WAVELET SEWER OVERFLOW (CSO/SSO) KIT

SUMMARY

Wavelet Sewer Overflow Kits are comprised of a level sensor, the Wavelet data-logging and telemetry platform, and a data management system all fused into a single streamlined solution. Level can be measured using a level switch, a submersible hydrostatic level sensor, an ultrasonic non-contact level sensor, or a radar level sensor. Each installation location is unique and requires the level-monitoring method best suited to it.

Some cities have a combined sewer system, where wastewater and rainwater are mixed in one system. Combined Sewer Overflow (CSO) and Sanitary Sewer Overflow events (SSO) occur when a significant amount of storm water causes sewage to overflow, polluting surrounding public right-of-way and water bodies. Real-time awareness of CSO events is critical for public health and safety and for compliance with EPA CSO Control Policy. Management of these time-sensitive conditions is aided by the Wavelet's automatic SMS and email alerts which trigger whenever an emergency event occurs.

FEATURES

- Automatic SMS & Email Alerts
- Real-Time Continuous Data
- SCADA Connectivity
- Plug-and-Play Installation

APPLICATIONS

- Prevent CSO Events & Pollution
- Awareness of Sewer Water Levels
- Protect Public Health & Safety
- Comply with EPA CSO Control Policy

SENSOR SPECIFICATIONS

A. Level Switch

Control Differential	3.8 cm (1.5 in.) above or below horizontal
Housing	High impact, corrosion resistant polypropylene
Max. Water Depth	9 m (30 ft)
Max. Pressure	2.1 bar (30 psi)
Max. Liquid Temperature	60°C (140°F)

B. Non-Contact Ultrasonic Level Sensor

Range	0.3 – 7.5 m (1 – 25 ft). Other ranges available upon request.
Accuracy	0.25% of measurement range. Internal temperature compensation included.
Beam Pattern	9° off axis
Frequency	43 kHz or 69 kHz (depending on model)
Body Material	PC/PBT blend upper housing; ceramic, PVDF faced transducer
Operating Temperature	-34°C to 60°C (-30°F to 140°F)

C. Submersible Hydrostatic Level Sensor

Range	0 – 1 bar (0 – 15 psi) included. Ranges of 0 – 0.34/0.69/1.38 bar (0 – 5/10/20 psi) available.
Max. Depth	140 m (450 ft)
Accuracy	≤ 0.5% of full span
Temperature Compensation	-17°C to 54°C (0°F to 130°F)
Certification	CSA Intrinsically Safe, Class 1, Division 1
Housing	316L SS

D. Radar Level Sensor

Operation	Pulse Radar
Range	15 m (49 ft) included
Accuracy	±2 mm (±0.08 in.) of max. range
Frequency	26 GHz
Max. Pressure	-1 – 2 bar (-14.5 psi – 29 psi)
Operating Temperature	-40°C to 80°C (-40°F to 176°F)

E. Dual-Axis Inclinometer

Range	±90° (±25° and ±45° measurement ranges also available)
Accuracy	0.15° at 25°C; 0.5° at -40°C to 80°C is typical
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Wake-Up Time	< 1 s

All Wavelet CSO/SSO Kits include the following, along with the specified level sensor and/or inclinometer:

- Wavelet Device & Activator
- 4G (LTE), 3G, 2G, Global SIM Card
- Internal Lithium Battery
- Installation Hardware
- External Power Connector
- **WA00129** External Cellular Antenna

Model No. WA1111-SE00015-WA00129

Wavelet Level Switch CSO/SSO Kit:

- **A. SE00015** Float Level Switch, 15 m (50-ft) Cable

Model No. WA1111-SE00011-WA00117-WA00129

Wavelet Ultrasonic Level CSO/SSO Kit:

- **B. SE00011** Non-Contact Ultrasonic Level Sensor, 0.3-7.5 m (1-25 ft) Range, 10.7 m (35-ft) Cable
- **B1. WA00117** Non-Contact Ultrasonic Level Sensor Installation Hardware

Model No.WA1111-SE00012-WA00129

Wavelet Hydrostatic Level CSO/SSO Kit:

- **C. SE00012** Submersible Hydrostatic Level Sensor, 0-1 bar (0-15 psi), 10.7 m (35-ft) Cable

Model No. WA1111-SE00095-WA00129

Wavelet Radar Level CSO/SSO Kit:

- **D. SE00095** Non-Contact Radar Level Sensor, 15 m (49-ft) Range, Mounting Bracket, 12 m (39-ft) Cable

Model No. WA1111-SE00075-WA00129

Wavelet Inclinometer CSO/SSO Kit:

- **E. SE00075** Dual-Axis Inclinometer (+/-90°), 10.7 m (35-ft) Cable