



Changes in EZ-ZONE® PM firmware revision 13.00 to 14.00 were effective October 16, 2014.

1) A countdown timer feature was added as an ordering option available in all DIN sizes.

**So what has changed? –**

General Operation

- 1 When Timer Enable **[T.En]** is set to yes **[YES]** and timer is started (you define which key combination this is), controller will switch from Closed Loop Set Point **[C.SP.1]** to Closed Loop Timer Set Point **[C.T.S.1]**. If timer is interrupted, the timer is terminated and the time remaining is reset to initial value.
- 2 When Timer Start Method **[T.St]** =
  - a. Immediate **[IMM]**, timer starts as soon as counter is initiated. When Time Remaining **[T.R.1]** equals zero, set point changes from Closed Loop Timer Set Point **[C.T.S.1]** back to Closed Loop Set Point **[C.SP.1]**. Colon flashes to indicate countdown is in progress. **[0000]**
  - b. Ready Band **[RDY]**, set point changes and when temperature is within ready band, ready band indicator **[RDY]** illuminates; countdown timer starts and continues as long as within ready band. When Time Remaining **[T.R.1]** equals zero, set point changes from Closed Loop Timer Set Point **[C.T.S.1]** back to Closed Loop Set Point **[C.SP.1]**. Colon flashes to indicate countdown in progress. **[0000]**
  - c. Ready Acknowledge **[RDYA]**, set point changes and when temperature is within ready band, ready band indicator **[RDY]** illuminates, user responds with acknowledge (you define which key combination this is); countdown timer starts and continues as long as within ready band. When Time Remaining **[T.R.1]** equals zero, set point changes from Closed Loop Timer Set Point **[C.T.S.1]** back to Closed Loop Set Point **[C.SP.1]**. Colon flashes to indicate countdown in progress. **[0000]**
  - d. Power **[PUJR]**, timer starts on power up of controller. When Time Remaining **[T.R.1]** equals zero, set point changes from Closed Loop Timer Set Point **[C.T.S.1]** back to Closed Loop Set Point **[C.SP.1]**. Colon flashes to indicate countdown is in progress. **[0000]**
- 3 In Setup Page, Output Menu, Output Function **[Fn]** can be assigned as Timer Event Output 1 **[T.E.o.1]**, Timer Event Output 2 **[T.E.o.2]** or Timer Event Output 3 **[T.E.o.3]**. Timer Event Output 1 is active during timing, Timer Event Output 2 is deactivated during timing and Timer Event Output 3 is active at the end of the countdown for a period in seconds specified by Signal Time **[ST]**. This signal may be used to monitor that timing is occurring or signal that timing has completed. Process outputs may not be assigned to Timer Event Outputs.



- 4 The home display is user programmable in the Factory Page, Custom Menu. You may program the display to alternate between display pairs. See display pairs in Setup Page, Global Menu. As an example, we could show the process temperature in the upper display and have the lower display alternate between the countdown called time remaining and the active set point.

2) Users may trigger an output if a heater fails or an SSR is shorted.

**So what has changed? –**

For controllers with either CT input or Open Loop Detect enabled, an output may be programmed to indicate the conditions of a Heater Error, SSR Error or Open Loop Detection activation. The output will allow an external device to be notified of one of those conditions. Previously, only an error message was displayed and it was not tied to an output.

3) Increase soak step range to 9,999 hours, 59 minutes, 59 seconds for profiling ramp and soak models.

**So what has changed? –**

Previously, soak steps were limited to 99 hours, 59 minutes, 59 seconds.

4) Users may access the setup page from the operations page.

**So what has changed? –**

Previously, pressing the two arrow keys consecutively for six seconds entered the setup page. Pressing the same arrow key for three seconds gets to the operations page. If a user did not hold the keys continuously for six seconds (they let go as soon as they see OPEr for Operations page), they could no longer get to the setup page without exiting and trying again. Now, when the operations page appears and they let go of the keys, they would still be able to repress the two arrow keys to get to the setup page.

5) The ramp rate for a single ramp to set point can be set in tenths, hundredths or thousandths of a degree

**So what has changed? –**

In firmware revision 12.0, we added the ramp rate in profiles to be entered in tenths of a degree. The ramp rate for a single ramp to set point located in the loop menu is either in whole degrees if the unit is set to display whole degrees or tenths if the unit is set to display in tenths. It displays in 0.01 if the unit is set in hundredths and so on. The user can set tenths, hundredths or thousandths even when set for whole units. If the user goes as high as 999.9 the display will then move to whole degrees.

6) PM Express limit will no longer display “unk” for “PAR1” in the setup menu.

**So what has changed? –**

Issues were reported on PM Express Limit controls where the top (left) display was blank. It was found that the prompt "PAR1" displayed “unk” in the setup menu. Customers were able to change the prompt "PAR1" to ACPU, but this prompt did not stick. The only work around was for the customer to default the control to factory settings. This issue has now been resolved.



7) The maximum torque rating for terminals is being changed from 7 lb-in to 5 lb-in.

So what has changed? –

The maximum torque rating for the terminals was documented in our user manuals as 7 lb-in. In some cases, applying this amount of torque resulted in bowing of the connector which caused an inadequate latch between the case and connector. The documented maximum torque specification from the vendor of the connectors is 5 lb-in. Our documentation is being changed to reflect this specification.