

LoRaWAN/NB-IoT Flow Sensor

OVERVIEW:

The Dragino SW3L series is a **Flow Sensor**. It detects **water flow volume** and uplink to IoT server via **LoRaWAN and NB-IoT** network. User can use this to monitor the water usage for buildings.

The Dragino SW3L series will send water flow volume every 20 minutes. It can also detect the **water flow status and send Alarm**, to avoid the waste for water usage such as broken toilet case.

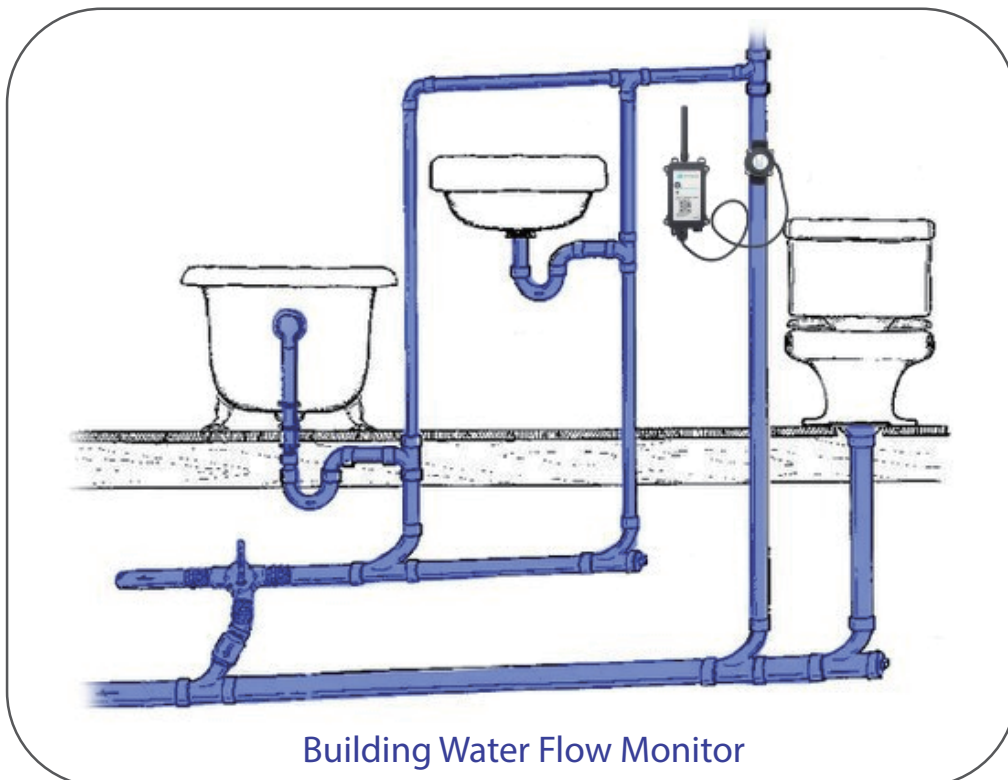
It is designed for both indoor and outdoor use. It has a weatherproof enclosure and industrial level battery to work in low to high temperatures.

It supports **BLE configure and wireless OTA update** which make user easy to use.









The Dragino SW3L series is powered by **8500mAh Li-SOCI2 battery** or **solar panel with li-on battery**, it is designed for long-term use up to several years.



Applications:



Model Variants

Variants	SW3L-LB	SW3L-LS	SW3L-NB	SW3L-NS
Appearance				
Connectivity				
Configure Method	TTL, BLE, LoRaWAN	TTL, BLE, LoRaWAN	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT
Upgrade Method	TTL, BLE, LoRa	TTL, BLE, LoRa	TTL, BLE	TTL, BLE
Features	<ul style="list-style-type: none"> * Ultra-low power consumption * Upload water flow volume * Monitor water waste * Support Datalog Feature, Alarm Feature * Support Bluetooth v5.1 remote configure and OTA update firmware * Downlink to change configure 			
Battery & Power	* Li/SOCI2 Battery	* Solar + Li-on Battery	* Li/SOCI2 Battery	* Solar + Li-on Battery
Power Consumption	<ul style="list-style-type: none"> * Sleep Mode: 5uA @ 3.3v * LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm 	<ul style="list-style-type: none"> * Sleep mode: 74uA@3.8V * LoRa Transmit Mode: 206mA@14dBm, 236mA@20dBm 	<ul style="list-style-type: none"> * Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V 	<ul style="list-style-type: none"> * Sleep mode: 74uA@3.4V * Max Transmit power: 350mA@3.4V
Supply Voltage	2.5v ~ 3.6v	3.7v ~ 4.2v	2.5v ~ 3.6v	3.7v ~ 4.2v
Operating Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Battery & Enclosure Option:



Li-SOCI2 Battery:

- Li/SOCI2 un-chargeable battery
- Capacity: 8500mAh
- Self-Discharge: <1% / Year @ 25°C
- Max continuously current: 130mA
- Max boost current: 2A, 1 second



Solar Version:

- 3000mAh Re-chargeable battery
- 0.9W on board solar panel Suitable to used in the place where sun is sufficient

Wireless Option:



- LoRaWAN 1.0.3 Class A
- Bands: CN470/EU433/KR920/US915/EU868/AS923/AU915/IN865
- OTAA or ABP Mode.
- World Wide Unique LoRaWAN Key
- RX sensitivity: down to -139 dBm.
- Max +22 dBm - 100 mW RF output



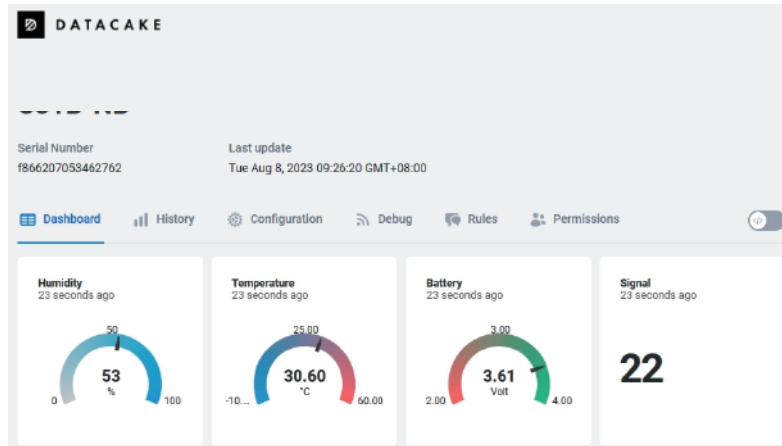
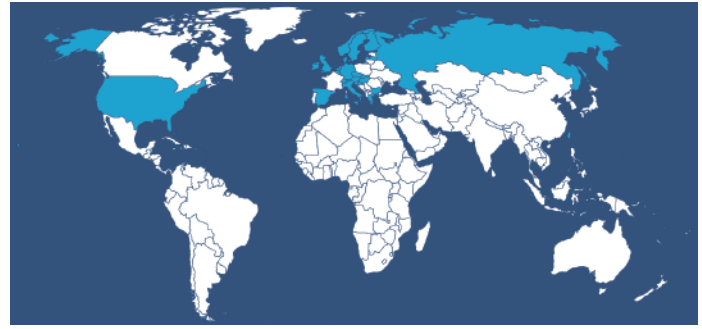
- NB-IoT Bands, B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85 @H-FDD
- Uplink via MQTT, MQTTs, TCP, or UDP
- Multiply Sampling and one uplink

What is 1D version for NB-IoT version?

The 1D version of SW3L NB-IoT is with 1NCE SIM Card and DataCake IoT Service.

1NCE card provides 10 years lifetime for NB-IoT connection and Includes 500MB data traffic which is enough for 10 years normal uplink for the NB-IoT Sensor.

Coverage of 1NCE card is NB-IoT network coverage: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Malta, Netherlands, Norway, Puerto Rico, Russia, Slovak, Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.



1D version with DataCake IoT service pre-installed. This save a lot of work from user side to configure IoT server.

Below is Dash Board is the demo in DataCake.

Order Info:

Part Number: SW3L-LB-XX-YY

XX: The default frequency band

- XX: Frequency Bands, options: EU433,CN470, EU868,IN865,KR920,AS923,AU915,US915

YY: Flow Sensor Model

- 004: DW-004 Flow Sensor: diameter: G1/2" / DN15. 450 pulse = 1 L
- 006: DW-006 Flow Sensor: diameter: G3/4" / DN20. 390 pulse = 1 L
- 010: DW-010 Flow Sensor: diameter: G 1" / DN25. 64 pulse = 1 L
- 020: DW-020 Flow Sensor: diameter: G 2" / DN50. 12 pulse = 1 L

Part Number: SW3L-NB-XX-YY

XX:

- **GE:** General version (Exclude SIM card)
- **1D:** with 1NCE* 10 years 500MB SIM card Pre-configure to DataCake server

YY: Flow Sensor Model

- 004: DW-004 Flow Sensor: diameter: G1/2" / DN15. 450 pulse = 1 L
- 006: DW-006 Flow Sensor: diameter: G3/4" / DN20. 390 pulse = 1 L
- 010: DW-010 Flow Sensor: diameter: G 1" / DN25. 64 pulse = 1 L
- 020: DW-020 Flow Sensor: diameter: G 2" / DN50. 12 pulse = 1 L

Part Number: SW3L-LS-XX-YY

XX: The default frequency band

- XX: Frequency Bands, options: EU433,CN470, EU868,IN865,KR920,AS923,AU915,US915

YY: Flow Sensor Model

- 004: DW-004 Flow Sensor: diameter: G1/2" / DN15. 450 pulse = 1 L
- 006: DW-006 Flow Sensor: diameter: G3/4" / DN20. 390 pulse = 1 L
- 010: DW-010 Flow Sensor: diameter: G 1" / DN25. 64 pulse = 1 L
- 020: DW-020 Flow Sensor: diameter: G 2" / DN50. 12 pulse = 1 L

Part Number: SW3L-NS-XX-YY

XX:

- **GE:** General version (Exclude SIM card)
- **1D:** with 1NCE* 10 years 500MB SIM card Pre-configure to DataCake server

YY: Flow Sensor Model

- 004: DW-004 Flow Sensor: diameter: G1/2" / DN15. 450 pulse = 1 L
- 006: DW-006 Flow Sensor: diameter: G3/4" / DN20. 390 pulse = 1 L
- 010: DW-010 Flow Sensor: diameter: G 1" / DN25. 64 pulse = 1 L
- 020: DW-020 Flow Sensor: diameter: G 2" / DN50. 12 pulse = 1 L

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