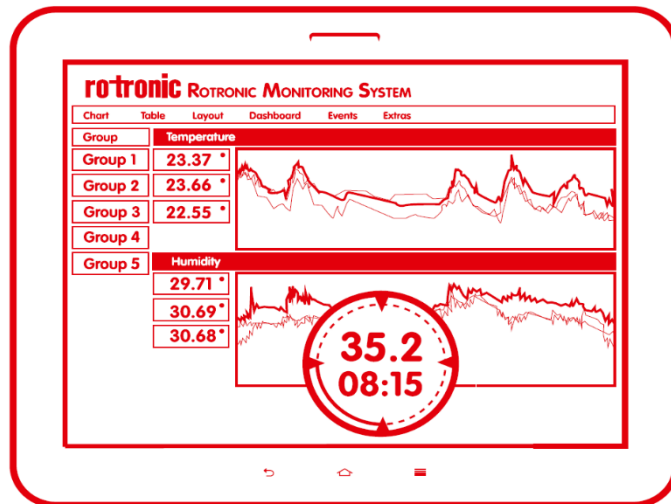


Rotronic Monitoring System
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Release Notes – RMS-CONVERTER-
100
-
Version: 1.6.0



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1. Version Overview

Please find below the meaning of the version.

- 1: Major version number.
- X.1: Minor version number.
- X.X.1: Bug fix or specific update version number.
- X.X.X.1: Year and day of compilation.

2. Rotronic Tracking System

Rotronic use a tracking system to monitor bugs, features, improvements and change requests. This tracking system is the basis for any software, hardware and firmware User Requirement Specification based upon the GAMP©5 validation model.

Each point will be recognised with an ID (eg. RMS-XXX). A description and details are attributed to each point within the tracking system.

All changes documented within the RMS Release Notes will have an ID number and a description.

3. Version Control

Version	Release
V1.4.0	Daniel Schürmann, 6 th of February 2020.
V1.5.0	Daniel Schürmann, 14 th of December 2020.
V1.6.0	Daniel Schürmann, 22 th of April 2021.

4. Version V1.6.0

4.1. Release Details

The main target of this firmware version has been to integrate the AirNet II Particle Counter into the Firmware.

4.2. New Features

ID	Description
RMS-CONVERTER-2924	In case of a first operation and integration into RMS via Converter, or in case of short power interrupt, the particle counter Airnet II need to be reinitiated by a modbus order, that enables/re-enables the particle counter. For that reason, a new command 'Write single coil' with starting address and switching status IS implemented into the Modbus editor of the Converter. Every interval this order is sent out from the converter to the particle counter. The modbus order cannot be linked to any RMS function. It works independent between particle counter and converter

4.3. Improvements

N/A

4.4. Bug Fixes

N/A

4.5. Known Errors

N/A

4.6. Risk Analysis

N/A

5. Version V1.5.0

5.1. Release Details

The main target of this firmware version has been to correct existing bugs that can occur when an RMS-CONVERTER-100 and a HygroLog NT/HL-NT are integrated into a system.

5.2. New Features

ID	Description
RMS-CONVERTER-2646	In protected IT infrastructures, the use of a CA certificate could be mandatory to identify that the RMS-CONVERTER-100 is a permitted network participant. For that reason such a CA certificate can be uploaded to the RMS-Converter.

5.3. Improvements

ID	Description
RMS-CONVERTER-2850	Modbus Editor – The Signed Integer as a further number format is added.

5.4. Bug Fixes

ID	Description
RMS-CONVERTER-2530 & 2545	HL-NT input 7 not transmitting probe serial number.
RMS-CONVERTER-2429	Validation issue with Battery test for HL-NT. The HL-NT units have PoE functionality. The battery levels shown on the HL-NT's are incorrect. The information about the battery level is not displayed anymore.
RMS-CONVERTER-2409, 2426, 2222	Within the audit trail, the event "Probe replaced" appears without any probes being replaced. Important due to the range of HygroLog and HL devices as well as the range of docking stations, Rotronic cannot fully guaranty that this bug is corrected for the entire range of products.
RMS-CONVERTER-2425	Data gaps by HL-NT devices (only data gaps on RMS, data is available on memory card).
RMS-CONVERTER-2575	When the probe on a HL-NT is disconnected, it shows probe replaced (SNxxx - > 0) in the audit trail, whereas a sensor error should appear.
RMS-CONVERTER-2496	Data gaps when reading out digital inputs. Note: Update to RMS Software V2.2 is necessary.

5.5. Known Errors

N/A

5.6. Risk Analysis

The RMS-COVNERTER-100 firmware has been tested.

The probability that the bug persists is low. The severity must be judged by the end user to define the risk class. The detectability will depend on how the customer uses the RMS-CONVERTER-100 and as of such must be defined by the customer.

The regulated user knows their application and process and as such should carry out the necessary risk assessment to determine the severity, probability and detectability and define the process risk class based upon the features used within the RMS-CONVERTER-100. Please see the RMS-RA risk assessment for more details.

6. Version V1.4.0

6.1. Release Details

This firmware version has been programmed to implement the Modbus TCP Editor to allow for easy integration of 3rd party devices in the RMS environment.

6.2. New Features

ID	Description
RMS-2341	- Modbus Editor to integrate Modbus TPC devices (only Ethernet devices) into the RMS.

6.3. Improvements

N/A

6.4. Bug Fixes

ID	Description
RMS-2587	RMS-Converter causes a data gap after an RMS software restart, which is caused by an empty device list on first query (only visible as of the RMS V2.0.0),

6.5. Known Errors

N/A

4.5 Risk Analysis

6.6. Risk Analysis

The RMS-CONVERTER-100 firmware has been thoroughly tested.

The probability that the bug persists is low. The severity must be judged by the end user to define the risk class. The detectability will depend on how the customer uses the RMS-CONVERTER-100 and as of such must be defined by the customer.

The regulated user knows their application and process and as such should carry out the necessary risk assessment to determine the severity, probability and detectability and define the process risk class based upon the features used within the RMS-CONVERTER-100. Please see the RMS-RA risk assessment for more details.

7. Version V1.3.0

7.1. New Features

ID	Description
RMS-793	Encrypted communication between Webservice and Converter

7.2. Improvements

ID	Description
RMS-1112	Adjustment for differential pressure devices implemented: <ul style="list-style-type: none"> - PF4 first generation

ID	Description
RMS-1112	Adjustment for differential pressure devices implemented: <ul style="list-style-type: none"> - PF4 first generation
RMS-795	Adjustment for differential pressure devices implemented: <ul style="list-style-type: none"> - PF4/5 second generation - CRP5

ID	Description
RMS-831	Implemented two new devices: <ul style="list-style-type: none"> - RMS-8ADC-L-R - RMS-4RTD-L-R

ID	Description
RMS-1012	Implemented a new device: <ul style="list-style-type: none"> - RedLion E3-16ISOTC

ID	Description
RMS-832	Login window integration. During the first 10min from the startup, the default password and user can be used.

7.3. Bug Fixes

ID	Description
RMS-787	<ul style="list-style-type: none"> - Automatic restart function after system break down - Improved startup function for the OS

ID	Description
RMS-740	HL NT audit trail message "Probe replaced SNxxxx →SN0 corrected"

ID	Description

RMS-829	<ul style="list-style-type: none">- By configuration the RMS-8ADC-L-R unit is mv, it shall be mA- Chanel number from the RMS-8ADC-L-R is 0 to 7. In RMS Webservice was it 1 to 8. Corrected to 0 to 7 in RMS Webservice.
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ID	Description
RMS-849	DNS address get reset to "8.8.8.8" after reboot.

ID	Description
RMS-1104	Converter deleted HL-NT log files that are older than 1 week.

ID	Description
RMS-939	PF5/4 reconnection after network issues.

7.4. Validation Documentation

N/A

7.5. Risk Analysis

N/A