

## VW weir monitoring system



[Outline of VW weir monitoring system]

### Description

Model 1650 **VW weir monitoring system** employs a VW force transducer and that is possible to high sensitivity measure of water level.

This VW weir monitoring system consists of the VW transducer, a buoy cylinder assembly to detect water level, and a chamber to inject water. Water level in a chamber serves as buoyancy that is equal to adjacent water level.

Changes in buoyancy on the buoy cylinder assembly caused by water level, change tension of the vibrating wire. When excited by the plucking coil, the vibrating wire at its resonant frequency.

This frequency is transmitted to the VW readout unit and is displayed.

VW force transducer provides very excellent responsibility and reproducibility. Also they do not affected by secular change and are suitable for long term monitoring.

The VW force transducer is equipped with a temperature device for compensating for temperature variations and a lightning protection device for protecting the VW force transducer from electrical shock.

When using it under weir monitoring system on the dam site. You have to apply them to accessories on V notch, wave filter and discharge weir and the size or installing place has to be consulted beforehand.

### Features

- High precision and reliability
- Long term stability and reliability
- Employed permanent anti-corrosive materials
- Not affected by cable length and resistance change, reproducibility are very excellence
- Possible to automatic measurement

### Applications

- Measurement of water leakage volume in dams
- Measurement water level in filtration plants and contained water lake

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### Specification

Model	1650		
Sensor element	VW force transducer		
Range	300mm	600mm	1,500mm
Resolution	0.025% FSR		
Accuracy	±0.1% FSR		
Nonlinearity	±0.5% FSR		
Operating temperature	-40~80°C		
Built-in temperature device	Thermistor (3k $\Omega$ )		
Temperature device range	-40~105°C		
Temperature device accuracy	±0.5°C		
Waterproof	105m H <sub>2</sub> O		
Material	Stainless steel , PVC chamber		
Weight	① Sensor 1.4kg ② Buoy ass'y 8~12kg ③ PVC chamber 15~20kg		
Weight	④ Ceramic filter ass'y 1kg		
Signal cable	Ø6.4mm, 0.37mm <sup>2</sup> × 4C shielded PVC sheath cable		

### The readout

It is connected to the system such as the VW readout units, data loggers to be data logging and data acquisition system to monitor readings. It is compatible with other company's readout unit.

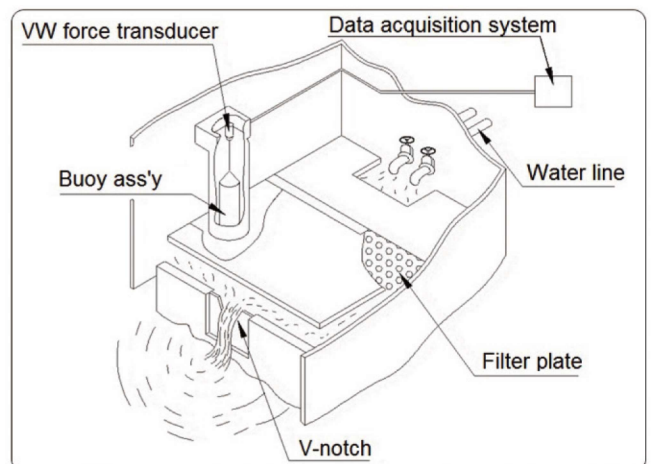
- ACE-800 (VW readout)
- ACE-1000 (VW data recorder)
- ACE-1100 series (VW mini logger)
- ADL-16V (VW data logger)
- ADL-200A (Smart logger)
- VL Module (Smart LoRa system)

### Ordering information

- Application field
- Range
- Liquid type
- Keeping VW readout unit
- Cable length

### Ancillary equipments

- Universal terminal box (model 7012/7024)
- Heavy duty cable
- V-notch
- Filter plate
- Water plate
- Atmospheric pressure meter
- Atmospheric pressure meter



[Installation of VW weir monitoring system]