Drowsimeter R100

Measurement of drowsiness and eye metrics based on eye images @ 120 Hz

AUTOMATIC • OBJECTIVE • REAL-TIME

www.phasya.com
The Phasya Drowsimeter R100 uses images of the eye acquired from a camera integrated into glasses to provide an automatic, objective, and real-time measurement of several drowsiness and eye metrics in most lighting conditions (from darkness to daylight).

The Drowsimeter R100 is dedicated to research applications. It consists of the Phasya Glasses, a standard laptop, and the Drowsilogic software. The ergonomics and the high-frame rate of Phasya Glasses ensure accurate and continuous measurements without disturbing the user.

### Easy-to-use
- Setup and calibration in less than one minute
- Automatic and real-time analysis of images to provide drowsiness and eye metrics
- Intuitive visualization of data
- Well-known and widely-used export format to facilitate further data analysis

### Starter package
- Phasya Glasses
- Drowsilogic software licence according to the modes selected (drowsiness metrics and/or eye metrics)
- Laptop
- Carry-on suitcase for safe storage and transportation
- One year of maintenance and software updates

### Drowsiness metrics mode
- Accurate measurement of the level of drowsiness and ocular parameters related to eyelids activity
- Use of several ocular parameters related to eyelids and eyeball activity to ensure an objective measurement of drowsiness

### Eye metrics mode
- Accurate measurement of three raw eye features related to eyelids and pupil at 120 Hz
- No calibration needed

### Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>General specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame rate of eye images</td>
<td>120 Hz</td>
</tr>
<tr>
<td>Export file format</td>
<td>text/CSV</td>
</tr>
<tr>
<td>Drowsiness scale – Level of Drowsiness</td>
<td>From 0 (fully awake) to 10 (fully drowsy)</td>
</tr>
<tr>
<td>Video recordings</td>
<td>Images of the eye taken by Phasya Glasses &amp; Images taken by an external camera</td>
</tr>
<tr>
<td>Weight of glasses</td>
<td>104 g</td>
</tr>
<tr>
<td>Length of USB cable</td>
<td>1.8 m</td>
</tr>
<tr>
<td>Power supply</td>
<td>100-240V 50-60 Hz</td>
</tr>
</tbody>
</table>

### Drowsiness metrics mode
- Calibration: 10 seconds – Automatic
- Metrics:
  - Level of Drowsiness, PERCLOS 70, mean blink duration, blink frequency, percentage of LEYECLOS*, mean LEYECLOS* duration
- Recording frequency of metrics: 1 Hz
- Calculation window length of metrics: 60 seconds

### Eye metrics mode
- Calibration: No calibration needed!
- Metrics (in pixels):
  - Eyelids gap, pupil position, pupil diameter
- Recording frequency of metrics: 120 Hz

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*LEYECLOS* = long eyelids closure