4010-2/3 pH Adapter
DIN / BNC

PH ADAPTER FOR MULTILAB 4010-2 AND MULTILAB 4010-3
For the most recent version of the manual, please visit www.ysi.com.
General information

The 4010-2/3 pH Adapter enables the connection of an analog pH electrode (with or without temperature sensor) to the digital meters MultiLab 4010-2 and 4010-3.

Two models of the adapter are available:

<table>
<thead>
<tr>
<th>Connection of the analog electrode</th>
<th>Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN</td>
<td>4010-2/3 pH Adapter DIN</td>
</tr>
<tr>
<td>BNC</td>
<td>4010-2/3 pH Adapter BNC</td>
</tr>
</tbody>
</table>

Automatic adapter recognition

The measuring electronics with the stored adapter data is in the 4010-2/3 pH Adapter. The data include, among other things, the adapter type and series number. With each calibration, the calibration data is written in the adapter and the calibration history is recorded. The data are called up by the meter and used for measurement and documentation of measured values.

If the adapter firmware is enhanced by YSI, it can be updated via the meter.

Note

More detailed information on the automatic adapter recognition or sensor recognition is given in the operating manual of the meter.

Calibration data and calibration history

The meter uses for measurement the calibration data stored in the adapter, regardless of the mounted electrode.

Note

Therefore, you always have to recalibrate after exchanging the pH electrode. Otherwise, the IDS pH sensor will work with the calibration data of the previously calibrated electrode. This could lead to incorrect measured values. When evaluating the calibration history, please note that in between calibrations, the electrode may have been exchanged.
Commissioning, measuring, calibration

Commissioning

1. Unscrew the 4 screws of the cover plate (the screw driver is included in the scope of delivery).

2. Insert the 4010-2/3 pH Adapter in the open mounting slot.

3. Attach the adapter to the meter with the 4 screws.

Example

4010-3 with mounted 4010-2/3 pH Adapter DIN

1. pH electrode

2. Reference electrode

3. Temperature sensor (NTC 30)

Note
The further commissioning steps are given in the operating manual of the pH electrode.

4. Connect the electrode to the socket of the adapter.

5. Calibrate the electrode according to the operating manual of the meter.

All further details are given in the operating manuals of the pH electrode and meter.
### Technical data

#### General data
- Electrodes that can be connected: All pH electrodes with DIN or BNC plug head connector

#### Application characteristics
- pH measuring range: Depending on the electrode used
- Allowed temperature range: 0 ... 80 °C (32 ... 176 °F)
- Typical application: Applications with special pH electrodes

#### Measuring characteristics of the IDS measuring electronics in the 4010-2/3 pH Adapter

<table>
<thead>
<tr>
<th>Measured parameter</th>
<th>Measuring range</th>
<th>Resolution</th>
<th>Accuracy (± 1 digit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>-2.000 ... 20.000</td>
<td>0.001</td>
<td>± 0.004</td>
</tr>
<tr>
<td>U [mV]</td>
<td>-1000.0 ... +1000.0</td>
<td>0.1</td>
<td>± 0.2</td>
</tr>
<tr>
<td>T [°C]</td>
<td></td>
<td>0.1</td>
<td>± 0.2</td>
</tr>
</tbody>
</table>

#### Material, electrical connection
- Material of the plug enclosure: ABS
- Electrode connection: DIN or BNC
- Meter connection: Mounting slot with contacts

#### Electrical data of the electrode connection
- Input resistance: > 5 * 10^{12} ohm
- Input current: < 1 * 10^{-12} A

#### Note
The latest version of the present operating manual can be found on the Internet under [www.YSI.com](http://www.YSI.com).
Contact Information

Ordering & Technical Support

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When placing an order please have the following information available:

YSI account number (if available)  Name and Phone Number
Model number or brief description  Billing and shipping address
Quantity  Purchase Order or Credit Card

Service Information

YSI has authorized service centers throughout the United States and Internationally. For the nearest service center information, please visit www.ysi.com and click ‘Support’ or contact YSI Technical Support directly at 800-897-4151.

When returning a product for service, include the Product Return form with cleaning certification. The form must be completely filled out for an YSI Service Center to accept the instrument for service. The Product Return form may be downloaded at www.ysi.com and clicking on the ‘Support’ tab.
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1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

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