Vaisala Automatic Weather Station AWS310 has everything that you need for taking accurate and reliable weather measurements. It is a complete communication and data monitoring solution including sensors, electronics, mast, and power supply.

An All-in-One Solution with Many Applications
Vaisala Automatic Weather Station AWS310 is a weather data collection system that automatically measures, processes, and stores meteorological data for professional use. AWS310 can be operated as a standalone unit, or it can be connected with other compatible Vaisala weather stations to form weather observation networks. AWS310 stations can be used for several applications, such as synoptic, aviation, and agricultural meteorology, hydrology, and climatology. Using the same standard hardware and software for many purposes lowers the cost of training, spare parts, and logistics support.

Validated Data From Reliable Sensors
Vaisala weather stations and instruments are fully compliant with World Meteorological Organization guidelines. The design quality of Vaisala weather stations has been proven with extensive tests in the development phase and on the field. To ensure continuous accuracy of measurements and calculations, AWS310 includes built-in data quality controls that test sensor data against minimum and maximum limits and changes between successive measurements. The weather station’s QML data logger continuously monitors the status of the sensors to ensure measurement reliability, notifying the user if the status of any sensor becomes invalid. All the sensors operate independently from each other, meaning that an individual sensor failure does not affect the performance of the other sensors.

Maintenance Made Easier
For AWS310 networks, the Vaisala Observation Network Manager NM10 software provides a powerful browser-based interface for 24/7 monitoring, access, and control of all your observation sites. Continuous, reliable observations improve the performance of your weather services and weather-critical operations, while shorter site visits and correct maintenance actions save time and money.

Even without the optional NM10 software, it is possible to adjust settings and fix problems remotely. The Vaisala AWS Client software, that is included in each AWS310 delivery, supports setup, diagnostics, and data retrieval. The AWS310 StationView GUI allows the user to view basic station information, sensor status, and readings, to set site-specific parameters, and to perform many other functions using a graphical user interface. AWS310 can also automatically download a new configuration file from a network server, making maintenance even easier.
Technical Data

Operating Environment

- **Operating temperature:**
  - 1) −40 ... +60 °C (−40 ... +140 °F)
  - Excluding backup battery, QMN200, QSM200, EHS6T cellular modem, QMN101, RG13(H), SR50A, and PAA-36 X W. See the manufacturer documentation.
  - 2) −60 ... +60 °C (−76 ... +140 °F) option available as project delivery.

- **Storage temperature:**
  - 3) −60 ... +70 °C (−76 ... +158 °F)
  - Excluding EHS6T cellular modem, HMP155, and HMP110. See the manufacturer documentation.

- **Operating humidity:** 0 ... 100 %RH

Environmental Compliance

### Test
<table>
<thead>
<tr>
<th>Operation</th>
<th>Applied Standard or Test Procedure</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry heat</td>
<td>IEC 60068-2-2</td>
<td>+60 °C (+140 °F)</td>
</tr>
<tr>
<td>Cold</td>
<td>IEC 60068-2-1</td>
<td>−40 °C (−40 °F)</td>
</tr>
<tr>
<td>Vibration (sinusoidal)</td>
<td>IEC 60068-2-6</td>
<td>Frequency range 5 ... 200 Hz, 1.2 mm/s velocity, 5 ... 12 Hz, 0.7 g, 12 ... 200 Hz</td>
</tr>
<tr>
<td>Vibration (random)</td>
<td>IEC 60068-2-64</td>
<td>5 ... 100 Hz</td>
</tr>
<tr>
<td>Shock</td>
<td>IEC 60068-2-27</td>
<td>5.0 g, pulse duration 11 ms with 100 pulses in each direction</td>
</tr>
</tbody>
</table>

### Storage

- **Dry heat:** IEC 60068-2-2
- **Cold:** IEC 60068-2-1
- **Damp heat:** IEC 60068-2-30
  - 40 °C (104 °F) / 85 ... 95 %RH

### Transport

- **Vibration (random):** IEC 60068-2-64
- **Shock:** IEC 60068-2-27
  - 18 g, pulse duration 6 ms, with 100 pulses in each direction
- **Rough handling:** IEC 60068-2-31
  - Drop height 60 cm (23.62 in)

EMC Compliance

### Test
<table>
<thead>
<tr>
<th>Emissions radiated</th>
<th>CISPR 32 Class B (EN 55032)</th>
<th>30 MHz ... 2 GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions conducted to mains (AC)</td>
<td>CISPR 32 Class B (EN 55032)</td>
<td>150 kHz ... 30 MHz</td>
</tr>
<tr>
<td>Emissions conducted to telecommunication lines</td>
<td>CISPR 32 Class B (EN 55032)</td>
<td>150 kHz ... 30 MHz</td>
</tr>
<tr>
<td>Emissions, harmonic current</td>
<td>EN 61000-3-2</td>
<td>0 ... 40th harmonic</td>
</tr>
<tr>
<td>Immunity to RF field (80 MHz ... 6 GHz)</td>
<td>EN 61000-4-3</td>
<td>11 V/m (80 MHz ... 1 GHz)</td>
</tr>
<tr>
<td>Immunity to electric fast transient</td>
<td>EN 61000-4-4</td>
<td>2 kV AC, 1 kV I/O</td>
</tr>
<tr>
<td>Immunity to surge</td>
<td>EN 61000-4-5</td>
<td>2 kV / 1 kV AC, 1 kV I/O</td>
</tr>
<tr>
<td>Immunity to conducted RF</td>
<td>EN 61000-4-6</td>
<td>4 V e.m.f. (150 kHz ... 80 MHz)</td>
</tr>
<tr>
<td>Immunity to voltage dips and short interrupts</td>
<td>IEC 61000-4-11</td>
<td>0 % 1 cycle, 40 % 10 cycles, 70 % 25 cycles, 0 % 250 cycles</td>
</tr>
</tbody>
</table>

Powering Specifications

- **AC (mains) power:** 100 ... 240 VAC (90 ... 264 VAC), 50 ... 60 Hz (45 ... 65 Hz), 5.6 A maximum (120 VAC)

- **External DC:** 16.8 ... 26.4 VDC
  - 10 A maximum

- **Solar panel:** 30 W (max. 2 pcs) or 80 W
  - 15.5 ... 30 VDC
  - 2.5 A maximum

- **Internal backup battery:** 12 V / 26 Ah or 12 V / 52 Ah

- **Mains fuse (nominal):** 10 A minimum

ENC652 Specifications

- **IP rating:** IP66

- **Material:** Stainless steel AISI 316, painted white

- **Size (enclosure only):** 600 × 500 × 207 mm (23.62 × 19.68 × 8.15 in)

- **Weight:** 28.9 kg (63.7 lb)

- **Maximum wind speed:** 75 m/s (168 mph)

Standard Sensor Options

- **Wind speed and direction:** WMT700, WA15 (dual sensors available)

- **Weather transmitter:** WXT531, WXT532, WXT535, WXT536

- **Atmospheric pressure:** BARO-1 (Class A accuracy), PTB330 (Class A accuracy, with 3 transducers)

- **Air temperature, relative humidity, and dew point:** HMP110, HMP155

- **Rain/Precipitation:** RG13(H), OTT Pluvio2 L

- **Global solar radiation:** SMP3, SMP6, SMP10, SMP21, SMP22, SP Lite2

- **Net radiation:** QMN101

- **UV radiation:** SULV5

- **Visibility and present weather:** PWDD2

- **Cloud height and sky condition:** CL31

- **Ground temperature:** QMT110

- **Snow depth:** SR50A

- **Water level:** VEGAPULS 61, PAA-36 X W

Standard Communication Options

- **Wireless communication:** Five-band UMTS cellular modem (with quad-band GSM GPRS support)

- **Landline communication:** RS-232, RS-485, LAN

- **Data collection software:** Vaisala Observation Network Manager NMD

- **Satellite communication:** Vaisala GOES DCP Transmitter GST102-3

- **Maintenance terminal software:** Vaisala AWS Client with StationView GUI

For other data validation, calculation, report, mast, powering, sensor, communication data collection software options, and measurement unit conversions, contact Vaisala.

Standard Accessories

- **USB maintenance cable**
- **Removable 2 GB CF-memory card**

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