

GPL Odorizers

Software Release Notes

For GPL750 (XL7) Version 18

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Version 18.0

New:

- A Usage Pulse Counter has been added to the I/O page for enhanced monitoring.
- Introduced "Contract Hour" on the usage page, enabling users to customize the time when usage data transitions to a new day.
- **Memory Failure Alarm:** An alarm has been added to detect instances where memory is not retained after a power cycle, helping to identify depleted memory batteries. Please note that this alarm will be triggered following a software update—this does not necessarily indicate battery depletion. Be sure to clear the alarm after updating.
- Solenoid cycles are now recorded in the data logs.

Changes:

- Defaulted "Iso Valve Transition Drops" to zero.
- **User Interface:**
 - Standardized reset buttons across the user interface.
 - Redesigned the odor page for improved usability.

Injection Rate Target		0.00 #/MMCF	
Density	0.000 #/gal	Odor Blend:	Default
#/pulse out	0.00000	Batch Time	0.0 mins
Drip Size	0.000 cc	Iso Valve Transition	0 drops
Upstream Injection		Disabled	

Menu
Home

Figure 1: Odor Page

- Merged Modbus and IP pages into a unified Soft I/O page.

IP Address	0.0.0.0	Modbus Address	0
IP Mask	0.0.0.0	Baud Rate	300
IP Gateway	0.0.0.0	Bits	8
		Parity	NONE
		Stop Bits	1
		Protocol	RTU
		RS232 / RS485	RS232
		Status	Timeout

Menu
Home

Figure 2: Soft I/O

- **Gas Page:**

- Removed the “Gas Timeout” setting from the “Pulses” gas source.
- Removed the “Samples to Average” setting from the “4-20mA” gas source.

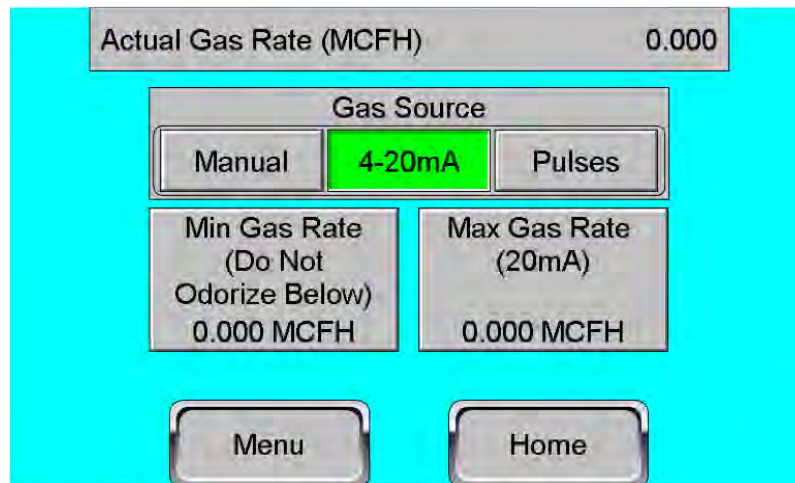


Figure 3: Gas Page

- Replaced ESD on the I/O page with Standby Mode.
- Made minor enhancements to alarms, maintenance, and I/O pages.
- Improved overall user interface for a smoother experience.

Version 18.1

Changes:

- Added a main menu navigation button to the Alarm History page.

Fixes:

- Resolved an issue where manual activation during an Upstream Signal Alarm prevented proper batching. The alarm still triggers Standby Mode, but if the user manually restarts the system, it will override the alarm and inject to achieve the Total Target Injection Rate.
- Ensured the Memory Failure Alarm can no longer be cleared automatically.
- Removed the shutdown delay after critical alarms. Originally introduced in version 17 to prevent shutdowns post-power cycle.
 - Added a delay to the Isolation Alarm to prevent unintended shutdowns following a power cycle.

Version 18.2

New:

- **Home Screen:** Added date and time display to the top right corner.

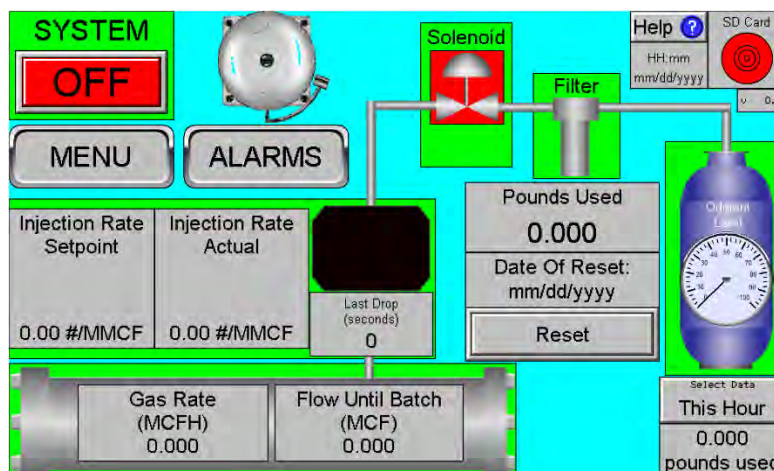


Figure 4: Home Screen

- **Standby Mode Additions:**
 - Added Standby Polarity (normally open/normally closed) to the alarm configuration to control the digital input.
 - Added a standby alarm, which can be disabled in the alarm configuration. This alarm activates when the unit is in standby mode.

Changes:

- Set default Manual Gas Alarm delay to one hour.
- Updated default standby mode input to Digital Input 1 (DI1), replacing ESD on the wiring diagram.

Fixes:

- **High Gas Alarm:** Ensured the alarm appears in the active alarms.
 - The alarm now clears automatically when the gas rate drops below the Hi Gas set point in the alarm configuration.
- Resolved an issue where monthly usage data was corrupted after a power cycle. Data logs on the SD card were unaffected.
- Corrected date formatting for:
 - Filter Age on the Maintenance Page
 - Reset Date on the home screen usage totalizer

Version 18.3

New:

- **Comprehensive Data Logging:** Every batch now creates an entry in the data logs stored on the SD card.
- The odorizer now maintains its previous injection rate during an Upstream Signal Alarm rather than increasing to meet the Total Target Injection Rate.
 - The hold value is calculated based on the average injection rate from the previous hour.
 - The Upstream Signal Alarm continues to send the alarm out signal.
 - This behavior applies only when Upstream Standby is disabled in the alarm configuration (enabled by default). Disabling Upstream Standby introduces a risk of inaccurate odorization during an Upstream Signal Alarm, and users are responsible for addressing the issue promptly.

Changes:

- Updated the upstream signal alarm toggle to the Upstream Standby toggle.
 - The Upstream Signal Alarm is now always enabled when Upstream Injection is active.
 - When Upstream Standby is enabled, the odorizer enters standby upon loss of the upstream odor signal, effectively shutting down.
 - When Upstream Standby is disabled, the odorizer maintains its previous injection rate during an Upstream Signal Alarm.
- Implemented automatic shutdown if the Hi Gas Alarm remains active for three consecutive minutes.

- Relocated Soft I/O to the I/O page and replaced its section on the Main Menu with the Usage page. The I/O page now includes arrow buttons.

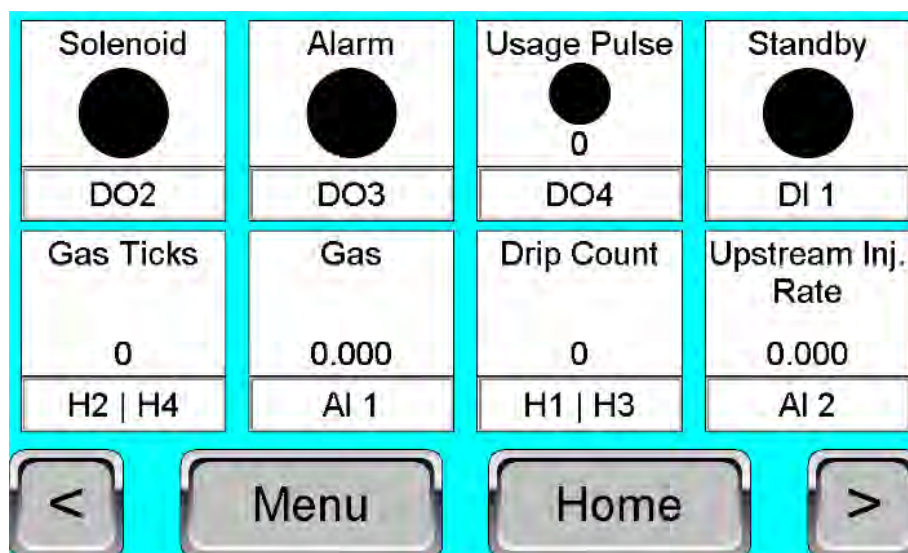


Figure 5: I/O Page

- Separated Modbus and IP configurations to support new Modbus options (see Modbus fixes below).

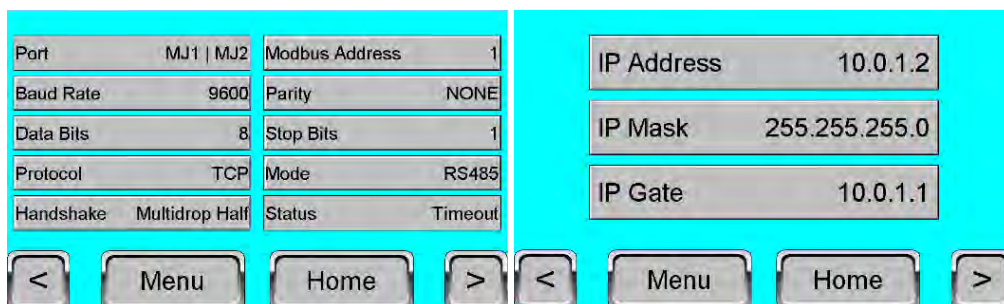


Figure 6 & 7: Modbus & IP Configuration Sub-pages

Fixes:

- Added Modbus Address, Modbus Handshake, and Port settings to the Modbus page.
- Introduced an upper threshold for the Isolation Alarm to reduce false alarms. Drops exceeding 25 per second, as detected by the optical comparator, are disregarded based on fluid dynamics calculations.
- Ensured “Volume Until Batch” no longer updates during a Hi Gas Alarm.

Version 18.4

New:

- **Max Time Open Alarm Behavior:**
 - The system now shuts down after consecutive Max Time Open alarms.
 - This alarm is triggered when the solenoid remains open too long, often because the injection target is not met.
 - A Max Time Open Limit is now configurable in the alarms settings, defaulting to four cycles before system shutdown.
- **I/O Expansion Error:** Added an alarm to notify users when the connection to the OCS-I/O Expansion Module is lost.
 - The I/O Expansion Error Alarm does not shut down the system but will activate the Alarm Out signal.
 - This was implemented because the OCS-I/O retains the last output upon disconnection. Since the OCS-I/O reports injection rate, a lost connection would mistakenly display the last recorded injection rate.
 - The alarm automatically enables when the system detects a valid status from an OCS-I/O expansion module and triggers when the status changes from valid to invalid. Users should acknowledge the alarm after intentionally disconnecting an OCS-I/O.
- **WebMI** enables remote control of the system for users with modems.



Figure 8: WebMI Remote Access

Changes:

- **Data Logs:** Hourly logs now include both odorized and total gas volumes. Total volume accounts for gas detected by the meter even when the injection system is off.
- **Odor Page:**
 - Moved Upstream Injection to a dedicated page within the Odor section to declutter the interface and allow for larger readouts.

Injection Rate Target 0.50 #/MMCF	
Density 6.740 #/gal	Odor Blend: Scentinel E
#/pulse out 0.00100	Batch Time 3.0 mins
Drip Size 0.010 cc	Burst Transition 0 drops

Upstream Injection	
Disabled	
Min Upstream Injection Rate 0.025 #/MM	Max Upstream Injection Rate 0.50 #/MM

Menu Home Upstream Back Home Menu

Figure 9 & 10: Odor Page & Upstream Sub-page

- The “Iso Valve Transition” has been renamed “Burst Transition” for clarity.
 - This setting controls the number of drops the solenoid remains in burst mode before fully opening.
 - Burst mode is beneficial for small batches with only a few drops.
 - The default Burst Transition value is zero, meaning the solenoid will always open fully. Increasing this setting may improve performance for low-flow (small batch) applications.
- Removed Manual Gas Delay from Alarm Config; now hard-coded to one hour.

Fixes:

- Resolved an issue with the monthly alarm counter on the monthly usage page.
- Fixed an overflow error for “Volume Until Batch” after a power cycle.
- Fixed a bug that permitted one additional Autoclear beyond the limit set in Alarm Config.

Known Issues:

- The Usage totalizer on the home screen can scramble after a power cycle. This has no effect on the data stored on the SD card.
- An incorrect initial value for drip mass leads to inaccurate usage pulses until the system is activated and drip mass is recalculated.