Marley
Engineered Products
470 Beauty Spot Rd. East
Bennettsville, SC 29512 USA

MODEL TH110A-DP-P

SUMMARY

u **OPTIONS SELECTION**

At the back of the thermostat, there are 3 selection switches to set at your preferences.

⇒ Temperature in °C or °F, time in 12 or 24 hours and Early Start function.

u TO SET TIME AND DAY
Press on DAY, HOUR and MIN buttons to adjust time and day.

u TO RECORD THE ☼ (COMFORT) SETPOINT TEMPERATURE
Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☼ button (2 to 3 seconds) until icon appears on display.

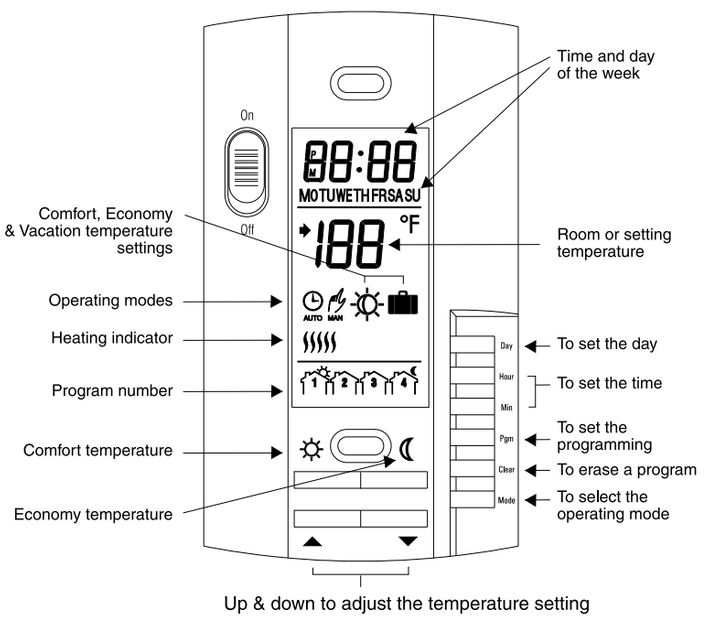
u TO RECORD THE ☾ (ECONOMY) SETPOINT TEMPERATURE
Select chosen setpoint temperature by using ▲ or ▼ button. Press on ☾ button (2 to 3 seconds) until icon appears on display .

u TO RECORD THE 💼 (VACATION) SETPOINT TEMPERATURE
To program the Vacation temperature, select the desired degree using the ▲ ▼ buttons and press on the ☼ and ☾ buttons simultaneously until the 💼 icon is displayed (app. 3 seconds).

u OPERATING MODES
To select an operating mode, use MODE button.

AUTO: Runs the program. ▲ or ▼ shows temperature setting and can override temporarily your programming up to the next program.

MAN: Maintains the selected temperature. ▲ or ▼ changes the temperature setting.



INSTALLATION

NOTE: The "Problems and Solutions" section at the end of this user's guide will help you to correct your problems during the installation.

This thermostat has been designed to operate with any installation which has a RESISTIVE load not exceeding 4000 W (16.67 A) @ 240 VAC such as electric baseboards, radiant ceilings and floors, electric con vectors, etc. It is not compatible with a low voltage controller used by a central heating system.

Electricians or experienced technicians should install the thermostat.

This thermostat is designed to be used with a self-protected heating system equipped with thermal cut off and circuit breaker.

PARTS INCLUDED

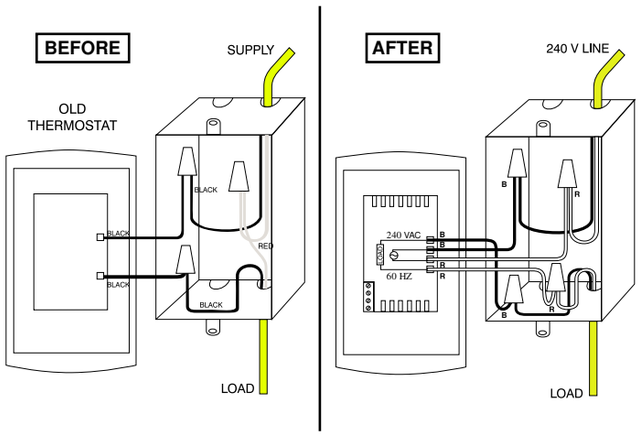
- One (1) TH110A-DP-P (240 VAC) thermostat
- Two (2) 6-32 screws
- Four (4) solderless connectors (for copper wire)

TURN OFF POWER OF THE HEATING SYSTEM AT THE MAIN POWER PANEL TO AVOID ELECTRICAL SHOCK. Keep air vents of the thermostat clean and free from obstructions.

1) Connecting wires and mounting thermostat

Connect the rear thermostat wires to the 240 V LINE and to the load using solderless connectors for copper wires. See schematic diagram.

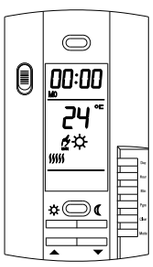
Push the excess wire back into the electrical box to prevent interference with the thermostat. Secure the thermostat using two (2) 6-32 screws. Once the thermostat is properly installed, return power to heating system.



Note 1: *All cables and connections must conform to the local electrical code.*

WARNING: *Special CO/ALR solderless connectors must be used when connecting with aluminum conductors.*

Power-up



To power up thermostat:

Set the On/Off switch to On.

When power is applied for the first time, the display must show the time 00:00, the room temperature and the Manual mode icon ( ). Other information might show up on the display if installation is defective or does not comply with the instructions.

Note: The On/Off switch set to Off will place the thermostat in sleep mode. Ideal for summertime.

OPERATING MODES

The TH110A-DP-P has two (2) operating modes.

MANUAL ( )

This mode allows you to maintain a constant temperature in the room.

1- To activate this mode, press on Mode button to display the icon.

2- Set the desired temperature using the ▲ ▼ buttons or select the pre-programmed ☼ or ☾ or 💼 settings.
(To select the 💼 setting, press on ☼ and ☾ simultaneously.)

AUTOMATIC ( )

This mode executes your own programming.

To activate this mode, press on Mode button to display the icon. The ☼ or ☾ icon indicates which temperature setting is used. Also, the icon of the program number will be shown.

Memory back-up

In the event of a power failure, an internal circuit will maintain the programming and the time. But only the time could have to be set if power failure is more than 2 hours.

Early Start function

The thermostat is providing a built-in function enabling it to calculate the optimum time to start the heating system to achieve the desired temperature setting at the programmed time. This function could start the heating system as early as 6 hours prior to the programmed time. To enable this function, set the switch E.S. to “ON” at the back of the thermostat.

PROGRAMMING

Programming the time and day

1-Set the time using the Hour and Min buttons.
2-Set the day using the Day button.

Programming the Comfort, Economy and Vacation settings

The Comfort ☼, Economy ☾ and Vacation 💼 settings respectively represent the temperatures that you wish to have during the day ☼, at night or while you are away at work ☾, or while you are away for an extended period 💼.

To program your settings

a) To program the Comfort temperature, select the desired degree using the ▲ ▼ buttons and press the ☼ button until the ☼ icon is displayed (app. 3 seconds).

b) To program the Economy temperature, select the desired degree using the ▲ ▼ buttons and press the ☾ button until the ☾ icon is displayed (app. 3 seconds).

c) To program the Vacation temperature, select the desired degree using the ▲ ▼ buttons and press on the ☼ and ☾ buttons simultaneously until the 💼 icon is displayed (app. 3 seconds).

d) Press the Mode button to exit this function and return to the normal operating mode.

Schedule programming

The TH110A-DP-P allows 4 setting changes for each day of the week. There are no pre-set programs.The programs are tailored to perfectly adapt to your life style. The principle is very simple. For each day, enter the time at which you wake up (P1), the time you leave for work (P2), the time you arrive back home (P3) and the time you go to bed (P4).

Program	Mode	Time
1	☼	Wake-up time
2	☾	Leaving time
3	☼	Return time
4	☾	Bed time

For savings to be obtained, you must lower the temperature for a period of 2 to 3 times the delay required to bring the temperature back to your comfort level.

Example : *If your system takes one hour to go from your saving temperature level to your comfort temperature level, it is useless to lower the temperature for a period less than 2 to 3 hours.*

a) To Program your Schedule

1- Press on PGM button to access the programming mode.

2- Press on Day button to select the day to be programmed. You can select all days of the week by pressing on Day button for 3 seconds.

3- Press on PGM button to select program 1, 2, 3 or 4.

4- Press on Hour and Min buttons to program the time.

5- When you have completed your programming, press on Mode button to exit this function.

b) To Erase a Program :

Select the program using PGM and Day buttons, and press on Clear button. The time field displays --:-- when the program is inactive.

c) Example 1 : Comfort period from 7:00 AM to 10:30 PM
Economy period from 10:30 PM to 7:00 AM
Identical schedule for all days of the week.

1- Press on PGM button to access the programming mode.

2- Press on Day button 3 seconds to select every day of the week.

3- Press on Hour button to enter 7:00 AM, Prog. 1 (☼).

4- Press on PGM button again to select Prog. 2 (☾), and press on Hour and Min buttons to enter 10:30 PM.

5- Press on Mode button to exit this function.

d) Example 2 : Comfort period: Monday to Friday from 6:15 AM to 8:15 AM and from 5:00 PM to 10:00 PM.
Saturday & Sunday from 7:30 AM to 11:00 PM.

Schedule/Day	MON.	TUES.	WED.	THU.	FRI.	SAT.	SUN.
PROG. 1 ☼	6:15 AM	6:15 AM	6:15 AM	6:15 AM	6:15 AM	7:30 AM	7:30 AM
PROG. 2 ☾	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	---	---
PROG. 3 ☼	5 PM	5 PM	5 PM	5 PM	5 PM	---	---
PROG. 4 ☾	10 PM	10 PM	10 PM	10 PM	10 PM	11 PM	11 PM

NOTE : *It is faster to program the same schedule for every day and then modify the exception days.*

1- Press on PGM button to access the programming mode.

2- Press on Day button 3 seconds to select every day of the week.

3- Press on Hour and Min buttons to enter 6:15 AM, Prog. 1 (☼).

4- Press on PGM button to select Prog. 2 (☾) and Hour and Min buttons to enter 8:15 AM.

5- Repeat step 4 to enter Prog. 3 (5:00 PM) and Prog. 4 (10:00 PM).

NOTE : *When making modifications, make sure you are in the right program.*

To modify the Saturday and Sunday schedules:

6- Press on Day button until SA or SU is displayed.

7- Press on PGM button to select Prog. 1 (☼) and Hour and Min buttons to enter 7:30 AM.

8- Press on PGM button to select Prog. 2 (☾) and then Clear button to erase it.

9- Press on PGM button to select Prog. 3 (☼) and then Clear button to erase it.

10- Press on PGM button to select Prog. 4 (☾) and then Hour and Min buttons to enter 11:00 PM.

11- Press on Mode button to exit this function.

Temporary or permanent temperature bypass

This operation allows you to temporarily modify the room temperature while you are in the Automatic mode. Simply press on ▲ or ▼ button to select the desired temperature, or the ☼ or ☾ button to select the Comfort or Econo settings you have programmed.This temperature will be maintained until the beginning of the next programmed schedule.

You can also switch to the Vacation setting for a prolonged absence by pressing on ☼ and ☾ at the same time.The display will show 💼 icon. In that case, the derogation is permanent. To return to the normal operating mode, press on Mode button.

If you wish to immediately return to the programmed settings, press on Mode button twice.

CHARACTERISTICS

• Model:	TH110A-DP-P (240 VAC)
• Supply:	240 VAC, 50/60 Hz
• Load:	16.67 A maximum (resistive only)
• Power:	4000 watts (NI) @ 240 VAC
• Approvals:	CSA / UL
• Display range:	0 to 60 °C (32 to 140 °F)
• Setting range:	5 to 30 °C (40 to 85 °F)
• Comfort default setting:	20 °C (68 °F)
• Econo default setting:	18 °C (64 °F)
• Vacation default setting:	10 °C (50 °F)
• Storage:	-20 to 50 °C (-4 to 120 °F)

WARRANTY

All products manufactured by Marley Engineered Products are warranted against defects in workmanship and materials for one year from date of original installation or 18 months from date of manufacture, except special components as noted below which are warranted against defects in workmanship and materials (see medallion levels below) from date of installation.This warranty does not apply to damage from accident, misuse or alteration; nor where the connected voltage is more than 5% above the nameplates voltage; nor to equipment improperly installed or wired or maintained in violation of the products installation instructions. All claims for warranty work must be accompanied by proof of the installation or purchase.

The customer shall be responsible for all costs incurred in the removal or reinstallation of products, including labor costs and shipping costs incurred to return products to Marley Engineered Products Service Center. Within the limitations of this warranty, inoperative units should be returned to the nearest Marley authorized service center or the Marley Engineered Products Service Center and we will repair or replace, at our option, at no charge to you with return freight paid by Marley. It is agreed that such repair or replacement is the exclusive remedy available from Marley Engineered Products. If the product requires replacement, but an identical model is no longer available, Marley Engineered Products will select a comparable item.

the above warranties are in lieu of all other warranties expressed or implied and all implied warranties of merchantability and fitness for a particular purpose which exceed the aforesaid expressed warranties are hereby disclaimed and excluded from this agreement. marley engineered products shall not be liable for consequential damages arising with respect to the product, whether based upon negligence, tort, strict liability or contract.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

For the address of your nearest authorized service center, contact Marley Engineered Products in Bennettsville, SC, at **1-800-642-4328**. Merchandise returned to the factory must be accompanied by a return authorization and service identification tag, both available from Marley Engineered Products. When requesting return authorization, include all numbers shown on the products.

PROBLEMS AND SOLUTIONS

PROBLEMS	CAUSES	SOLUTIONS
No display	• Circuit breaker is open • Power failure • The thermostat switch is in Off position	• Check 240 VAC presence at the thermostat • Put the switch in On position
The thermostat is loosing the time but not the programming	• Power failure more than 2 hours	
Room temperature shown is wrong	• A draft is nearby the thermostat	• Eliminate the draft
Heating system always on	• Bad installation	• Check installation
The thermostat displays heating but heating system is not turned on	• Bad installation	• Check installation • Check 240 VAC presence at the heating system
Programs do not change as you want	• Incorrect programming hours • Wrong programming mode selected	• Check actual time in AM & PM as well as program times (AM is not displayed) • Make sure operating mode is set to AUTO

PROBLÈMES ET SOLUTIONS

PROBLÈMES	CAUSES	SOLUTIONS
Pas d'affichage	• Disjoncteur ouvert • Panne de courant • L'interrupteur du thermostat est en position Off	• Vérifiez la présence du 240 Vca au thermostat • Placez l'interrupteur en position On
Le thermostat perd l'heure mais pas la programmation	• Panne de courant de longue durée (plus de 2 heures)	
Affichage de la température ambiante incorrect	• Courant d'air à proximité	• Éliminez les courants d'air
Système de chauffage toujours en marche	• Mauvaise installation	• Vérifiez l'installation
Le thermostat affiche du chauffage mais le sytème de chauffage ne chauffe pas	• Mauvaise installation	• Vérifiez l'installation • Vérifiez la présence du 240 Vca au système de chauffage
Les programmes ne changent pas comme vous le souhaitez	• Heures de programmation incorrectes • Mauvais mode d'opération sélectionné	• Vérifiez les heures actuelles de programmation (attention au format AM et PM, AM n'est pas affiché) • Assurez-vous que vous avez choisi le mode d'opération AUTO

PROBLEMAS Y SOLUCIONES

PROBLEMAS	CAUSAS	SOLUCIONES
La pantalla no marca	• Disyuntor abierto • Corte de corriente eléctrica • El interruptor se encuentra en Off	• Verifique la presencia de 240 Vca del termostato • Colóquo en On
El termostato pierde la hora pero no la programación	• Pérdida de corriente de larga duración (más de 2 horas)	
Marca la temperatura ambiente incorrecta	• Corriente de aire a proximidad	• Elimine la corriente de aire
Sistema de calefacción siempre en marcha	• Mala instalación	• Verifique la instalación
El termostato marca la calefacción pero el sistema de calefacción no calienta	• Mala instalación	• Verifique la instalación • Verifique la presencia del 240 Vca en el sistema de calefacción
Los programas no cambian como usted desea	• Horas de programación incorrectas • Selección de un modo de operación erróneo	• Verifique las horas de programación actuales (cuidado con el ciclo AM y PM, AM no aparece en pantalla) • Asegúrese de haber elegido el modo de operación AUTO