºC (External Sensor)
Wiring Port:	2.5mm² Max
Working Temp:	0~50ºC

Display Overview

Manual Control
Day Display
Time Control
Power
Ambient Temperature
Temperature Value
Clock/Set OFF
Temperature/
Time Program
Heating
Setting
Increase
Reduce
Menu
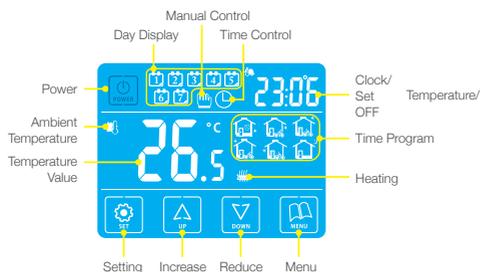
Dimensions
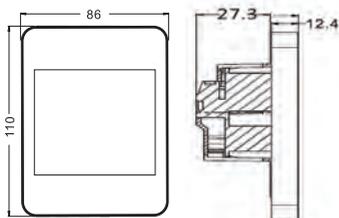
General Settings

Power on/off:
Press POWER to turn on or off.
When the power is off, the display shows "OFF" and the current time alternatively.

When the power is on, the display shows the set temp and the current time alternatively.

Adjust the set temperature:
Press UP/DOWN to adjust the temp during manual control and temporary control modes.

Key-lock function:
In the "ON" state, press and hold SET for 3 seconds until "LOC" displays. Repeat to unlock the controller.
(Note: If mains power is switched off when in key-lock, when power is switched on again the power button will not work.)

Time and Week Setting:
Ensure the unit is in the "ON" state.
Press SET and then press UP/DOWN to adjust the minutes, then press SET to amend the hour, and press SET to set the day of the week.
Press POWER to save and exit the settings.

Time Program:
Ensure the unit is in the "ON" state.
Press and hold MENU for 3 seconds.
Press UP/DOWN to adjust the time for period 1.
Press MENU again to adjust the related temperature using UP/DOWN.
Press MENU to adjust the next time period and continue until all periods are set.
Press POWER to save and exit the settings.

Control Mode:
Press MENU to switch between manual or time program control modes.
In time control mode, keep pressing UP/DOWN to enter temporary temperature override mode.

Time Periods		Default Time	Default Temp
Weekdays	1	06:00	22ºC
	2	08:00	
	3	11:30	
	4	12:30	
	5	17:00	
	6	22:00	
Weekend	1	08:00	
	2	23:00	

Period 1 - Wake up
Period 2 - Leave in the morning
Period 3 - Return over lunch
Period 4 - Leave after lunch
Period 5 - Return later afternoon
Period 6 - Sleep
LOC Key-LOC

Advanced Settings

Note - These are normally set by technicians during initial installation.

In the "ON" state, press and hold MENU and then press POWER for 3 seconds to enter advanced settings. 1 Adj will show on the screen.

1 Adj - Probe temperature compensation
Press UP/DOWN to adjust during range -9~9ºC.
Press MENU to enter the next setting.

2 Sen - Sensor Selection
Press UP/DOWN to choose the sensor.
"IN" = The internal Sensor.
"OU" = The external sensor.
"AL" = Both internal and external sensors. (Note: Use "OU" for UFH)
Press MENU to enter the next setting.

3 Lit - Limitation temperature of external sensor
Press UP/DOWN to change the limit temperature (35ºC recommended).
Press MENU to enter the next setting.

4 Dif - Differential Temp
Press UP/DOWN to adjust the differential temperature range 0.5~5ºC.
Press MENU to enter the next setting.

5 Prg - 5+2/6+1/7 or off
Press UP/DOWN to change to 7 day for ease of setting.
Press MENU to enter the next setting.

6 Rle - Leave on 00
Press MENU to enter the next setting.

7 Dly - Leave on 0
Press MENU to enter the next setting.

8 Hit - Max Temp Setting
Press UP/DOWN to adjust the max temp from 35~60ºC (35ºC recommended)
Press MENU to enter the next setting.

9 LIG - Backlight Setting
Press UP/DOWN to adjust the setting value "ON" or "OFF".
Press MENU to enter the next setting.

10 LT - Backlight timer
Press UP/DOWN to set the time for the backlight. It can be set between 10 and 30 seconds. The default is 15 seconds.
Press MENU to enter the next setting.

11 PE - Button Sound
Press UP/DOWN to adjust the setting value. "ON" means enable, "OFF" means disable.
Press MENU to enter the next setting.

12 LP - Frost function setting
Press UP/DOWN to adjust the setting value. "ON" means enable, "OFF" means disable.
Press MENU to enter the next setting.

13 TP - Defrost Temp Setting
Press UP/DOWN to adjust the defrost value at the range of 5ºC to 12ºC.
Press MENU to enter the next setting.

14 SF - ON/OFF state of the thermostat
Press UP/DOWN to change the state of the thermostat. The default is "ON".

15 CF - Temperature Unit Setting
Press UP/DOWN to switch the temperature unit.
C = Display temperatures in degrees celsius.
F = Display temperatures in degrees fahrenheit.

16 AFAC - Recover factory settings
Press and hold UP
The symbol "—" will appear on the screen
Keep holding UP until it changes to "— —"
Press MENU to enter the next setting, or press POWER to save and exit advanced settings.

Wiring Diagrams

AC 220 - 250v 20amps
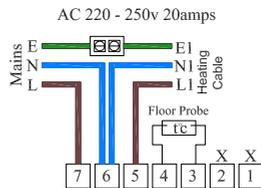
Installation Diagrams
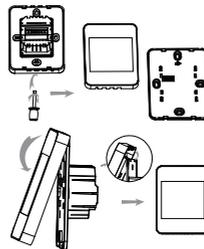
1. To remove the front cover, gently twist the screwdriver clockwise as shown.

2. Use a 38mm deep wallbox and connect wiring as shown in the wiring diagram. The Neutral to the mat connects to the mains Neutral. The heating cable Earth connects to Mains Earth in the back of the wall box.

3. Reconnect the unit as shown. Only reconnect from the top and ensure the internal pins line up before clicking the unit together at the bottom.

Troubleshooting

Error Codes
Display Er2: External Sensor Error. Floor probe not connected or damaged.

Touch-Screen Stat [CTSW/CTSB]

Display Symbols

Menu key

1-6 event

UP

Clock-controlled programme mode

Manual mode

Room temperature

Day number

Set value/Time display

DOWN

Heating on

On/off

Clock key
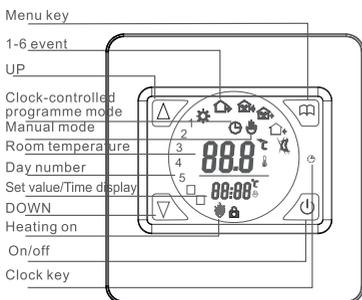
Dimensions (mm)
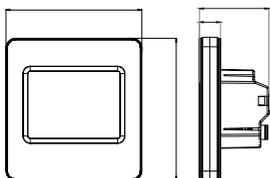
Mounting Steps:

1. Release the front cover by inserting a screwdriver into the bottom crack.
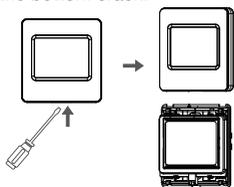
2. Take the backing plate apart according to the following diagram.
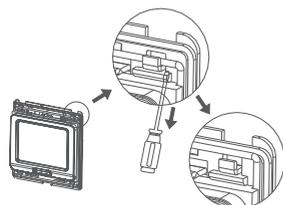
3. Fix the backing plate to the wall box.
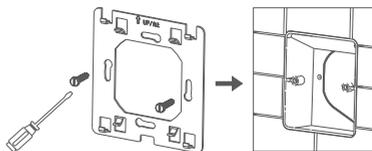
4. Connect wires (see diagram), and then mount thermostat on the backing plate and remounted the cover and frame
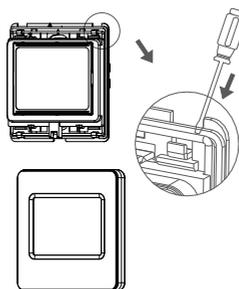
Connection Diagram:

Attention! The thermostat will take a maximum load of (3200W)

CTSW/B   7 6 5 4 3 2 1

Sensor

L1 N1   N   L
16A
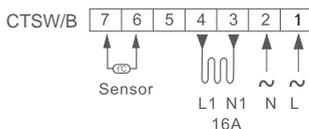
Wiring should be carried out by a qualified Electrician in accordance with I.E.E. Regulations. We do not recommend the timerstat be installed inside a bathroom or location where it can be affected by steam.

Programming

Weekly: Programmable Touchscreen Timerstat with 6 daily periods and manual override. 16 amp relay and floor sensor.

Selection Table:

Model	Current	Application
E92.713	3A	Built-in & floor sensor, floor limit sensor, weekly programme
E92.723	3A	Built-in & floor sensor, floor limit sensor, weekly programme, a potential-free output
E92.716	16A	Built-in & floor sensor, floor limit sensor, weekly programme

Parameter:

Voltage: 220V/230V
Power Consumption: 2W
Setting Range: 2~90°C (can adjust to 35-90°C)
Limitation setting: 5~60°C (Factory Setting: 35°C)
Switch Differential: 0.5~10°C adjustable (Factory Setting 1°C)
Ambient Temperature: 5~50°C
Protective Housing: IP20
Housing material: Anti-flammable PC
HVAC Controls Products

Programming:

Press Menu key for 5 seconds to enter programming mode.

Key	Event	Icon	Time	Modify	Temp	Modify
📖	Days 1-5	☀ 1	06:00	▲▼ Event Time	22°C	▲▼ Mode
		⌂ 2	08:00		15°C	
		✉ 3	11:30		15°C	
		✉ 4	12:30		15°C	
		⌂ 5	17:00		22°C	
		☾ 6	22:00		15°C	
	Days 6-7	☀ 1	08:00		22°C	
		☾ 2	23:00		15°C	

Note The default settings are a starting point and both the temperature and start time for each time period can be adjusted. Leave time periods where they are with only minor adjustments to the start times if necessary - so if a time period is required 'on' increase it's temperature (e.g. Bathroom 26c-30c) If the time period is required off, set the temperature 10c-15c. When in programming mode, the time for period 1 will show on the screen and can be adjusted with the up or down keys. Press the menu button and the temperature for period 1 will show and can be adjusted accordingly. Press the menu button again and the start time for period 2 will show and so on for all 6 time periods.

User Operation:

Buttons

⏻ Power

🕐 Clock

▲▼ Up/Down

📖 Menu

　 Plus/Minus

Icons

✋ Manual Mode

🕐 Programme Mode

🔒 Key Lock

✋ Heating On

☀ Time Period 1 - Wake-Up

⌂ Time Period 2 - Leave House Am

✉ Time Period 3 - Return To House AM (Lunch)

✉ Time Period 4 - Leave House PM (After Lunch)

⌂ Time Period 5 - Return To House (Evening)

☾ Time Period 6 - Sleep

On/Off:

Press the POWER button to turn the unit on or off.

Setting the time:

Press the CLOCK button for 5 seconds to enter clock set. Alter minutes and then press the CLOCK button to alter hours, press the CLOCK button again to alter day number. Use the UP/DOWN buttons to modify minutes, hours and day, then press the POWER button to retain the settings.

Override:

Press the MENU button to choose MANUAL MODE or PROGRAMME MODE. In MANUAL MODE use the UP/DOWN buttons to modify the hold temperature. In PROGRAMME MODE, use the UP/DOWN buttons to modify the time period temperature that will be held until the end of the time period only.

Programme Set-up:

Press the MENU button for 10 seconds to enter PROGRAMME MODE - refer to programming table for default time periods and temperatures. Press MENU to access period 1 start time and the again for period 1 temperature etc for all 6 time periods. The temperature and start time can be altered for each period as required. IMPORTANT! Do not try and eliminate time periods as this will cause the device to work incorrectly. Simply apply a low temperature to any period where you want the heating to be "off".

Anti-Tamper Screen Lock:

Press both UP/DOWN keys together for five seconds to lock the screen. The KEY LOCK icon will be displayed. Press both UP/DOWN keys together for five seconds again to unlock the screen.

Advanced Setting (Qualified Person Preferred)

Usually finished at mounting thermostat.
Whilst the device is off, press the MENU and POWER keys simultaneously.

1ADJ: Temperature Calibration
Press PLUS/MINUS key to adjust the floor probe displayed temperature to coincide with the actual floor temperature. Re-press the MENU key to enter the next step.

2SEN: Sensor Mode (Note: Set to "out" for floor probe)
Press PLUS/MINUS key to enter sensor working mode.
IN = Built in. Out = Floor sensor.
ALL = Both sensors. Floor sensors is the limit sensor. Re-press the MENU key to enter he next step. Should be sent to out to read floor temperature and properly control the underfloor heating.

3LIT: Modify Limitation Value (Note: Set no higher than 35C)
Press PLUS/MINUS key to modify the temperature. Limit value limitation range: 5~60C. Re-press the MENU key to enter the next step.

4DIF: Switch differential Setting
Press PLUS/MINUS key to change the switch differential. Setting range: 0.5~10C (Recommend 1C). Re-press the MENU key to enter the next step.

5LTP: Start anti-frozen function in power off.
Press PLUS/MINUS key to change the present anti-frozen function. Re-press the MENU key to enter the next step.

6PRG: Set day off mode (Note: Set to 1234567 for ease)
Press PLUS/MINUS to choose day off. 5/2 day mode, 6/1 day mode, or 7 day mode. Re-press the MENU key to enter the next step.
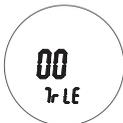
7RLE: NOT APPLICABLE FOR UNDERFLOOR HEATING.
LEAVE ON '00'. Re-press the MENU key to enter the next step.

8DLY: NOT APPLICABLE FOR UNDERFLOOR HEATING.
LEAVE ON '1'. Re-press the MENU key to enter the next step.

9HIT: Max Temp Setting (Note: Do not set higher than 35C)
Re-press the MENU key to enter the next step.

AFAC: Reset Factory Settings
Press PLUS key for 5 seconds till the device shows - - - Reset to factor Setting. Press OFF to save settings.

Setting the clock and day – 24hr clock, hours, minutes and day.
To set the clock and day of the week, press and hold the CLOCK button for approximately five seconds; the minutes will then start to flash. Whilst they are flashing, adjust using the UP/DOWN arrows. When they are at the correct setting, press the CLOCK button again. The hours will then start to flash, repeat as before. When set, press the CLOCK button again and you will see a number on the left of the circle. The day number, (Monday = 1, Sunday = 7), is set by using the UP/DOWN arrows as before. (e.g. If it's Tuesday set it on number 2). The unit will return to the main screen after around five seconds if no buttons are pressed, or if you press the CLOCK button again.
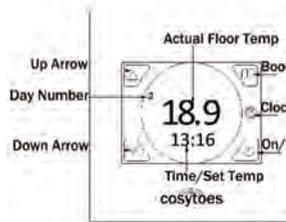
Setting the programmer – Start time and temperature set for each time period:
Note: There are 6 default time periods Monday-Friday and 2 time periods Saturday and Sunday. Change to all 7 day programming in advanced settings if required.
Press and hold the MENU button for approximately five seconds; the start time for period 1 and week day numbers 1-5 will be displayed. (All the time periods will be set the same for days 1-5).
To adjust the start time for period 1, press the UP/DOWN buttons. (Do not try to eliminate time periods simply have a high temperature for periods that are on and low temperatures for periods that are off. For example if the heating is only required to be on in the morning, all the subsequent periods should be set with a low temperature so they don't come on).
Then, press the MENU button and the display will show the temperature set. Use the UP/DOWN arrows to adjust

the temperature. If you want the heating on, set the temperature at 25c to 32c as preferred. Or, if you want the heating off, set the temperature below 10c and it will not come on unless it is very cold.

By pressing the MENU button repeat the previous steps to set each time period and temperature.

Saturday & Sunday only have two time periods that are set as above. Press the POWER button again to save the settings.

If you require them to work on weekday time periods, you can alter this in the advanced settings. (Follow the instructions below or contact our customer service department on 0113 2577 588 for assistance).

Turn the unit off with the POWER button on the screen, then press and hold the MENU button when turning the stat back on with the POWER button. The first screen you see will have '1AdJ' at the bottom. Press the MENU button until the numbers for the days of the week appear with '6PrG' at the bottom of the screen. Press the UP button and days 6 and 7 are shown with days 1 - 5. All 7 days will now have 6 time periods as weekdays. Once set, press the POWER button to save the settings.

Temporary Override:
When in timed mode change the temperature by pressing the UP/DOWN buttons. The unit will hold this temperature until the end of the current time period. To remove the temporary override before the end of the time period, press the MENU button once.

Hold Mode:
When in hold mode change the temperature by pressing the UP/DOWN buttons. The unit will permanently hold this temperature until the MENU button is pressed.

Switch Your Heating Off:
Press the POWER button on the timerstat to switch off the heating for going away on holiday or during hot weather.

Troubleshooting

Error Codes
E0: Built-in sensor short-circuited or disconnected
E1: External sensor damaged or disconnected

Wireless Timerstat [WTS3]

Functions:
- Large display can be clearly read with the background lighting.
- Easy to use.
- 4 programmable periods each day (5+1+1)
- Floor Sensor for high temperature protection.
- The display shows the set and actual room temperature and time.
- Temperature display in degrees Celsius.
- The transmitter can be wall mounted or free standing.
- Recessed discrete receiver.
- Manual and temporary override.

Technical Data:

Transmitter Operating Voltage:	2 x AAA 1.5 V, Alkaline batteries
Backup Storage:	EEPROM
Receiver Current Load:	16A – 3600w capacity
Frequency:	868MHz
Channel selection:	By programming the thermostat and the receiver
Switching options:	5+1+1 day, 4 periods each day
Temperature settings:	5°C ~ 35°C, 0.5°C increments
Accuracy:	+/- 0.5°C (+/- 1°F)
Thermostat dims:	Surface mounted, 135x88x22mm
Receiver dims:	Recessed, 86x86x23mm
Color:	White
IP protection rating:	20
Certification:	CE

Design:

Weekday
Clock
Set Temp
Heating Icon

Battery Indicator
Room Temp Display
Program Period

Prog Button Mode Select Power Adjust Up/Down
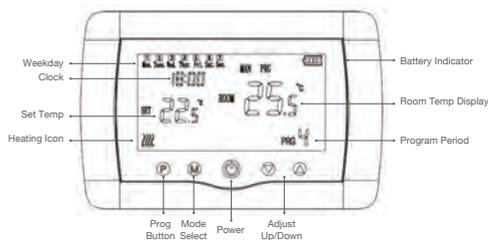
The timerstat consists of two parts:
- An electronic transmitter with digital display, controls and built-in room temperature sensor.
- A recessed wall mounted receiver complete with floor sensor.

Time, Day and Program Setting

Pic 1

Pic 2
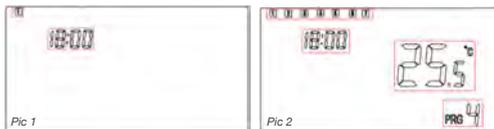
To set the time and day (Pic 1):
1) Press PROGRAM and hold for 3 seconds, the minutes flash, change the values by using UP/DOWN buttons.
2) Press PROGRAM button again, the hour flashes, change the hour by using UP/DOWN buttons
3) Press PROGRAM button again, the day flashes, use UP/DOWN button to change the day number. 1 = Monday and 7 = Sunday.
4) Press the POWER button on the thermostat to save this function and leave the menu.

Programming for daily use:
Monday to Sunday (1~7), each day has 4 periods time periods (1~4). (Note Press PROGRAM button to access subsequent settings. First it will access P1 start time, then P1 temperature, then P2 start time, then P2 temperature etc. The temperature is the room temperature so a typical on setting is 21c to 25c and an off setting of 16c or less. So if you want a time period on, put the temperature up and if it needs to be off, put the temperature down. Do not try to eliminate time periods or the timerstat will not work properly. (The floor sensor connected to the receiver will prevent the floor getting too hot.)
In 'ON' mode, press PROGRAM and hold for 3 seconds, to enter clock set mode, then press PROGRAM three times to enter programming mode – see Pic.2. The time display for P1 will flash, change the value as required by pressing UP/DOWN buttons
Press PROGRAM again, the temperature display will flash, change the values by pressing UP/DOWN buttons.
Press PROGRAM button again, and repeat the process for P2, P3 and P4. (Note, do not try to eliminate time periods.)
(Days 1 – 5 have now been completed)
Press PROGRAM again and repeat the same method

for Saturday and then PROGRAM again for Sunday programming.
Press the POWER button on the thermostat to save this function and leave the menu.

Example:

	Monday - Friday			
Period	1	2	3	4
Time	6:30	8:00	18:00	22:30
Temp	21°C	18°C	21°C	16°C

	Saturday			
Period	1	2	3	4
Time	8:00	10:00	18:00	23:00
Temp	21°C	21°C	21°C	16°C

	Sunday			
Period	1	2	3	4
Time	9:00	12:00	19:00	0:00
Temp	23°C	21°C	16°C	21°C

Manual Override:
In program mode 'PRG', if the temperature is adjusted, the temperature will hold as required and then reverts to programmed temperature at the end of the current time period.
Press the 'M' button 'MAN' and then adjust the temperature for permanent hold. Press the 'M' button again to revert to 'PRG'. Should the 'M' button be pressed again the temperature displayed will be as previously set but can be adjusted as required.

IP Address Setting:
The receiver has an ID SET IP button to link it with the thermostat, which in turn has a response button to link it. This linking has usually already been activated. Should this not be the case, the following steps can be taken.
1) Press the SETIP button on the receiver; the green LED light will flash.
2) Turn off thermostat handset, press and hold the MODE button for 3 seconds. You will see ID code (four digit number) show on the top left. Press MODE again, and the LED light on the receiver will stop blinking. The thermostat and the receiver are now linked.
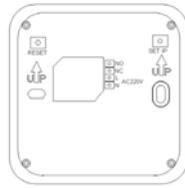
Protection Setting:
Low Temperature Protection: When the room temperature (Internal Sensor) lower 5°C, thermostat will start heating.
High Temperature Protection: When floor sensor probe floor temperature over set point (35°C as default), thermostat will stop heating no matter if room temperature has arrived at the set point or not.

About Alarm:
When "ALARM" flashes, it means the external sensor has a problem, please check if the floor sensor is connected or damaged.
When both "ALARM" and SIGNAL STRENGTH icon flash, then the wireless communication between transmitter and receiver has a problem.

Parameter Setting
To access parameter settings, in 'off' mode, press MODE and UP buttons simultaneously for 10 seconds until 03 appears. Each press of the MODE button will go to the next item.

Menu	Description	Range	Default
03	Set Point Max	5°C ~ 50°C	35°C
04	Set Point Min	5°C ~ 50°C	5°C
09	High Temp Protection Setting	5°C ~ 80°C	35°C

Connection Diagrams
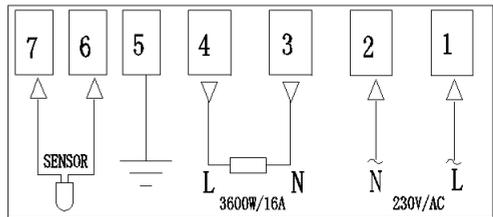
Mounting

IMPORTANT: Don't forget to remove plastic protection film from screen.
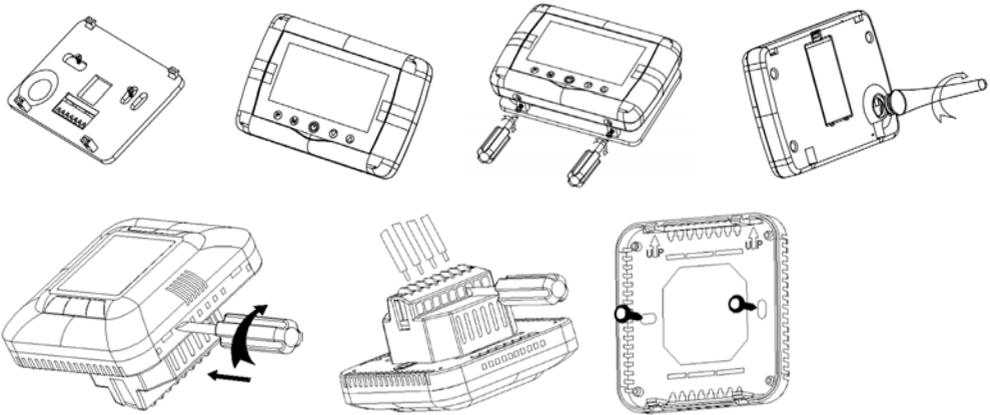
Manual Themostat [MTS3]

Features:

- Extremely simple to operate.
- On/Off switch.
- Temperature selection-dial.
- LED shows when the thermostat is calling for heat.
- Internal and floor sensors.

Technical Parameters:

Voltage:	230VAC 50/60Hz (Max 16amps)
Power Waste:	<2VA
Range of Temperature:	5°C ~ 40°C
Ambient Temperature:	-5°C ~ 50°C
Protective Casing:	IP20
External Sensor:	B-3380 10K@25°C
Lead Length:	3M
Casing Material:	Flame-retardant PC
Standard Installation Height:	1.2M
Installation Location:	Away from direct heating source and sunlight.

Floor Limiting Temperature Sensor Installation:

The sensor at the end of the floor probe should be situated mid way between 2 heating cables typically 4cm from each. Do not install the sensor over another heat source e.g. central heating pipe or the thermostat will not function correctly.

Temperature Setting and Control:

Adjust the temperature dial as required, the thermostat will automatically track and compare the current room temperature with the set temperature. When the room temperature is higher than the preset temperature, the thermostat will automatically disconnect the under floor heating. When the room temperature is lower than the set temperature, the thermostat will automatically switch on the heating.

Wiring Diagram:
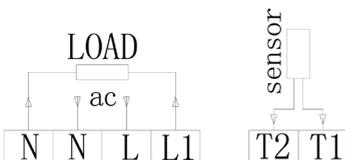
Mode Setting:

J1	Short without floor sensor connected, works with air sensor only.
J1*	Open with floor sensor connected, works with floor sensor only.
J2	Room frost protection - Short: On, Open: Off.

*FOR UNDERFLOOR HEATING
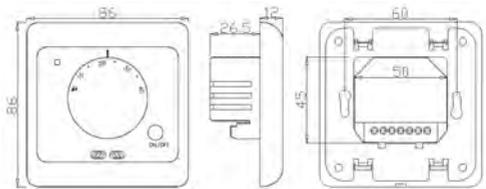
Jumper should not be on J1 (default) to work with floor probe.
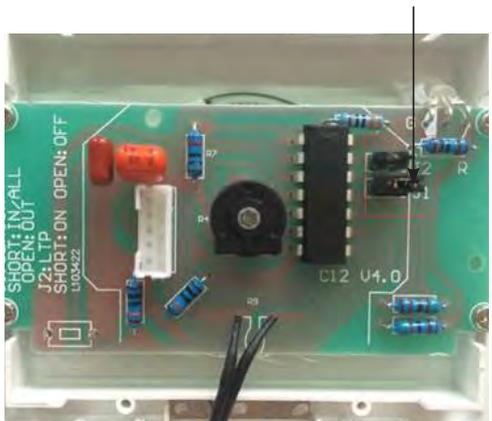
Mounting Instructions:

1. Remove Bezel from thermostat

2. Use flat screwdriver to press fixing clips and detach metal back plate.
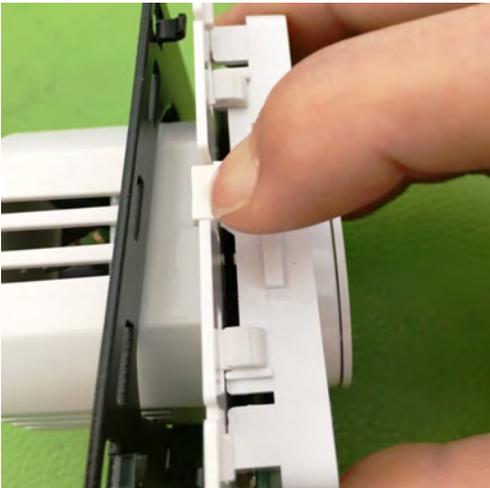
3. Fix the metal back-plate to a 38mm deep wall box, wire up the unit as shown and reassemble.

Call 0113 2577 588 should you need assistance.
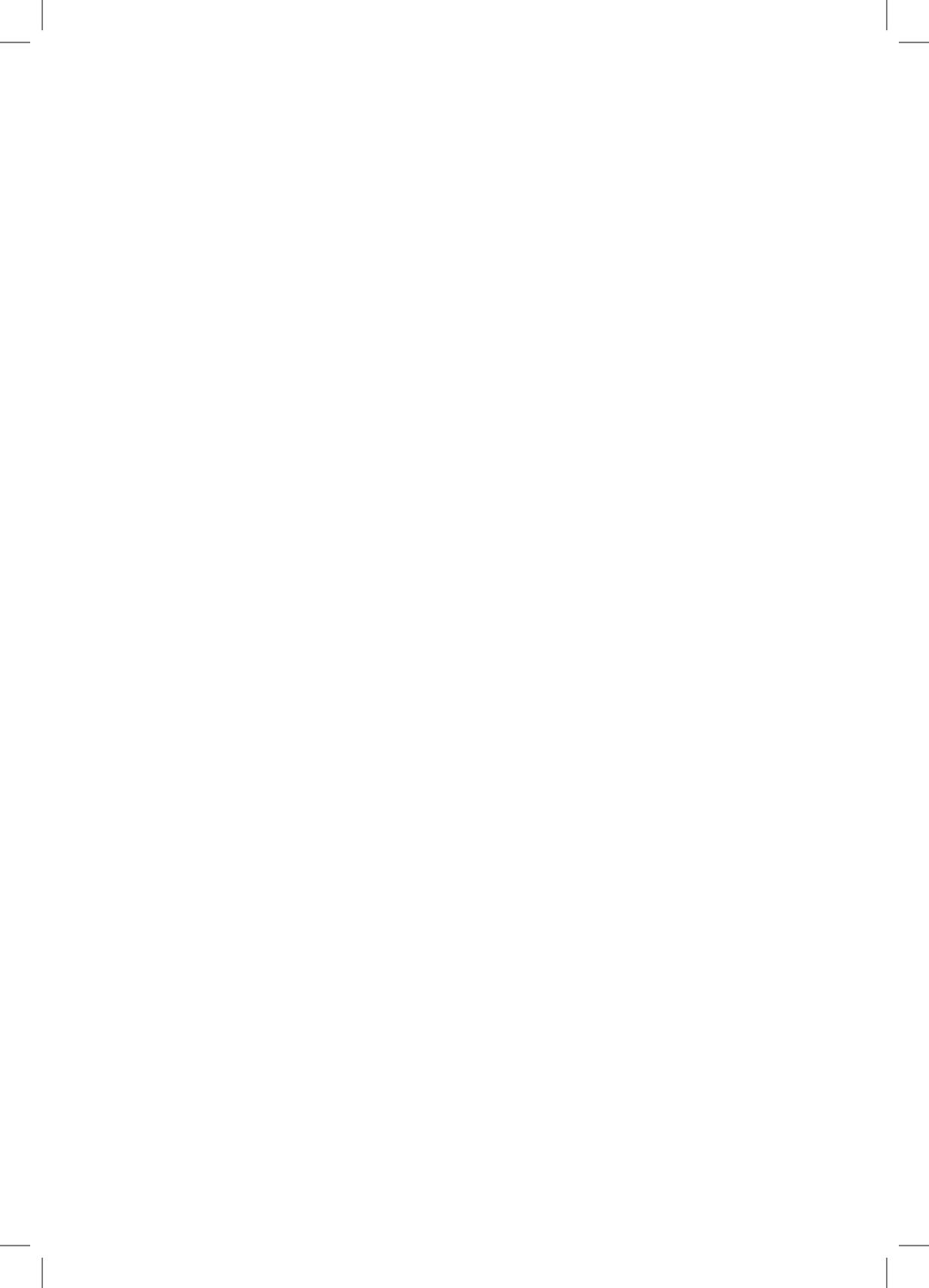
Help and Assistance:
Should you need any assistance, please contact us on 0113 2577 588, or email cs@cosytoes.co

We give full support to the installer: -
- Free help and advice
- Free planning service for the installation if required (prior to supply).
- Exchanging wrong sized products with no restocking charge. (The product should be in a resalable condition excluding packaging. Carriage costs chargeable).
- Replacements for damaged probes (Cost £15 inc p&p).
- Repair kits for damaged cable. (Accidents do occasionally happen and if the damage location is known then the cable can be easily and permanently repaired by a qualified electrician. Cost £15 inc p&p).
- We have thermal imaging and specialist equipment for finding a cable has been damaged after the flooring is installed. (Subject to call out charge)

Timerstats: Please note that the floor probe is packed in the box with the timerstat and must be installed at the same time as the heating system otherwise the timerstat will not work.

A Question of Quality
There are many systems on the market and unless you are an expert it is difficult to choose one from another. This is a quality guide to what to look for.

Our underfloor heating cables are manufactured to meet the underfloor heating standard EN 60335-2-96:2002. The cables are subjected to continuous testing throughout the manufacturing process and the factories are subjected to regular external quality audits. The manufacturing process involves extruding high quality teflon insulation around resistance heating wire. The wire is subject to a continuous 5000v spark test as it comes off the cable extruding machine. If there are any imperfections the resulting spark will stop the machine. Twin heating cables and an earth dump wire are wrapped in a continuous thick aluminium foil before the outer insulation is extruded around it. This ensures that Cosytoes® products are 100% accurate all of the time. All our cables are IPX7 rated for use in wet areas.

Cheaper products are cheaper for a reason, brittle heating cable, poor quality insulation and dangerous connection cables are what our technicians have found when testing these products.

Peace of Mind Lifetime Guarantee
All our heating cables are manufactured using state of the art technology. As our manufacturing standards in our factories are so comprehensive, we are able to offer our Cosytoes® lifetime guarantee. See www.cosytoes.co/guarantee for details.

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