PF2200 - DB

SOFTWARE RELEASE NOTES

V5.0

PROFIRE

CONTENTS

1 INTRODUCTION

SCOPE

This document is meant to provide customers with a list of changes for each software bundle release. The notes are categorized by their software bundle release version (e.g. AA B.C.D). Where:

AA: Product Variant Type (e.g. DB – Dual Burner)

B: Major Software Release (typically with new features)

C: Minor Software Release (typically with fixes / changes)

D: Build Number (internal use only)

Modification to software is generally split up into three main categories:

NEW: Software modifications that add additional functionality (e.g. features).

CHANGES: Software modifications which modify existing behavior.

FIXES: Software modifications which correct identified issues (e.g. bugs).

KNOWN SAFETY ISSUES

Description	Work Around	Affected Version(s)	Fixed Version
In weakly grounded systems, excessive sparking may cause phantom key presses and/or board resets.	Ensure proper grounding. Avoid excessive sparking in weakly grounded systems (e.g. Use a standing pilot, dial back the gas pressure).	ALL	N/A

2 RELEASE NOTES

DB 2.1.1

DB 2.1.1 was released on May 12, 2025.

NEW:

- Added the ability for the user to configure the maximum position of the TCV output. Firing rate is mapped linearly between 0 and TCV Max Position. Note that the TCV is still gated by TCV Min Position.

CHANGES:

- Aux outputs configured as a temperature echo are now gated to 4mA and 20mA when the output is beyond the configured transmitter span (previously the output would be disabled if it went beyond the span).

FIXES:

- Fixed a bug where powering on the system would sometimes show an erroneous Comm Loss alarm.

DB 2.0.4

DB 2.0.4 was released on Sept 14, 2022. It includes major feature additions and software fixes based on customer feedback.

NEW:

- Added an independent Level/Flow Control Setpoint for use when the Status Contact Mode is set to *Level/Flow Control*. This allows users to operate the status contact at an independent setpoint from the High Level/Flow Trip Setpoint. For example, the system can now use the status contact for pump control while retaining the ability to trip on a high level. The *Level/Flow Control Setpoint Configuration* alarm was added to ensure the new Level/Flow Control Setpoint is between the Level/Flow Control Low/High Trip Setpoints.
- Hardware product variant information has been added to the info screen.
- Added the UI Comm Loss setting. If enabled, the system will shut down if communication between the UI and BMS is lost.
- Light off failures have been added to the diagnostics screen (for both pilots).
- The diagnostics screen now shows the state of the digital input contacts and external switch.
- Added data logging capability for valve run times and Bath 2 temperature input.
- Added a popup dialog to all numeric settings to allow for better fine-grained control of setting values.
- Added Bath Standby Mode. This allows the system to maintain a minimum bath temperature when multiple process temperatures are configured, and the system is configured in on/off control. So long as all process temperatures remain below their main off setpoints, the system can keep the mains on to maintain the bath standby setpoint.
- Aux output status has been added to the diagnostics page.

CHANGES:

- Level and flow units have now been split. Users can now configure the Level/Flow and Aux Inputs independently (e.g. Level/Flow could be configured for level units, while Aux In 1 could be configured for flow units).
- Setpoints are now properly gated while the system is running to prevent erroneous shutdowns due to configuration errors. For example, it is no longer possible to set a Process Setpoint above an associated Main Off Setpoint and shut the system down while running. Note that setpoints are NOT gated while the system is stopped.
- Temperature faults that occur on inputs that are set to *Display Only* now ring in as warnings on the UI (instead of alarms).
- Added the TCV Manual Override Enabled warning to notify the user when the TCV is in manual override mode.
- PID Configuration warning has been changed to an alarm.
- System will now alarm if the process control mode is set to firing rate, but no aux input is set to 4-20 appliance firing rate.
- High pressure events on the Pressure A and Pressure B inputs (when configured in digital mode) now cause an alarm in every state (rather than in main fuel states only).
- The Ramp Time setting has been redefined to generate a rate limit equal to (100% - light off firing rate)/ramp time. The ramp will end when a burner reaches it's requested output.

- Pilot Off Mode “Follow Main” has been renamed to “Off at Main Off Setpoint”.
- The system will now wait 5 seconds after proving the light off position before handing over control of the TCV to the PID.
- Alert numbers have been added to the alert display on the UI (useful for tech support).
- Data Logging and Event Logging improvements:
    - Updated data log naming format to prevent potential sharing of data across different BMS’. The data log root directory will now contain a unique serial number for that particular BMS. Each file generated for the data log will contain the name of the status that its logging. Added the BMS serial number to the header of each file as well.
    - Updated the event log folder names to use the BMS hardware serial number for differentiation between BMS’.
    - Added timestamp so the user can see date when a file was created.
    - Added event log export button to event log options dialog. Activating this will concatenate all event log files into a single csv file. Added a progress dialog for this operation.
- When changing a password protected setting, the password dialog now shows the required security level for that setting.
- Misc. Settings Backup improvements:
    - Each BMS will get their own folder for backups (based on serial).
    - Updated the bundle version number in the settings backup file to be human readable.
    - Added serial number to the backup file.
- Setpoint adjustments are now gated such that configuration alarms cannot occur while the system is running.
- Valve run time is now cumulative across the entire power on time (was previously reset when the valves closed).
- Process Control Mode “Firing Rate” has been changed to “External Firing Rate”.
- PF2100 legacy setpoint change request registers are now gated such that register writes are unable to cause configuration alarms.
- Alert text is now more descriptive.
- TCV A/B are now context sensitive on the diagnostics page. If shared tcv is enabled, only the upstream tcv appears on the diagnostics page. If its disabled, both tcv a and b appear on the diagnostics page.
- Bath Process Setpoint is now lower bounded by the Bath Standby Setpoint while running if Bath Standby is enabled.
- Temperature setpoints can now be set as low as -40C (instead of 0C).
- Bath Process Setpoint Adjust and Cascade PID can no longer be enabled at the same time.
- The Pressure B Modbus register has been moved to register offset 3777 and now spans 2 registers so it can be properly reported as an int32 value.

FIXES:

- Fixed a bug where the Bath Process Setpoint displayed on the status screen would show a unitless value of 0 before entering PID Control when using Cascade PID. The Bath Process Setpoint now has the correct temperature units (according to the system temperature units setting).
- Fixed a bug where setting changes made by the UI were sometimes unknowingly reverted.
- Fixed a bug where if the user configured pressure, level or flow as a % or mA unit and configured an aux input as a pressure, level or flow, the aux in spans were modifiable instead of being locked in (0 and 100 if %, 4 and 20 if mA).
- Fixed an issue where the incorrect rate limiting was being applied to the PID controller.
- Fixed a bug where the aux in spans would be interpreted as Celsius when the system was set up from process setpoint adjust using Fahrenheit units.
- Fixed a bug where the data / event logging would log using the serial number 0000-0000-0000 instead of the actual BMS serial number before communication has been established with the BMS.
- Fixed a bug where if one burner was running and the other stopped, the stopped burner could not be restarted over Modbus.
- Fixed a bug where invalid coil reads over Modbus would not return an error but instead return 0 or the value of the wrong coil.

DB 1.1.0

DB 1.1.0 was released Sept. 16, 2021. This is a minor release that increases the deadband range of the Auxiliary Inputs.

CHANGES:

- Aux Input deadbands can now be set between 0mA and 16mA (instead of 0mA and 1mA).

DB 1.0.3

DB 1.0.3 was released Mar. 30, 2020 and is the first major release of the Dual Burner product variant. This release is for Field Trial purposes ONLY.

NEW:

- Initial release

CHANGES:

- Initial release

FIXES:

- Initial release

3 DOCUMENT REVISION HISTORY

Document Version	Date	Description of Changes
v5.0	12 MAY 2025	DB 2.1.1 release
v4.0	14 SEP 2022	DB 2.0.4 release
v3.0	16 SEP 2021	Updated known issues list to include the DB 1.1.0 bundle
v2.0	16 SEP 2021	DB 1.1.0 bundle release
v1.0	30 MAR 2020	Initial document release (linked to DB 1.0.3 bundle release)

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