



WAVELET DISCHARGE KIT

Model No. WA2230 - SE00016

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 both for 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 radar and ultrasonic technology in pre-defined pipe sizes, which enables continuous operations and situational awareness. By contrast, substitute solutions in 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.

WAVELET PLATFORM FEATURES

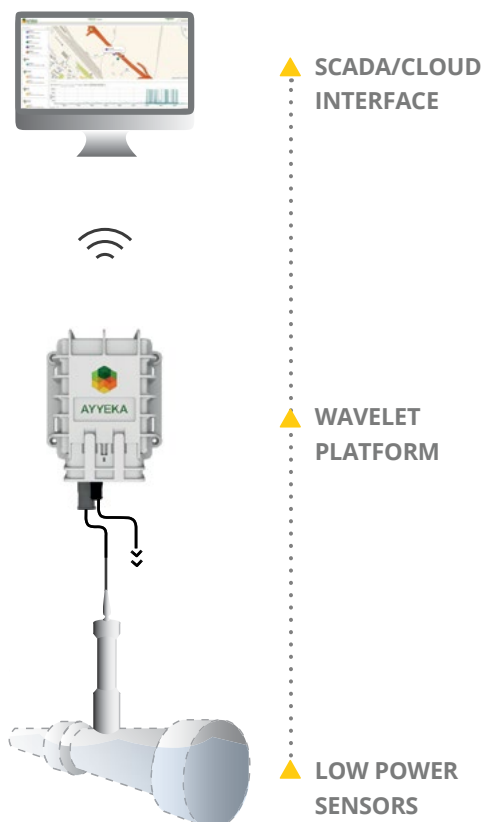
- ▶ PLUG-AND-PLAY
- ▶ BUILT-IN SCADA INTERFACE
- ▶ CYBER-SECURITY
- ▶ USER-FRIENDLY DATA VISUALIZATION
- ▶ CLOUD-BASED DATA STORAGE
- ▶ REMOTE NETWORK MANAGEMENT
- ▶ GLOBAL GSM CELLULAR SERVICE
- ▶ PROGRAMMABLE THRESHOLDS
- ▶ E-MAIL & SMS ALERTS
- ▶ GPS TIME & LOCATION SYNC
- ▶ LOW POWER CONSUMPTION
- ▶ AUTONOMOUS OPERATION



THE WAVELET PLATFORM

Wavelet brings together end-to-end, turnkey solutions that cover all of your continuous remote monitoring needs. Starting from the smart sensors, across the transmission platform, through data management, we have created unique monitoring kits to measure and monitor a range of water supply, water quality, wastewater and hydrologic parameters. Wavelet Kits are all designed to help facilitate more effective water network management.

Ayyeka's Wavelet Kit features a fully integrated, plug-and-play monitoring solution that fits seamlessly onto any water infrastructure and sends the data securely to you. Our Kits provide you with total visibility of your networks. The Kits are easy to setup and use, and will save valuable time and money.



DISCHARGE MONITORING SENSOR SPECIFICATIONS

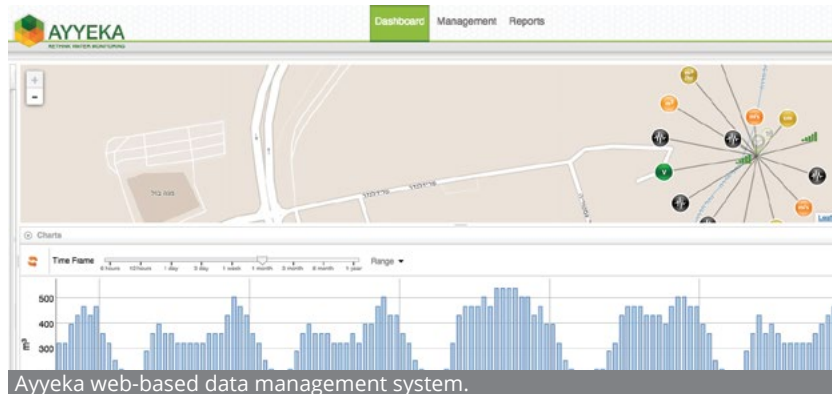
| | | |
|-------------------------------|--|---|
| ▶ General | Enclosure | IP 68 Waterproof rating, polystyrene |
| | Dimensions (W x L x D) | 160.5 mm x 432.2 mm x 297 mm (6.3 in. x 16.7 in. x 11.7 in.) |
| | Operational Temperature | -10°C to 50°C (14°F to 122°F) |
| ▶ Velocity Measurement | Method | Radar |
| | Range | 0.23 to 6.10 m/s (0.75 to 20 ft/s) |
| | Accuracy | ±0.5%; ±0.03 m/s (±0.1 ft/s) |
| ▶ Depth Measurement | Method | Ultrasonic |
| | Standard Operating Range | 0 to 152.4 cm (0 to 60 in.) |
| | Optional Extended Level Operating Range | 0 to 6.1 m (0 to 20 ft) with 43.18 cm (17 in.) dead band, temperature compensated |
| | Accuracy | ±1%; ±0.25 cm (±0.1 in.) |
| | Flow Measurement | Method |
| | Accuracy | +/- 5% typical flow +/- 1% full scale max. |

The discharge monitoring sensor combines advanced radar velocity and ultrasonic pulse echo sensing technology.



CASE STUDY

- ▶ **Description:** A regional wastewater treatment plant was unable to accurately assess the volume of influent received from each of its customers, resulting in inaccurate invoicing.
- ▶ **Solution:** The client installed wastewater Wavelet Discharge Kits at access points for each of its customers, enabling the client to measure and monitor volumetric data in real-time for each of its customers and precisely allocate charges.



WAVELET PLATFORM SPECIFICATIONS

▶ DATA & SOFTWARE

| | |
|--|---|
| Ayyeka Data Server | Ayyeka Private Cloud and/or Customer On-Premises Server |
| User Interface | Web-Based, Tablet & Mobile |
| Data Export Options | Excel, CSV |
| SCADA & 3rd Party Integration | OPC/DNP3/API |
| Data Encryption | AES 256 |
| Internal Memory | 32 GB |

▶ CONNECTIVITY & INTERFACE

| | |
|-------------------------------------|--|
| Cellular Network | Multi-Cellular Carrier: 2G, 3G, and CDMA (Verizon) |
| Data Transmission Profiles | Periodic, Data Dependent |
| Event Driven Alerts | SMS, E-mail, API |
| Configuration & Upgrades | Remotely Over-The-Air, USB PC Connection |
| Antenna | Internal or External |
| SIM Card | Included |

▶ POWER

| | |
|---|--|
| Primary Power Supply | Internal Lithium Battery |
| Operational Run Time | 3,500+ Transmissions per Battery Pack, Field Replaceable Battery |
| External Power Supply (Optional) | 4.5V-28V, Automatic Power Source Switching |
| Battery Level Notifications | Included |

Ayyeka provides cyber-secure, plug-and-play, remote monitoring solutions designed for various markets. Founded in 2011, Ayyeka has an installed base in challenging locations and earned a reputation for excellent customer service. Bringing together a state-of-the-art hardware and cloud-based software package, Ayyeka's solutions are leading the infrastructure monitoring sector into the future.