

# SOFTWARE

## SOFTWARE VERSIONS

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### Features

- Instrument monitoring
- Recording of measured values on a PC
- Alarm functions
- Tabular and graphical display of measured values
- Room layout graphic with live measured values
- Instrument configuration
- Programming and data retrieval from data loggers
- Probe calibration and adjustment
- Psychrometric parameters
- Assignable user rights

## HW4

### SOFTWARE EDITIONS

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150



### OVERVIEW OF FUNCTIONS

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151-152

### DESCRIPTION OF FUNCTIONS

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152 -154

## SW21

### OVERVIEW OF FUNCTIONS

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155



## SOFTWARE EDITIONS

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### HW4 LITE

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Visualization of measured values from the compact logger HL-20(D) and HC2-WIN-USB

A maximum of 3 instruments can be connected simultaneously

All functions of the Standard edition

Download at [www.rotronic.com](http://www.rotronic.com)

### HW4 STANDARD

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Single-user applications

Visualization of multiple loggers and measured values

Monitoring (1 instrument at a time), data logger programming, data retrieval, scaling, instrument settings, alarm function, service and configuration tool for ROTRONIC instruments, time synchronization, adjustment and calibration of ROTRONIC probes

No password protection

**Order code: HW4-E-Vx**

### HW4 PROFESSIONAL

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Network applications in the pharmaceutical and food industries

All functions of the Standard edition

Fulfills the requirements for electronic data records and signatures (FDA21 CFR Part 11, Annex 11)

Grouping of devices, graph overlays, printing of reports

**Order code: HW4-P-Vx**

### HW4 PROFESSIONAL WITH WATER ACTIVITY MEASUREMENT

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All functions of the Professional edition

AW Quick function for fast determination of water activity

**Order code: HW4-P-QUICK-Vx**

### HW4 PROFESSIONAL WITH OPC SERVER

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Network applications with integration into the customer's own software tools

All functions of the Professional edition

Contains an OPC server with which the data can be integrated into the customer's own software

**Order code: HW4-P-OPC-Vx**

### HW4 VALIDATED SOFTWARE

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For users subject to regulatory requirements (GxP)

All the functions of HW4 OPC

Includes HW4 e-compliance package

This comprehensive documentation package supports the user in the qualification/validation of HW4-based solutions

**Order code: HW4-VAL-Vx**

### HW4 TRIAL VERSION

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Full functionality of the Professional edition, including OPC functions

Limited trial period of max. 30 days

Download at [www.rotronic.com](http://www.rotronic.com)

## QUALIFICATION / COMPUTERIZED SYSTEM VALIDATION

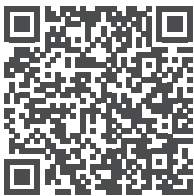
Data integrity and security are of essential importance today. Companies in the pharmaceutical, food, and medical technology industries must prove that their data is measured and managed reliably. For this they require software and devices that can be validated. Combining ROTRONIC HW4-compatible instruments and software, ROTRONIC provides solutions in which validation plays a central role. The instruments and software are validated and compatible with FDA 21 CFR Part 11 (directive of the US Food and Drug Administration, FDA) and GxP.

Function overview						
All versions of HW4 support the HygroLog HL-NT series, HL20, HygroFlex HF3-HF8, HygroLab C1, HygroPalm HP21 to HP23-A and future instruments. You can find a compatibility list at <a href="http://www.rotronic.com">www.rotronic.com</a>						
	Lite	Standard	Professional	Professional with water activity	Professional with OPC server	HW4-VAL
HW4 product key	20 xxx	24 xxx	64 xxx	86 xxx	88 xxx	12 xxx
<b>Viewing of measured values/Monitoring</b>						
Display of measured values on a monitor for multiple instruments		✓	✓	✓	✓	✓
Monitor display of measured values consolidated into groups			✓	✓	✓	✓
ROTRONIC networkable products (RS-485)			✓	✓	✓	✓
<b>Archiving of data</b>						
Automatic saving of the measured data (monitoring)			✓	✓	✓	✓
Simultaneous management of the log settings for instruments in a group			✓	✓	✓	✓
<b>Display of measured values</b>						
Numeric and graphic display	✓	✓	✓	✓	✓	✓
Graphic comparisons and overlay functions			✓	✓	✓	✓
Customer-specific room layout			✓	✓	✓	✓
<b>Analysis and calculation tool</b>						
Psychrometric parameters	✓	✓	✓	✓	✓	✓
Statistics	✓	✓	✓	✓	✓	✓
<b>Printing/Reports</b>						
Automatic generation of adjustment, calibration and configuration reports			✓	✓	✓	✓
Printout as table or graph	✓	✓	✓	✓	✓	✓
<b>Users and passwords</b>						
Password protection			✓	✓	✓	✓
User names and rights freely definable			✓	✓	✓	✓
<b>Alarms</b>						
Visual display of active alarms	✓	✓	✓	✓	✓	✓
Alarm via email, SMS, relay, report printout			✓	✓	✓	✓
Flexible programming of alarm priority possible for every instrument			✓	✓	✓	✓
<b>OPC server (OLE for Process Control)</b>						
Server client functions					✓	✓
<b>Electronic record, electronic signature, audit trail</b>						
Logging of all HW4 user events & automatic generation of reports			✓	✓	✓	✓
Data integrity guaranteed at all times			✓	✓	✓	✓

## Function overview

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You can find a compatibility list at [www.rotronic.com](http://www.rotronic.com)

	Lite	Standard	Professional	Professional with water activity	Professional with OPC server	HW4-VAL
<b>HW4 product key</b>	20 xxx	24 xxx	64 xxx	86 xxx	88 xxx	12 xxx
<b>Standards, laws, directives, instructions</b>						
US FDA: 21 CFR 11			✓	✓	✓	✓
US FDA: 21 CFR 210-211, Drugs and 21 CFR 110, Human Food			✓	✓	✓	✓
EU Guidelines of good manufacturing practice of medicinal products			✓	✓	✓	✓
EU Annex 11 to the EU Guidelines of Good manufacturing practice of medicinal products			✓	✓	✓	✓
<b>Validation</b>						
System Qualification Guide CD (only in English)						✓
<b>Water activity measurement</b>						
AwQuick and AwE				✓		✓
<b>Supported interfaces</b>						
RS-232, USB, Ethernet, WLAN	✓	✓	✓	✓	✓	✓
RS-485			✓	✓	✓	✓
<b>Instrument-specific functions</b>						
Instrument settings, scaling, programming, data retrieval, data logging function	✓	✓	✓	✓	✓	✓
Adjustment and calibration of ROTRONIC probes	✓	✓	✓	✓	✓	✓
Simultaneous adjustment of probes in one group			✓	✓	✓	✓
Time synchronization for HygroLog NT Data Loggers		✓	✓	✓	✓	✓
<b>Supported operating systems</b>						
Microsoft Windows XP Service Pack 2, Vista, Windows 7, Windows 8	✓	✓	✓	✓	✓	✓



## FUNCTIONS

### VIEWING OF MEASURED VALUES/MONITORING

Viewing of measured values is very easy and user-friendly. Data files for any device shown in the device tree can be copied and opened directly with the HW4 explorer. The data is presented in table or graphical formats.

The graph module can be configured by the user.



## ROOM LAYOUT

For clear presentation of the measured values, the room layout of the building or machine can be stored within the HW4 software.

Drawings and images can be imported in BMP or JPG format. Once the room layout has been imported, the probes can be placed in the room layout and their measured values shown.

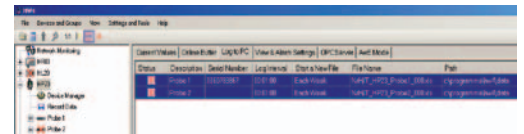


## ARCHIVING OF DATA/FILE FORMATS

The data can be written automatically to different files.

For example, the user can configure the system to create a new file every day, every week or every month.

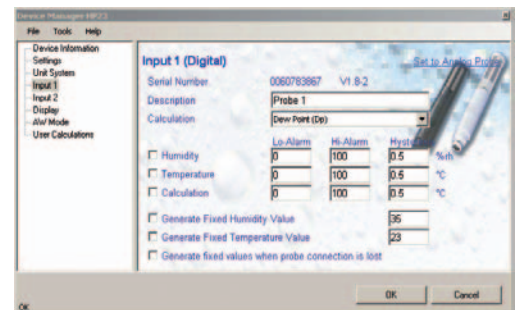
The file formats can be defined by the user. The formats .xls and .log are available for log files. The .log format saves the data in a binary format that can only be read by HW4, while the .xls format can be opened with an editor or Excel. The data can also be exported in other formats.



## INSTRUMENT CONFIGURATION

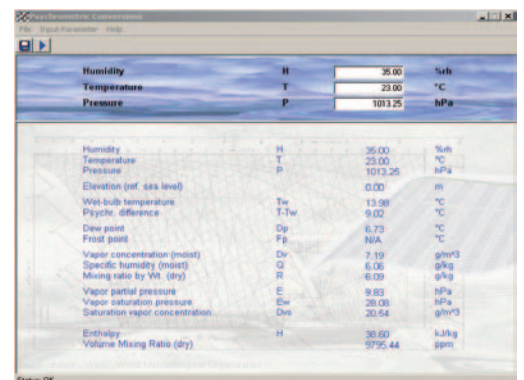
The HW4 software can be used to adjust the settings of ROTRONIC instruments and probes. Depending on the instrument and probe, the following functions and settings can be changed:

- Assignment and scaling of transmitter outputs
- Definition of alarm values
- Relay switch points
- Adjustment and calibration of probes

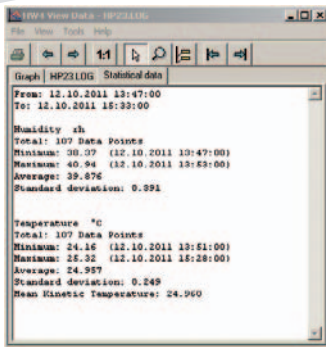


## ANALYSIS AND CALCULATION TOOL PSYCHROMETRIC PARAMETERS

All ROTRONIC instruments measure relative humidity and temperature. These two values can be used to calculate other psychrometric values such as dew point, mixing ratio, enthalpy and wet bulb temperature. The calculation module in HW4 software uses WMO\*-verified formulas for these calculations and allows users to define their own parameters (e.g. mixing ratio & temperature) as input values in order to calculate the relative humidity from them. Other advanced options such as dew/frost point differentiation are also included.



\* WMO = World Meteorological Organisation



## STATISTICAL FUNCTIONS

For many users detailed data, which can be very extensive, is not necessarily of much interest. For them it is merely important that the measured values lie within a certain range. This is the role of the statistical function.

It shows the following values:

- min., max. and mean value (during a defined period or during the time of an alarm)
- standard deviation
- mean kinetic temperature
- number of measured values
- total time measurements exceeded a certain value

User name: Paul  
 User description: Operator  
 Password valid until: [REDACTED]  
 Password: [REDACTED]  
 Confirm password: [REDACTED]

User Rights

- Manage user accounts
- Add / remove devices
- HW4 global settings and view settings
- Log-to-PC function
- Change OPC settings
- Device configuration / log function
- Adjust probes
- Acknowledge alarms
- Read / Copy / Sign files
- Delete Mes

Add Exit

## USERS AND PASSWORDS

User names and passwords can be defined and assigned freely.

Every user can be granted different rights. Users can be blocked and reactivated again. Users that have been deleted cannot be recreated under the same name.

Global Alarm Settings

Device Assignment

Triggers

- HW4 Software 1
- Default Trigger 1

Limit

- Limit Set 1
- Processing 1
- Processing 2

Actions

- Actions 1

Global Alarm Settings

Archive Alarm Records after (Months): 3

Archive File Size Limit: 10000

Run Control Timeout (min): 15

Test Alarm Interval (Hours): 24

Test Alarm

Email Settings

- HTTP Requires MS Outlook
- SMTP [example@corp.com]

User Name: [REDACTED] Username: [REDACTED]

Password: [REDACTED]

Test Email

OK Cancel Help

## ALARMS

In monitoring mode HW4 can trigger an alarm when certain events occur. Such an event can be when a device or a file storage path is not available, when measured values lie outside defined limits or when a data logger sends an error message. The following actions can be carried out when an alarm occurs:

- reporting of the alarm on the screen
- sending of emails
- switching of relays
- starting of applications

Enabled Tag	Tag Group Name	Tag Group Description
<input type="checkbox"/>	DeviceInfo	Device information tags
<input type="checkbox"/>	MeasuringInfos	Data tags
<input checked="" type="checkbox"/>	Alert	Alarm tags (device condition, out of limits values and software errors)

## OPC SERVER (OBJECT LINKING AND EMBEDDING FOR PROCESS CONTROL)

HW4-OPC contains an OPC server with which the measured values can be integrated into the customer's own software.