LOG_aLevel LR

Make Offshore Water Level and Wave Measurements a Breeze

LOG_aLevel LR is a calibration-free, accurate, robust, cost-effective, remote sensing and stand-alone water level gauge. On the basis of advanced ultrasonic technology it measures reliable, fast and precise all kinds of water level and its dynamics. Easy to deploy thanks to its compact sensors, needs no maintenance, works automatically and is independent of any external connections.

Main Advantages:

- Calibration-Free and Accurate due to the Outstanding Sound Velocity Compensation
- Maintenance-Free, no Moving Parts
- Precise, Robust and Economical
- Reliable under Extreme Conditions: Flood, Ice, Storms, Debris etc.
- Compact and Low Power Sensors for Easy Installation
- Narrow Beam for Accurate Level Even at Wavy Water Surface
- Simultaneous Wave and Level Measurement
- Extension With Additional Sensors (Redundancy, Meteorology, Hydrology) for e.g. Helipads and Rescue
- Remote Data Transmission, Control and Alerting
- Hazzle free Operation and Integration to Measuring Network (SCADA)

Applications:

- Offshore Constructions
- Storm Tide, Flood and Tsunami Measuring Networks
- Real-Time Data for Vessels through AIS/AtoN
- Hydrology and Environmental Monitoring
- Harbor Management
- Wave Monitoring and Analysis
- Local Tide Analysis and Prediction
- Load Determination for Hydraulic Engineering
- Event Alerting System
- Water Reservoir Management and River Monitoring from Bridges
- Safe Boarding and Transport for Personnel and Goods
- Real-Time Data during Construction and for Management of Operations and Emergency Response, Weather- and Wave Forecast

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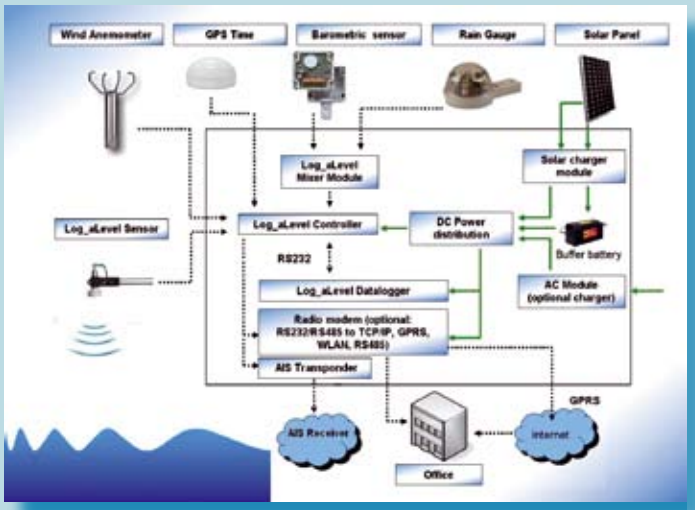
Remote Sensing of Water Level and Waves

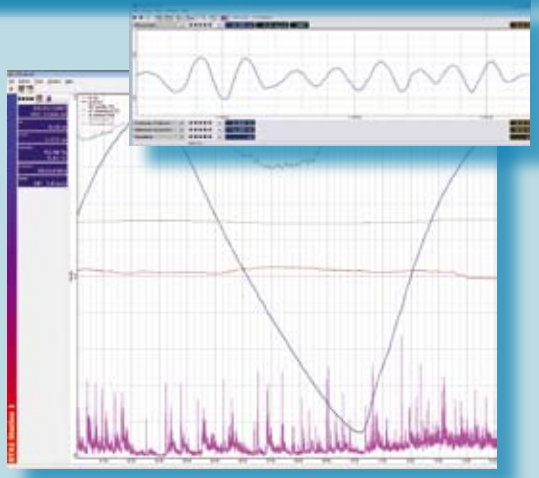
Standard System:

- Stainless steel housing, IP 66, lockable, size: 30x40x20 cm (or 50x50x20 cm)
- Ultrasound sensor ULL15040, IP 68, measuring range 15 m (options up to 60 m)
- Sound velocity sensor for precise distance measurement (REF300)
- Controller module for signal processing and sensor control/data acquisition incl. RTC
- RS232/RS485 serial data interface
- Power supply 12 VDC (AC optional)
- LOG_aLevel Software for system set-up, online-analysis of measuring network, visualisation, managing and storing of data on a Windows PC



Options:

- Ultrasound Sensors: 20/25/30 m measuring range
  Radar Sensor: 35/40/60 m measuring range
- Sensor bracket
- Additional wave parameter (direction-with current meter, wave spectra etc.), Tide analysis and prediction
- Data Logger incl. 4 GB Flashcard or complex/sophisticated data acquisition system
- Radio Data Modems: licence free and licensed
- GSM/GPRS data transmission to dyn. or fixed IP-Addr.
- Modem or Ethernet-Module LAN/WLAN - connectivity
- Integration into SCADA systems/Modbus, AIS AtoN
- Wind generator up to 300 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. Ultrasonic wind gauge, temperature, humidity, precipitation, barometric pressure, visibility, cloud height etc.
- Data server, additional Windows clients, alerting software



Specifications:

Measuring range:	15/20/25/30 m (Ultrasonic) 35/40/60 m (Radar)
Resolution / Field accuracy:	1 mm / 2 cm
Wave parameter:	Hs, Hmax, Ts
Sample rate (User selectable):	up to 5 Hz (15/20/35/40/60 m) up to 4 Hz (25/30m)
Sensor frequency:(Ultrasonic)	40 kHz; 30 kHz @ 30m 10 GHz FMCW (Radar)
Working temp:	-20 °C up to +70 °C
Storage temp:	-40 °C up to +80 °C

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