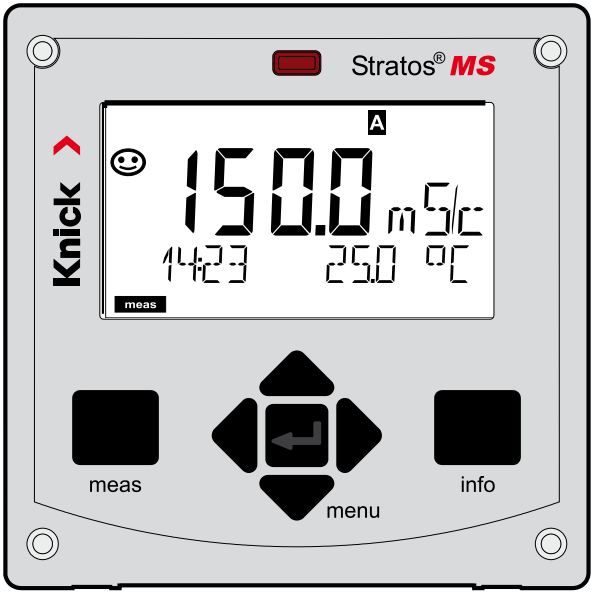
The Art of Measuring. Knick

Software Versions
English

Stratos MS A405



Latest Product Information: www.knick.de

Software Version

The software version of your device is shown in the Diagnostics mode under "VERSION":

CALDATA	Viewing the calibration data
SENSOR	Viewing the sensor data
SELFTEST	Starting a device self-test
LOGBOOK	Viewing the logbook entries
MONITOR	Displaying currently measured values
VERSION	Displaying device type, **software version**, serial number

Access to diagnostics can be protected with a passcode (SERVICE menu).

Note:
HOLD is not active during Diagnostics mode!

Action	Key	Remark
Activate diagnostics	menu	Press **menu** key to call the selection menu. (Display color changes to turquoise.) Select DIAG using ◀ ▶ keys, confirm by pressing **enter**.
Select diagnostics option		Use ◀ ▶ keys to select from: CALDATA SENSOR SELFTEST LOGBOOK MONITOR VERSION
Exit	**meas**	Exit by pressing **meas**.

Version

Display of **device type, software/hardware version** and **serial number** for all device components.
Use the ▲ ▼ keys to switch between software and hardware version. Press **enter** to proceed to next device component.

Version 1.2.0 Oct. 1, 2016

Changes/supplements compared to 1.1.1

Optimization of Memosens monitoring:
Device limits are monitored and an error message is generated when a limit is exceeded. Measurement is still possible when the parameters saved in the Memosens are exceeded, e.g., during CIP/SIP.

Implementation of a new standard buffer set according to NIST DIN 19266:
-05- NIST standard 1.679/4.006/6.865/9.180 for a reference temperature of 25 °C / 77 °F

The rH value can be calculated from the pH value and the ORP value (pH-compensated ORP).
- Display resolution and measuring range: rH 0.0 … 42.5
- Error message for out-of-range conditions
  rH < 0 or > 200: (ERR 14) "rH RANGE"
- Output via OUT1, OUT2, limit values, HART;
  cannot be used for the controller
- Adjustment via pH and ORP value
  (no direct adjustment of the rH value)

If the rH value has been assigned to an output (OUT1, OUT2, limit values) and another Memosens pH/ORP sensor is connected, the "WRONG SENSOR" error message will be generated.

Expansion of wear detection:
Detecting and counting CIP

Reading out the bootloader version via HART; see HART CmdSpecs

All active error messages are output via HART command 48:
Command 48 - "Read Additional Device Status"

Limits for minimum current span were removed.
The selected current spans can be arbitrarily small.

IrDA port is disabled.
Adjustment, testing, and software update take place via the RS-485 Memosens interface.

Implementation of sensor verification using TAG and GROUP
The measuring point (TAG) and/or group of measuring points (GROUP) can be saved in the sensor. When a Memosens sensor is connected and TAG and/or GROUP have been activated (ON), it is checked if the sensor contains the correct TAG and/or GROUP. If the entries differ, a message will be generated. When Sensocheck has been activated in addition, Sensoface gets "sad", and the display backlighting turns purple.
When no TAG and/or GROUP is saved in the sensor, e.g., when using a new sensor, the TAG/GROUP specifications of the Stratos are used. When sensor verification is switched off, Stratos always enters its own measuring point and group.
A possibly existing TAG/GROUP will be overwritten.

Version 1.1.1 May 1, 2014

Changes/supplements compared to 1.1.0

Optimization of device starting behavior
The starting behavior of the device was optimized to ensure a safe device start.

Fault detection of parameter management
The internal fault detection which caused the display of error 98 (wrong parameter setting) was improved.

Response time of flow measurement was reduced

Display of bootloader version
In addition to the firmware version, now also the bootloader version is displayed.

Version 1.1.0 Sept. 1, 2013

Changes/supplements compared to 1.0.0

Waiting time of wash function
Waiting time of the wash function – wash relax time – (previously fixed at 30 s) can now be adjusted in the configuration.

Memosens sensor monitoring
Sensor communication was designed to be more robust, so that sporadic sensor error messages (Error 04 – Sensor Failure) could not occur any more.

Behavior in case of bad calibration values
After a sensor adjustment with bad calibration results now a measured value continues to be displayed (previously replaced by dashes).

Flow indication
Now, the flow rate can be displayed by pressing [meas]. Error signals are temporarily suppressed.

Version 1.2.0 Oct. 1, 2016

Changes/supplements compared to 1.1.1

Optimization of Memosens monitoring:
Device limits are monitored and an error message is generated when a limit is exceeded. Measurement is still possible when the parameters saved in the Memosens are exceeded, e.g., during CIP/SIP.

Reading out the bootloader version via HART; see HART CmdSpecs

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Limits for minimum current span were removed.
The selected current spans can be arbitrarily small.

Relax time for wash contact can be adjusted as desired.

IrDA port is disabled.
Adjustment, testing, and software update take place via the RS-485 Memosens interface.

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Version 1.1.0 Sept. 1, 2013

Changes/supplements compared to 1.0.0

LDO sensor: error output during drift check corrected
When drift check detects a drifting value, the "BAD VALUE" message is displayed immediately. After 12 minutes the "VALUE UNSTABLE" message will be displayed.

LDO sensor: zero calibration
Now, the "Zero" icon is displayed instead of the "Slope" icon.

LDO sensor: version indication
Indication of the LDO sensor software version was corrected.

Flow indication
Now, the flow rate can be displayed by pressing [meas]. Error signals are temporarily suppressed.

Version 1.2.1 Jan. 1, 2017

Changes/supplements compared to 1.2.0

Extended current output – parameter setting
The extended settings for the conductivity measuring range XXXX mS/cm are now taken into account for the parameter setting of the current outputs.

Version 1.2.0 Oct. 1, 2016

Changes/supplements compared to 1.1.1

Optimization of Memosens monitoring:
Device limits are monitored and an error message is generated when a limit is exceeded. Measurement is still possible when the parameters saved in the Memosens are exceeded, e.g., during CIP/SIP.

Reference temperature can be entered in °F.

Monitoring the sensor lines for breakage
When the temperature is used for calculating the conductivity (TC: temperature compensated) or calculating the concentration, a broken temperature detector (temperature out of range) is indicated by the output current being set to FIX or 22 mA. For conductivity measurement without temperature compensation, the sensor line can be monitored by activating the new TEMP CHECK parameter (ON/OFF) in the ALARM menu.

Extension of the concentration tables for conductivity
Tables -06- to -10- were supplemented by

-06- H2SO4	94–99 wt% (-17 °C)	... 89–99 wt% (115 °C)
-07- HCl	22–39 wt% (-20 °C)	... 22–39 wt% (50 °C)
-08- HNO3	35–96 wt% (-20 °C)	... 35–96 wt%t (50 °C)
-09- H2SO4	28–88 wt% (-17 °C)	... 39–88 wt% (115 °C)
-10- NaOH	15–50 wt% (0 °C)	... 35–50 wt% (100 °C)
-11- H2SO4•SO3	13–45 wt% (0 °C)	... 13–45 wt% (120 °C) oleum

Reading out the bootloader version via HART; see HART CmdSpecs

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Command 48 - "Read Additional Device Status"

Limits for minimum current span were removed.
The selected current spans can be arbitrarily small.

Relax time for wash contact can be adjusted as desired.

IrDA port is disabled.
Adjustment, testing, and software update take place via the RS-485 Memosens interface.

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Version 1.1.1 May 1, 2014

Changes/supplements compared to 1.1.0

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Fault detection of parameter management
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Response time of flow measurement was reduced

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Version 1.1.0 Sept. 1, 2013

Changes/supplements compared to 1.0.0

Flow indication
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Version 1.2.1 Jan. 1, 2017

Changes/supplements compared to 1.2.0

Additional sensor type selection
The configuration menu (CONF > SENSOR), now includes a menu step for selecting the SE 670 conductivity sensor.

Version 1.2.0 Oct. 1, 2016

Changes/supplements compared to 1.1.1

Implementation of sensor model SE680*M with Memosens protocol

Measuring range extended to 000.0 … 999 µS/cm

Measuring ranges for concentration measurement extended

Reference temperature can be entered in °F.

Monitoring the sensor lines for breakage
When the temperature is used for calculating the conductivity (TC: temperature compensated) or calculating the concentration, a broken temperature detector (temperature out of range) is indicated by the output current being set to FIX or 22 mA. For conductivity measurement without temperature compensation, the sensor line can be monitored by activating the new TEMP CHECK parameter (ON/OFF) in the ALARM menu.

Extension of temperature compensation options for ultrapure water

Temperature compensation	(OFF)	Without	
(Ref. temp. specifiable)	(Lin)	Linear characteristic 00.00 ... 19.99 %/K	
(Ref. temp. 25 °C)	(NLF)	Nat. waters to EN 27888	
(nACL)	NaCl from 0 (ultrapure water) to 26 wt%		(0 ... 120 °C)
(HCL)	Ultrapure water with HCl traces		(0 ... 120 °C)
(nH3)	Ultrapure water with NH3 traces		(0 ... 120 °C)
(nAOH)	Ultrapure water with NaOH traces		(0 ... 120 °C)

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Version 1.1.1 May 1, 2014

Changes/supplements compared to 1.1.0

Sensor model SE 680 (KIM)
Writing data in the sensor was designed to be more robust.

Optimization of device starting behavior
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Fault detection of parameter management
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Response time of flow measurement was reduced

Display of bootloader version
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Changes/supplements compared to 1.0.0

Flow indication
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Knick
Elektronische Messgeräte GmbH & Co. KG
Beuckestraße 22
14163 Berlin
Germany

Phone: +49 30 80191-0
Fax: +49 30 80191-200
Web: www.knick.de
Email: info@knick.de

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Overview of Software Versions as of 20170101