IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment:

Model #: _____

Serial #: _____

Date Purchased: _____

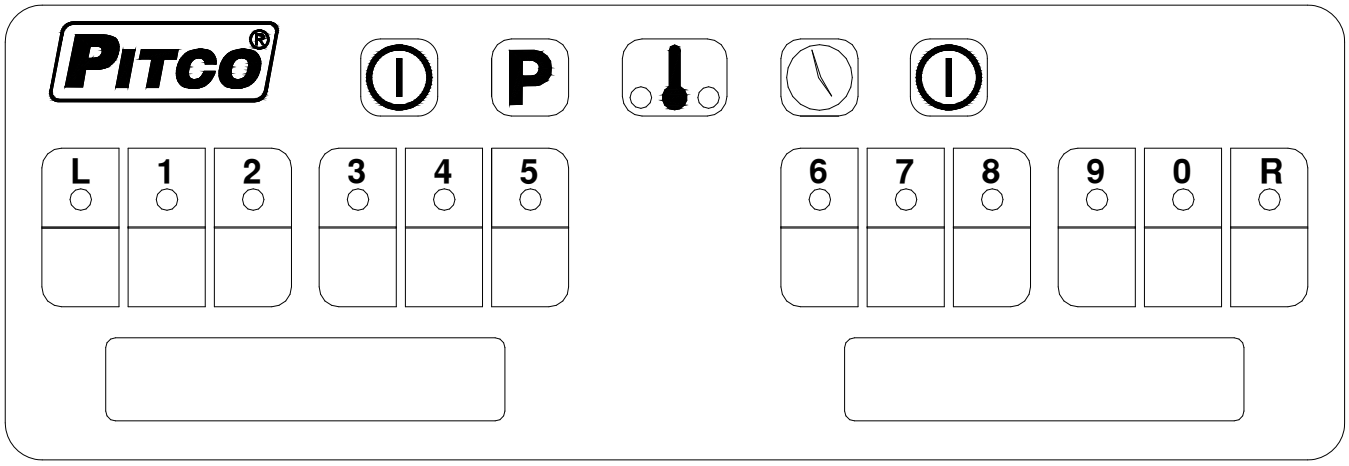
ENGLISH

Service Manual

Solstice I12 Cooking Computer

Covering

Single Vat (P/N 60126801) and Dual Vat (P/N 60126802)



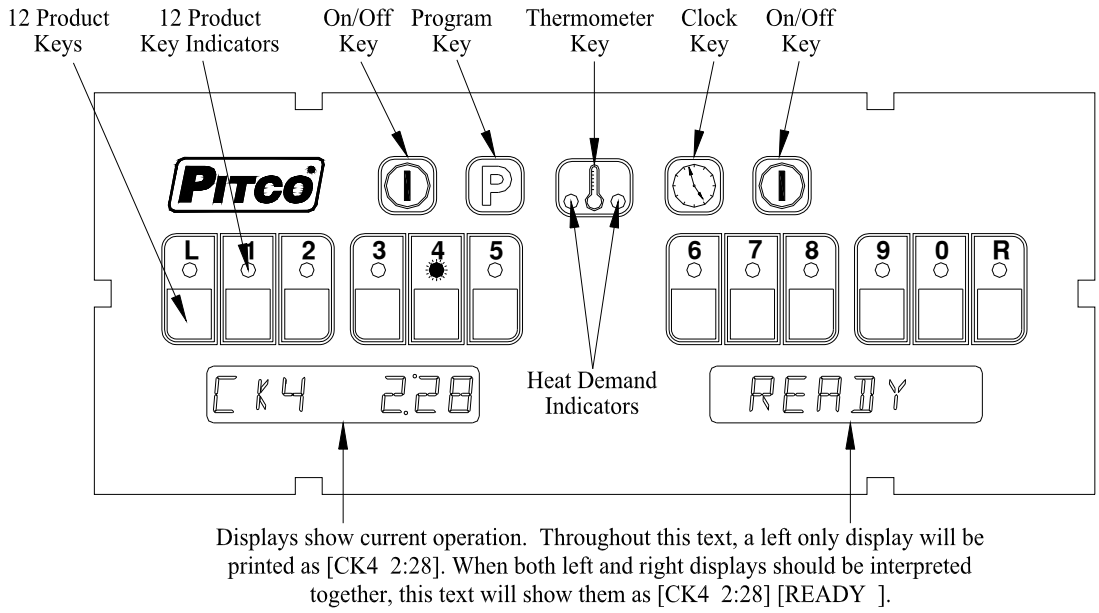
This manual details the operation and adjustment of the Solstice I12 Cooking Computer control developed for Pitco fryer products. This microprocessor control offers the latest cooking technology, including temperature and time compensation that requires no user adjustments for consistently cooked product. Other features include, drain valve interlock, faulty probe detection, selectable melt cycles, beeper volume, and cook temperature. Each product key may be programmed with cook, shake and hold times to keep pace with changing menus over time. This manual reveals all adjustments that are possible by keyboard entry, including passwords.

The target audience for this manual is the Service Technician.

L22-278 Rev 1 (06/11)

Table of Contents

1 Key Locations and Functions:



1.1 To turn the appliance ON:

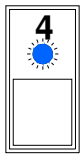
If power is applied to the appliance, the displays will show [OFF]. Press the [I/O] key. Displays will show one of the normal displays: [HEATING]; [MELTING] [SOLID]/[LIQUID]; or [READY]. Some messages may show in both left and right displays. Wait for the appliance to heat up to the [READY] condition before cooking.

1.2 To turn the appliance OFF:

Press the [I/O] key. Display will momentarily show the software version number and then [OFF][OFF]. *Use the Left [I/O] key for left side and Right [I/O] key for the right of dual vat control 60126802. Either key may be used on the single vat controller.*

1.3 To start a cook:

When displays are showing [READY] the appliance has reached set temperature and is ready to cook. Press the desired product key, and place product into the vat. The indicator above the product key will flash to indicate the cook timer is running. In the example above, product 4 is cooking with 2 minutes and 28 seconds remaining. The right side display has no running cook timers, and shows [READY].



Multiple cooks may run together. While cooks are running, the displays will always show the cook with the least time remaining. Longer running cooks will flash their indicators at a slower rate. Cook time remaining on these keys may be checked by momentarily pressing the product key.

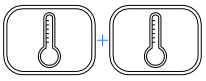
1.4 To cancel a cook:

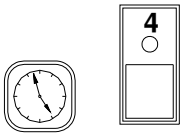
Press and hold the product key to cancel a running cook. If no other cooks are pending, controller displays will return to [READY].

1.5 To check Actual and Set temperatures:

To view the actual vat temperature, press the thermometer key. The display will show [ACT nnnF] or [ACT nnnC], where nnn is the current vat temperature. After a few moments, the display will return to [READY], [MELT], or [HEATING] when no cooks are running, or, [CKn mm:ss] for any cooks still running.

To view the set temperature, press the thermometer key twice. The display will show [SET nnnF] or [SET nnnC], where nnn is the current set temperature. After a few moments, the display will return to [READY], [MELT], or [HEATING] , or, [CKn mm:ss] for a cook still running.





1.6 To View Current Settings for cook, shake, and hold times:

To view the current settings for any product key, press the clock key, followed by the desired product key.

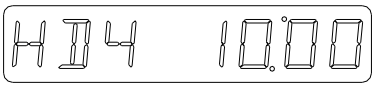
The display will show [CKn mm:ss], followed by [SHn mm:ss], then [HDn mm:ss]. Where "n" is the key number, and "mm:ss" are the current settings for time. After a few moments, the display will return to [READY], [MELT], or [HEATING] , or, [CKn mm:ss] for a cook still running.

Typical displays using key 4 as an example:

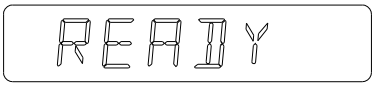
Key 4 set for 3 minutes and 28 seconds cook time.

Key 4 Shake Time is set for 2 minutes and :00 seconds <u>before the end of the Cook</u>.

Key 4 Hold Time in set for 10:00 minutes.



In a few moments, the display will return to [READY]

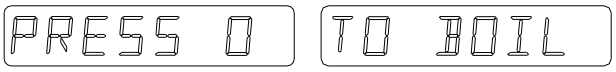


1.7 To perform a Boil Out operation:

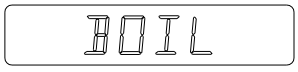
Normal maintenance of a fryer requires regular tank cleaning. This process involves draining the vat of oil and filling with water. Cleaning solution is added, and the control is set to the boil out mode by one of the following methods:

1.7.1 Automatic Boil Entry (Water Detection):

After filling an empty vat with water, turn the appliance On. Heat will be applied to the vat warming the water. This control will detect the presence of water by temperatures not rising above the boiling point of water; 212°F (100°C). After a time at this temperature, displays will show:



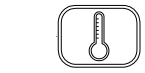
<u>Heat will be disabled until the operator responds to this prompt</u>. Pressing the [0] key is a **<u>YES</u>** response to the boil prompt. If pressed, display will show:

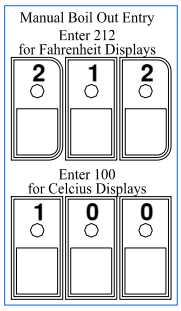


Heat will maintain vat temperature at 185°F (85°C) for cleaning as long as the control remains on. To exit boil mode control must be turned off.

*Warning: Pressing any other key at the [PRESS 0] [TO BOIL] prompt is regarded by the control as a **<u>NO</u>** response. <u>With this response, the control will apply heat to the vat as if oil were present in the vat</u>. With water in the vat, a rolling boil will result. This will cause undesirable foam over conditions, and steam burn hazards to operators performing cleaning operations.*

1.7.2 Manual Boil Entry:





After filling an empty vat with water, turn the appliance on. Press the thermometer key and enter key sequence [2], [1], [2]. *If control is set to display in the Celsius scale, press [1], [0], [0] keys to manually enter boil mode.* The display will show [BOIL] to indicate entry into boil mode.

To exit boil mode, control must be turned off.

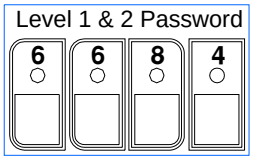
2 To Enter Programming Level 1 (for the Store Manager):

Note: The factory default setting for this control does not require an operator password to be entered. However, the operator password requirement and value may be changed in section 3.2. This text assumes the operator password is disabled. Entry of a password when NOT required will not interfere with the programming process.

With no cook timers running, displays will show one of the following displays: [HEATING], [MELT] [LIQUID (or SOLID)], or [READY].

Press the [P] program key. Left display will show [PROGRAM]. Right display will be blank.

Enter password 6684 using the product keys as numeric keypad for entry.



Display still shows [PROGRAM].

From the [PROGRAM] display, continue with this section or go to section 3.

2.1 To Set Cook Temperature:

Press the thermometer key once for Single Vat (left side of Dual Vat) or press key twice for Dual Vat (right side of Dual Vat).

The display will show [SET xxxF] [TEMP] or [SET xxxC] [TEMP], where “xxx” is the temperature setting. Use the product keys for numeric entry to adjust the current setting. Press the [P] key to save setting. Display now shows [PROGRAM]. To exit here, press [P] again, or continue.

2.2 To Change a Product Key–Cook, Shake, Hold, and Hold Pre-Alarm Times:

For each product key, Cook, Shake, Hold, and Hold Pre-alarm times are set in this section. With display showing [PROGRAM], continue with the following section for each product key to change.

2.2.1 Cook Time

Cook Time may be set for each product key. To deactivate any product key enter a zero value for cook time.

Press the [Clock] key. Display will show [SELECT] [PRODUCT]. Press the desired product key to change.

The display is now showing [nCK mm:ss] [TIME] where “n” is the key number, “CK” means Cook, and “mm:ss” is minutes and seconds. Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save cook time and continue setup for this product key.

2.2.2 Shake Time

Shake time is an alarm that sounds during Cook Time to prompt operators to shake the basket. Default for this value is zero, meaning the Shake Time is inactive. To use Shake Time, time value must be a non-zero value, and must be set to a value less than cook time.

Display shows [nSH mm:ss] [TIME] where "n" is the key number, "SH" means Shake, and "mm:ss" is time in minutes and seconds.

Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save shake time and continue setup for this product key.

Note: Cook Time minus DisplayShake Time = Shake Value Entry, Example: 3:00 cook time with a 2:00 shake time, the value you enter would be 1:00 minute.

2.2.3 Hold Time

Cooked product may stand in holding bins for a period of time. This timer produces an alarm to inform operators to discard old product and start a new cook. Default for this value is zero, meaning the Hold Time is inactive.

Display is showing [nHD mm:ss] [TIME], where "n" is the key number, "HD means HOLD, and "mm:ss" is minutes and seconds.

Use the product keys for numeric entry to adjust the current setting. Press the [Clock] key to save hold time and continue setup for this product key.

2.2.4 Hold Pre-Alarm

Hold Pre-Alarm is a timer setting that is used to warn operators that the Hold Time is about to expire. To use Hold Pre-Alarm, time value must be a non-zero value, and must be set to a value less than Hold Time. Default value is zero, meaning the Hold Pre-Alarm is inactive.

Display is showing [nPA mm:ss] [TIME] where "n" is the key number, PA means Pre-Alarm, and "mm:ss" is minutes and seconds.

Use the product keys for numeric entry to adjust the current setting.

Press the [Clock] key to save cook time and continue setup for this product key.
Note: Value entered for Hold pre-alarm time is the hold time minus the pre-alarm time. Example: 15:00 hold time with a 5:00 prealarm time, the value you enter would be 10:00 minutes.

Display will again return to [SELECT] [TIME]. Repeat steps from section 2.3.1 to make changes to any other product keys *or continue*.

2.3 To Exit Level 1 programming:

Display shows [SELECT] [TIME].

Press the [P] key.

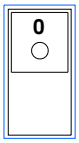
Display shows [PROGRAM]. Continue to section 3 to change options, or, exit here in the next step.

To exit Level 1 programming, press the [P] key again.

Displays will show [HEATING], [MELT] [LIQUID (or SOLID)], or [READY].

3 To Enter Programming Level 2 (for the Store Manager):

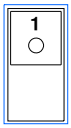
The display must show [PROGRAM] from section 2 to change these options. When the product key [0] is pressed, the display will show [SELECT] [OPTIONS]. Indicator lights above product keys will illuminate to represent options that may be changed. Each option listed below uses the product key [0] to toggle or scroll through available choices



in the display. When the correct value is displayed, press the [P] key to save choice. The display will again return to [PROGRAM] for another option selection.

3.1 Fahrenheit or Celsius Display:

The Controller will display temperatures in the Fahrenheit or Celsius scales. The default scale is °F. With display showing [PROGRAM], press the product key [0].



Display shows [SELECT] [OPTIONS].

Press product key 1, display shows [DEGREE n] [F OR C], where “n” is the current setting.

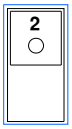
Use the product key [0] to scroll through choices (F or C). Press [P] key to save choice.

Display shows [PROGRAM].

3.2 Password Change or Required?

With factory settings, an operator password is not required to enter programming Levels 1 and 2. The password may be activated or changed in this section.

With display showing [PROGRAM], press the product key [0]. Display will show [SELECT] [OPTIONS].



Press product key 2, display shows [SET PASS] [NEW PASS]. Use the product key [0] to scroll through choices [NO PASS] or [PASS REQ]. Press [P] key to save choice.

If [NO PASS] is selected Display returns to [PROGRAM].

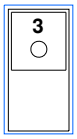
If [PASS REQ]. is selected, display will show [PASSnnnn] [NEW PASS] to prompt for new password. Displayed value “nnnn” is the current password. Use the product keys for numeric entry to change password. Press [P] key to save choice. Display shows [PROGRAM].

Note: The factory default password (6684) will always work even if a different password is selected above.

3.3 Beeper Volume and Tone:

Volume and Tone of the beeper alarm may be changed in this section. Volume ranges are 1,2 and 3, where 3 is the loudest setting. Later model controls have an additional selection for tones.

With display showing [PROGRAM], press the product key [0].



Display will show [SELECT] [OPTIONS]. Press product key 3, display shows [VOLUME n] [BEEPER]. Use the product key [0] to scroll through choices (n= 1,2,3, or T). Beeper volume will change as each selection is made.

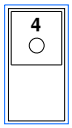
If “T” is selected an additional display is shown, [TONE n] [BEEPER]. Use the product key [0] to scroll through choices (n= 1,2,3). Beeper tone will change as each selection is made.

Press [P] key to save choice. Display shows [PROGRAM].

3.4 Language Selection:

With display showing [PROGRAM], press the product key [0].

Display shows [SELECT] [OPTIONS].



Press product key 4, display shows [ENGLISH] [LANGUAGE].

Use the product key [0] to scroll through choices (ENGLISH, ESPANOL, FRANCAIS, DEUTSCH, HOLLAND).

Press [P] key to save choice. Display shows [PROGRAM].

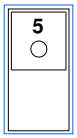
3.5 Melt Cycle Type:

This adjustment allows selection of the melt cycle type, or, disabling the melt cycle requirement when starting the appliance from a cold start.

With display showing [PROGRAM], press the product key [0].

Display will show [SELECT] [OPTIONS].

Press product key 5, display shows [LIQUID], the default setting.



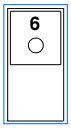
Use the product key [0] to scroll through choices (liquid, solid, no melt).

Press [P] key to save choice. Display will again return to [PROGRAM].

3.6 Recovery Test Value:

This controller maintains a record of heat up times for the appliance. A poorly running appliance will have increased recovery times stored in this display. There is no selection done here, just the display of recovery time values.

With display showing [PROGRAM], press the product key [0].



Display shows [SELECT] [OPTIONS].

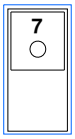
Press product key 6; display will show [RECOVERY] [TEST].

Press the product key [0]. Display will show [FnnnLyyy], where nnn is the factory recovery value, and yyy is the last warm up recovery value.

After recording these values, press the [P] key. Display returns to [PROGRAM].

3.7 Control or Timer: (Left side of Dual or Single Vat)

With display showing [PROGRAM], press the product key [0].



Display shows [SELECT] [OPTIONS].

Press product key 7; display will show [CONTROL].

Use the product key [0] to scroll through choices (Control, Timer).

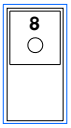
Press [P] key to save choice. Display shows [PROGRAM].

Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.

3.8 Control or Timer: (Right side of Dual Vat)

Note: This key has no function of single vat controls.

With display showing [PROGRAM], press the product key [0].



Display shows [SELECT] [OPTIONS].

Press product key 8; display will show [CONTROL].

Use the product key [0] to scroll through choices (Control, Timer).

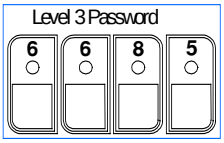
Press [P] key to save choice. Display shows [PROGRAM].

Note: If timer is selected, heat control outputs are disabled, leaving only the timer functions active. Do not make this selection on Solstice fryer models.

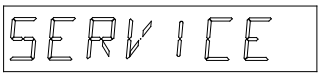
4 To Enter Programming Level 3 (for the Technician)

With no cook timers running, displays will show one of the following displays: [HEATING], [MELT] [LIQUID(or SOLID)], or [READY]. Press the [P] program key.

Left display will show [PROGRAM]. Right display will be blank.



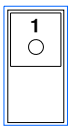
Enter password 6685 using the product keys as numeric keypad for entry.



Display will show [SERVICE]. Product key indicators will illuminate to prompt operator to select a key. This section details parameters that may be changed in Level 2 programming.

4.1 Offset Temperature Display

This adjustment allows the displayed temperature value to be offset to reflect the true center vat temperature while reading the probe tip temperature. Default value is zero. With zero value set, displayed values are the probe temperature.



With display showing [SERVICE] press product key 1.

Display shows [OFF nn F] [DEGREES], where “nn” is the value of the adjustment.

Negative values are preceded with a minus sign. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display will show [POSITIVE] [DEGREES].

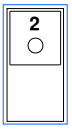
Use the product key [0] to scroll choices (Positive or Negative value). After selection, press the [P] key.

Display shows [SERVICE].

Note: Computer Display Temp – Center Oil Temp = Offset (+/-). Example: Computer Display shows 350F while Center Oil Temp measures at 352F, 350F – 352F = (-) 2F neg. offset value.

Warning: Proper equipment and expertise is required to properly adjust this value. Even small changes may negatively effect cooking performance.

4.2 Melt Cycle ON Time

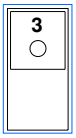


With display showing [SERVICE], press product key 2.

Display shows [MLTON :nn] [MELT ON], where “nn” is the value, in seconds, of time for a melt cycle heat pulse. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display now shows [SERVICE].

4.3 Min Cycle Time

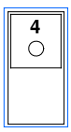


With display showing [SERVICE], press product key 3.

Display shows [MIN ON:nn] [MIN ON], where “nn” is the value, in seconds, of time for minimum heat pulse period. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display now shows [SERVICE].

4.4 Recovery Time



With display showing [SERVICE], press product key 4.

Display shows [RECY nnn] [RECOVERY], where nnn is the last cold start recovery time. No adjustments are permitted here. This is an information display only.

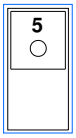
Press the [P] key. Display returns to [SERVICE].

4.5 Diagnostic Menu Entry

The diagnostic menu is used to determine the functionality of controller outputs and inputs. By exercising each output and examining inputs, a determination can be made if an appliance problem is controller related. In the diagnostic menu, product keys are assigned specific inputs or outputs.

All outputs in the ON state should produce 24VDC at the appropriate pins on the controller connector. Controller inputs can be verified by the on or off state of the indicator above the product key. This section details the process of checking each input and output.

With display showing [SERVICE], press product key 5.



Display will show [DIAGNOST] [DIAGNOST].

Note: For dual vat controls use key 0 (sect 4.5.8) to select left of right side for the following diagnostics. Key 0 has no function of single vat controls.

4.5.1 Left Basket Lift Output

Press the product key 1 to toggle the left basket lift output ON. Display will show

[L BASKET]. Press again to toggle output OFF.

4.5.2 Right Basket Lift Output

Press the product key 2 to toggle the right basket lift output ON. Display will show

[R BASKET]. Press again to toggle output OFF.

4.5.3 Heat Demand Output

Press and hold the product key 3 to force Heat Demand output ON. Display will show

[HEAT DEM]. Releasing the key will force output OFF.

4.5.4 Side On Output

Press the product key 4 to toggle the Side ON output ON. Display will show

[SIDE ON] Press again to toggle output OFF.

4.5.5 Drain Switch Input

Press the product key 5. Display will show state of the Drain Valve input. Display will show [DRN ON (or OFF)]. Product key 5 indicator shows the ON or OFF state of the input.

4.5.6 Lamp Test

Press the product key 6. All display indicators will be forced on. The purpose is to reveal non-functional indicators or displays.

4.5.7 Heat Feedback Input

Press the product key 7. Display will show state of the Heat Feedback input [FB xxx], where xxx is ON or OFF. Product key 7 indicator shows the ON or OFF state of the input.

4.5.8 Left or Right Side Select (Dual Vat only)

Press the product key 0. Display will show [DIAG] [LEFT]. Press key 0 again to select the right side for diagnostic keys in this section.

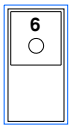
4.5.9 Exit Diagnostic Menu

To exit diagnostic menu, Press the[P] key. Display will return to [SERVICE]. Other service menu items may be selected for changes.

To return to programming press the [P] key again. Display will show [PROGRAM]. Other settings can be made in section 2.

To return to normal operations, press the [P] key again. Display will show one of the normal displays: [HEATING], [MELT] [LIQUID(or SOLID)], or [READY].

4.6 Ready Level

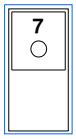


With display showing [SERVICE], press product key 6.

Display shows [READY nn], where "nn" is the value, in degrees below set temperature that the READY message is displayed. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display now shows [SERVICE].

4.7 Temperature Operating Range

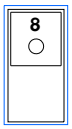


Forces the control to display the range on temperatures that may be set by operators.

With display showing [SERVICE], press product key 7.

Display shows [RANGE 1] [200 380]. No adjustments are permitted here. This is an information display only. Press the [P] key. Display returns to [SERVICE].

4.8 More Service Menu Entry



With display showing [SERVICE], press product key 8. Display now shows [MORE] [SERVICE].

Product keys will illuminate where adjustments are permitted; all other keys are inactive. The following section details each product key function in the More Service Menu.

4.8.1 Cook Now

Should operators be forced to acknowledge a Cook Done Alarm before starting another cook? This setting forces that requirement. Factory default value is OFF.

With display showing [MORE] [SERVICE], press product key 1. Display will show [NOW xxx] [COOK NOW], where "xxx" is ON or OFF. Use product key [0] change value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

Note: With OFF value selection, operators must acknowledge a done cook [DONE n] display before starting any another cooks.

With an ON value, operators are permitted to start a cook on the opposite side before acknowledging a cook done alarm.

Example: The left display is showing [DONE 2] with the beeper alarm sounding. Indicator 2 is flashing needing to be acknowledged. All other product indicators are off.

With a set value of OFF, no other cooks can start until product key 2 is pressed to acknowledge and clear the cook done alarm.

With a value of ON set, a cook on the right side of the control (keys 6-R) may be started before operator clears the cook done alarm for product key #2 on the left side.

4.8.2 Turbo Select (Single Only)

With display showing [MORE] [SERVICE], press product key 2. Display will show [TRBO OFF] [TURBO]. This setting is for use on Pitco's Turbo-Fry appliance. It should remain OFF for all other applications. Use product key [0] change value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

4.8.3 Heat Demand Profile

With display showing [MORE] [SERVICE], press product key 3. Display will show [xxxxxxx] [HEAT DEM], where xxxxxxx may be one of 5 heat control profiles listed below.

1. [GENERIC 1] for gas fired fryer appliance. This is the factory default.

2. [GENERIC 2] for electric fryer appliances, and model SGH50.
3. [T-STAT] control operates as a mechanical thermostat for general purpose applications on gas or electric fryers. This setting offers the quickest possible recovery times at the expense of temperature overshoot suppression.
4. [HE RPB] for use with High Efficiency RPB models only.
5. [HE ADV] for use with High Efficiency Advance models only.

Use product key [0] change value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

4.8.4 Shake Alarm Duration

With display showing [MORE] [SERVICE], press product key 4. Display will show [SH-DUR:nn] [DURATION], where "nn" is the time in seconds the shake alarm will sound. Use product keys for numeric entry of desired value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

4.8.5 Hold Alarm Duration

With display showing [MORE] [SERVICE], press product key 5. Display will show [HD-DUR:nn] [DURATION], where "nn" is the time in seconds the hold alarm will sound. Use product keys for numeric entry of desired value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

4.8.6 Cancel Duration

With display showing [MORE] [SERVICE], press product key 6. Display will show [CANCEL:nn] [DELAY] , where "nn" is the time in seconds the operators must press a basket key to cancel a cook. Use product keys for numeric entry of desired value, then press the [P] to save choice. Display returns to [MORE] [SERVICE]. Default value is 2 seconds.

4.8.7 Configuration Value

With display showing [MORE] [SERVICE], press product key 7. Display will show [CFG hhhh], where "hhhh" is a hexadecimal check sum of the program contained in the controller. Modifications to any part of the setup of this control will change the check sum value. Press the [P] display will return to [MORE] [SERVICE].

4.8.8 Factory Reset

Factory Reset provides a quick way to erase all setup changes and restore control to factory settings.

> *Warning: Any settings made prior to a factory reset will be lost. This includes customer specific downloads performed at Pitco Frialator.*

With display showing [MORE] [SERVICE], press [8] product key. After a few moments, the display will show [P]. Press the [P] display will return to [MORE] [SERVICE].

4.8.9 Standing Pilot Toggle

For some applications, it is desirable to maintain the gas pilot flame when the appliance is OFF. Heat from the pilot keeps solid shortening in the liquid state for quicker warm-ups in the morning. Default setting for standing pilot is off.

> *Note: Heat Demand Profile (section 4.8.3) must be set to Generic 1, or T-stat. Standing Pilot toggle has no effect in with any other setting.*

With display showing [MORE] [SERVICE], press product key 9. Display will show [STANDING] [PILOT n], where "n" is ON or OFF. Use product key [0] change value, then press the [P] to save choice. Display returns to [MORE] [SERVICE].

4.8.10 To Exit More Service Menu

With display showing [MORE] [SERVICE], press the [P] key. Display returns to [SERVICE]. Continue with Level 2 programming in section 4 (display showing [SERVICE]), or continue.

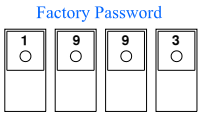
4.9 To Exit Programming Level 3

- With display showing [SERVICE], press the [P] key. Display will show [PROGRAM]. Continue with changes in section 2, or continue.
- To return to normal operations, press the [P] key again. Display will show one of the normal displays: [HEATING], [MELT] [LIQUID(or SOLID)], or [READY].

5 Factory Menu Level 4 (for the Technician)

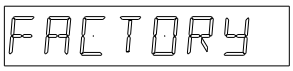
With no cook timers running, displays will show one of the following displays: [HEATING], [MELT] [LIQUID(or SOLID)], or [READY]. Press the [P] program key.

Left display will show [PROGRAM]. Right display will be blank.



Enter password 1993 using the product keys as numeric keypad for entry.

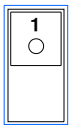
Display will show [FACTORY]. Product key indicators will illuminate to prompt operator to select a key. This section details parameters that may be changed in Factory programming.



5.1 Offset Temperature Display

This adjustment allows the displayed temperature value to be offset to reflect the true center vat temperature while reading the probe tip temperature. Default value is zero. With zero value set, displayed values are the probe temperature.

With display showing [FACTORY] press product key 1.



Display shows [OFF nn F] [DEGREES], where “nn” is the value of the adjustment.

Negative values are preceded with a minus sign. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display will show [POSITIVE] [DEGREES].

Use the product key [0] to scroll choices (Positive or Negative value). After selection, press the [P] key.

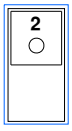
Display shows [FACTORY].

Note: Computer Display Temp – Center Oil Temp = Offset (+/-). Example: Computer Display shows 350F while Center Oil Temp measures at 352F, 350F – 352F = (-) 2F neg. offset value

Warning: Proper equipment and expertise is required to properly adjust this value. Even small changes may negatively effect cooking performance.

5.2 Melt Cycle On Time

With display showing [FACTORY], press product key 2.



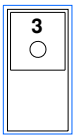
Display shows [MLTON :nn] [MELT ON], where “nn” is the value, in seconds, of time for a melt cycle heat pulse. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display now shows [FACTORY].

5.3 Minimum Cycle Time

With display showing [FACTORY], press product key 3.

Display shows [MIN ON :nn] [MIN ON], where “nn” is the value, in seconds, of time for minimum heat pulse period. To change this value, use the product keys for numeric entry of a new value.

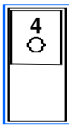


Press the [P] key. Display now shows [FACTORY].

5.4 Recovery Time

With display showing [FACTORY], press product key 4.

Display shows [RECY nnn] [RECOVERY], where nnn is the last cold start recovery time. No adjustments are permitted here. This is an information display only.



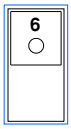
Press the [P] key. Display returns to [FACTORY].

5.5 Diagnostic Menu Entry

Same as section 4.5 except [FACTORY] is displayed instead of [SERVICE].

5.6 Ready Level

With display showing [FACTORY], press product key 6.

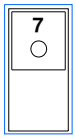


Display shows [READY nn], where “nn” is the value, in degrees below set temperature that the READY message is displayed. To change this value, use the product keys for numeric entry of a new value.

Press the [P] key. Display now shows [FACTORY].

5.7 Operating Temperature Range

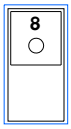
With display showing [FACTORY], press product key 7. This forces the control to display the range of temperatures that may be set by operators.



Display shows [RANGE 1] [200 380]. No adjustments are permitted here. This is an information display only. Press the [P] key. Display returns to [FACTORY].

5.8 High Limit Value

Pressing product key 8 forces the control to display the temperature *above set temperature*, the high limit alarm will sound. Changes may be made buy using the product keys for numeric entry. Press the [P] key. Display now shows [FACTORY].

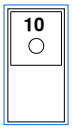


5.9 Basket Lift (dual control only)

Key 9 has no function on single vat fryers.

5.10 Test On/Off

With display showing [FACTORY], press product key 0.



Display shows [TEST xx], where “xx” is ON or OFF. If ON is selected, temperatures displayed by the controller are probe tip temperatures unaltered by values set in section 4.1, or 5.1. For normal operations, this setting should remain OFF.

To change this value, use product key [0] to toggle choice (ON or OFF).

Press the [P] key. Display now shows [FACTORY].

5.11 To Exit Factory Menu (Level 4):

To exit Factory Programming, Press the [P] key

Display will show [PROGRAM]. Continue with settings in section 2, or continue.

To return to normal operations, press the [P] key again.

Display will show one of the normal displays: [HEATING], [MELT] [LIQUID(or SOLID)], or [READY].

6 Other Displays:

[PROBE OP] [OPEN]

Open probe detection is standard on all Pitco controls. If probe is detected open, normal heating and cooking activities are suspended.

[HIGH TMP] [HIGH TMP]

This display warns operators that the vat temperature has exceeded set temperature by 40°F (22°C), or an absolute maximum of 410°F (210°C). This display does not show the status of the mechanical high limit switch.

[DRAINING] [TURN OFF]

This message indicates that the drain valve has been opened, the vat is assumed to be empty by the controller. Normal heat control activities are suspended. To restore to normal operation, close the drain value. Display will show [TURN OFF] [TURN OFF].

Turn controller off, and refill the vat. Continue with normal operations at section 1.

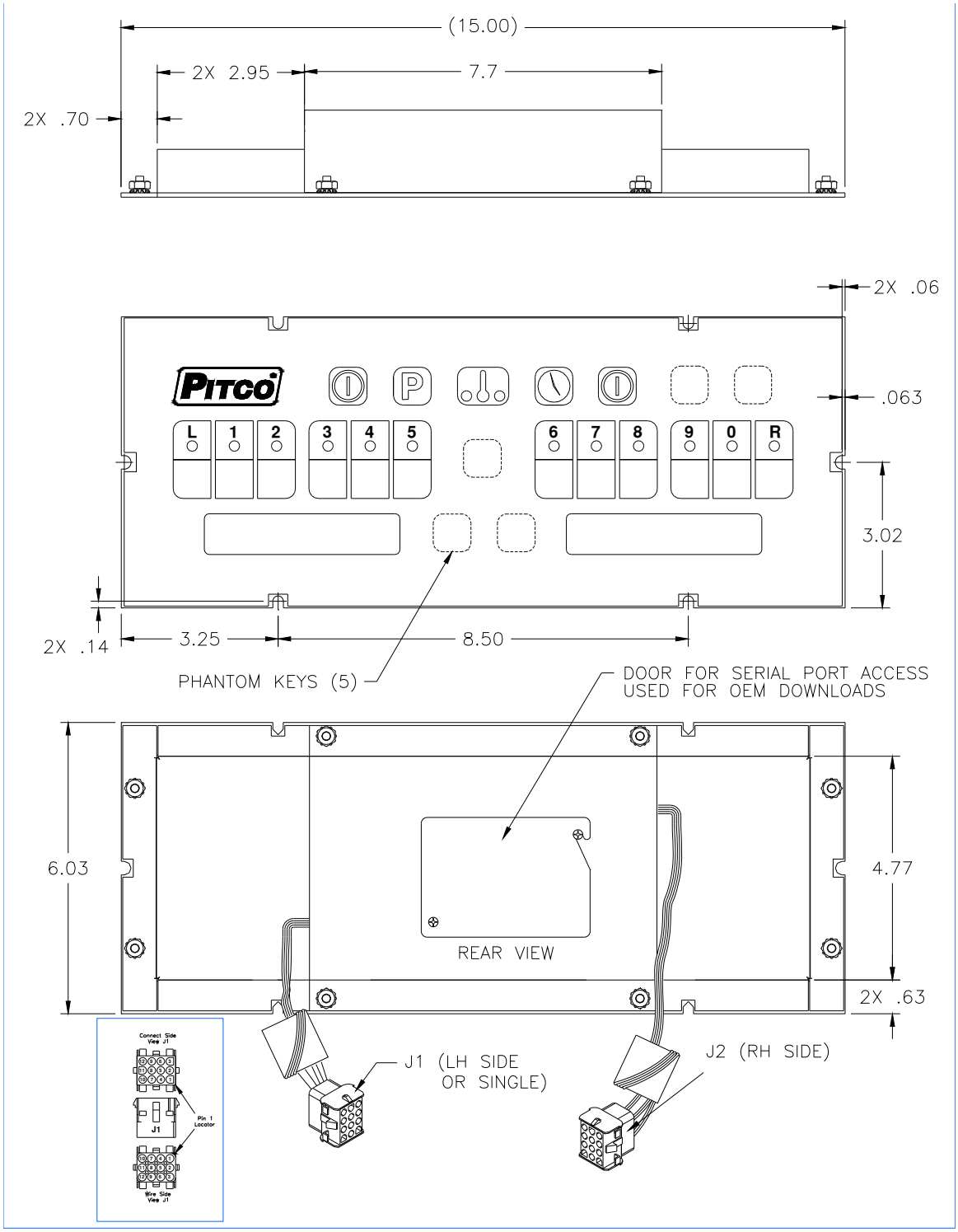
[HEAT] [FAILURE] OR [IGNITION] [FAILURE]

This message indicates that the heating system failed to respond. Typically, the high temperature limit switch has tripped and is in need of resetting. In the case on gas fired appliances, this message will display if the pilot fails to light or is detected marginal by the ignition module.

[SYSTEM] [FAILURE]

This message indicates a shorted probe. If probe is detected as a short circuit, normal heating and cooking activities are suspended.

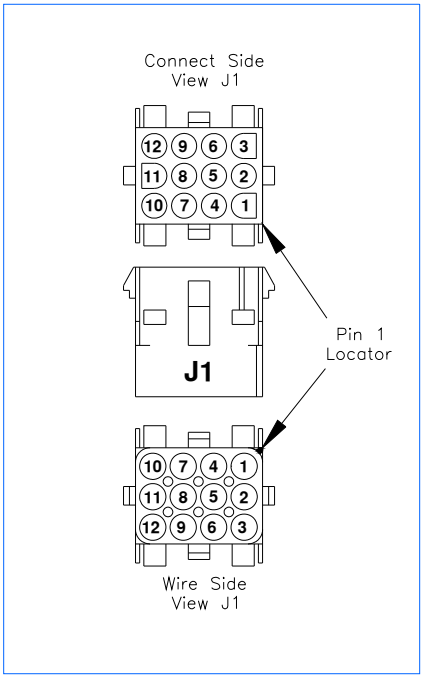
7 Mechanical Dimensions:



8 Electrical Connections at J1:

J1	Inputs	Type	Nominal	Notes:
1	ACH	PWR	24VAC	24VAC +20% -15% 50/60Hz.
2	ACN	PWR	24VACN	24VAC Return.
3	PROBE+	Thermistor Proble	Resistance varies with vat temperature. 942 Ohms @ 350°F	
4	PROBE-			
5	DVI	IN	24VAC	Drain Valve Interlock
6	HFB	IN	24VAC	Heat Feed Back
7	24VDC COM	IN	24VDC	DC Returm
8	HD	OUT	24VDC	Heat Demand
9	SO/xFER	OUT	24VDC	Side ON or XFER
10	RBL	OUT	24VDC	Right Basket Lift
11	LBL	OUT	24VDC	Left Basket Lift
12	Spare	Non Con	?	Spare terminal not connected.

Tip: Use the diagnostic menu to check outputs, and verify inputs.



9 Electrical Connections at J2 (Dual Vat Only):

J1	Inputs	Type	Nominal	Notes:
1				
2				
3	PROBE+	Thermistor Proble	Resistance varies with vat temperature. 942 Ohms @ 350°F	
4	PROBE-			
5	DVI	IN	24VAC	Drain Valve Interlock
6	HFB	IN	24VAC	Heat Feed Back
7	24VDC COM	IN	24VDC	DC Returm
8	HD	OUT	24VDC	Heat Demand
9	SO/xFER	OUT	24VDC	Side ON or XFER
10	RBL	OUT	24VDC	Right Basket Lift
11	LBL	OUT	24VDC	Left Basket Lift
12	Spare	Non Con	?	Spare terminal not connected.

10 Probe Resistance Chart:

Probe Resistance in 5°F Increments.								
Probe Temp (°F)	**Probe Temp (°C)**	**Resistance (Ohms)**	**Probe Temp (°F)**	**Probe Temp (°C)**	**Resistance (Ohms)**	**Probe Temp (°F)**	**Probe Temp (°C)**	**Resistance (Ohms)**
10	-12.2	562734	175	79.4	11719	340	171.1	1058.23
15	-9.4	483875	180	82.2	10716	345	173.9	998.09
20	-6.7	417167	185	85.0	9812	350	176.7	942.00
25	-3.9	360589	190	87.8	8995	355	179.4	889.67
30	-1.1	312474	195	90.6	8255	360	182.2	840.78
35	1.7	271446	200	93.3	7586	365	185.0	795.10
40	4.4	236370	205	96.1	6979	370	187.8	752.38
45	7.2	206311	210	98.9	6427	375	190.6	712.41
50	10.0	180491	215	101.7	5926	380	193.3	674.95
55	12.8	158252	220	104.4	5470	385	196.1	639.87
60	15.6	139055	225	107.2	5055	390	198.9	606.96
65	18.3	122489	230	110.0	4675	395	201.7	576.09
70	21.1	108051	235	112.8	4329	400	204.4	547.09
75	23.9	95539	240	115.6	4013	405	207.2	519.86
80	26.7	84644	245	118.3	3723	410	210.0	494.24
85	29.4	75136	250	121.1	3458	415	212.8	470.16
90	32.2	66823	255	123.9	3214	420	215.6	447.49
95	35.0	59540	260	126.7	2991	425	218.3	426.13
100	37.8	53146	265	129.4	2785	430	221.1	406.02
105	40.6	47523	270	132.2	2597	435	223.9	387.04
110	43.3	42569	275	135.0	2422	440	226.7	369.14
115	46.1	38195	280	137.8	2262	445	229.4	352.24
120	48.9	34328	285	140.6	2113.9	450	232.2	336.29
125	51.7	30902	290	143.3	1977.3	455	235.0	321.21
130	54.4	27862	295	146.1	1851.0	460	237.8	306.94
135	57.2	25161	300	148.9	1734.3	465	240.6	293.46
140	60.0	22755	305	151.7	1626.1	470	243.3	280.69
145	62.8	20610	310	154.4	1525.9	475	246.1	268.61
150	65.6	18695	315	157.2	1433.0	480	248.9	257.15
155	68.3	16981	320	160.0	1346.7	485	251.7	246.30
160	71.1	15446	325	162.8	1266.6	490	254.4	236.00
165	73.9	14069	330	165.6	1192.1	495	257.2	226.24
170	76.7	12823	335	168.3	1122.8	500	260.0	216.96

Notes: Resistance, of either probe lead, to the frame of the appliance should read as “open’ on the meter. Typically this is 1Meg ohms or more.

In the event of problems with or questions about your order, please contact the Pitco Frialator factory at (603) 225-6684 World Wide www.pitco.com	In the event of problems with or questions about your equipment, please contact the Pitco Frialator Authorized Service and Parts representative (ASAP) covering your area, or contact Pitco at the numbers listed to the left.

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