



INSTRUCTIONS

TSSHHC-3ILD2-2 electronic thermostat with built-in timer mode for installation in standard wall socket.

The thermostat can be set within the +5/40°C (40-105°F) temperature range. LED indication for energised heating.

MICROTEMP PRODUCT LINE

Type MTW with built-in timer for 24 hours/7- day cycle, °F

240V supply	120V supply	24V supply
MTW 1991 UDF6 with floor sensor	MTW 2991 UDF6 with floor sensor	MTW 3991 LIDF6 with floor sensor
MTW 1999 UDF6 with built-in sensor		MTW 3999 UDF6 with built-in sensor

Type MTW with built-in timer for 24 hours/7 day cycle, °C

240V supply	24V supply
MTW 1991 LIDC6 with floor sensor	MTW 3991 UDC6 with floor sensor
MTW 1999 LIDC6 with built-in sensor	MTW 3999 UDC6 with built-in sensor

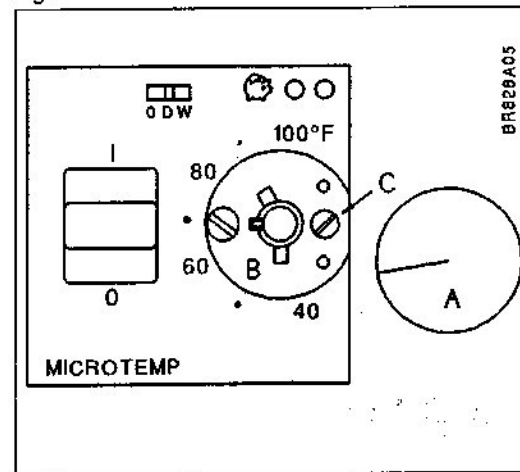
APPROVALS (only 120 Vac, 240 Vac)

The thermostat is in compliance with UL8730-1 and UL8730-2-9, standards for temperature indicating and regulating Equipment. The product may only be *energised when the entire installation meets* the current directive requirements. When the product is installed according to this instructions guide and the current installation guidelines, it is covered by factory guarantee. If the product has *been exposed* to damage e.g. in transport, it must be *checked and overhauled* by *qualified* staff before the product is *connected to* the power.

TECHNICAL DATA

Power supply	24, 120, 240Vac, ±1 0%, 60 Hz
Output relay, SPST.....	16A
Built-in switch.....	2-pole, 16A
Ambient operating temperature.....	32-122°F
.....(0/+50°C)	
Scale limitation.....	min./max.
Scale range.....	40-105°F (+5/40°C)
Temperature setback.....	9°F for 7 + 6 hours (5°C)
ON/OFF difference.....	0.7°C (0.4°F)
Timer mode back-up.....	ca. 15 minutes
Housing.....	IP20
Dimensions (HxWxD).....	115x84x58 mm
The thermostat does not require any maintenance	

Fig. 1

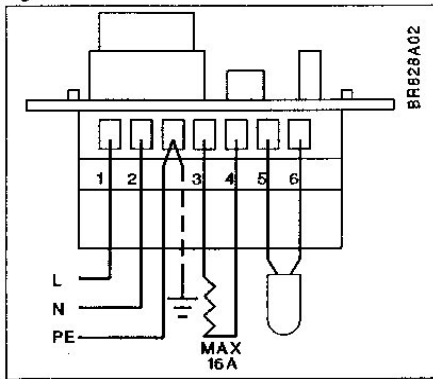


SENSOR INSTALLATION

Floor sensor: to be placed in conduit which is embedded in concrete in the floor. The conduit end is sealed and placed as close to the surface as possible in the concrete layer. The sensor cap may be removed to ease the installation. Room sensor: to be mounted on standard conduit box or directly on to wall.

The sensor is UL approved, regarding the isolation test and is extendable up to several hundred meters as the cable resistance can be as high as 20 Ohm. Two conductors in one multiple cable, which e.g. is applied to supply the heating cable, must not be used. Voltage signals may occur which can interrupt thermostat modes. If a shielded cable is applied, then the shield must not be earthed but must be connected to terminal 6. The optimum installation is achieved by separate sensor cable which is installed in separate conduit. MICROTEMP has a built-in error circuit which deenergises the heating if the sensor is switched off or short-circuited.

Fig. 2



THERMOSTAT INSTALLATION (Fig. 1-3)

1. Remove thermostat button (A).
2. Loosen screw to remove cover (B).
3. Cables to be connected from the rear as shown in diagram.
4. The thermostat is placed in wall socket remount frame and cover reposition thermostat button

PROGRAMMING/OPERATION

MTW has built-in setback programme for 9°F (5°C) night-setback 6 hours from Monday to Friday. MTW is equipped with button to start timer mode and a 3-step switch for mode options:

- **0** No temperature setback
- **D** 7-hour-setback all weekdays
- **W** 7-hour-setback all weekdays and 6-hour-day-setback from Monday to Friday.

SETBACK PROGRAMME IN D-POSITION (TIMER FOR 24 HOURS)

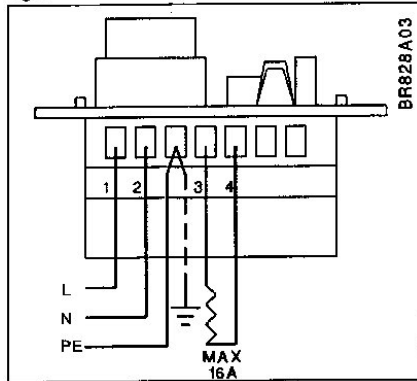
All weekdays	
7 hours	17 hours
night-setback	comfort temperature

Setback programme in W-position (timer for 24 hours/7-day-cycle):

Saturday & Sunday	
7 hours	17 hours
night-setback	comfort temperature

Monday to Friday			
7 hours	3 hours	6 hours	8 hours
night-setback	comfort	day-setback	comfort

Fig. 3



MTW is available with microprocessor. All the laborious settings have been preset. The timer mode is easy to operate by using the buttons and after this the setback periods will be repeated each day.

MTW is equipped with a button for starting the timer mode. The timer will be energised by pushing the button Friday at the time when the setback period is programmed to begin, e.g. Friday at 23.00 p.m. At anytime it is possible to change to setback mode by the 3-step switch without influencing the programming.

INDICATION OF LIGHT DIODE

If only a constant 7 hours' night setback temperature is required, the timer may be set at any day of the week, at the time at which the fixed setback period (night setback) is to start.

- Flashing green light with long intervals (1 sec): The thermostat has not been programmed.
- Flashing green light with short intervals (0.3 sec.): The programming of the thermostat has been finished.
- Constant Green Light: Thermostat in period of setback temperature.
- Constant Red Light: Heating on for normal comfort level. (Relay on).
- No colour: Normal temperature - no heating requirement. (Relay off).
- Flashing red light with short intervals: Sensor error.

TEMPERATURE SETTING

MTW has a scale range of 40-105°F (+5-40°C). To assist the setting, the thermostat has a LED which flashes red when the heating is ON. The thermostat is set at max. temperature until the requested room or floor temperature is obtained. Then turn back the thermostat until LED switches off. After one or two days fine adjustments may be necessary.

THERMOSTAT ADJUSTMENT

When the room temperature has been stabilized, then the thermostat can be adjusted. Measure room temperature by a thermometer. The thermostat is adjusted by removing the temperature line indicates the same temperature as measured. This adjustment takes places in steps of about 5.4°F (3°C).

MIN./MAX. TEMPERATURE (FIG. 1)

Behind the thermostat button there is a locking mechanism. By loosening the little screw (C) the temperature setting can be locked, e.g. between 68 and 77°F (20 and 25°C). The blue ring indicates min. temperature and the red ring indicates max. temperature.