



OMNIS Titrator

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CAN
TRUST

Metrohm
means ...
Spectroscopy!



 **Metrohm**

OMNIS – titration on a whole new level

The OMNIS Titrator is the heart of the modular OMNIS Titration Platform. Dosing with a resolution of 100,000 steps for higher precision, an optimized titration algorithm for faster results, fully digital sensors with a lower signal/noise ratio and a unique, patented system for faster and safer reagent exchange – the OMNIS Titrator is the new benchmark in titration.

SCALE UP PERFORMANCE AS YOU NEED

Instead of buying another instrument, simply expand your OMNIS Titrator when you need to. You can connect and control up to four additional burets and eight additional measuring inputs with your OMNIS Titrator! Likewise, you can always license additional measuring modes so you can also perform, e.g., photometric, conductometric, volumetric Karl Fischer, or thermometric titrations with your OMNIS Titrator!

NO RISK OF CONTACT WITH REAGENTS

Simply connect the OMNIS Liquid Adapter to the reagent bottle – that's how safe and easy it is to exchange reagents is with OMNIS! This patented system eliminates the risk of coming into contact with toxic reagents.

OMNIS BURET DRIVE AND CYLINDER UNIT

Achieve superior accuracy of results due to dosing with a resolution of 100,000 steps. The OMNIS cylinder unit with four dosing ports offers more Liquid Handling options and a fully automated rinsing of the glass cylinder.

FULLY DIGITAL SENSORS

The «dTrode» electrode family offers maximum performance with maximum traceability. The fully digital electrodes convince with a lower signal/noise ratio which leads to faster titration and better reproducibility. Thanks to integrated data chip all sensor and calibration information is stored on the sensor and recorded with every titration.

TWO STIRRING OPTIONS

Depending on the application a magnetic or propeller stirrer can be chosen – for both, the stirring speed can not only be defined in the software, but also manually at the push of a button at the front of the titrator.



Licensing model for the OMNIS Titrator – start from a dedicated license package and add additional capabilities whenever you need them.

| License Package | Thermometric Titrator | Conductometric Titrator | Basic Titrator | Potentiometric Titrator | Advanced Titrator | Professional Titrator |
|-------------------------------|-----------------------|-------------------------|----------------|-------------------------|-------------------|-----------------------|
| U / T / pH Measurement | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ion Measurement | opt. | opt. | ✓ | opt. | ✓ | ✓ |
| Conductivity Measurement | opt. | ✓ | opt. | opt. | opt. | opt. |
| Titration with external buret | opt. | opt. | ✓ | opt. | ✓ | ✓ |
| Liquid Handling | opt. | opt. | ✓ | opt. | ✓ | ✓ |
| Fix-endpoint Titration (SET) | opt. | opt. | ✓* | ✓* | ✓ | ✓ |
| Monotonic Titration (MET) | opt. | ✓ | opt. | ✓ | ✓ | ✓ |
| Dynamic Titration (DET) | opt. | opt. | opt. | ✓ | ✓ | ✓ |
| Karl-Fischer Titration | opt. | opt. | opt. | opt. | opt. | opt. |
| Thermometric Titration | ✓ | opt. | opt. | opt. | opt. | opt. |
| Two parallel titrations | opt. | opt. | opt. | opt. | opt. | n/a |
| Five parallel titrations | opt. | opt. | opt. | opt. | opt. | ✓ |

opt. = optional, * Fix-endpoint titration without conditioning

With OMNIS, titration is safer and smarter than ever



Safer – the OMNIS Liquid Adapter

Exchanging reagents always poses a certain risk because accidental contact with hazardous liquids cannot be excluded entirely. To minimize this risk, we developed the OMNIS Liquid Adapter. This feature provides for a safe and simple connection of the reagent bottle to your OMNIS Titrator and prevents any risk of accidental contact with the liquid in the bottle when changing the reagent.

Once the OMNIS Liquid Adapter and the reagent bottle are connected, OMNIS identifies the reagent and transfers this information to the software for complete traceability of your analysis. This feature is based on RFID technology and prevents user errors.



Maximum safety for your Karl Fischer Titration

No other KF titration system offers you the same level of user safety. Karl Fischer titration with OMNIS is also more convenient than with any other comparable solution as hardly any manual steps are required from the user:

- Once you have injected the sample, the titration starts automatically
- After the measurement, the titrated sample is disposed of automatically
- Finally, the titration cell is automatically prepared for the next determination

Automatic titration start

The OMNIS KF Titrator reduces the risk of human error to almost zero as it starts the titration automatically after the sample addition – no further manual steps required.

New KF titration cell

The OMNIS KF Titration cell with screw-cap closure guarantees an air-tight closure and a comfortable exchange of the titration vessel.

OMNIS Solvent Module

For contact-free exchange of the solvent (at the push of a button or automatically) after the titration.



The OMNIS Titration System – modular by design

A TYPICAL UPGRADE PATH COULD LOOK LIKE THIS:

1
Start with the OMNIS Titrator with magnetic stirrer and Measuring Module analog for Karl Fischer titration.

2
Add the OMNIS Solvent Module for more comfort and safer solvent handling.

3
Upgrade your OMNIS Titrator with an additional Measuring Module Digital and a Dosing Module with magnetic stirrer for a potentiometric pH titration.

4
For a further titrations, connect an OMNIS Titration Module with magnetic stirrer and a measuring module for further applications.



OMNIS ROD STIRRER

- Connection to OMNIS Titrator and Sample Robot
- Various stirring propellers for different beaker dimensions



OMNIS CYLINDER UNIT

- Optional volumes: 2, 5, 10, 20 and 50 mL
- Special version available for extended lifetime when used with strongly crystallizing reagents



MODULARITY ON A WHOLE NEW LEVEL

OMNIS allows you to consolidate your titration applications on one platform. OMNIS features various customization and automation options and ensures efficient and safe titrations. Instead of buying another instrument, you can customize your titration system with additional OMNIS Titration Modules and OMNIS Dosing Modules to perform up to five parallel titrations. You can connect and control up to four additional burets and eight additional measuring inputs with your OMNIS Titrator!

OMNIS TITRATOR

- The main unit of every OMNIS Titration system
- With or without magnetic stirrer / titration stand
- two slots for measuring interfaces
- Connects up to four OMNIS Titration or Dosing Modules or Rod Stirrers in total
- Modular license packages for titration modes

OMNIS SOLVENT MODULE

- Manual or software controlled solvent handling for e.g., Karl-Fischer Titration
- Programmable control buttons for more user comfort

OMNIS DOSING MODULE

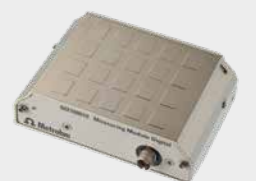
- Expands your OMNIS Titration System with additional buret and titration stand
- With or without magnetic stirrer / titration stand

OMNIS TITRATION MODULE

- Expands your OMNIS Titrator with additional buret, titration stand and measuring interfaces
- With or without magnetic stirrer / titration stand
- Two additional slots for measuring interfaces

MEASURING MODULE

- Measuring interfaces for OMNIS Titrator and OMNIS Titration Module
- Measuring Module Digital for intelligent electrodes "dTrodes"
- Measuring Module Analog for analog electrodes or KF Titration
- Measuring Module Conductivity for conductivity measurement / titration



TECHNICAL SPECIFICATIONS

| | |
|---|--|
| Measuring and Titration Modes (modular) | MEAS for pH / U / T measurement MEAS CONC for direct ion measurement STDADD for ion measurement using standard addition MEAS COND for conductivity measurement DET for dynamic equivalence-point titration MET for monotonic equivalence-point titration SET for titration to a preset endpoint with automatic conditioning KFV for volumetric Karl Fischer titration with automatic titration start after sample addition MET COND for conductometric titration TET for thermometric titration |
| Dosing elements | 1 integrated dosing drive with 100,000 dosing steps per cylinder volume |
| Attachment of additional dosing elements | Up to 4 additional Titration or Dosing Modules |
| Maximum number of parallel titrations per OMNIS Titrator | 5 |
| Intelligent cylinder units with integrated data chip | Yes, available volumes: 2, 5, 10, 20, or 50 mL |
| OMNIS Liquid Adapter with 3S Technology for contact-free reagent exchange | Yes |
| Digital electrodes «dTrodes» | Yes |
| Stirrers | Magnetic or Rod Stirrer |
| Measuring interfaces | Maximum 10 measuring interfaces Up to two measuring interfaces digital, analog or conductivity per OMNIS Titrator or OMNIS Titration Module |
| Measuring range U / resolution | ± 2.400 mV / 1.56 μ V |
| Measuring range T / resolution | -150 °C to $+250$ °C / 0.002 °C (Pt1000) |
| Polarization current | -200.0 μ A to $+200.0$ μ A (in 0.5 μ A steps) |
| Measuring range Conductivity / resolution | 0.1 μ S– $1,000$ mS / 4 significant digits |
| Measuring interval | 100 mS |
| Differential amplifier | With OMNIS Measuring Module Analog |
| Automation options | OMNIS Sample Robot S, M, or L for up to 175 samples and 4 parallel titrations |
| Fixed endpoint evaluation | Maximum 9 fixed endpoints |
| Break point evaluation (photometry) | Yes |
| Operation | Software (via LAN / Ethernet connection) |
| Dialog languages | English, Chinese, German, Japanese, French, Spanish, Korean, Portuguese |
| Attachment of barcode reader, third-party devices | Via computer / RS232 |
| Balance connection | RS232 / Ethernet |
| Report options | PDF / print |

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