SENSAPHONE®
REMOTE MONITORING SOLUTIONS

Sensaphone Sentinel Pro and Stratus EMS

Firmware Revision History

Version 1.8.14

· Upgraded secure connection to TLS 1.2, AES256/SHA256; also enable server name TLS extension (Server Name Indication; SNI).

· Upgraded security certificate.

· Improved Modbus TCP compatibility with Siemens PLCs.

· Corrected issue which caused 'Dependency Failure' to occasionally appear on Modbus zones.

· Changed timing for Modbus zones to be recognized as 'Not Responding' to 10 minutes.

· Automatic output relay modes will ignore a given zone if either the zone's input or alarm is disabled.

· Prevent the device from automatically rebooting if main power is off.

· Improved management of flash memory.

· Corrected issue that caused Runtime (Normally Open) zones to occasionally stop working.

· Corrected issue that caused Min/Max reset on Runtime & Pulse Count zones to work incorrectly.

· Updated several NTP server IPs.

· Disabled IP forwarding.

Version 1.7.32

· Corrected an issue which could result in the relay output being set to the wrong state after a reboot.

· Improved storage of certain variables in battery-backed memory while device is powered off or rebooted.

· Corrected issue which caused pulse count and run-time values to reset or become corrupt.

· Improved NTP server compatibility for time synchronization.

· DHCP addresses no longer sent to the server

· Improved handling of Modbus values & alarm status when the device reboots or is powered down.

Version 1.7.25

· Reduced the time to automatically reboot the unit in the event of excessive connection negotiation errors.

· Added an 'Auto Acknowledge' feature which will cancel remaining alarm notifications if the condition corrects itself. Feature must be enabled per zone.

· Changed 'Alarm Reset' functionality such that the reset timer will run whenever the alarm is enabled.

· Improved DNS server compatibility.

· Updated flash memory startup routines to verify that the chip is ready for access prior to use to protect against unexpected writes.

Version 1.7.21

• Corrects an issue which was preventing the unit from successfully rebooting when certain DHCP errors or Ethernet controller errors were detected.

• Improves the operation of the reset-to-defaults button and adds an audible beep when pressed.

• Sends the IP address of the device to the server when configured for DHCP.

Version 1.7.18

- Removed zone values from periodic updates when the zone is disabled.
- Added automatic reboot if consecutive connection attempts result in TCP socket connection failure.

Version 1.7.16
· Corrected an issue which caused occasional website mismatch between zone 'status' and 'value' fields.

Version 1.7.12
- Added verification of datalog records written to internal memory with rewrite if errors detected.
- Improved datalog upload reliability.
- Reduced false MODBUS "Not Responding" alarms.
- Eliminated retries if a MODBUS zone is busy or in error.

Version 1.7.11
- Corrected Relay Output issue which caused the unit to incorrectly report the on/off state of the output(s).
- Corrected pulse count processing issue at start-up which caused the unit to potentially fail to boot up.
- Corrected Standby mode issue which caused the Standby time to count down from 65,535 minutes when it was set to 'untimed'.

Version 1.7.10
- Corrected an issue which caused (reset) alarms to be sent out while the device was in standby.

Version 1.7.9
- Improved accuracy of temperature readings which can affect units currently in the field. THESE UNITS MAY REQUIRE RE-CALIBRATION AFTER THIS FIRMWARE UPDATE.
- Randomized the connection sequence to Sensaphone.net servers which provides for enhanced redundancy and recovery when devices connect to the Sensaphone.net server system.
- Zone values will update the Sensaphone.net website while in standby.
- The Datalogger will record current values while in standby.
- Alarm Reset timers will restart after a reboot. This ensures that the Alarm Reset feature will function correctly if the device reboots (or is powered on) with previously acknowledged alarms.
- Allocated additional memory resources for selected internal tasks

Version 1.7.5
- Added automatic reboot if operating system detects a memory problem or if multiple TCP socket errors occur.
- Added led error codes 18 and 19 for TCP socket-closed error and HTTP parse error.
- Added alternate method to set clock when NTP is unavailable.
- Improved datalog download process.
- Improved communication protocol error handling.

Version 1.7.4
- Improved datalog record search routines.

Version 1.7.3
- Freeze MODBUS zone values while in Standby mode.
- Device no longer records a datalog record at startup.
- Improved firmware download process.
- Optimized datalog memory storage.

Version 1.7.2

- Improved memory erase function when the device is reset to defaults.
- Corrected potential corruption of pulse count values.
- Improved pulse count initialization to avoid spurious counts.
- Corrected Standby LED operation on startup.
- Corrected deletion of system description when reset to defaults.

Version 1.7.1

- Improved datalog record search routines.
- Improved detection and correction of invalid dates.
- Zone value updates now limited in size to fit in one MTU.
- Initial Zone updates now includes all zones' min/max values.
- Improved handling of Runtime zones.
- Improved accuracy of internal clock.
- Corrected relay output operation when set to 'Cycle'.
- Corrected a memory issue if SSL connect attempt fails.
- Corrected a problem when the Output uses a Runtime zone as the trigger source.
- Optimized datalog timestamps.

Version 1.7.0

- Standby LED now flickers if a delayed reset/reboot is pending.
- Improved reliability of alarm event updates.
- Improved connection reliability over low-bandwidth networks.
- Improved DHCP compatibility with certain satellite modems.
- Improved handling of resolution of NTP time server names.
- Corrected recording of datalog records at alarm interval when status is only Pending.
- Min/Max no longer reset when setting pulse count or runtime values.

Version 1.6.68

- Pulse count zone types can now support negative values.

Version 1.6.67

- Maintain Standby mode through device reboot.
- Reduced MODBUS TCP socket connect timeout.
- Improved MODBUS TCP polling reliability.
- Improved device startup time.
- Pulse counts now limited to +/- 1,000,000.00.