

EASY TO NAVIGATE

Navigating the controller operating menu



1. Classic Main Menu

2. Menu Scrolling Keys

3. ON/OFF Key

4. Defrost Key

5. PTI - Pre-trip Inspection

MP-4000 Controller Display Panel

EASY TO NAVIGATE

Menu scrolling keys

Moving through these seven menus, their submenus and entering commands requires the use of four keys:

F1

EXIT - Press the **F1** key each time you want to exit a submenu shown in the message display.

F2

UP/ DOWN - Press the **F2** or **F3** key each time you want to scroll up or down in a menu or submenu shown in the Message Display; or scroll forward or backward in a menu line.

F3

F4

ENTER - Press the **F4** key to enter a new menu or submenu.

The MP-4000 contains an extensive operating menu. The menu is navigated via the controller keypad. There are 2 types of menu's that can be displayed:

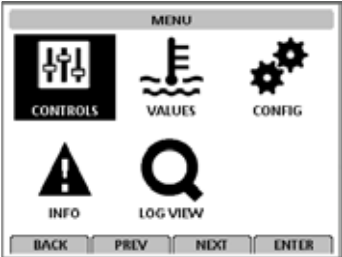


1. The Classic Main menu is divided into seven major areas that can be navigated via keypad.

Classic Menu

EASY TO NAVIGATE

Menu scrolling keys



2. The icon Main menu is divided into 5 icons (Alarms and warnings appear under "Info" icon)



LOCK PADLOCK
If PADLOCK is active, contact technician, the technician must enter correct key (number) to unlock display. PADLOCK OPTION must be selected ON under the CONFIGURATION/UNIT SETTING for it to be active or visible.

Icon Menu

Lock Padlock



Initiating a manual defrost
Turn the **UNIT ON**. Allow Unit to start and stabilise. Complete the following steps:



1. Press the **DEFROST** Special Function key.

- If the unit operating conditions allow a manual defrost (e.g. evaporator coil temperature is less than 18 C [56 F]), the unit enters Defrost.
- Select Start Defrost.

2. The defrost cycle automatically terminates and returns the unit to normal operation.



PTI
Turn the **UNIT ON**. Allow Unit to start and stabilise. Complete the following steps:

- Press the **PTI** Special Function key.
- Press the F2/F3 keys to scroll down to select from the different PTI test.
- Press the F4 key to ACCEPT and start the PTI or test.

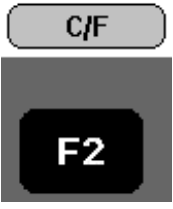
EASY TO NAVIGATE

Menu scrolling keys



Viewing alarms/warnings
To view the alarms that are present, turn the **UNIT ON**. Allow Unit to start and stabilise. Complete the following steps:

- Press the **F1/ALARM KEY**. The Alarm List appears.
- Press the **F2/F3** keys to scroll between Alarms that are present.
- Press the **F4** key to acknowledge the Alarm. Press F1 again to exit.



Display alternate fahrenheit (F) or celsius (C) temperatures
To view the alarms that are present, turn the **UNIT ON**. Allow Unit to start and stabilise. Complete the following step:
The controller can display temperatures in Celsius or Fahrenheit. Press the **F2** function key display will change to C or F To change the display to C or F permanently, press and hold the F2 C/F key, then confirm "ARE YOU SURE YES or NO. Some customers do not allow the display to be change permanently.



Changing setpoint
To change the controller setpoint, turn the **UNIT ON**. Allow Unit to start and stabilise. Complete the following steps:

- Press the **F3** key at the main screen. The Setpoint Change menu appears.
- Press the **F2/F3** keys to scroll the Setpoint Up or down - depending on your required Temperature.
- Press and hold the **F4** key until you are returned to the main Screen. The new setpoint is recorded in the controller and appears in the display.

Controller back-up battery
Every Controller has a Back-up Battery. This will allow the controller to be energized if the unit is not connected to shore power. The technician can change settings in the controller - Setpoint, etc.
Press the ON/OFF key, the controller will energize and stay energized for 25 sec, by pressing any of the Menu keys the 25 sec timer will reset to 20 sec.

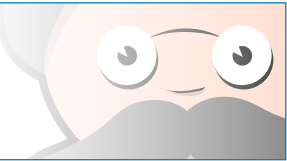
There are several options for viewing the Alarm Codes list pertaining to your particular unit:

- By visiting our www.europe.thermoking.com/tools for a link to the Thermo King Alarm Codes App.
- By downloading our Truck, Trailer, Cyro and DAS Alarm Codes Booklet for all Alarm Codes. This can be downloaded from the following link: www.emea-user-manuals.thermoking.com/ or at the QR code below.
- A printed copy can also be obtained from your Thermo King Dealer Representative.



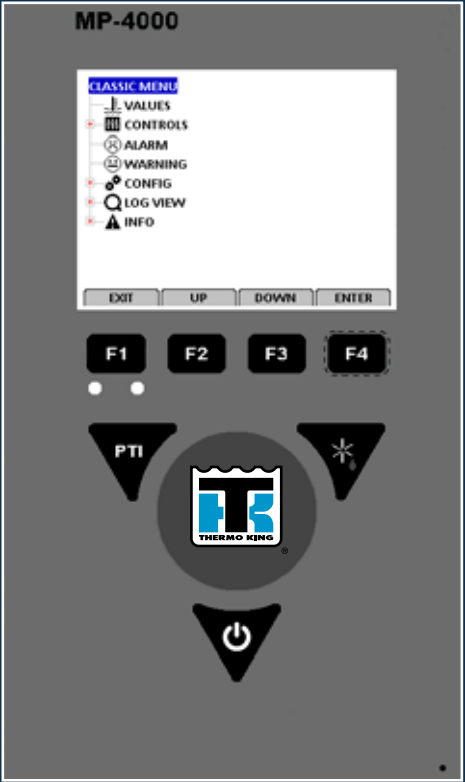
www.emea-user-manuals.thermoking.com

For more information or tutorial sessions, please contact your Thermo King Service Manager



 THERMO KING

MP-4000 Controller Display Panel



Driver Guide to Simple Operation



CONTROLLER DESCRIPTION

Standard display

The Standard Display is a ¼ VGA graphical type display. The temperature can be displayed in Celsius or Fahrenheit. The standard display will display the controlling sensor and Setpoint. The Setpoint will be the low reading with the C or F. Once a key is pressed the Standard display will change to the Unit Status Display. After 2 min of no key activity the display will return the Standard display



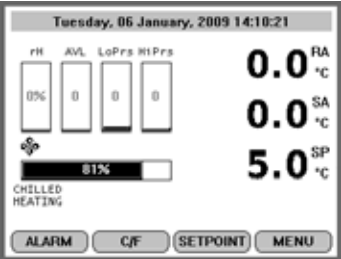
Standard Display

Idle Screen
After approximately 30 seconds of inactivity the display will go into hibernation and one of the following symbols will be displayed. Display alternates between the Idle screen and the standard display during this time.

- The happy face => everything is ok
- The Disgruntled face => we do have a warning
- The unhappy face => we do have an alarm

Check Mark Symbol
The check mark symbol indication that a SmartPTI has recently been running and no problems was found. The thumb will only be shown in the normal operation state. This symbol will appear at the left hand corner of the idle screen display.

Unit Status Display



Unit Status Display

CONTROLLER DESCRIPTION

Glossary of symbols

	Alarm
	Pretrip Inspection / Test in Progress
	Heating
	Evaporator Fan High Speed
	Evaporator Fan Low Speed
	Condenser Fan On
	Watercooled
	Dehumidification
	Defrost
	Compressor On Unloaded
	Compressor On loaded without Vapour Injection
	Compressor On loaded with Vapour Injection
	SmartPTI has recently been runnning and no problems found
	Controlling mode optimized
	Bluetooth
	Cell Phone
	GPS Signal
	RMM

The Unit Status display will show.
Looking at the display from top to bottom

- Date and Time / Alarm Warning
- rH Relative Humidity sensor
- AVL Door Position/AFAM+
- LoPrs Low Pressure Transducer
- HiPrs High Pressure Transducer
- RA Return air sensor
- SA Supply air sensor
- SP Setpoint
- Mode Icons Compressor ON, Heater ON, Evap Fan ON
- Capacity Bar Graph Percentage of mode (100% is full on)
- Mode Description Descript unit operation
- F1 – F4 Key Functions ALARM C/F SETPOINT MENU

CONTROLLER DESCRIPTION

Glossary of mode descriptions

Chilled/cooling
Chilled cooling is a mode where the Unit setpoint is set to above -10C. The function here is to maintain setpoint temperature by controlling the temperature on the supply air. The supply air is not allowed to be lower than the setpoint. Chilled/cooling mode can operate the unit in different modes where the compressor can run loaded, unloaded/ loaded and vapor injection depending on the need for cooling capacity. The condenser fan will operate in an on/off algoritim depending on the temperature on the condenser. The evaporator fans will operate in either high or low speed mode depending on the need for capacity.

Chilled/heating
Chilled heating is a mode the Unit setpoint is set to above -10C. The function here is to maintain setpoint temperature by controlling the temperature on the supply air. The supply air is not allowed to be lower than the setpoint. Chilled heating mode can operate the unit where only the evaporator fan low speed is running, evaporator high speed is running or evaporator high speed and heat is on.

Frozen/cooling down
Frozen/cooling down mode where the Unit setpoint is set to below -10C. The function here is to maintain setpoint temperature by controlling the temperature on the return air. Frozen/cooling down mode can operate the unit in different modes where the compressor is loaded and vapor injection is on/off. The condenser fan will operate in an on/off algoritim depending on the temperature on the condenser. The evaporator fans will operate in low speed mode or off.

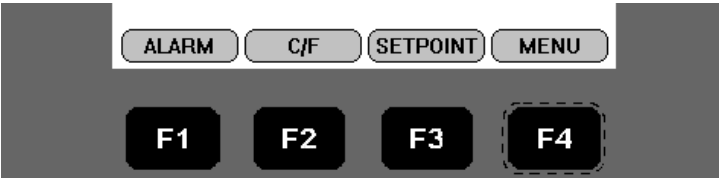
Defrost
Defrost is a situation where the unit either on demand or timing is defrosting the evaporator coil. The unit is heating with the heating elements awaiting 18C on the evaporator sensor. When the set Defrost termination temperature is reached, the unit will return to the operation mode depending on the setpoint.

PTI
PTI is a pretrip inspection and is used to diagnose the condition of the unit. There are a possibility to chose between several type of PTI’s depending on the test needed to secure the functionality of the unit.

Function Keys
The function keys are the F1 – F4 keys located below the display. They allow the operator to move quickly to a specific area of the information or into the controller menu. Function keys will change based on what menu is active in the display

CONTROLLER DESCRIPTION

Glossary of mode descriptions



Function Keys

- F1 INFO key: Press to view an explanation for the current alarms present.
- F2 C/F key: Press to view alternate temperature scale Celsius or Fahrenheit in display.
- F3 SETPOINT key: Press to enter Setpoint menu. Press F2 Up or F3 Down keys to increase or decrease the Setpoint. Press and Hold F4 until you are returned back to the main menu.
- F4 MENU key: Press to view the extended Menu for the MP4000.

Indicator LEDs
Two status indicator LEDs are located just under the F1-F4 function keys

Green Led	Flashing	Temperature approaching in-range
	Solid	Temperature In-Range
Red Led	Flashing	Alarm present and has not been acknowledged
	Solid	Alarm present and has been acknowledged

Three Special Function Keys
The Special Function keys are located around the TK Logo. These special function key allow the operator to move quickly to perform a specific function



Unit Status Display

PTI	Pre-Trip Inspecon
*	Defrost
ON OFF	Unit On/OFF Control