



**SCHMIDT
HAENSCH**
innovators by tradition since 1864

VariFamily –
Compact family of laboratory measuring instruments
for the pharmaceutical, cosmetic and food industry



The VariFamily

connected, compact, modular

VariRef
Refractometer



VariDens
Density Meter



VariPol
Polarimeter



Software Aquisys 3
unified user interface



Applications

**Quality control, Incoming goods inspection, Synthesis,
Research & Development**



Polarimeter

Optically active substances, cannabis, sugar,
pharmaceutical API's, essential oils

Refractometer

Sugar, incoming goods inspection of raw materials, organic solvents

Density meter

Ready-to-use solutions, organic solvents, beer and other food products



Compliant with international standards and 21 CFR part 11

VariPol - Polarimeter



Smart Accessories

Various tubes – easy to fill and clean

Temperature monitoring directly in the tube

Quartz plates – traceable to PTB standards

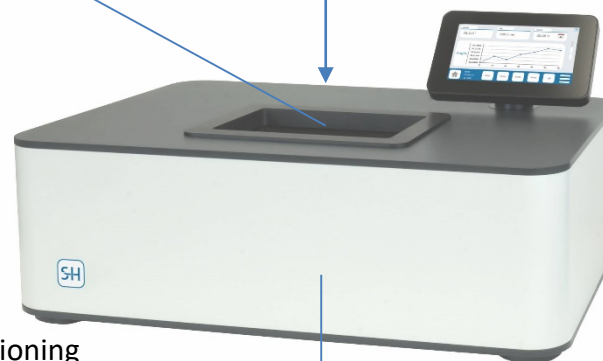


Unique Sample Room

Easy cleaning due to seamless design

Perfectly parallel lightpath

Good chemical resistance



Touch Display (Optional)

Easy cleaning

Easy to replace

Ergonomic operation

RapidTemp®

Extremely fast temperature conditioning

High temperature stability

Application examples:

Quality control of substances, e.g. lactose, sucrose, dextrose, starch

Purity measurement, e.g. of alkaloids, amino acids, organic compounds, essential oils

Research of Active Pharmaceutical Ingredients (API)

VariRef - Refractometer



Smart Sample Room

Easy and fast cleaning
High sample throughput



Solutions for various sample types

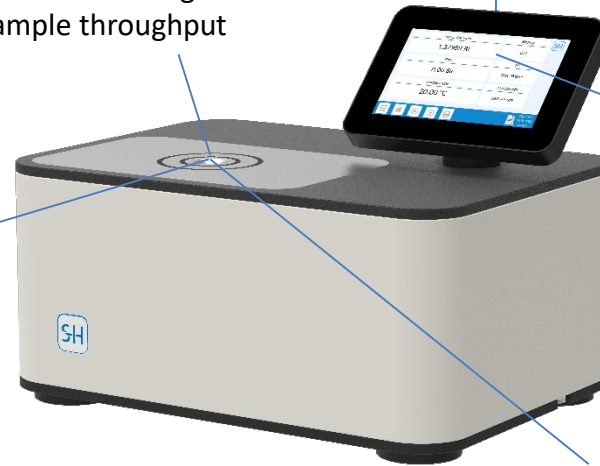
Various sample covers
(Hatches: standard, solid sample, flow-through, small volume)
Usable with sticky, hard-to-remove material
Good chemical resistance

Touch Display (Optional)

Easy cleaning
Easy to replace
Ergonomic operation

Scales

Programmable



RapidTemp®

Extremely fast temperature conditioning
High temperature stability

Application examples:

Sugar, incoming goods inspection of raw materials, organic solvents

VariDens – Density Meter



Visual Control

Inspection window for filling control

Touch Display (Optional)

Easy cleaning
Easy to replace
Ergonomic operation



RapidTemp®

Extremely fast temperature conditioning
High temperature stability

Easy Sample Supply

Standard Luer system
Small sample volumes
Easy cleaning

Application examples:

Ready-to-use solutions, organic solvents, beer and other food products

Aquisys 3 Software – Unified User Interface

Connectivity

Operation in network and via internet
Mobile use on smartphones, tablets



Multi User Concept

Multiple users in parallel on the device
Parallel measuring and data viewing/reporting

Creativity

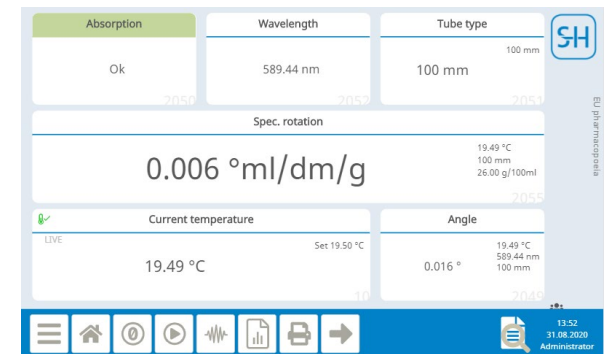
Copy and adapt pre-installed methods
Create your own methods
Programmable Widgets with graphical design
Adjustable traffic light functionality, e.g. for measuring values

Export Capability

Storage of reports, audit log
in various formats
Storage in network or via USB stick

Reporting

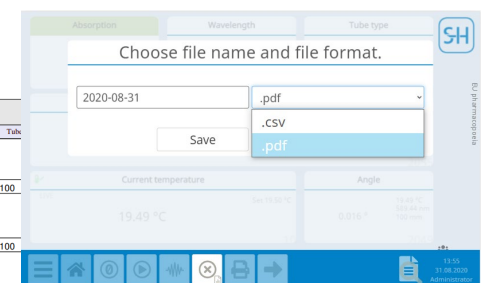
Settings for report design



SCHMIDT + HAENSCH GmbH & Co. Waldstraße 80/81, 13403 Berlin Deutschland

Serial No. : 40774
Method : EU pharmacopoeia

| Measurement results | | | | | | |
|----------------------------|-------|------------|----------|--------------------------|----------------|------|
| Date | Time | Absorption | Angle(°) | Measured temperature(°C) | Wavelength(nm) | Tube |
| Batch ID: ID083120115238p | | | | | | |
| Conducted by: admin | | | | | | |
| Sample ID: ID083120115238q | | | | | | |
| 31.08.2020 | 13:52 | 0.0 | -0.001 | 19.49 | 589.44 | 100 |
| Batch ID: ID083120115309r | | | | | | |
| Conducted by: admin | | | | | | |
| Sample ID: ID083120115309b | | | | | | |
| 31.08.2020 | 13:53 | 0.0 | 0.016 | 19.49 | 589.44 | 100 |
| Mean value | | 0.008 | 19.49 | 589.44 | | |
| Standard Deviation | | 0.009 | 0.00 | 0.00 | | |



Aquisys 3 Software – 21 CFR Part 11 Conformity of the Software

| Measurement data | | | |
|------------------|---------|-----------------|-----------------|
| 25.08.2020 16:42 | | ID082520144257y | Advanced |
| Sample ID | Brix[%] | RI | Sample ID |
| ID082520144257c | -0.00 | 1.33300 | - |
| ID082520144257c | -0.00 | 1.33300 | - |
| ID082520144257c | -0.00 | 1.33300 | - |
| ID082520144257c | 0.00 | 1.33300 | ID082520144257c |
| 25.08.2020 16:42 | | ID082520144255b | Advanced |
| Sample ID | Brix[%] | RI | Sample ID |
| ID082520144255q | -0.00 | 1.33300 | ID082520144255q |
| 25.08.2020 16:42 | | ID082520144253o | Advanced |
| Sample ID | Brix[%] | RI | Sample ID |
| ID082520144253h | -0.00 | 1.33300 | ID082520144253h |

Database

Digital storage of all measurements
Up to approx. 10 years

Data Archive

Tamper-proof backups

Integrated Statistical Analysis

Auditlog

Storage of relevant processes on the system
with timestamp and User ID or system identification
Export as a file

User Management

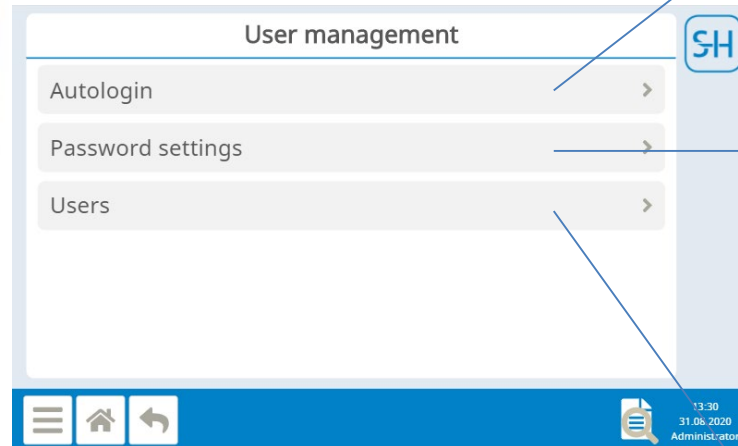
Access management via authorization levels
User administration through profiles
Password security

| Audit log | | | |
|------------|-------|--|--------|
| Date | Time | Message | User |
| 31.08.2020 | 13:24 | i User logged in: admin | System |
| 27.08.2020 | 12:15 | i User logged in: admin | System |
| 26.08.2020 | 17:07 | i User logged out: admin | System |
| 26.08.2020 | 14:30 | i Configuration stored. | System |
| 26.08.2020 | 14:30 | i Configuration changed. | admin |
| 26.08.2020 | 14:30 | i Language changed to: English->admin | System |
| 26.08.2020 | 14:30 | i Configuration value change. User langua... | admin |
| 26.08.2020 | 14:02 | i Configuration stored. | System |
| 26.08.2020 | 14:02 | i Configuration changed. | admin |
| 26.08.2020 | 14:01 | i Language changed to: Deutsch->admin | System |
| 26.08.2020 | 14:01 | i Configuration value change. User langua... | admin |

Aquisys 3 Software – 21 CFR Part 11 Conform User Management

Access Control

No Autologin in 21 CFR Part 11 Mode
Only authorized persons have access

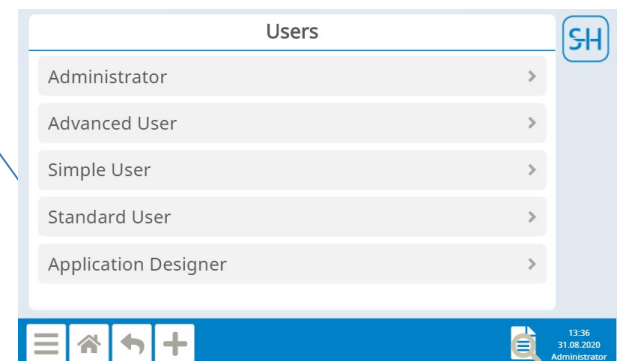
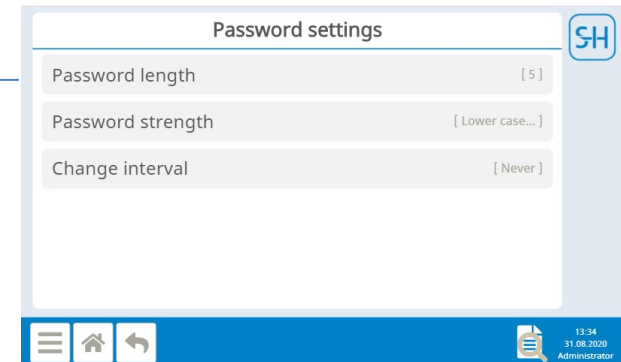
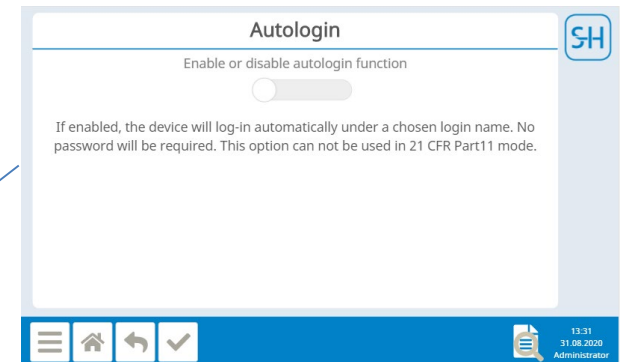


Individually adjustable password criteria

Administrator defines password length,
password strength and change interval

User administration via profiles

Administrator manages users
Assignment of authorization levels



Aquisys 3 Software – 21 CFR Part 11 Conform User Management

Permission level

Access level < Standard user >

Access level - 100 +

- ✓ see shared methods
- ✓ use shared methods and sequences
- ✓ change widget parameters

1/2

Permission levels

Linear system of user rights

Clear structure with simultaneous flexibility

| Access level (description) | Simple viewer | Simple user | Standard user | Advanced user | Application designer | IT administrator | Laboratory administrator |
|----------------------------------|---------------|-------------|---------------|---------------|----------------------|------------------|--------------------------|
| Access level (between 0 and 200) | 0 | 50 | 100 | 125 | 150 | 175 | 200 |
| see shared methods | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| use shared methods and sequences | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| change widget parameters | x | x | ✓ | ✓ | ✓ | ✓ | ✓ |
| use default methods | x | x | ✓ | ✓ | ✓ | ✓ | ✓ |
| simple dataviewer access | x | x | ✓ | ✓ | ✓ | ✓ | ✓ |
| create own methods and sequences | x | x | x | ✓ | ✓ | ✓ | ✓ |
| share own methods and sequences | x | x | x | ✓ | ✓ | ✓ | ✓ |
| full dataviewer access | x | x | x | ✓ | ✓ | ✓ | ✓ |
| create user backups | x | x | x | ✓ | ✓ | ✓ | ✓ |
| access to Auditlog | x | x | x | ✓ | ✓ | ✓ | ✓ |
| create, modify and test scales | x | x | x | x | ✓ | ✓ | ✓ |
| change system settings | x | x | x | x | x | ✓ | ✓ |
| install updates | x | x | x | x | x | ✓ | ✓ |
| install user level backups | x | x | x | x | x | ✓ | ✓ |
| manage user accounts | x | x | x | x | x | x | ✓ |
| change device settings | x | x | x | x | x | x | ✓ |



**SCHMIDT
HAENSCH**
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