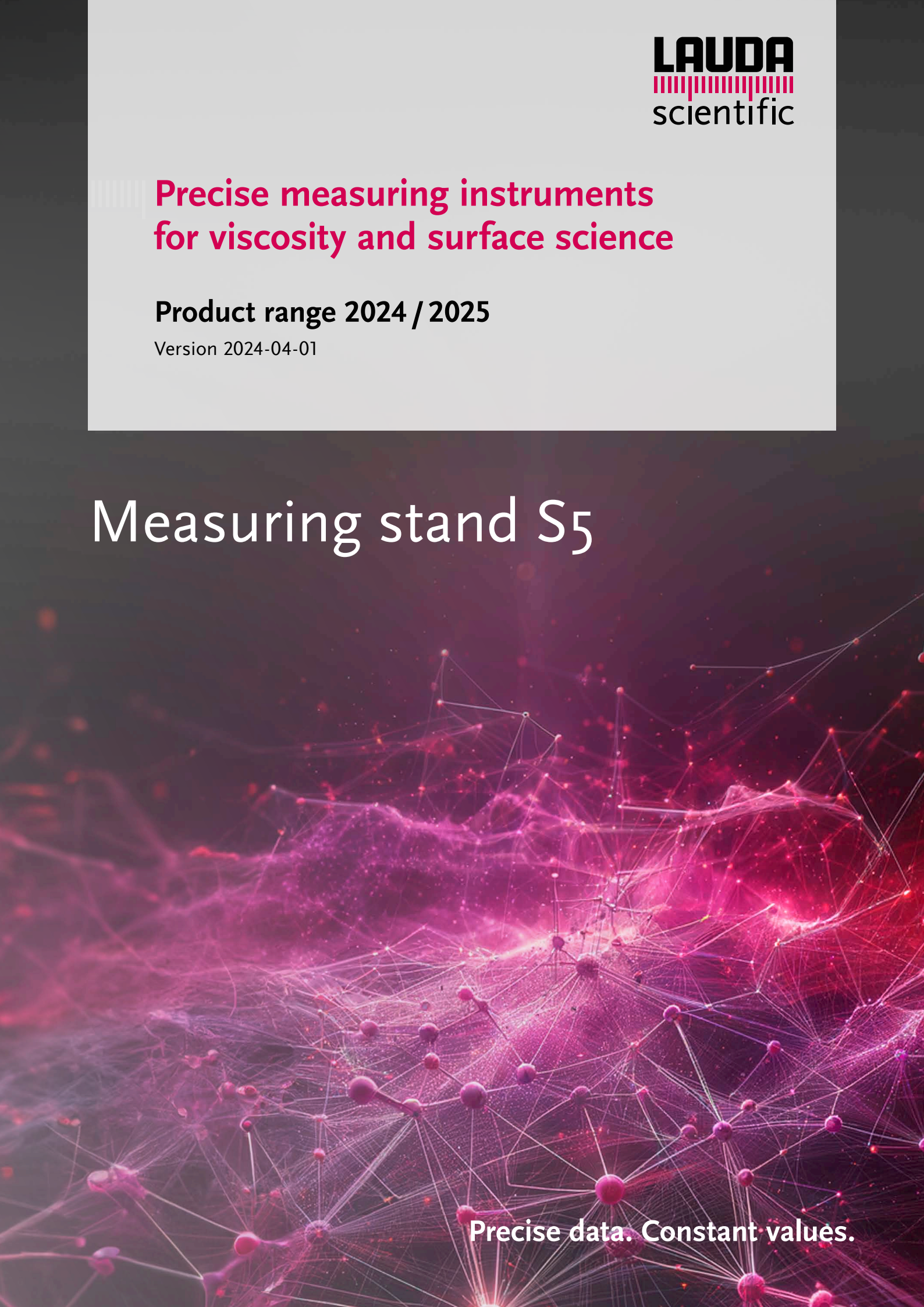
LAUDA scientific

# Precise measuring instruments for viscosity and surface science

## Product range 2024 / 2025

Version 2024-04-01

# Measuring stand S5



Precise data. Constant values.

# Measuring stand S5

The S5 is the key part of the PVS system. Its head is comprised of the opto-electronic meniscus detectors as well as the entire control of the measuring process including miniature pump and valves. The accuracy and resolution of the light sensor measurement system is among the best of its class. The robust micro-pump for pushing the sample up into the capillary well as the chemical-resistant valves in the head of the stand allows reliable and continuous operation.

## Special Features:

- Completely micro-processor controlled for a highly precise time measurement
- Adaptive infrared (NIR) detection
- Short tubing to the viscometer
- For (Micro-) Ubbelohde, Cannon-Fenske-Routine and Micro-Ostwald capillaries

## Scope of supply:

- Measuring stand S5
- Connection cable
- Set of viton connection caps
- Tubing

## Not included:

- Control unit PVS Box
- Measuring software
- Viscometer capillaries

| Technical data | S5 stand (LMVZ948) |
|---|---|
| Sample temperature range | -65...160 °C |
| Time measurement range | 0...9,999.99 s |
| Recommended measurement range of flow time | 30...1,000 s |
| Viscosity range | 0.3...50,000 $mm^2/s$ |
| Resolution of time measurement | 0.01 s |
| Meniscus detection | Optical (infrared) |
| Light sensor control | Digital (µP) |
| Dimensions (W x D x H) | 90 x 90 x 500 mm |
| Weight, net | 4.5 kg |

# Accessories for S5 stand

**UG 003** **Viscometer frame**
For better handling of Ubbelohde/Micro-Ubbelohde capillaries

**UG 094** **Viscometer frame**
For better handling of Micro-Ostwald capillaries

**EZ 054** **Viscometer holder**
For 2-legged glass capillaries (Cannon-Fenske and Micro-Ostwald)

**HKB 532** **Adapter**
To fix Micro-Ubbelohde capillaries in the S5/iVisc stand

**HKB 532**

# PVS Control unit


The PVS control unit is the core of the system as well as the switching station between the PC and individual components. It can be equipped with up to four plug-in boards depending on the configuration (up to 8 S5 stands, up to 4 VRM modules, up to 4 MT dosing systems and 4 motor locks on the VAS auto-sampler systems).

**LMV 812** Control unit PVS 1/2
For 2 measuring stands

**LMV 813** Control unit PVS 1/4
For 4 measuring stands

**LMV 814** Control unit PVS 1/6
For 6 measuring stands

**LMV 815** Control unit PVS 1/8
For 8 measuring stands

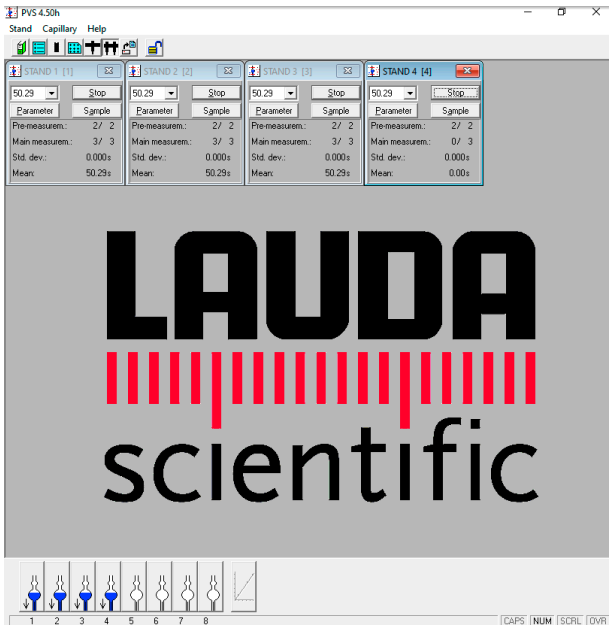
## Scope of supply:

- Control unit PVS Box
- Measuring software
- RS 232 connection cable
- Power cable (Schuko/EU)

## Note:

Each PVS control unit can be upgraded up to max. 8 measuring stands. This number can be lower when using additional options (e.g. dilution systems, Autosampler etc.).

| Technical data | Control unit PVS Box |
|---|---|
| Interface to the PC | RS 232 C |
| Dimensions (W x D x H) | 340 x 270 x 105 mm |
| Weight, net | 4.6 kg |
| Ambient temperature | 10...45 °C |
| Total power consumption | 100 W |
| Compatible Windows versions | 7, 8, 8.1, 10, 11 |

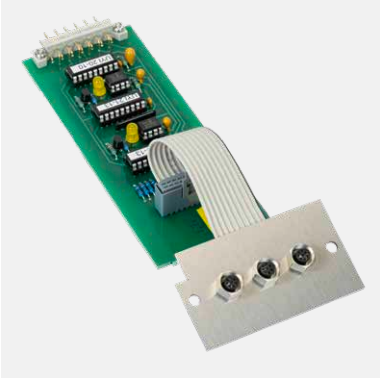



## Software based on Windows

All PVS system configurations are controlled by the PVS software. The high-performance and user-friendly PVS software controls the measurement, the cleaning and the calculation of the intrinsic, kinematic, dynamic, relative, reduced and inherent viscosity and the K-value. Further material properties can be determined using additional software modules.

The measuring results and evaluations can be printed out and saved in a file in ASCII format. The measurements report logs all measuring data of a day in chronological order and saves them in a file marked with the day's date. This data can be viewed at all times which means that consistent documentation is guaranteed. Further processing in other programs like MS Excel and in other networks is possible.

# Accessories for control unit PVS Box



**LMVZ930**


**SDE 998-7**


**LRZ 913**

**LMVZ930** **2-place plug-in unit ME 2**
For additional 2 measuring stands and one additional VRM module

## Viscosity software support services

**SDE 998-2** **PVS software upgrade to Windows 10/11**
Upgrade from an earlier Microsoft Windows version (Windows 7, 8, 8.1) to the latest version, upgrade from older version on request

**SDE 998-3** **PVS data transfer**
Individualized installation file for Microsoft Windows 10/11, incl. methods and data from an already existing system (backup)

**SDE 998-4** **PVS-LIMS implementation standard**
**Standard** development service for connecting the PVS software to existing database systems via ASCII data storage

**SDE 998-5** **PVS-LIMS implementation individual**
**Individual** development service for connecting the PVS software to existing database systems e.g. SAP, Oracle, MS-SQL, MS-Access etc.

**SDE 998-7** **PVS support module "21 CFR part 11"**
This module of our PVS software supports you in implementing the requirements of 21 CFR Part 11 for your LAUDA Scietific viscosity measurement system.

**Including:**

- Password-controlled 4-level user registration and the cryptic data storage.
- IQ / OQ documentation template for viscometry tests

## Application software

**LDVM2017** **PVS software module ENZ-DLL**
For determination of enzyme activity

**LDVM2023** **PVS software module TEMP-DLL**
For software control of LAUDA thermostats, incl. USB- and RS 232 connection cable, requires an LAUDA thermostat with RS 232/585 interface (LRZ 913)

**LRZ 913** **RS 232/485 Interface for viscothermostats**
Plug-in module to upgrade a LAUDA Scientfic viscothermostat with a RS 232/485 interface

05-430-en-05 2024-04



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