

WAVELET DISCHARGE KIT

SUMMARY

The Wavelet Discharge Kit measures flow, typically in gravity-fed systems, for applications in wastewater and stormwater drainage as well as in agricultural supply water and run-off. Ayyeka offers an accurate, cyber-secure, and streamlined solution using best-in-breed sensors that is effective for both freshwater and wastewater discharge monitoring applications.

Ayyeka's Wavelet Discharge Kit measures velocity and liquid depth of influent and effluent in real-time using contactless laser and ultrasonic technology in pre-defined pipe sizes. This enables continuous operation and situational awareness. By contrast, substitute solutions on the market typically involve instrumentation relying on acoustics. Compact acoustic sensors are suitable inside the flow for freshwater, but are not a viable solution for wastewater applications.

FEATURES

- ▶ Non-Contact Discharge Monitoring
- ▶ Robust IP 68 / NEMA 6P for Aggressive Environments
- ▶ Use Real-Time Data to Control Sewer Flows

APPLICATIONS

- ▶ Sewer Monitoring & Control
- ▶ Monitoring of Storm Discharge into the Natural Environment
- ▶ Discharge Reuse Cost & Energy Savings

SENSOR SPECIFICATIONS

Velocity Measurement	Method	Non-Contact Laser Doppler Velocity
	Range	-4.6 m/s – 4.6 m/s (-15 ft/s – 15 ft/s)
	Accuracy	±0.5% of reading ±0.03 m/s (0.1 ft/s)
	Min. Velocity	0.15 m/s (0.5 ft/s)
	Max. Distance	3 m (10 ft) from liquid surface to bottom of sensor
	Direction	Selectable bidirectional flow measurement Requires turbidity > 20 NTU
Level Measurement	Method	Non-Contact Ultrasonic
	Range	0 – 3 m (0 – 10 ft) from measurement point
	Accuracy at 22°C (72°F)	±0.006 m (0.02 ft) at ≤ 1-ft level change; ±0.012 m (0.04 ft) at ≥ 1-ft level change
	Temperature Coefficient	±0.0002 x D (m) per °C; ±0.00011 x D (ft) per °F (D = Distance from transducer to liquid surface)
	Beam Angle	10° (5° from center line)
	Ultrasonic Signal	50 KHz
	Deadband	Zero deadband from bottom of sensor
	Size (H x W x D)	38 cm x 26.2 cm x 56.7 cm (15 in. x 10.3 in. x 22.3 in.)
General	Weight	8.7 kg (19.2 lbs)
	Operating Temperature	-20°C to 60°C (-4°F to 140°F)
	Flow Accuracy	±4% of reading under normal conditions



Model No. WA1111-SE00016-WA00129

Wavelet Discharge Kit includes:

- Wavelet Device & Activator
- 4G (LTE), 3G, 2G, Global SIM Card
- Internal Lithium Battery
- Installation Hardware
- External Power Connector
- **WA00129** External Cellular Antenna
- **SE00016** Non-Contact Laser Velocity Sensor, 10 m (33-ft) Cable