# A221, A231, A451

# ChangeLog
# Firmware History

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# Content

# 1       Firmware History

## 1.1      Version 1.0.3

**Optimization of ENTER key detection**

**Optimization in the detection of Memosens sensors.**

## 1.2      Version 1.1.0

**New: cation exchanger consumption as measured value**
The cation exchanger consumption  available as a measured value.

**New: Resetting the cation exchanger consumption in the measuring mode**
In the display "Cation exchanger consumption" the cation exchanger consumption can be reset by pressing the Enter key (NEW EXCHANGER: YES)..

**New: Calculation of alkalizing agent concentration (selection -C9-)**
Calculation of the concentration of the alkalizing agent is available as a calculation type (selection -C9-).

**New: Calculation of the cation exchanger consumption**
Display of the residual capacity of the cation exchanger: 100% corresponds to the unused state

**Change: Calculation option -C7-**
Introduction of the additional parameter FACTOR 3..

**Change: Parameterization of the degassed conductivity calculation -C8-**
The parameter B for the calculation of the degassed conductivity is entered with exponent 10E-3 instead of 10E-4 so far.

**New: Flow calculation with variable acquisition interval**

Detection interval for pulse counting of incremental flow meters can be parameterized (1 ... 20 s).

## 1.3     Version 1.2.0

**New: support for Memosens conductivity 4-electrode sensor**

**New: Additional measured value display**

Display no. 7 with flow and pH/LF DAC calculated

**Bugfix: Calibration method in the Memosens**

The wrong identifier for a product calibration was entered in the Memosens pH/ORP sensor.

**Change: Impedance monitoring**

The limits of impedance monitoring were not considered for Memosens pH/ORP sensors in the Sensoface.

**Bugfix: Checking the autoclave counter**

The autoclave counter was not considered for Memosens pH/ORP sensors in the Sensoface.

## 1.4     Version 1.2.1

**Change: Enabling color matching in production.**

## 1.5     Version 1.3.0

**Bugfix: Measured value display for Cond/Cond did not show the subline**

**Bugfix: pH measured value was not monitored for limit values with Cond/Cond**

Error 59 was not issued.

**Change: TAG display in the measured value display**

The TAG that is configured in the physical block is displayed.