Aqua Logger HS Compact is a device dedicated to water level monitoring in natural environment as well as in difficult conditions like in sewage wells or sewage pumping station. Measurement is made with the use of a hydrostatic probe calibrated with the data logger. The measurement of water level is made by calculating the hydrostatic pressure of the liquid column on the probe placed by the bottom of a water basin. All measured data is sent to data server via GSM network.

Data logger and GSM modem are integrated with a set of lithium batteries in a solid compact size housing (220x120x90mm). Such size enables easy installation in tight locations with limited access. Additionally, there are three protection levels available: IP67, IP68 and IP67 ATEX.

Ultra-low power consumption of the station marks it out among similar devices used for water level measurement.

With typical measurement and GSM transmission settings, device is ready to work continuously for more than 10 years on one battery set. For example, if the measurement is made every 10 minutes and data is updated every 3 hours, the station will work for 10 years minimum including battery self-discharging and wearing out. Such long working time on one battery set provides uninterrupted operation time of the device.

Online access to measuring and transmission intervals configuration is one the crucial features of Aqua Logger HS Compact. It allows effective management of the station by increasing the frequency of measurement in crisis situations when quick access to data is extremely important. In order to maintain full control over Aqua Logger, immediately after a threshold value is exceeded the user receives a text message or an email.
### EXEMPLARY DAILY POWER CONSUMPTION FOR CHOSEN SETTINGS

<table>
<thead>
<tr>
<th>Data transmission interval</th>
<th>Measurement Interval</th>
<th>Approx. daily power consumption*</th>
<th>Approx. operation time with battery set**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/24h (once a day)</td>
<td>24/24h (every 60 minutes)</td>
<td>0,011Wh</td>
<td>&gt;65 years</td>
</tr>
<tr>
<td>1/24h (once a day)</td>
<td>144/24h (every 10min)</td>
<td>0,016Wh</td>
<td>&gt;45 years</td>
</tr>
<tr>
<td>6/24h (every 4 hours)</td>
<td>144/24h (every 10min)</td>
<td>0,036Wh</td>
<td>&gt;20 years</td>
</tr>
<tr>
<td>24/24h (every 60min)</td>
<td>144/24h (every 10min)</td>
<td>0,108Wh</td>
<td>&gt;6 years</td>
</tr>
<tr>
<td>144/24h (every 10min)</td>
<td>144/24h (every 10min)</td>
<td>0,587Wh</td>
<td>460 days</td>
</tr>
<tr>
<td>144/24h (every 10min)</td>
<td>1440/24h (every 1minute)</td>
<td>0,637Wh</td>
<td>420 days</td>
</tr>
</tbody>
</table>

* Calculation for good GSM signal and low network usage conditions. When weak GSM signal or BTS overload, the given values will be higher.
** Approximate time assuming the use of full nominal capacity of the battery set. In reality, energetic efficiency of lithium batteries is lower than the nominal capacity given by manufacturer. It depends on working temperature, self-discharging and process of wearing out. Together with level measurement, the logger always measures power supply voltage. It allows live monitoring and replacement of the batteries before discharging.

### SPECIFICATION

- **Measurement range**: 0 … 4m; 0 …. 8m or 0 … 20m
- **Probe type**: Ceramics, Al₂O₃ (96%)
- **Sensor output signal**: 4 … 20mA
- **Accuracy at 250°C**: ± 0.3% of measuring range
- **Probe working temperature**: -10°….+70°C
- **Long-term stability (1 year)**: ± 0.2%
- **Probe’s housing**: Stainless steel 1.4404 (AISI316L), IP 68 (2.0 bar; 20 m), dimensions 96 x Ø 25mm
- **Probe’s wiring material**: PUR
- **Data transfer type**: GSM / GPRS
- **Data logger working temperature**: -40°….+60°C
- **Power supply**: built-in packet of lithium batteries with rated voltage 14.4V, 19Ah capacity
- **Standby power consumption**: <250μW
- **GPRS transfer power consumption**: ~360mW
- **Measurement power consumption**: ~100mW
- **Single measurement time**: <2s
- **Average data transfer modem activity time**: 18 … 22s typically
- **Approx. working time without battery replacement**: data update – 60min, data sampling – 10min data update – 10min, data sampling – 10min
- **Data transfer interval**: in range: (1min),….(24h)
- **Measurement interval**: in range: (1min),….(24h)
- **Internal memory**: 50 000 records
- **Registered technical parameters**: Electronics’ temperature, power supply voltage, GSM signal, modem activity during last data transfer, cabinet door open
- **Text alarms**: For medium level and chosen technical parameters
- **Tightness levels available**: IP67, IP68 and IP67ATEX
- **Data logger housing**: Polyester 220x120x90mm
- **Housing versions**: IP67, IP68 and IP67ATEX Additionally, each version has following options: - internal antenna /external wired antenna - lid opening alert

Podolska 11, 81-321 Gdynia
e-mail: info@pmecology.com
tel: +48 58 500 800 7
www.pmecology.com