


Conductivity meter: CM  
ConductivityMeter  
CM V 1.5 03.18


 **Please read these operating instructions carefully and file for future reference.**


**1. Applications:**


The CM ConductivityMeter measures and indicates the conductivity of pre-treated water in the 0 – 199.9  $\mu\text{S}/\text{cm}$  range. The device should only be used for this purpose.


**2. Safety notes:**

Please note that the CM should only be used for the intended purpose. Failure to comply with operating instructions may invalidate your guarantee!

 **Please observe valid health and occupational safety regulations at all times!**

 **Never attempt repairs to the machine or its AC adapter. Housing sections containing live componentry should only be opened by suitably qualified personnel.**

 **Only connect the AC adapter to a properly installed wall socket.**

 **Always unplug the AC adapter to properly disconnect the unit from the mains supply.**

 **Use only the AC adapter provided.**

**3. Scope of delivery**

CM ConductivityMeter parts list

1. Conductivity meter
2. Meter with sensor and supply lead
3. Meter bracket
4. 2 nuts,  $\frac{3}{4}$ "
5. LED complete with connection cable
6. AC plug unit with adapters for AUS/EU/UK/USA
7. 4 S6 rawl plugs for wall assembly
8. 4 Torx raised head screws, galvanised, 4.5 x 40 mm
9. 4 Duo Taptite bolts M4x10 (2x for display; 2x for bracket)
10. 5 self-locking cable ties (1x for LED; 1x for mounting bracket; 3x for accessories bracket)
11. Operating instructions
12. 1 hose, 1940 mm long,  $\frac{3}{4}$ "  
1 straight / 1 angled
13. 1 hose, 1500 mm long,  $\frac{3}{4}$ "  
1 straight / 1 angled

**4. Unboxing and inspection:**

Unbox the machine carefully, check that no items are missing and inspect the condition of the unit. Any complaints should be made immediately. Never attempt to operate a unit which is not in perfect working order.

## 5. **CM ConductivityMeter:**

### Housing unit

- Remove the fixing rail from the grey bracket on the CM ConductivityMeter and affix on mounting bracket with two M4x10 bolts.
- Secure the meter's mounting bracket in the housing unit with two M4x10 bolts.
- Clip the meter in place on the fixing rail.
- Place meter and sensor unit in bracket and secure with ¾" nuts.
- Connect the hoses supplied.
- Fit LED complete with wiring in housing unit door.
- Make all necessary connections at the CM meter (sensor unit, LED, AC adapter). Use the cable ties provided to secure the cables.
- Plug the AC plug unit into a suitable wall socket using the appropriate adapter.
- The meter is now ready for operation.

## 6. **CM ConductivityMeter installation:**

### Wall mounting

- Remove the fixing rail from the grey bracket on the conductivity meter and bolt to the wall with two 4.5 x 40 mm screws and rawl plugs.
- Clip the meter in place on the fixing rail.
- Secure the bracket to the wall using two 4.5 x 40 mm screws and rawl plugs.
- Place meter and sensor unit in bracket and secure with ¾" nuts.
- Connect the hoses supplied.
- Make all necessary connections at the CM ConductivityMeter (sensor unit, LED, AC adapter).  
Use the cable ties provided to secure the cables.
- Plug the AC plug unit into a suitable wall socket using the appropriate adapter.
- The meter is now ready for operation.

## Operating the CM ConductivityMeter



Rotary selector: Buzzer: Connection: Connection: Connection:  
switchpoint On/Off Ext. LED Sensor unit AC adapter

- The conductivity meter is commissioned by plugging in the 9V AC adapter. The last valid maximum permissible value appears for approx. 1 second when the unit switches on. The display now shows the current conductivity reading virtually in real time with a refresh interval of 1 second. If the rotary selector is used to select an alternative target value during a reading, the new value appears in the display for approx. 1 second. The display then reverts to showing the current conductivity value.
- **Alarm when max. value is exceeded:**  
The LEDs flash at the rate of once per second and the buzzer is activated for 30 secs. at intervals of 5 minutes in the event that the max. permissible value set at the rotary selector is exceeded. If the conductivity value improves, the alarm is automatically terminated.
- **Acknowledging an alarm:**  
The buzzer can be deactivated and switched on again using the 'Buzzer' control. Acknowledging the buzzer causes a small triangle to appear in the top left corner of the display. Once alert conditions no longer prevail, the buzzer is automatically reset for the next alarm.

⚠ A prolonged period of inactivity may cause the conductivity to rise and trigger the alarm. The conductivity should drop to below the set value during the next rinse cycle. If the alarm is still active after rinsing, the cartridge is depleted and needs replacing.

⚠ When 'OFL' appears in the display:  
The measuring range is exceeded

⚠ When three bars appear on the display the following situations are possible:  
→ Measuring cell dry  
→ Measuring cell not fitted correctly  
→ Break in measuring cell cable (cable break)

Smallest displayed conductance: 0.1µS/cm

**Permanent buzzer deactivation:**

Hold the button pressed for 10 seconds until the buzzer sounds once and a small triangle appears in the top left corner of the display.

Pressing the same control again for 10 seconds reactivates the buzzer. The small triangle in the display disappears. Both of these conditions are saved in the event of a power failure.

Capacity in litres between cartridge reactivation cycles						
°d German hardness	5	10	15	20	25	30
µS/cm	150	300	450	600	750	900
VE P 2000 (12.5 l of resin)	4000	2000	1330	1000	800	660
VE P 2800 (19 l of resin)	5600	2800	1850	1400	1120	930

1°d corresponds to approx. 30 µS/cm.  
All values are approximations.

Source: Miele

## 7. **Technical data for CM ConductivityMeter**

<b>ConductivityMeter</b>
Single-line display
Range: 0 – 199.9 $\mu\text{S}/\text{cm}$
10 switching points selectable: 1/3/5/10/15/20/50/75/100/199.9 $\mu\text{S}/\text{cm}$
Optical and acoustic 'change cartridge' indicator
Wall bracket
Connection to external LED
Manual calibration on site
Tolerance: +/- 5% re. measured value
Weight: 151 g
Dimensions: W 100 mm, H 125 mm, D 40 mm (incl. wall bracket)
Operating temperature: 5°C – 50°C
Incl. 3/4" pressure hoses for connection to cartridges and machine
<b>AC adapter</b>
Input: 110 – 240 V AC
Output: 9 V DC
Adapters for AUS/EU/UK/USA/CDN
Power rating: 5 W
<b>Sensor unit:</b>
Connection: G ¼"
Temperature range: 5°C – 65°C
Orientation: Any direction

## 8. **Environment**



Decommissioned machines contain valuable materials and should be recycled.

→ Dispose of separate to domestic refuse.

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