+WATLOW PM PID KEYS (1/4 DIN SHOWN)

UPPER DISPLAY (DISPLAYS PROCESS VALUE DURING OPERATION OR VALUE OF PARAMETER SHOWN IN LOWER DISPLAY.)

INFINITY KEY (PRESS TO BACK UP ONE LEVEL)

EZ KEY(S) (PROGRAMMABLE)

ADVANCE KEY (ADVANCES THROUGH PROMPTS)

INDICATOR LIGHTS: (DISPLAY TEMPERATURE UNIT, OUTPUT, PROFILE AND COM ACTIVITY)

LOWER DISPLAY (DISPLAYS SET POINT DURING OPERATION OR PARAMETER WHOSE VALUE APPEARS IN UPPER DISPLAY

UP AND DOWN ARROW KEYS (MOVE UP/INCREASE AND MOVE DOWN/DECREASE)
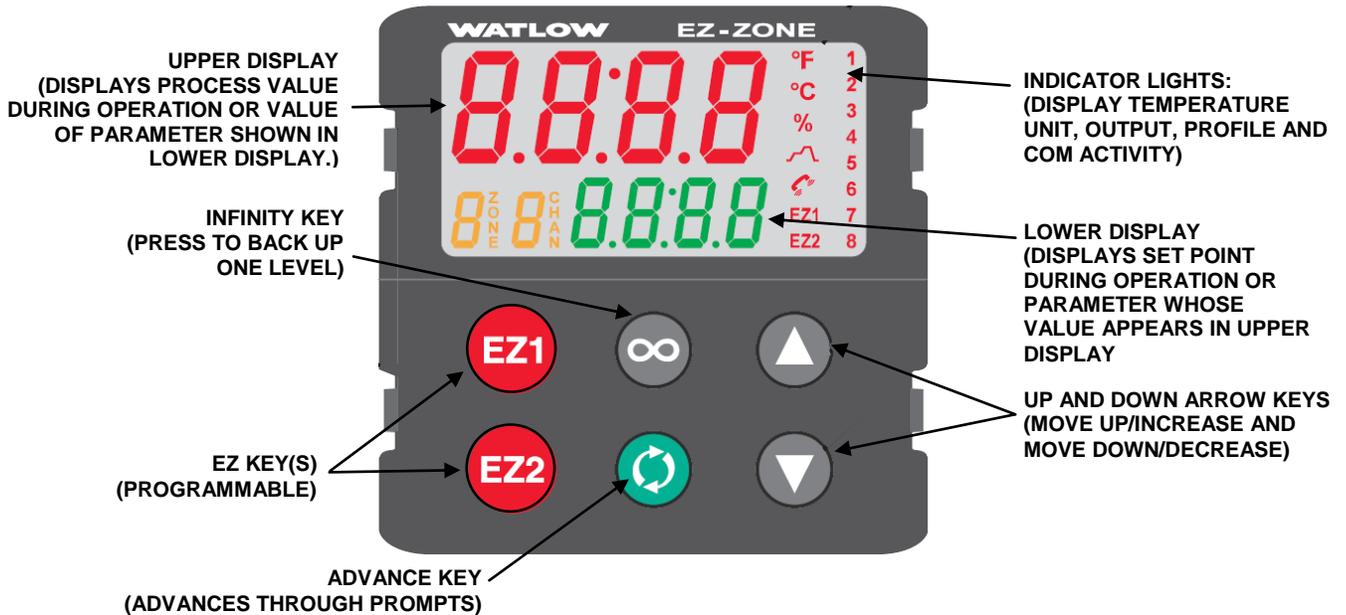
A.   BASIC OPERATION

1.   If you ever reach a point on the controller where you do not want to be, press and hold ∞ for 2 seconds to return to the **HOME PAGE**.

2.   From the **HOME PAGE**, press ↻ to scroll through the display parameters.

B.   STATIC SET POINT OPERATION

1.   From the **HOME PAGE**, press ▲ or ▼ to change the set point.

2.   To enable static set point operation after running a profile, perform the following steps:

a.   From the **HOME PAGE**, press ↻ until **C.M** is shown on the lower display and **oFF** is shown on the upper display.

b.   Press ▲ or ▼ until **AUto** is shown on the upper display.

c.   Press and hold ∞ to return to the **HOME PAGE.**

C. PROFILE OPERATION

***ONLY APPLICABLE IF CONTROLLER HAS PROFILE OPTION

1. From the **HOME PAGE**, press [EZ] to start a profile. [⌇] will light up to indicate a profile is running.

2. Press [EZ] to terminate a profile from the **HOME PAGE**.

D. CHANGE TEMPERATURE UNITS

***NOT REQUIRED FOR NORMAL OPERATION

1. From the **HOME PAGE**, press and hold [▲] and [▼] for 6 seconds to enter the **SETUP PAGE**. **Ai** is shown on the upper display and **SEt** is shown on the lower display.

2. Press [▼] until **gLbL** is shown in the upper display. Press [◯] to enter **gLbL** menu.

3. Press [◯] until **C_F** is shown on the lower display.

4. Press [▲] or [▼] to change to the desired temperature unit.

5. Press and hold [∞] for 2 seconds to exit **SETUP PAGE**. The process value, set point, upper and lower limits will automatically change according to the temperature unit selected.

E. VIEW PERCENT OUTPUT

1. From the **HOME PAGE**, press [◯] once. The percent output is shown on the upper display and **h.Pr** is shown on the lower display.

2. Press [∞] once to return to the **HOME PAGE**.

F. PERFORM AUTOTUNE

***NOT REQUIRED FOR NORMAL OPERATION

1. Once oven is powered on, load parts into oven and set oven to required set point.

2. From the **HOME PAGE**, press and hold ⬆ and ⬇ for 3 seconds to enter the **OPERATIONS PAGE**. **Ai** is shown on the upper display and **oPEr** is shown on the lower display.

3. Press ⬇ until **LooP** is shown in the upper display. Press ⟳ to enter **LooP** menu.

4. Press ⟳ until **no** is shown on the upper display and **AUt** is shown on the lower display.

5. Press ⬆ or ⬇ to change to **YES**.

6. Press and hold ∞ twice to exit **OPERATIONS** page. Autotune will begin momentarily. The display will alternate between showing the input value and set point and showing **tUn1** and **Attn**. Once autotune is completed ('tUnE' will no longer be displayed), the controller will run at the set point with the new tuning constants.
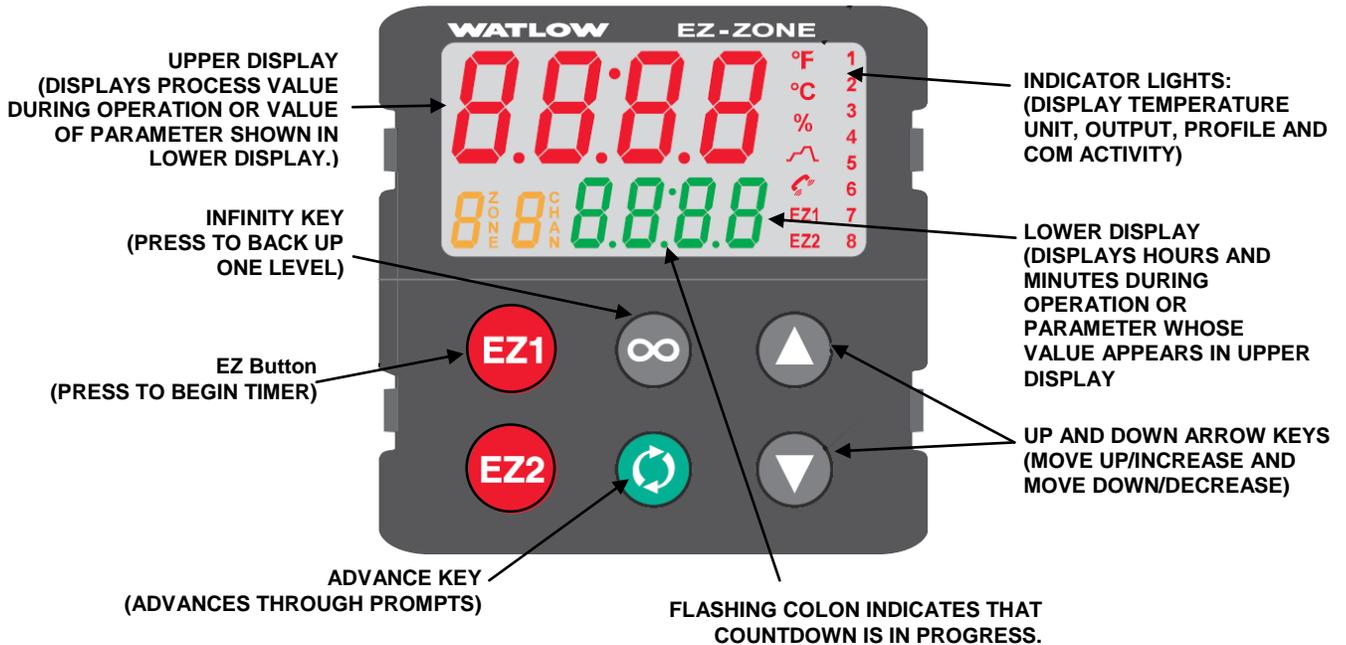

G. CHANGE SET POINT LIMITS

***NOT REQUIRED FOR NORMAL OPERATION

1. From the **HOME PAGE**, press and hold ⬆ and ⬇ for 6 seconds to enter the **SETUP PAGE**. **Ai** is shown on the upper display and **SEt** is shown on the lower display.

2. Press ⬇ until **LooP** is shown in the upper display. Press ⟳ to enter **LooP** menu.

3. Press ⟳ until **L.SP** is shown on the lower display.

4. Press ⬆ or ⬇ to change to the set point lower limit.

5. Press ⟳ until **H.SP** is shown on the lower display.

6. Press ⬆ or ⬇ to change to the set point upper limit.

7. Press and hold ∞ for 2 seconds to exit **SETUP PAGE**.

H. VIEW PID SETTINGS

***NOT REQUIRED FOR NORMAL OPERATION

1. From the **HOME PAGE**, press and hold ⬆ and ⬇ for 3 seconds to enter the **OPERATIONS PAGE**. **Ai** is shown on the upper display and **oPEr** is shown on the lower display.

2. Press ⬇ until **LooP** is shown on the upper display. Press ⟳ to enter **LooP** menu.

3. Press ⟳ until **h.Pb** is shown on the lower display. The setting shown on the upper display is your heat proportional band setting.

4. Press ⟳ until **ti** is shown on the lower display. The setting shown on the upper display is your heat integral setting.

5. Press ⟳ until **td** is shown on the lower display. The setting shown on the upper display is your heat derivative setting.

6. Press and hold ∞ for two seconds to exit **OPERATIONS** page.

I. COUNTDOWN TIMER (ONLY AVAILABLE FOR PM_T MODELS)

UPPER DISPLAY
(DISPLAYS PROCESS VALUE DURING OPERATION OR VALUE OF PARAMETER SHOWN IN LOWER DISPLAY.)

INFINITY KEY
(PRESS TO BACK UP ONE LEVEL)

EZ Button
(PRESS TO BEGIN TIMER)

ADVANCE KEY
(ADVANCES THROUGH PROMPTS)

INDICATOR LIGHTS:
(DISPLAY TEMPERATURE UNIT, OUTPUT, PROFILE AND COM ACTIVITY)

LOWER DISPLAY
(DISPLAYS HOURS AND MINUTES DURING OPERATION OR PARAMETER WHOSE VALUE APPEARS IN UPPER DISPLAY

UP AND DOWN ARROW KEYS
(MOVE UP/INCREASE AND MOVE DOWN/DECREASE)

FLASHING COLON INDICATES THAT COUNTDOWN IS IN PROGRESS.

1. **CONFIGURATION**

   a. From **HOME PAGE,** press ⟳ until **Ct.s1** (Closed loop Timer Set point) is shown in the lower display. Use ▲ and ▼ to configure set point at what temperature the timer should be started.

   b. Press ⟳ until **hoU1** is shown on lower display. Use ▲ and ▼ to set hours for timer.

   c. Press ⟳ until **Mi1** is shown. Use ▲ and ▼ to set minutes for timer.

   d. Press ∞ to return to the home page.

2. **OPERATION** (DTS - to shut off oven at end of timer)

   a. Press **EZ1** to begin timer. Once oven temperature gets within ready band (typically set for ±5°F) of **Ct.s1** value (Closed loop Timer Set point configured in section **1.a** above), ready band indicator ⌁ lights up and countdown timer starts and continues as long as

temperature is within ready band. If temperature falls outside of ready band during countdown, timer will pause. However, indicator and flashing colon between hours and minutes are remained on. Timer will resume counting once oven temperature returns within ready band.

b. In order to terminate countdown timer before it times out, simply press again and indicator will be turned off. Timer will be reset to default hours and minutes configured in section **"1"** above.

c. For Digital Timing System (DTS), oven control circuit is hardwired to shut off oven (turning off fans and heat) once timer times out. In the event that timer is manually stopped as described above section **2.b**, oven does not shut off automatically.