

One Click® Density Measurement with Built-in Quality Control



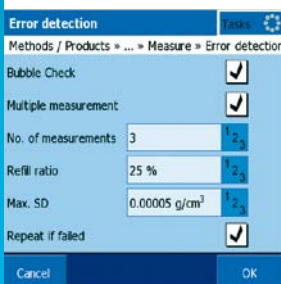
One Click® operation

Measure your products with One Click! The color touchscreen allows quick, simple and direct access to all routine tasks utilizing shortcut buttons to start routine tasks immediately. Every operator has a personalized home screen with shortcuts and his own operation language.



Immediate QC results

For each product lower and upper result limits can be defined. Measured products are automatically verified with the limits, and the color of the result(s) indicates if specifications are met: black = passed, red = failed. Results can be displayed in density, specific gravity, %Alcohol, Brix, API or user-defined concentrations.



Smart error detection

Most measuring errors due to air bubbles, remaining rinsing liquids and faulty adjustments are eliminated due to comprehensive test and error detection capabilities, such as the Bubble Check™, automatic multiple measurement with evaluation and automatic cell test.



LiquiPhysics™ Excellence

The straight way to reliable results

- Product database: no methods to select and no results to judge – just One Click on the product shortcut
- Automatic error detection
- Powerful automation even for viscous and difficult samples (e.g. honey, paraffin)
- Tailored measuring procedures even for very particular needs thanks to flexible method structure, conditions, formula editor and user tables
- Full SOP user guidance
- Simultaneous determination of refractive index, density, pH/conductivity and color
- Advanced user management including biometric instrument protection
- LabX® PC Software: ERP/LIMS connectivity, result database, customized reports, secure traceability and 21 CFR 11 support



Modular system

Multiple parameters with One Click: a stand-alone DM Density Meter can be easily customized and upgraded to measure several parameters simultaneously (density, refractive index, pH/conductivity and color). Sampling, cleaning and drying of the whole system is done completely automatically with the powerful SC automation units.

Specifications

	DM40	DM45 DeltaRange™	DM50
Measuring range	0–3 g/cm ³	0–3 g/cm ³	0–3 g/cm ³
Resolution	0.0001 g/cm ³	0.00001 g/cm ³	0.00001 g/cm ³
Repeatability (S.D. n = 10)	0.00005 g/cm ³ 0.03 °Brix 0.1% v/v Alcohol	0.000005 g/cm ³ 0.015 °Brix 0.01% v/v Alcohol	0.000005 g/cm ³ 0.003 °Brix 0.01% v/v Alcohol
Limit of error	0.0001 g/cm ³ 0.03 °Brix 0.1% v/v Alcohol	0.00002 g/cm ³ (0.7–1 g/cm ³ Measuring Range) 0.00005 g/cm ³ (0–3 g/cm ³ Measuring Range) 0.02 °Brix 0.02% v/v Alcohol	0.00002 g/cm ³ (0–1 g/cm ³ Measuring Range) 0.00003 g/cm ³ (1–2 g/cm ³ Measuring Range) 0.006 °Brix 0.02% v/v Alcohol
Temperature range	0–91 °C	0–91 °C	0–91 °C
Limit of error temperature	0.05 °C (10–30 °C) 0.10 °C (0–91 °C)	0.02 °C (15–20 °C) 0.05 °C (0–91 °C)	0.02 °C (10–30 °C) 0.05 °C (0–91 °C)

Thermostat	2 built-in Peltier thermostats
Viscosity correction	Yes
Automatic error detection	Bubble Check™, verification of stored product limits, multiple measurement with definable max. S.D.
Built-in result units / concentration tables	Specific gravity, light and heavy Baumé, Twaddell Sugar: Plato, Brix (Emmerich, NBS 113), HFCS 42/55, Invert Sugar, KMW, Oechsle, Babo Alcohol: OIML, AOAC, Proof Degree, HM C&E, Gay Lussac Petro: API degrees and gravity tables for crude oils, refined products and lubricants Up to 30 user-defined concentration tables (can be entered as tables or formulas)
Minimal sample volume	Approx. 1.2 mL
Materials	In contact with sample: borosilicate glass, PTFE, PP (syringe adaptor)
Dimensions and weight	272 x 385 x 215 mm / 10.70 x 15.16 x 8.46 in (W x L x H). 13.53 kg / 29.83 lbs

User Management

Number of users	30 (to each user a role with different rights can be assigned)
Languages	en, de, fr, it, es, pt, zh, ru (can be set individually for each user)
Shortcuts	8 (individually for each user) for One Click® start of measurements, adjustments, tests etc.
Password protection	Yes. Also biometric protection possible with LogStraight™ fingerprint reader

Data Handling

Printer	Compact strip printer USB P-25, lightfast paper (normal or adhesive)
Results export	Automatic or manual export to USB stick (CSV), export to RS-232 (XML), LabX® LiquiPhysics: automatic storage in database and optional LIMS / ERP export
Import / export	Share between instruments: Methods, Products, Tables, User Management etc.

Automation / Pumps

Drying pump	DryPal™ (to dry measuring cell if no SC1 or SC30 is used)
Sampling pump	FillPal™ Food (aqueous products), FillPal™ Chem (acids, bases, solvents)
Automation units	Fully automatic sampling, rinsing and drying of all cells and tubes Single sample: SC1, SC1H. Up to 30 samples: SC30, SC30H (H = heated version, up to 80 °C)

Multi-parameter

Refractive index	RX40, RX50 Refractive Index Cell Modules
pH / conductivity	SevenCompact™ pH S220 / conductivity S230
Color	Konica Minolta CM-5 / CR-5, Tintometer Lovibond PFXi 880/950/995
Others	RS-232 controlled instruments: send and receive commands and results

PC Software

Single PC	LabX® LiquiPhysics Express (installation on a single PC, up to 3 instruments)
Client / server	LabX® LiquiPhysics Server (installation on a client server system, up to 30 instruments)

Other Options

Barcode reader	Hand-held or built-in for SC30. SmartCodes™: sample data entry and automatic selection of method
Sensors	ErgoSens: infrared optical sensor to start measurement without touching anything LevelSens: level sensor to avoid waste container spillage AtmoSens: barometric pressure sensor for accurate 5-place adjustments of DM50
Certified standards	Water (0.99... g/cm ³), dodecane (0.75...), dichlorotoluene (1.25...), bromonaphthalene (1.48...)
Services	IPac (Initial Qualification Package): fast and easy qualification solution EQPac (Equipment Qualification Package): supports most stringent needs for regulatory compliance EduPac (Education Package): get completely familiar with the instrument



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For more information

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