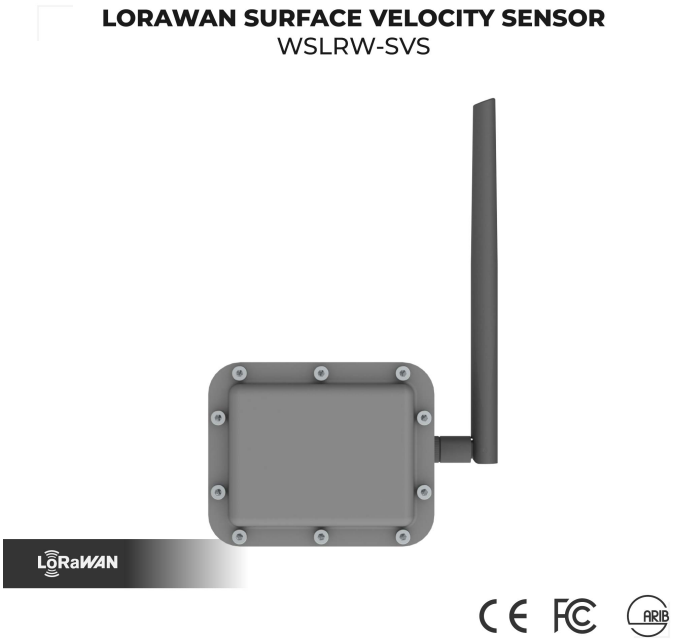
LoRaWAN Surface Velocity Sensor

Smart City

SKU: WSLRW-SVS



Safe Zone

Hazardous Zones

The LoRaWAN Surface Velocity Sensor WSLRW-SVS is an advanced solution for monitoring surface water flow, utilizing 24GHz Doppler radar technology to accurately measure bidirectional surface velocity in rivers, canals, and streams. It supports a wide measurement range from 0.1 to 20 m/s with exceptional accuracy of ±0.01 m/s, providing precise and real-time insights into surface flow dynamics. Designed for continuous, high-frequency monitoring, the sensor integrates a 5W solar panel and an internal rechargeable battery (user-installed), enabling autonomous and energy-efficient operation in remote or outdoor environments. Wireless data transmission is enabled via LoRaWAN with global frequency band compatibility, allowing seamless deployment and integration into existing IoT or telemetry infrastructures. The external antenna ensures stable, long-range communication, making the WSLRW-SVS ideal for applications such as flood early warning systems, hydrological monitoring, and water resource management. With its high precision, low power consumption, and robust LoRaWAN connectivity, this sensor delivers a reliable and modern solution for bidirectional surface velocity measurement.

Applications

Flood Monitoring, River Flow Monitoring

Notes For Applications

- **Reliable Measurement**
  Utilize 24GHz doppler radar technology to get reliable measurement
- **Fully Autonomous**
  Equipped with Solar panel and Rechargeable Battery
- **Global LoRaWAN**
  Support all frequency bands for Global use
- **IP67**
  Durable working in harsh environment

DAVITEQ TECHNOLOGIES INC
Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH
+84.28.6268.2523 / 6268.2524
info@daviteq.com **www.iot.daviteq.com**
Created date: Oct-20-2025 | Updated date: Nov-10-2025

Specification

Sensor Technology	Doppler 24GHz Radar Technology
Measurement range	0.1 - 20 m/s at max distance 30m, bidirectional
Resolution	0.01m/s
Accuracy	+/- 0.01m/s
Sensor sampling rate	configurable from 1 min up to 60 min
Alarm setting	setting the alarm threshold for calculated value
COMMUNICATION	
SF factors	SF7～SF12
Antenna	External Antenna 2.0dbi
Battery	6xRechargeable Battery Li-ion 18650, batteries not included
Solar Panel	included 5W solar panel
RF Frequency and Power	860～930MHz, 14～20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN® Class A
Data sending modes	Interval time and when alarm occurred
Configuration	via downlink or offline cable (software is free)
Working temperature	-20～70℃ (battery cannot be charged in < 0℃)
Dimensions	H87xW107xD40, not included solar panel and antenna
Net-weight	<1000g
Housing	Aluminum & POM plastic, IP67

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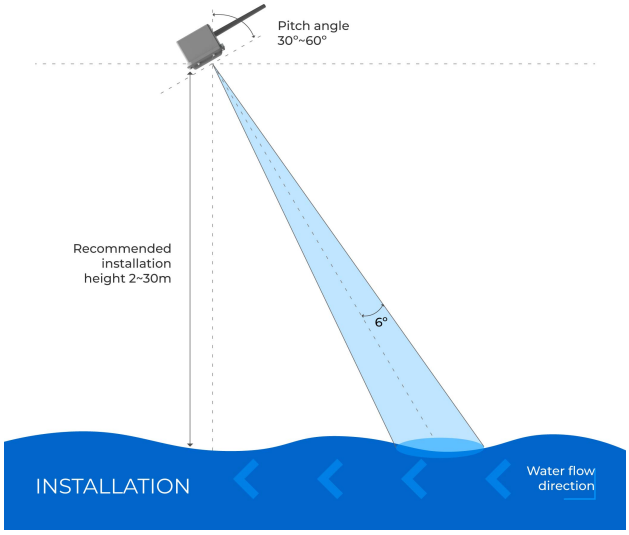
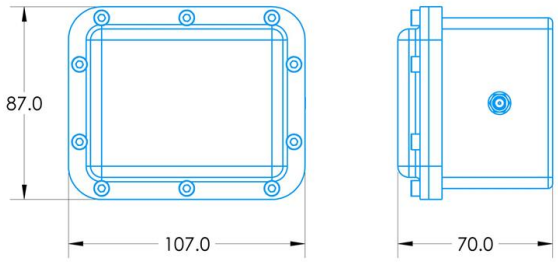
LORAWAN SURFACE VELOCITY SENSOR
WSLRW-SVS

INSTALLATION ON A POLE
WITH SOLAR PANEL

LORAWAN SURFACE VELOCITY SENSOR
WSLRW-SVS



LORAWAN SURFACE VELOCITY SENSOR
WSLRW-SVS



DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-SVS-30-01	LoRaWAN Surface Velocity Sensor, 30m distance, External antenna, 5W Solar panel, holder for rechargeable batteries, IP67, for all LoRa frequency bands, c/w standard mounting bracket

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