

The **ONLY CHOICE** for reliable measurements of tide and waves.

TWG-12

Tide & Wave Gauge

The TWG-12 is a solid state Tide & Wave Gauge incorporating microprocessor based CMOS circuitry with a high accuracy, high resolution quartz pressure transducer and a precision thermistor.

The TWG-12 offers internal data logging and batteries for complete autonomous operations. Programmable sample intervals, burst duration, tide and wave integration combined with optional conductivity or current speed and direction sensors, makes the TWG a powerful and versatile instrument for the collection of tide and wave data.

A standard feature of every TWG-12 is AML's powerful, user friendly MS Window™ 95/98/NT compatible "Integrated Systems Software." ISS allows for viewing, editing, printing, and graphing of data logged by the instrument.

Features

- High resolution and accuracy quartz pressure transducer (0.01% FS)
- Programmable burst sampling
- Programmable tide and wave integration
- Real time clock
- Non-volatile memory to 200 Mbytes
- Optically isolated autobauding RS-232 communications to 19.2 Kbaud
- Autonomous battery powered operation

Applications

- Wave height and period measurements
- Sea slope measurements
- Tsunami, wave and seiche studies
- Harbour and estuary depth monitoring
- Reservoir, lake and river level monitor
- Oceanic tidal measurements
- Detection of storm forerunners and storm surge
- Dredging and land reclamation



Instrumentation
THROUGH
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**APPLIED
MICROSYSTEMS
LTD**

TWG-12

Tide & Wave Gauge

Electrical

- Non-volatile 2 Mbyte RAM expandable to 200 Mbyte
- Real time clock
- Optically isolated autobauding RS-232 port
- Supports five additional analog channels
- Auto shut-down in low battery conditions

Power

- Alkaline (9 x "D" cell) 10 A-H
- 40 mA sampling
- 5 mA standby
- 0.04 mA sleep mode

Battery Options

- Lithium (3 x "D" cell) 14 A-H
- Nicad (9 x "D" cell) 4.4 A-H
- External power (8 to 16 volts DC)

Software

- Real time graphing & tables
- Instrument setup
- Downloading data
- Exporting data
- Windows™ 95/98/NT compatible

Mechanical

- Weight: 6.0 kg (13.2 lbs) in air
3.9 kg (8.6 lbs) in water
- Dimensions: 610 mm (24.0") x 100 mm (3.95") Ø
- Construction: Acetal homopolymer plastic (Delrin®)
Rated to 600 meters
- Connectors: IMPULSE Wet Pluggable™ series
- Environmental: Operating: -20° to 50°C
Storage: -40° to 70°C

Accessories

- Mounting bracket
- Cellular modem
- Radio modem
- Additional cable

Sensor Specifications

PRESSURE:

Type:	Quartz crystal transducer
Range:	Available ranges are: 0-30, 45, 100, 200, 300 and 400 PSIA full scale range
Accuracy:	0.01% Full Scale
Repeatability:	0.005% Full Scale
Hysteresis:	0.005% Full Scale
Tide Resolution:	0.000001% Full Scale at 1 minute integration 0.00000005% Full Scale at 15 minute integration
Wave Resolution:	0.0002% Full Scale at 0.25 second integration 0.0005% Full Scale at 1 second integration

TEMPERATURE:

Type:	Pressure protected precision aged thermistor
Range:	-2°C to 32°C
Accuracy:	0.01°C
Resolution:	0.001°C
Response:	<1.5 seconds

Optional differential pressure sensor for atmospheric correction.



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