Short Instruction Manual
ProMinent® Simulator
Unit overview / Functional Description

1 Unit overview

The ProMinent® Simulator simulates measuring signals for DULCOMETER® equipment.

2 Functional Description

The rotary knobs on the simulator have the following functions:

Switch S1: Selects the temperature sensor (Pt 100 or Pt 1000) and a temperature (25 °C or 80 °C)

Switch S2: Selects and switches on and off the measuring range that appears in the display

Switch S3: Selects the simulated probe (Redox or pH) and the output resistance (100 kΩ or 100 MΩ)

Potentiometer P: Adjusts the voltage signal (Redox or pH) and the mA signal:
The two signal types change simultaneously when P is adjusted!

Arranging the sockets:
Bu 1, Bu 2: Temperature sensor signal (Pt 100 or Pt 1000)
Bu 3 (SN6): Probe signal (Redox or pH)
Bu 4, Bu 5: mA signal
Bu 5, Bu 6: Connection for external voltage U+ (for voltage loop)
3 Controls

To simulate Pt 100/Pt 1000:
Connect controller to Bu 1 and Bu 2,
use S1 to select the required simulation.

NOTE
Unit does not have to be switched on for this simulation.

To simulate Redox probe:
Connect controller to Bu 3,
Set S2 to “Ua”,
Set S3 to “100 k” under “±2000 mV”,
Use P to set the required (Redox) voltage –
Value appears in the display.
Note voltage value on controller; Set S3 to “100 M” –
The voltage value on the controller must not change!

Simulate mA signal:
Connect controller to Bu 4, Bu 5 and Bu 6 (see Page 4),
Set S2 to “Sig. Soll”,
Use P to set mA signal – the display indicates the mA signal,
which corresponds to the P setting.
Set S2 to “Sig. Ist” – the display shows the actual mA signal
in the signal cable.
Set S2 to “U+” – the display shows U+.

Simulate pH probe:
Connect controller to Bu 3,
Set S2 to “Ua”
Set S3 to “100 k” over “pH 2...12”
Use P to set the required pH value – the display indicates this
value.
Note pH value on controller.
Set S3 to “100 M” – the pH value on the controller must not
change!
4 Technical Data

Measuring range U+:  5...30 V DC
Voltage supply:  9 V battery unit or charger
Battery life:  approx. 150 hours at 550 mAh capacity

NOTE:
Switch off the unit after use to save the battery.

Terminal connection to standard signal input (mA)

<table>
<thead>
<tr>
<th>Simulation</th>
<th>Output</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt 100, 25 °C</td>
<td>109.73 Ω</td>
<td>-</td>
</tr>
<tr>
<td>Pt 100, 80 °C</td>
<td>130.89 Ω</td>
<td>-</td>
</tr>
<tr>
<td>Pt 1000, 25 °C</td>
<td>1097.3 Ω</td>
<td>-</td>
</tr>
<tr>
<td>Pt 1000, 80 °C</td>
<td>1308.9 Ω</td>
<td>-</td>
</tr>
<tr>
<td>±2000 mV, 100 M</td>
<td>±1999 mV</td>
<td>±1999 mV</td>
</tr>
<tr>
<td>±2000 mV, 100 k</td>
<td>±1999 mV</td>
<td>±1999 mV</td>
</tr>
<tr>
<td>pH 2...12, 100 M</td>
<td>±295 mV</td>
<td>12.00...2.00*</td>
</tr>
<tr>
<td>pH 2...12, 100 k</td>
<td>±295 mV</td>
<td>12.00...2.00*</td>
</tr>
<tr>
<td>Sig. Ist</td>
<td>0...19.99 mA</td>
<td>0...19.99 mA</td>
</tr>
<tr>
<td>Sig. Soll</td>
<td>0...19.99 mA</td>
<td>0...19.99 mA</td>
</tr>
</tbody>
</table>

* Slope of 59 mV/pH and zero point at 0 mV is assumed.

We reserve the right to make technical changes.

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by the manufacturer:

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