# Portable Density/Specific Gravity/Concentration Meter

# DMA 35
# Density Measurement on the Move

**DMA 35 …**

… is the new generation of Anton Paar portable density meters, using the oscillating U-tube technology. DMA 35 measures the density and density-related values of your sample and shows the measuring results within seconds on the large display, ready for storage, printout or export to a PC.

Are you tired of cable tangles within your measuring environment? DMA 35 provides completely wireless communication with a printer or PC via the integrated IrDA interface.

The product versions DMA 35 Tag&Log, DMA 35 Ex and DMA 35 Ex Petrol are additionally equipped with an RFID interface for quick sample identification and convenient change of the measurement method by reading RFID tags.

## DMA 35 …

### … talks the same language

Your DMA 35 communicates with you in a language you will understand immediately. The user interface is clearly arranged and you will intuitively find your way through the menu. The display backlight, which switches on automatically when a new sample is filled, makes sure you clearly see your measuring results even in dark surroundings. The seven large keys enable operation of the instrument even when wearing protective gloves.

### … denies access to spills and humidity

The robust DMA 35 is designed to withstand the rough conditions of industrial and field applications. The leakproof sealed housing keeps humidity out of the electronics and stops pump spills entering the instrument.

### … saves you time and energy

Once defined, you can choose between up to 20 different customized measuring methods and up to 100 sample IDs for easy identification of samples, users or measuring locations. With a memory capacity for 1024 measurement results including timestamp and sample ID, DMA 35 is prepared for a long working day.

**The DMA 35 …**

… standard version, providing manual selection of sample IDs and methods, is the right choice for performing measurements with constant or only occasionally changing measurement settings. This basic model is an economic solution for general industrial and laboratory applications.

Additionally equipped with an RFID interface, the DMA 35 Tag&Log enables you to quickly and conveniently change the method and sample ID automatically, by just reading an RFID tag. DMA 35 Tag&Log is a big step forward in increasing the efficiency of your measuring process, especially when regularly measuring different samples according to different measuring units.

The intrinsically safe DMA 35 Ex (ATEX marking ⟨Ex⟩ II 2 G Ex ib IIC T4) is predominantly used for battery acid measurements and for chemical applications. It comes with an integrated RFID interface.

The DMA 35 Ex Petrol (ATEX marking ⟨Ex⟩ II 2 G Ex ib IIC T4) is the intrinsically safe product version with a special housing for the petrochemical industry. It is especially resistant to petrols and similar organic solvents and is equipped with an RFID interface. The DMA 35 Ex Petrol fully complies with the ASTM D7777 and IP 559 standards.

## … uses wireless technology

DMA 35 prints your measuring results and exchanges data with your PC completely wireless via the integrated IrDA interface. Update your instrument with the latest firmware, export measuring data for archiving purposes or simply write your method list and sample ID list on the PC and import it into your instrument via IrDA.

## … works at the push of a button

Your sample is filled into the measuring cell of DMA 35 by simply pushing the lever on the built-in pump. DMA 35 measures the density of your sample or determines concentration using the preinstalled density/concentration tables. You also have the option of adding up to ten custom functions to the list of measuring units. This is useful if you measure specific samples regularly.

## … lights up the cell

To obtain accurate measuring results it is essential that your sample is filled into the measuring cell without any gas bubbles. The measuring cell of DMA 35, visible from outside through an inspection window, is equipped with a backlight, making it easy for you to observe the filling process closely.

# Applications

## Food and beverage industry

- Fruit juices
- Cider
- Liqueurs
- Spirits
- Wine
- Beer wort

## Pharmacy and chemistry

- Fermenters
- Serums
- Lab preparations
- Battery acid

## Electrical engineering & electronics

- Coatings
- Metallic coatings
- Etching baths

## Environment

- Pesticides
- Sewage sludge
- Waste water

## Petrochemistry

- Tankers
- Drums
- Filling/loading stations
- Storage tanks

## General quality control and rapid product identification

# Technical Specifications

| Product version | DMA 35 | DMA 35 Tag&Log | DMA 35 Ex | DMA 35 Ex Petrol |
|---|---|---|---|---|
| Measuring range | Density: 0 to 3 g/cm$^3$<br>Temperature: 0 °C to 40 °C (32 to 104 °F)<br>Viscosity: 0 to 1000 mPa·s | | | |
| Accuracy | Density*: 0.001 g/cm$^3$<br>Temperature: 0.2 °C (0.4 °F) | | | |
| Repeatability | Density: 0.0005 g/cm$^3$<br>Temperature: 0.1 °C (0.2 °F) | | | |
| Resolution | Density: 0.0001 g/cm$^3$<br>Temperature: 0.1 °C (0.1 °F) | | | |
| Ambient temperature** | -10 °C to +50 °C (14 to 122 °F) | | | |
| Supported measuring units | Density, Density @ xx °C, Specific Gravity (SG), Alcohol % v/v, Alcohol % w/w, Alcohol US (°Proof), API Gravity, API SG, API Density, °Baumé, $H_2SO_4$ % w/w, $H_2SO_4$ @ 20 °C, °Brix, Extract (°Plato), ten programmable custom functions | | | |
| Data memory | 1024 measurement results | | | |
| Power supply | Two 1.5 V LR06 AA alkaline batteries | | | |
| Sample volume | 2 mL | | | |
| Dimensions | 140 x 138 x 27 mm (5.5 x 5.4 x 1.0 inches) | | | |
| Weight | 345 g (12.2 ounces) | 351 g (12.4 ounces) | 351 g (12.4 ounces) | 396 g (14 ounces) |
| Interfaces | IrOBEX/IrLPT | IrOBEX/IrLPT, RFID | IrOBEX/IrLPT, RFID | IrOBEX/IrLPT, RFID |
| Protection class | IP54 | | | |

| | |
|---|---|
| Available options | - Elongated filling tube<br>- Transportation suitcase<br>- Portable thermal printer with IrDA interface<br>- IrDA USB adapter<br>- Wristband<br>- Rubber housing |

*Viscosity < 100 mPa·s, density < 2 g/cm$^3$

**Sample must not freeze within the measuring cell!

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