



IMPORTANT FOR FUTURE REFERENCE

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

Model #: _____

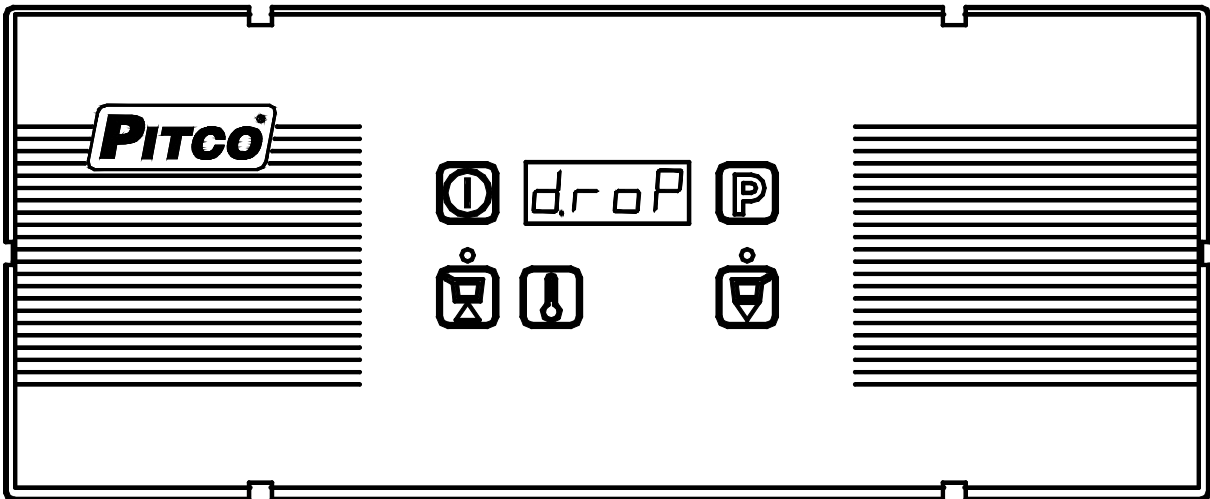
Serial #: _____

Date Purchased: _____

Service Manual
Covering

Pitco Solstice Digital Controller

Pitco p/n 60126601





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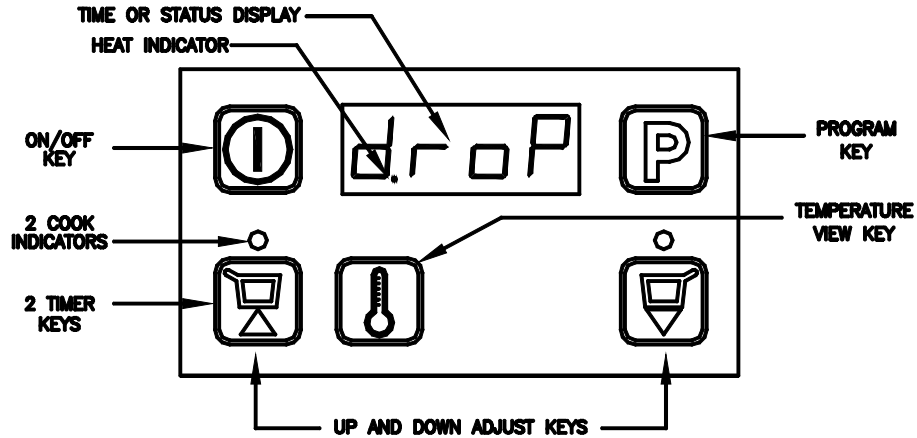
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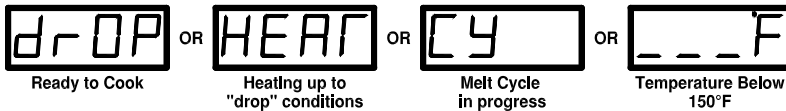
1 Keypad and Display Functions:



2 Normal Operations: (for the operator):

2.1 To turn control ON:

Press . Display will momentarily show the current Appliance Type "APLx" for 2 seconds and then to one of the normal displays shown here.



2.2 To turn control OFF:

Press and hold for 3 seconds. Display will show .

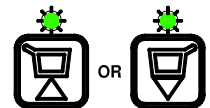
2.3 To Start a Cook Timer:

When display shows [droP], press a basket key to start a cook timer. Both timers may run together. Only the timer with the least time remaining will be displayed.



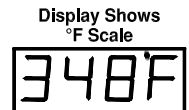
2.4 To Cancel a Cook Timer:

Press the Basket key until light above the key is off.

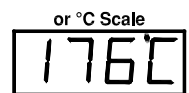


2.5 To Display Vat Temperature and Set Temperature:

Press the key once. Display will show current VAT temperature (348°F/176°C in this example).



Press the key again. Display now shows the SET temperature.



Press the key, or, make no key presses for 5 seconds and display will return to one of the



3 To Enter Programming: (for the store manager)

Press key. If the display shows , press to unlock, and continue.

3.1 To set timer T1:

The indicator light above timer key 1 will illuminate. Display will show current timer setting in MM:SS format for this key.

Press the UP arrow key or DOWN arrow key to adjust timer value. The value will change in steps of 5second each.

When set, press key to save setting and continue.



3.2 To set timer T2:

The indicator light above timer key 2 will illuminate. Display will show current timer setting in MM:SS format for this key.

Press the UP arrow key or DOWN arrow key to adjust timer value. The value will change in steps of 5second each.

When set, press key to save setting and continue.



3.3 To Change Cook Temperature:

Display will show [xxx°F] or [xxx°C], the current temperature setting. The default setting is 350°F (177°C).

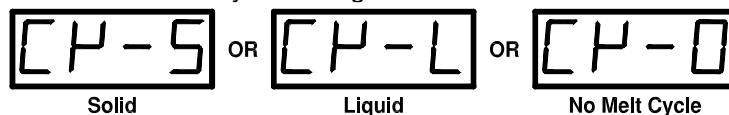
*Press and hold the UP arrow key or DOWN arrow key to **scroll** temperature setting. A single key press will increment or decrement the setting by one degree.*

When set, press key to save setting and continue.



3.4 To Change Melt Cycle type:

Display now shows the current melt cycle setting.



Press the UP arrow key or DOWN arrow key to adjust melt cycle type.

When set, press key to save setting and continue.



3.5 To Change Pass Word Requirement:

Display will show the current lock status OR .
Unlocked Locked

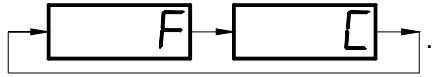
Press the UP arrow key or DOWN arrow key to change lock setting for future entry into programming menus.

When set, press key to save setting and continue.



3.6 To Change °F or °C Display:

Display will show the current temperature scale setting, either Fahrenheit or Celsius.



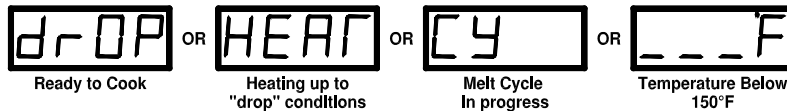
Press the UP arrow key or DOWN arrow key to change lock setting for future entry into programming menus.



When set, press key to save setting and continue.

3.7 To exit Level 1 Programming:

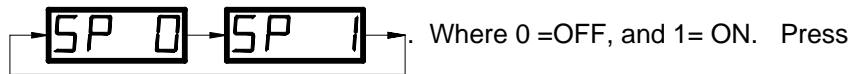
Display is showing . Press key to exit here. The display will return to one of the normal operating displays:

**4 To Enter Level 2 programming from "TECH" Display: (for technicians and factory use)**

Follow the instructions beginning at section 3. Use the key to advance to the [Tech] display. With display showing from step 3.7 above, press the key **AND** the key simultaneously for 3 seconds and continue.

4.1 Standing Pilot?

The display now shows current setting for the Standing Pilot option



Where 0 =OFF, and 1= ON. Press the UP arrow key or DOWN arrow key to change this setting. When set, press key to save setting and continue.



Note: Standing Pilot has no effect if Appliance Type 2 (electric) is selected in sect. 4.4.

4.2 Number of Basket Lifts:

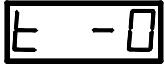


Display shows current basket lift setting or or .

Where LiF0 is no basket lift outputs, LiF1 is left basket lift, and, LiF2 is both left and right outputs are active. Press the UP arrow key or DOWN arrow key to change setting.



When set, press key to save setting and continue.





4.3 Display Options Display:

Vat temperature may be displayed rather than the normal displays. Display shows  or . Press the UP arrow key or DOWN arrow key to change setting. When set, press  key to save setting and continue.




Tech Tip: This display mode is intended as an aid to troubleshooting fryer performance. This setting should always be returned to the "t-0" setting after use.

4.4 Appliance Type:

This setting is for fryer type Gas(1), Electric(2), or general use Thermostat(3)  or  or  Press the UP arrow key or DOWN arrow key to change setting. When set, press  key to save setting and continue.



4.5 Control Point Offset:


This adjustment allows the control point to be adjusted to account for differences between probe tip temperature and vat center oil temperature. The adjustment range is plus or minus 0-15°F. Negative values are preceded with a minus "-" sign in display. Press the UP arrow key or DOWN arrow key to change setting. When set, press  key to save setting and continue.



Notes for Control Point Offset:

1. If controller is set for degrees C display, this offset value remains in units of °F.
2. Positive values will offset the vat control point temperature higher.
3. Negative values will offset the vat control point temperature lower.
4. Default values: APL1(gas)=-2°F; APL2(electric)=-3°F; APL3 (general use thermostat)=0°F.
5. Warning: Proper equipment and expertise is required to properly adjust this value. Even small changes may negatively effect cooking performance.

4.6 Display Value Offset:

This adjustment allows the Displayed Value for temperature to be adjusted to account for differences between probe tip temperature and set point temperature. The adjustment range is plus or minus 0-15°F. Negative values are preceded with a minus "-" sign in display. Press the UP arrow key or DOWN arrow key to change setting. When set, press  key to save setting and continue.




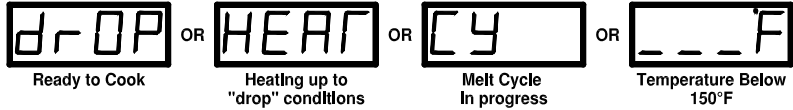
Notes for Display Value Offset:

1. If controller is set for degrees C display, this offset value remains in units of °F.
2. Positive values will offset the Displayed value higher.
3. Negative values will offset the Displayed value lower.

4. Default values: APL1(gas) =-2°F; APL2(electric)=-3°F; APL3 (general use thermostat)= 0°F.

4.7 Exit Programming:

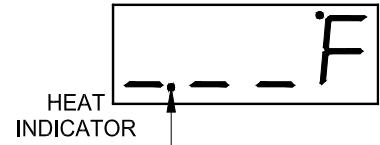
Press the  key to return to normal displays:



5 Other Displays

5.1 Low Vat Temperature:

When tank temperature is below 150°F (66°C), the display will show as blanks. This is normal for cold start-ups. **Heat Demand** indicator is located between the first and second digits of display.

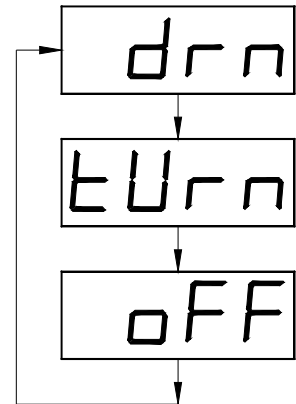


5.2 Drain Valve Open:

When drain valve is detected open, normal operations are suspended. The display will show Drain-Turn-Off message until reset.

To reset, CLOSE the drain valve, turn the control OFF.

Some applications do not use the drain valve input.



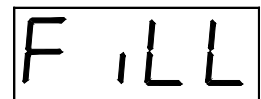
5.3 Equipment Fault Displays

This control will detect faulty probe conditions. If temperature probe faults are detected, display will show one of two possible conditions. All other functions are disabled. To reset, turn control Off then On.



5.4 Fill Display

If this appliance is equipped with a liquid level option, the control will display [FiLL] when the water level gets to low. Heat is suspended while the tank is filling or toping off.

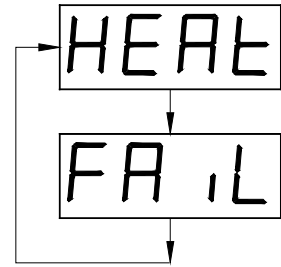


Some appliances don't have the liquid level option.

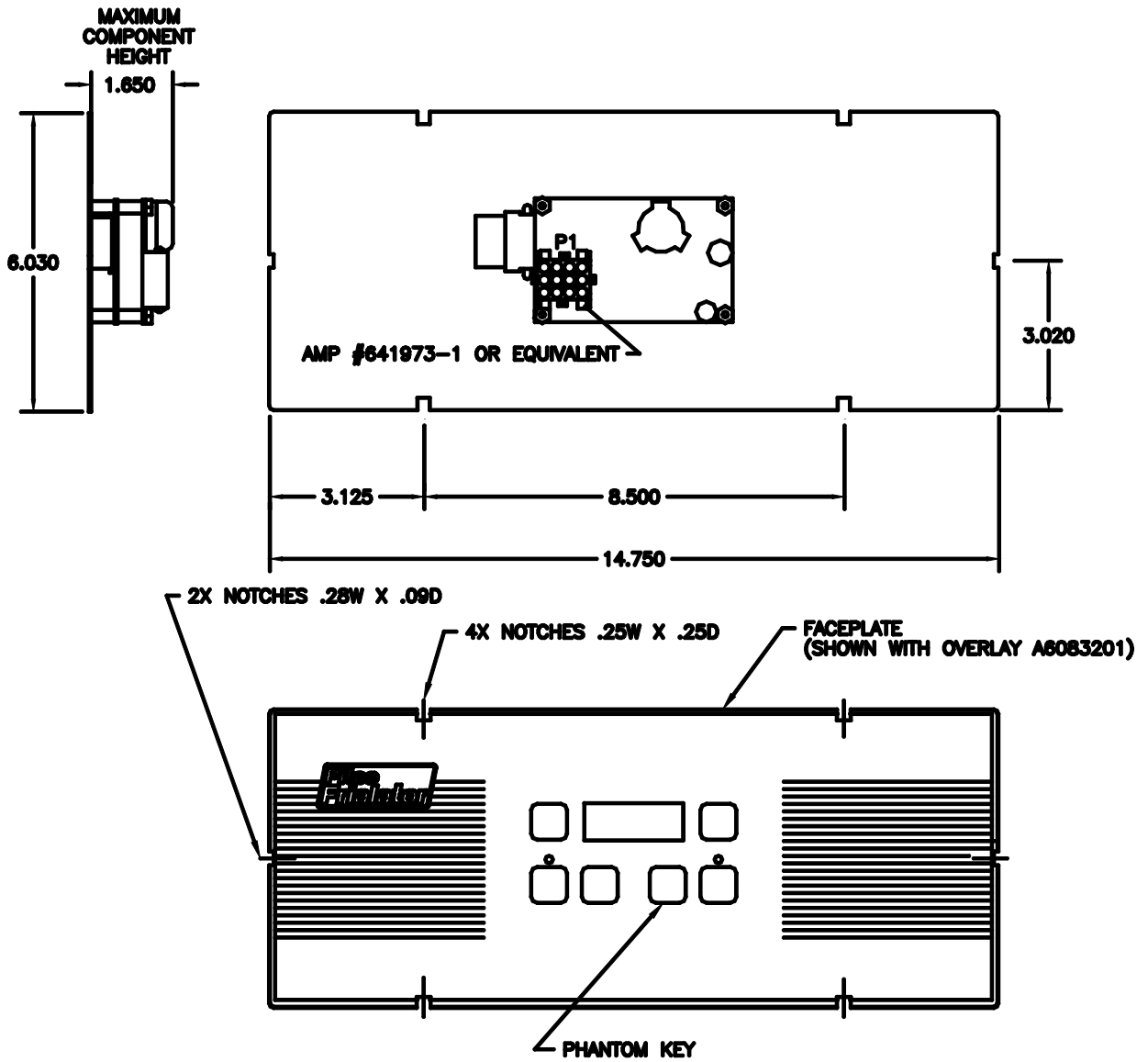


5.5 Heat Failure

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

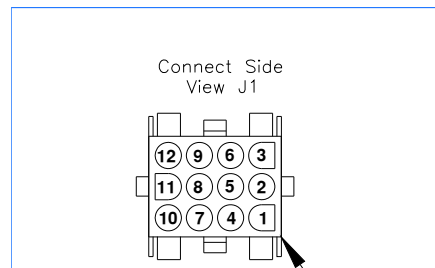


6 Mechanical Dimensions:



7 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 Return
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.





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

8 Probe Resistance Chart:

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
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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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