SOFTWARE RELEASE NOTES

Sensi+ GLA533-NG Natural gas analyzer software
SW V1.3

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1. Purpose and Basic Description

These release notes detail new features, functional changes and bug fixes made to the 3KXG165000S0001 Sensi+ GLA533-NG Natural gas analyzer Software.

1.1. Highlights for this software release

The main improvement in this software release focuses on optimizing pump management to enhance malfunction detection and improve instrument uptime. A new feature has been implemented to conduct diagnostic on each pump. Following diagnostic, a pump can be flagged as failed and will be excluded from the pump rotation cycle. Additionally, the software release includes the capability to manage pump revision B, which extends the pump manifold’s lifetime.

2. Prerequisites

- The current software version installed on the analyzer must be at least V1.1.x.
  - Contact ABB Service support team otherwise.
- Official Software release of the Sensi+ GLA533-NG Natural gas analyzer.
  - Download link: https://library.abb.com/d/3KXG165000S0001

2.1.1. SW update procedure

Refer to Sensi+ User’s guide:
https://library.abb.com/d/3KXG165001R4201

2.1.2. Notes

The following ID’s (ex: NGICOS-xxxx or GLANG-xxxx) are used to identify the items in the release notes. They refer to an ABB internal tracking tool unique ID for a better support to customers when mentioning a specific item.
2.1.3. **New Features**

**GLANG-622**  
Pump Manifold Replacement - If a pump manifold must be replaced, follow the latest Service Procedure SPA-533-PMPMAN (Rev.C or more). A **MANDATORY** additional step requires to select the pump manifold revision from the menu Maintenance -> Service -> Replace Pump Manifold.

![Image of Sensi+ GUI showing pump manifold replacement](image1.png)

**GLANG-530**  
Pumps Management - Improved the pump's failure detection algorithm. If a failure is detected in operational mode, the pump is switched to the next good pump and an event is logged. A manual pump diagnostic will be required to confirm the pump failure through the following menu:

Remote Desktop HMI - Maintenance -> Validation -> Added a Pump Diagnostic menu to start manually a diagnostic on a pump. If the pump is detected as defective, it is marked as FAILED and is removed from the operational pump switch cycle.
GLANG-542  Remote Desktop HMI – By default, the analyzer’s built-in firewall blocks all requests coming from public IP address ranges. Users with administrator rights can now override this protection by entering individual exceptions (up to two) in the Firewall Exceptions field. User must make sure to comply with their local IT security rules when adding such exceptions.

GLANG-281  Desktop Remote HMI -> Reports - Added the report “Configuration” to extract the analyzer's configuration in a .tsv format.

2.1.4. Improvements

GLANG-276  Pumps Management - Improved robustness when the analyzer starts on a defective pump.

GLANG-1229  Alarms - Added an event “PUMP_{n}_OBOX_P_NOISE_HIGH” to provide a feedback when a pump has been switched due to an Optobox pressure noise above the alarm limit for a sustained time period. This condition is likely be caused by a faulty pump. A manual pump diagnostic is required to confirm the pump failure.

GLANG-941  Alarms - Added an event “PUMP_{n}_CELL_PRESSURE_HIGH” to provide a feedback when a pump has been switched due to a cell pressure above the alarm limit for a sustained time period. The elevated cell pressure might be caused by a faulty pump or pressure valve, a clogged filter (slow cell pressure response time) or an external pressure transient impacting the system. A manual pump diagnostic is required to confirm the pump failure.

GLANG-393  Alarms - Changed the name of the error generated when the H2S exceeds its High High alarm threshold. Changed from "S1_VALVE_REQ_CLOSE" to "DO_01_ACK_ALARM_ENABLED". Same convention is also used for other gases "DO_{xx}_ACK_ALARM_ENABLED".

GLANG-780  Data Saving - Optimization have been implemented to save only 10 spectra before and 10 spectra after a process alarm is triggered. Also added few critical analyzer alarms to trigger the spectra saving to ease the troubleshooting.
2.1.5. Bug Fixes

GLANG-636 Service Logs - The .zip package extracted from the Export Service Logs function now includes the analyzer configuration and the time zone.

GLANG-492 Local HMI - Added the date beside the time on the local HMI.

GLANG-394 Local HMI - Added precision on the time format (UTC) on the alarm page of the local HMI.

GLANG-465 Remote Desktop HMI - Instrument Model information added to menu Settings->Configuration->General.

GLANG-417 Events Report - Events report generation progress feedback is now available.

GLANG-395 Remote Desktop HMI - Disable report button 'Generate Now' when report is in progress.

2.1.6. Known Issues

N/A
3. Additional Information

3.1. Software version details

Build Date: 2024-05-29T19:46:30Z
NGICOS application: 1.3.0-rel-1-g238c
GLA533 Model: 0.58-ge7df
WORKSPACE: 1.3.0-rel-2-gfed6
OS: 1.2.0-dev-1-14-gdi102
s400g API: 8.1.20-dev-7-g0d63
ICOS library: 1.1.1-1-gc53b
Skewfit: 1.5-5-gbe03d65-gbe03
ATW library: 2.0.2.2-2022-09-09-436-g3fd0

3.2. Listing of related documents

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Document Kind, Title</th>
<th>Document No.</th>
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4. Addendum

5. Revisions

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<thead>
<tr>
<th>Rev.</th>
<th>Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>A</td>
<td>SW V1.1.3 release of the Sensi+ GLA533-NG Natural gas analyzer</td>
<td>2022-12-22</td>
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<tr>
<td>B</td>
<td>SW V1.2 release of the Sensi+ GLA533-NG Natural gas analyzer</td>
<td>2023-04-24</td>
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<tr>
<td>C</td>
<td>SW V1.2.1 release of the Sensi+ GLA533-NG Natural gas analyzer</td>
<td>2023-10-16</td>
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<tr>
<td>D</td>
<td>SW V1.3 release of the Sensi+ GLA533-NG Natural gas analyzer. Major improvements on pumps management</td>
<td>2024-05-08</td>
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