

CHANGES FROM PF2100 TO PF2150 BMS



Warning:

If the PF2150 is used as a drop-in replacement for the PF2100, wiring the Coil- and Ion- terminals together will cause the ignition coil drive to malfunction. These terminals must be wired separately.

Similarly, if the signal lines to the digital inputs are being driven by another device, such as a PLC, the reversed logic (signal high vs low to energize) will cause the inputs to malfunction if the driving device is not reconfigured.

FEATURE	PF2100	PF2150
Ignition Coil Wiring	Coil- is grounded and could be wired together with Ion-.	Coil- is not grounded and must be wired separate from Ion-.
Digital Input Logic	Pull signal low to “energize”.	Pull signal high to “energize”.
OK Button Behavior	Pressing OK when no changes have been made will back out to the main screen.	Pressing OK when there are no changes does nothing. Holding OK returns to the main screen.
STOP Button Behavior	Initiates shutdown and lockout from any screen.	Initiates shutdown and lockout while running. Can be used to back out of menus quickly while idle.
MENU Button Behavior	Cycles through menus/settings. Cannot cycle backwards.	Cycles through menus/settings. Holding MENU cycles backward.
Firmware Update	Cannot update the firmware in field.	Can update the firmware over USB.
Settings Backup & Restore	No settings backup and restore functionality.	Can backup and restore settings over USB.
Manual Pilot Ignition	PILOT must be held while pressing or holding IGNITE until flame is detected.	Press IGNITE , then press OK , and press PILOT .
Purge Skip	Hidden key combination to skip purge for commissioning purposes.	No purge skip function.
Modbus	Requires expansion card for Modbus capability.	Modbus functionality is included in the PF2150-EMD but not PF2150-E.
Data Logging	Requires expansion card for data logging capability.	Data logging functionality is included in the PF2150-EMD but not PF2150-E.
UI Comm Alarm	System shuts down upon UI communication loss.	Can configure system to either continue running or shut down upon UI communication loss.
Auto Mode Start	While in manual mode, pressing MODE prompts the user to press OK to switch to auto and start ignition. MENU , MODE , or STOP cancels the prompt.	While in manual mode, pressing MODE switches to auto and prompts user to press OK to start the burner. MENU does nothing. MODE or STOP cancels prompt.
Process Setpoint	Can't be set lower than the low temp setpoint or 0°C + deadband.	Can't be set lower than the low temp setpoint.
Low Temp Setpoint	Setting to 0°C disables the feature.	Cannot disable low temp setpoint, but can lower it to -40°C.
Menu Access	Cannot enter System Setup, Control Setup or Expansion Card menus without a password.	Can enter and view all menus, but password is needed to change settings.
Main Delay	No option to change the main delay.	Main delay time is adjustable.
Level Event Restart	Level event restart is an option.	No explicit level event restart menu item. Same behavior can be accomplished by setting level trip mode to “wait”.
Pressure and Level Inputs	Digital only unless using expansion card.	Configurable input built-in to BMS.
Pressure and Level Delay	Pressure and level delays are the same setting.	Separate delay settings for pressure and level.
Pressure Restart	Pressure restart is an option.	No explicit pressure restart menu item. Same behavior can be accomplished by setting low pressure mode to “wait” or “main permissive”.
Status Contact Mode	Status contact indicates run status. Can be configured to show Alarm or No Alarm when Start contact is open.	Status contact can be used to indicate run status, heating status, low temp warning, or level control status. No start contact alarm configuration option.
TCV Opening % Control	Can only configure low fire TCV opening%.	Can set TCV Min%, purge%, pilot%, light off% in the Control Setup menu.
4-20mA Output Mode	Disabled, Valve Control, Temp Echo.	Bath Temp Echo, Auxiliary Temp Echo, Level Echo, or Valve Control.
Manual Mode Status Screens	In manual mode, while on status screens. Switching to auto exits to home screen.	In manual mode, while on status screens. Switching to auto does not exit to home screen; must hold OK to return.
Disabling Inputs	Cannot disable inputs in the software.	Can disable level, pressure, high pressure, POC, and start inputs.
Menu Access While Running	Can't access System Setup, Control Setup, or Expansion Card menus while running	Can access all menus and view settings while running. Allowing changes depends on the specific setting.
Flame Quality	Represented as a percent.	Represented as “NONE”, “WEAK” or “STRONG”.
Minimum Power Draw	1.1W	0.7W
Event Log	Logs up to 32 system events and alerts. Can only view on UI screen	Logs over 600 system events, alerts, and state changes. Can view on UI screen and export to USB.