

# CDM210 Conductivity Meter



- ✓ Conductivity and Resistivity
- ✓ AUTOREAD function
- ✓ AUTORANGE facility
- ✓ Large alphanumeric LCD for clear-text messages
- ✓ RS232C port for printer/PC
- ✓ Analogue recorder output: direct and calibrated

## CDM210

The CDM210 Conductivity Meter from Radiometer Analytical is a user-friendly conductivity meter ideal for routine measurements of both conductivity and resistivity in all types of laboratories.

Automatic frequency switching, the AUTOREAD function and a calibrated recorder output are just some of the features offered.

The CDM210 forms part of the MeterLab® range which is designed to ensure accurate and reliable pH, ion and conductivity measurements.

In addition to measuring equipment, a wide range of accessories is provided by MeterLab.

## Simple and reliable

With its seven dedicated keys and large alphanumeric display, the CDM210 is designed for maximum simplicity. Clear-text messages guide the user through each step of the measurement.

Using the AUTOREAD facility, the result is locked on the display as soon as the signal is stable ensuring

excellent repeatability. Measurements can also be performed by reading the result directly from the live display. A convenient visual stability indicator shows you when the result can be accepted.

Conductivity measurements are available in a wide range from 0.01  $\mu\text{S}/\text{cm}$  to 400  $\text{mS}/\text{cm}$  using a cell constant of 1  $\text{cm}^{-1}$  and resistivity measurements from 2.5  $\Omega\cdot\text{cm}$  to 49  $\text{M}\Omega\cdot\text{cm}$ .

## Conductivity cells

The CDM210 lets you choose 2, 3 or 4-pole conductivity cells according to your application. The CDC565 and CDC865 4-pole cells from Radiometer Analytical ensure reliable results in any range.

## Flexible

Measuring ranges are selected automatically using the AUTORANGE mode. This is suitable for the majority of applications. However, in order to monitor a reaction, for example, you can select one of the five conductivity ranges manually.

Conductivity can be corrected to a reference temperature of 20 or 25°C. Sample temperature is either measured with a temperature sensor or entered manually. Both temperature coefficient and cell constant are fully adjustable.

In addition to the SAM7 Sample Stand, the CDM210 can be used in conjunction with the other instruments in the MeterLab range, allowing you to create a fully automated setup.

## Easy communication

The built-in RS232C interface allows a PC or printer to be connected to the meter. In AUTOREAD mode results are printed out automatically.

As well as a direct recorder output, the CDM210 is equipped with a calibrated output. This means that the recorder output takes into account the cell constant and temperature correction coefficient, which is particularly appreciated for teaching purposes.

# CDM210 Conductivity Meter

## Specifications

### Measuring dynamics

Using a cell constant of  $1 \text{ cm}^{-1}$

**Conductivity:**

0.01  $\mu\text{S}/\text{cm}$  to 400  $\text{mS}/\text{cm}$

**Resistivity:**

2.5  $\Omega\cdot\text{cm}$  to 49  $\text{M}\Omega\cdot\text{cm}$

**Temperature:**

-9.9°C to 99.9°C

### Resolution

**Conductance:**

1/4000, i.e.:

0.01  $\mu\text{S}$  (in 40.00  $\mu\text{S}$  range)

0.1  $\text{mS}$  (in 400.0  $\text{mS}$  range)

**Temperature:**

0.1°C

### Accuracy

**Conductivity:**

$\pm 0.2\%$  of reading  $\pm 3$  on least significant digit

**Resistivity:**

Typically:  $\pm 1\%$  of reading  $\pm 3$  on least significant digit

**Temperature:**

$\pm 0.5^\circ\text{C}$

### Measuring frequencies/

**Conductance ranges**

94 Hz in 40.00  $\mu\text{S}$  range

375 Hz in 400.0  $\mu\text{S}$  range

2.93 kHz in 4.000  $\text{mS}$  range

23.4 kHz in 40.00  $\text{mS}$  range

46.9 kHz in 400.0  $\text{mS}$  range

### Range selection

**Automatic:** conductivity, resistivity

**Manual:** conductivity

### Measurement procedures

Reading with sliding **stability indicator**

**AUTOREAD:** the result is locked on the display when either the stability criterion (1% of measured value per minute) or the maximum accept time (3 minutes) is reached

### Result units

Conductivity:  $\text{S}/\text{cm}$  or  $\text{S}/\text{m}$

Resistivity:  $\Omega\cdot\text{cm}$  or  $\Omega\cdot\text{m}$

### Cell constant

0.050 to 15.000  $\text{cm}^{-1}$

Cell constant can be entered manually or adjusted using any conductivity standard

### Temperature correction

None or in relation to a reference temperature of 20°C or 25°C with an adjustable temperature coefficient from 0.00 to 9.99%/°C

### Cable correction

Cable resistance correction: 0.00 to 99.99  $\Omega$

### Inputs/Outputs

Inputs for conductivity cell and temperature sensor

RS232C port for connection of printer or PC. 9-pin D-connector, 2400 or 9600 baud

Direct analogue recorder output: 2000 mV full-scale for the nominal conductance range

Calibrated analogue recorder output for conductivity measurements: 0.25 mV corresponds to 2 digits of the display, 1 V max.

Power supply for SAM7

Sample Stand

### Display

2 x 16-character, alphanumeric LCD display

### Languages

English, French, German, Italian and Spanish

### Finish

Chemical resistant, splash-proof cabinet

### Ambient temperature

5 to 40°C

### Relative humidity

20 to 80%

### Electromagnetic compatibility

EMC qualified

### Power requirements

12 Vdc / 1 A mains adapter

### Dimensions (H x W x D)

9.5 x 28 x 21.5 cm

### Weight

1.6 kg

## Order Information

### CDM210 Conductivity Meter

230 V version

**R21M011**

115 V version

**R21M012**

- when you need to be sure...

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Approved Quality System

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