

FLARE CONTROLLER CHANGES PF2100F TO PF2150-F



FEATURE	PF2100F	PF2150-F
HARDWARE CONSIDERATIONS		
Ignition Coil Wiring	Coil- is grounded and could be wired together with Ion-.	Coil- is not grounded and must be wired separately from Ion-.
Digital Input Logic	Pull signal low to "energize".	Pull signal high to "energize".
HISTORY / INFO		
Flame Fail Count	Single count for all flame fails.	Separate flame fail counts for each flame detection input (Ion, Pilot TC, Main TC, and Aux TC).
ESD Counts	Shutdown counts for ESD input, Level ESD, Pressure ESD and High Pressure ESD.	No ESD counter (captured by event log).
Power Reset Counts	Reset counter.	No reset counter (captured by event log).
Open TC Count	Number of thermocouple shutdowns.	No counter (captured by event log).
Termination Errors	Number of terminal card shutdowns.	No counter (captured by event log).
Event Log	32 events without timestamp.	600 events with datetime.
SYSTEM CONFIGURATION		
Spark Mode	Until Flame or Always (Continuous on PF2150-F).	Until Flame, Continuous, or Re-ignition. Re-ignition has the system spark during the Flame Lockout Time at the start of a flame loss event.
Pilot Startup Delay	0 seconds.	Configurable 0-600 seconds delay.
Auto Relight	Always attempts relight.	Configurable to attempt relight or shutdown on pilot flame loss.
Main Flame Lockout	No main flame detection and therefore no lockout.	Configurable option to enable or disable lockout on "main" flame loss.
Low Pressure Event	Alarm or Main Permissive. 1 second delay.	Alarm, Wait, Warning, or Main Permissive. Configurable 2-20 seconds delay.
Level Event	Alarm. 1 second delay.	Alarm or Wait. Configurable 2-20 seconds delay.
Status Contact Mode	Run Status.	Configurable as run status or level control.
UI Comm Alarm	System shuts down upon comm loss with UI.	Can configure if system shuts down or continues running with comm loss.
CONTROLS AND I/O		
Thermocouple Inputs	High Temp ESD, Pilot 1, Pilot 2. System does not support main flame detection.	Pilot, Main, Aux - Each can be configured for flame detection, high temp ESD, or display only. Main and Aux can be disabled.
Thermocouple Setpoints	Low Temp Alarm, Min Run Temp, High Temp ESD, no configurable deadband.	Each thermocouple has separate flame detect, low temp, and deadband.
Low Temp Setpoints	Can be set to minimum of 0°C.	Can be set to minimum of -40°C.
Ionization	Pilot only, cannot be configured.	Configurable as pilot or pilot & main.
Pilot Flame Redundancy	No configuration, system defaults to TC detection, uses ionization if neither pilot TC is populated.	Can be set to require 1 or all flame detection inputs to detect flame.
Pilot Flame Establish Time	Not configurable. 60 seconds.	Configurable 0-900 seconds.
Pilot Flame Lockout Time	Not configurable. 60 seconds.	Configurable 0-7200 seconds. Disabled if set to 0.
Flame Timings	Flame Fail Timeout configurable from 1-120 minutes or disabled.	Pilot Flame Establish Time configurable from 1-900 seconds or forever. Pilot or Main Flame Failure Lockout Time configurable from 1-7200 seconds or never.
4-20mA Inputs	Level (% , m3, bbl, Gal, L) and pressure (psi, kPa, inWC, cmWC, ksc) available with expansion card.	Configurable level (m3, bbl, Gal, L, ft3, %, mA) and pressure(psi, kPa, inWC, oz/in2, kg/cm2, %, mA) inputs built in.
Input Enable/Disable	All inputs are enabled and cannot be disabled except for High Temp TC.	At least 1 pilot flame detection input is required to run. Can otherwise disable all other flame detection, start, POC, level, pressure, and high pressure inputs.
Solenoid PWM	Pilot and Main PWM duty cycle can be set to 20%, 40%, 60%, or 100%.	Pilot and Main PWM duty cycle can be set from 1%-100% in 1% increments.
UI		
Stop Button	Initiate shutdown and lockout from any screen while running or idle.	Only initiates a shutdown from running state. Otherwise can be used to return to home screen.
OK Button	Pressing OK without changes to save will return to home screen. Long hold to logout.	Pressing OK saves changes but otherwise does nothing. Short hold to return to main menu. Long hold to logout.
Menu Button	Pressing menu cycles through menu screens and settings.	Pressing menu cycles through menu screens and settings. Holding menu cycles backwards.
View/Edit Settings	Cannot view menu screens when running. Cannot view system or control setup without L2 password.	Can view all settings in manual mode. Editing settings is prohibited while running or without L2 password on per case basis.
Start Button	Switches from stopped state to running state without further prompts if the system is ready.	Start has been replaced with a Mode button which requires OK confirmation to start in auto.
Pilot / Ignite / Main Buttons	No manual mode and no buttons.	Can ignite pilot and energize "main" valve manually with Ignite, Pilot, and Main buttons.
Display	2-Line VFD.	2-Line text on OLED display.
MODBUS / DATA LOGGING		
Baud Rate	Requires expansion card. Server address configurable in system menu. DIP switches to configure baud rate, Rx to Tx delay, parity, and termination resistor.	All Modbus settings are configurable in system menu, including: server address, baud rate, stop bits, parity, and termination resistor.
Data logging	Requires expansion card. DIP switches to configure logging interval and time base.	Configurable data logging interval in system menu.
UTILITY		
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.