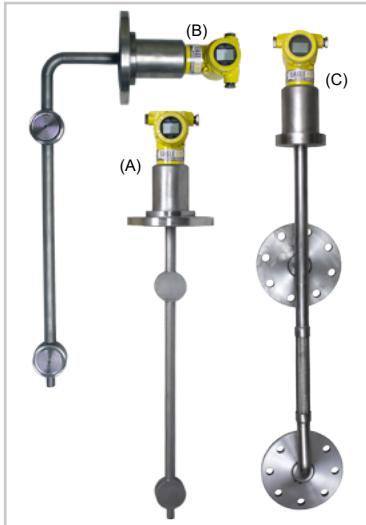


# DM-Series Inline Density Meters

Model # DM-Series

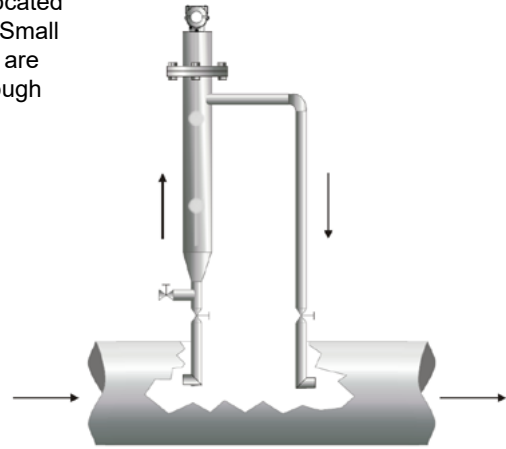


DM-1000A, DM-1000B, & DM-1000C

## Product Description

The **DM-Series Inline Density Meters** are designed for continuous monitoring and process control of liquid concentration/density and temperature of solutions across a wide range of applications. Available in three different mounting configurations, the DM-Series density meters can be integrated directly into a variety of tanks and inline systems. Temperature compensated values can be measured and displayed in Density, Specific Gravity, Brix, Plato, Baume, API, Concentration, Solid %, and other measurements of density. Designed for process control, measured data outputs through a 4-20 mA signal. Digital communication for remote calibration and monitoring is also available.

Each unit consists of a capacitive-type differential pressure transmitter tied to a pair of pressure repeaters immersed in the solution. Temperature compensation is performed by a temperature sensor located between the two pressure repeaters. Small variations in the process temperature are quickly and accurately calculated through dedicated software.



Inline Measurement of Density

## Applications

- Industrial Chemical Production: Petroleum, natural gas, oil refining, salt mining
- Food & Beverage Industry: Beverage, syrup, vegetable oil, & soft drink processing
- Other Chemical Production: Urea, detergents, ethylene glycol, lubricating oils, acid solutions, & polymers
- Paper Industry: Black pulp, green pulp, white pulp, alkali solution

## Technical Specifications

<b>Measurement Range:</b>	Density: 0.000 – 3.000 g/cm <sup>3</sup> <sup>(1)</sup> Temperature: 0 – 150°C / 32 – 302°F <sup>2</sup>
<b>Accuracy:</b>	Density 0 – 1 g/cm <sup>3</sup> : 0.001 g/cm <sup>3</sup> Density 0 – 2 g/cm <sup>3</sup> : 0.002 – 0.003 g/cm <sup>3</sup> Density 0 – 3 g/cm <sup>3</sup> : 0.002 – 0.005 g/cm <sup>3</sup> Temperature: 0.2°C / 0.4°F
<b>Resolution:</b>	0.0005 g/cm <sup>3</sup>
<b>Communication Output:</b>	4 – 20 mA, HART Protocol
<b>Display:</b>	Backlit 4.5" Digital LCD
<b>Volumetric Displacement:</b>	Less than 0.15 cm <sup>3</sup> / 0.01 in <sup>3</sup>
<b>Power Requirements:</b>	15 – 30 VDC (24 VDC recommended)
<b>Operating Environment:</b>	-10 – 60 °C / 14 – 140 °F, 0 – 90% RH

(1) Listed total range, specific models ordered with range of 0-1, 0-2, or 0-3 g/cm<sup>3</sup>. (2) DM-1000A & DM-1000B range is 0 – 100°C (32 – 212°F) due to installation method. (3) Varies slightly depending on individual model.

## Main Features

- **Monitoring & Process Control:** Continuously monitors process, displays real-time measurement and transmits data through a 4-20 mA output
- **Accurate Data Display:** Digital LCD displays measured data in user-configurable units which can be alternated during operation
- **Safe for Many Environments:** Intrinsically safe with no moving parts, stainless-steel wetted parts, models available for industrial or sanitary environments
- **Easy Operation:** User troubleshooting procedures with error messages to help trace cause of problem, user-calibration procedures

## Ordering Information

No.	Model #	Description
1	DM-1000A	Vertically Top-Mounted Inline Density Meter, 0.000 - 3.000 g/cm <sup>3</sup> , 0 - 100°C / 32 - 212°F
2	DM-1000B	Vertically Side-Mounted Inline Density Meter, 0.000 - 3.000 g/cm <sup>3</sup> , 0 - 100°C / 32 - 212°F
3	DM-1000C	Vertically Side-Flex-Mounted Inline Density Meter, 0.000 - 3.000 g/cm <sup>3</sup> , 0 - 150°C / 32 - 302°F