LOG_aLevel

## Make Water Level and Wave Measurements a Breeze

GENERAL ACOUSTICS

LOG_aLevel is a calibration-free, accurate, durable, cost-effective, remote sensing and stand-alone water level gauge. On the basis of advanced ultrasonic technology and the ability to resolve each wave, it measures reliably and precisely water level, at all kinds of water surface dynamics.

Easy to deploy thanks to its compact sensors, needs no maintenance, works automatically and is independent of any external connections. In addition, the LOG_aLevel system is designed in a modular manner to best meet requirements of various applications and the specific requirements for the customer.

Applications:

- Harbor and Terminal Management
- Storm Tide, Flood and Tsunami Measuring Networks
- Hydrology and Environmental Monitoring
- Temporary Level Gauge to Support Dredging, Surveying and Construction Works
- Spectral Wave Energy Analysis for Optimal Survey Quality
- Water Reservoir Management
- Wave Monitoring and Analysis
- Ship Induced Waves
- Load Determination for Hydraulic Engineering
- Torrent Monitoring
- Local Event Alerting e.g. Flood, Tsunami
- Real-Time Data for Vessels through AIS/AtoN
- Local Tide Analysis and Prediction System together with Tidepredictor Software
- Wave Measurements from Jack-Ups and Rigs
- Server-based Fleet Management Networks incl. Web Portal (e.g.Ferries, Water-Planes, Supply Vessels)
- Discharge Hydrographs
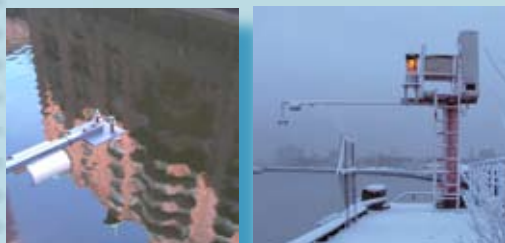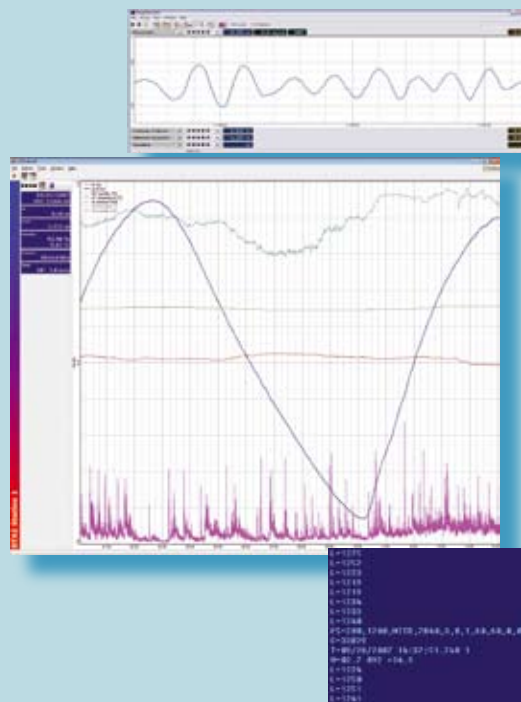
Main Advantages:

- Calibration-Free and Accurate due to the Outstanding Sound Velocity Compensation
- Maintenance-Free, no Moving Parts
- Precise, Robust and Economical due to outstanding durability
- Reliable under Extreme Conditions: Flood, Ice, Storms, Debris, etc.
- Narrow Beam for Accurate Level Even at Wavy Water Surface
- Simultaneous Wave and Level Measurement
- Extension With Additional Sensors (Redundancy, Meteorology and Hydrology)
- Remote Data Transmission, Control and Alerting
- Hassle-free Operation and Integration to Measuring Networks
- World-wide Proven and Tested

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Calibration-Free Remote Sensing of Water Level and Waves

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Standard System:

- Stainless steel housing, IP 66, lockable, size: 30x30x20 cm (or 50x50x20 cm)
- Ultrasound sensor ULL6080, IP 68, measuring range 6 m (options up to 10 m)
- REF300 sound velocity sensor for precise distance measurement
- Controller module for signal processing and sensor control/data acquisition incl. RTC
- RS232/RS485 data interface
- Power supply 12 V DC
- LOG_aLevel Windows Software for system set-up, online-analysis of measuring network, visualisation, managing, storing and exporting of data

Options:

- Ultrasound Sensors: ULL8080 - 8m measuring range ULL10080 - 10 m or for extreme weather conditions
- Data Logger incl. 4 GB Industrial Grade Flash Card (sufficient for 24 month of 5 Hz data)
- Radio Data Modems: 869, 900, 2.4 GHz (licence free) and licensed UHF/VHF with RS 232 interface
- GSM/GPRS data transmission to dyn. or fixed IP
- Modem or Ethernet-Module LAN/WLAN - connectivity
- Integration into SCADA systems/Modbus, AIS AtoN
- Digital display for direct level reading
- Current loop 4-20 mA output
- Wind generator up to 350 W, Solar panel up to 180 Wp
- 12 V Buffer batteries up to 200 Ah (AGM type)
- Power supply 230/110 VAC; overvoltage protection
- GPS-Time module (pps; drift free 1ms accuracy)
- Additional environmental / redundancy sensors e.g. wind gauge, temperature, humidity, ombrometer, pressure sensors, conductivity, 2D current meter etc.
- Data server, additional Windows application clients
- Client Services for Website, (Spectral) Wave parameters, Export Data Streams, Visualizations and Alerting
- Tideprediction Software for Tide Analysis and Prediction

Mobile LOG_aLevel system with 6 m sensor at telescope arm and REF300 sensor for sound velocity determination

Sensor bracket with 10m sensor-array and REF300; Powder coated housings and CF-Card Data Storage.

LOG_aLevel set-up

Specifications:

Measuring range:	6, 8, 10 m
(for Offshore / greater range see LOG_aLevel LR)	
Resolution:	1 mm
Field accuracy:	1 cm
Sample rate:	up to 5 Hz
Ultrasound sensor:	80 kHz, narrow beam
Working temp:	-20 °C up to +70 °C

Representative of General Acoustics:
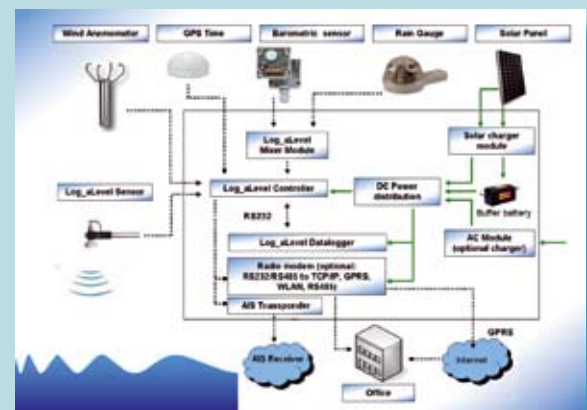
References:

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