LiquiPhysics™ Meters
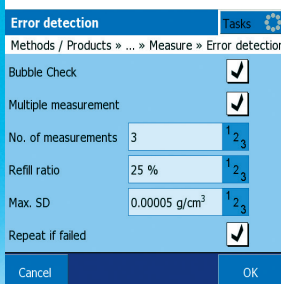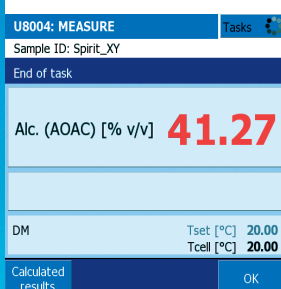
One Click® Density Measurement
with Built-in Quality Control

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.

U8004: MEASURE	Tasks
Sample ID: Spirit_XY	

End of task

Alc. (AOAC) [% v/v] **41.27**

DM	Tset [°C] 20.00
	Tcell [°C] 20.00

Calculated results	OK

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.

Error detection	Tasks

Methods / Products » ... » Measure » Error detection

Bubble Check	✔
Multiple measurement	✔
No. of measurements	3	1 2 3
Refill ratio	25 %	1 2 3
Max. SD	0.00005 g/cm³	1 2 3
Repeat if failed	✔

Cancel	OK

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.

METTLER TOLEDO

DM40
Density Meter

DryPal™ drying pump
Used with DM density meters in order to dry the measuring cell prior to adjustments.

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
- Tailored measuring procedures even for very particular needs thanks to flexible method structure, conditions, formula editor and user tables
- Full SOP user guidance
- Advanced user management including biometric instrument protection
- LabX® PC Software

METTLER TOLEDO

LiquiPhysics™ Excellence

Product	Order Number
DM40	10376200
DM45 DeltaRange™	10376201
DM50	10376202

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		

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)		

Other Options

Certified standards	Water (0.99… g/cm^3), dodecane (0.75…), dichlorotoluene (1.25…), bromonaphthalene (1.48…)		

www.fishersci.com/mettlertoledo

For more information

INS-2812-LIT
BN0620137