Modular system – the Porti 8 caters for all. From a simple ambulatory screening device to a complete PSG application with up to 40 channels. This small ergonomic device has been designed for optimum patient comfort and can be easily applied by the patient. All hardware and signal recording components are integrated in the device therefore well protected against damage.

Signal recording is obtained by means of simple, reliable and inexpensive sensors, making the SleepDoc Porti systems very easy to use and exceptionally economical for the Consultant and Sleep lab.

Standard Equipment

The standard Porti 8 has 10 channels for recording the following:

- **Respiration**
  Respiratory flow is measured by the internal pressure sensor via a low-cost flow prong.

- **Thoracic Effort**
  Chest wall movement is measured by pressure pads integrated in the chest belt (no circuitry!)

- **Abdominal Effort**
  Abdominal movement is measured by a pressure pad integrated in the abdomen belt (again no circuitry!)

- **SpO2 Saturation**
  Oxygen saturation is measured by the integrated pulse oximeter using the durable, soft-tip finger sensor.

- **Pulse Frequency**
  Internal pulse oximeter and finger probe.

- **Pulse Wave**
  Internal pulse oximeter and finger probe.

- **Snoring**
  External microphones are not necessary with the Porti 8. An internal microphone records breathing sounds via the flow prong.

- **Position**
  Body position is identified by an internal magnetic sensor.

- **Light Sensor**
  The internal light sensor allows continuous monitoring of brightness of the sleeping environment.

- **CPAP-Pressure**
  Absolute pressure is obtained via an integrated pressure sensor which can be directly connected to the patient CPAP/BIPAP interface or tubing.
Optional Modules

For the extentional use in private practice and clinics the following Options are available:

- Thermistor
- 2 x Leg movement (EMG)
- 6 x ECG
- PTT
- Systolic blood pressure
- NeuroPort
- 6 x EEG
- 2 x EOG
- 1 x EMG
- 8 x External channels
- Audio/Video

Exclusive, flexible software included

- Full automatic diagnosis and evaluation
- Easy configuration of raw data and final reports.
- Automatic report generation in a matter of seconds
- Network Integration (multiple users)
- HL7 Interface (optional)
- Data import and export via the internet
- Continuous software maintenance and development with free updates.

Competitive Screening – economical and efficient

Signal measurements are obtained via simple and inexpensive sensors specially developed for ambulatory sleep diagnosis which are reliable, well-proven and have been used for many years in clinical applications.

Reliable, robust sensors specifically developed for ambulatory sleep diagnosis.

Robust colour coded connectors.

Technical Data (Last update: 12/2016)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>35 mm x 75 mm x 168 mm (M x W x L, without bag)</td>
</tr>
<tr>
<td>Weight</td>
<td>260 g incl. storage battery, without bag</td>
</tr>
<tr>
<td>Casing</td>
<td>Metalised plastic (ABS, UL 94 HB)</td>
</tr>
<tr>
<td>Temperature range</td>
<td>+5°C...+45°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>25 % – 95 %</td>
</tr>
<tr>
<td>Storage capacity</td>
<td>min. 12 hours, optional several days</td>
</tr>
<tr>
<td>Fault indicator</td>
<td>2 LEDS on front of the device</td>
</tr>
<tr>
<td>Power supply</td>
<td>Rechargeable Li-Ion storage battery 3.6V with built-in power supply</td>
</tr>
<tr>
<td>Charger</td>
<td>plug-in power supply with medical approval</td>
</tr>
<tr>
<td>Output</td>
<td>USB interface with cable for data transmission</td>
</tr>
<tr>
<td>Video/Audio signal</td>
<td>Avis-Camera with integrated microphone and infra red spot, data transmission via Ethernet, camera control (e.g. zoom, turn, resolution...) via user interface in software</td>
</tr>
<tr>
<td>Online operation</td>
<td>In online operation with a patient, an optical waveguide to the PC is indispensable (option)</td>
</tr>
</tbody>
</table>

Registered Parameters

Breathing
- Differential pressure measurement via flow prong (with adaptor also during CPAP therapy), alternative or additional measurement by means of thermistor possible (option)

Thoracic effort
- Differential pressure measurement on thorax by means of rubber cuffs built into chest strap

Abdominal effort
- Differential pressure measurement on the abdomen by means of rubber cuffs built into the abdominal strap

Snoring
- Phonometric transducer via flow prong or external microphone

Saturation \( \text{SpO}_2 \)
- Built-in pulsoximeter
  - \( \text{SpO}_2 \) measurement range:
    - 80 % – 99 % ± 2 % \( \text{SpO}_2 \)
    - 60 % – 79 % ± 4 % \( \text{SpO}_2 \)
  - Pulse measurement range:
    - 50 1/min – 150 1/min ± 2 %
    - special rubber-coated thimble finger sensor

Pulse
- Plethysmogramm display; measurement via fingersensor

Position
- Magnetic sensors for position recording (8 positions)

Light
- Photometric measurement and light-intensity display

CPAP/Bilevel-pressure
- Differential pressure measurement directly on CPAP mask
  - Measurement range: 0 cm H\( \text{O} \) – 45 cm H\( \text{O} \) ± 5 %

Leg EMG
- Measurements of muscular actions (EMG), separate recording for left and right leg (option); connection of electrodes via DIN safety plug

ECG
- 6 channel lead via adhesive electrodes (option)
  - Measurement range: 30 1/min – 200 1/min ± 2 %

PTT
- Recording of Puls Transit Time PTT
  - Measurement range: 100 – 355 ms ± 4 % (Option)

EEG
- 6 channel lead via adhesive electrodes (option); connection with electrodes via DIN safety plug

EOG
- 2 channel lead of eye movement for left and right eye via adhesive electrodes (option); connection with electrodes via DIN safety plug

EMG
- 3 channel lead of muscle movement (EMG) from chin (option), connection with electrodes via DIN safety plug

External
- External box with voltage input (RJ11; 0…2.5 V) for up to 8 external channels with galvanic seperation and RJ11-jack