

Flow Sensor

OVERVIEW:

The Dragino SW3L series is a **Flow Sensor**. It **detects water flow volume** and uplink to IoT server via **LoRaWAN, NB-IoT or CAT-M1** 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.

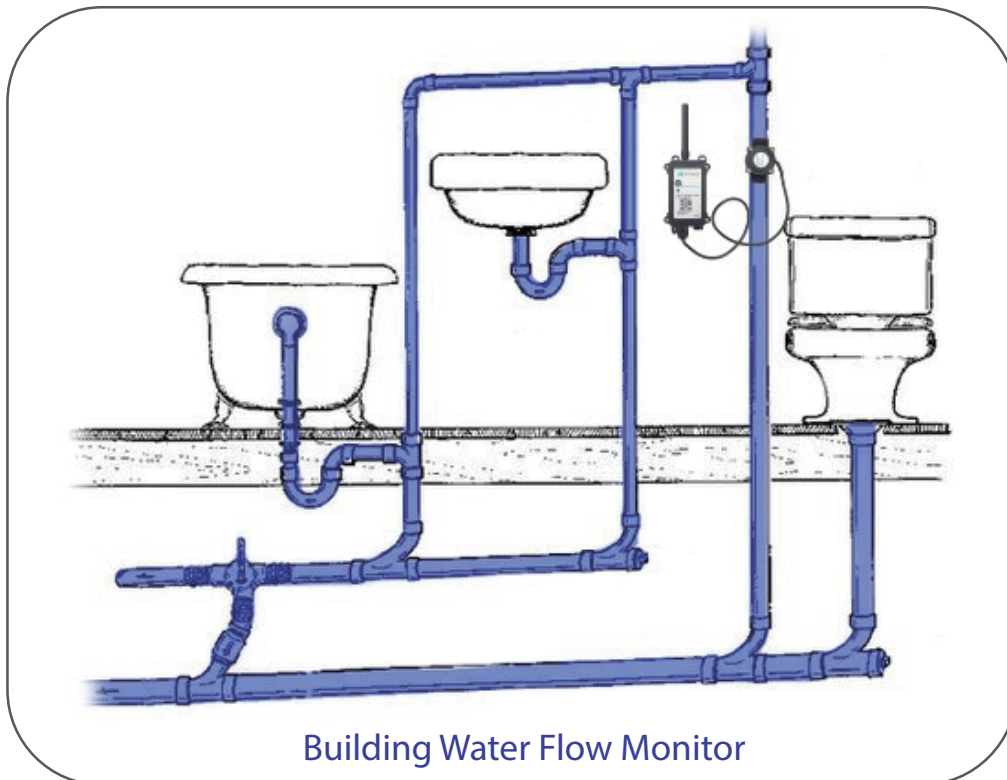
It is designed for both indoor and outdoor use. It has a weatherproof enclosure and industrial level battery to work in low to high temperatures.

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-ion battery**, it is designed for long-term use up to several years.



Application:



Model Variants

Variants	SW3L-LB	SW3L-LS	SW3L-NB	SW3L-NS	SW3L-CB	SW3L-CS
Connectivity						
Configure Method	TTL, BLE, LoRaWAN	TTL, BLE, LoRaWAN	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT	TTL, BLE, NB-IoT, LTE-M	TTL, BLE, NB-IoT, LTE-M
Upgrade Method	TTL, BLE, LoRa	TTL, BLE, LoRa	TTL, BLE	TTL, BLE	TTL, BLE	TTL, BLE
Features	<p>Sensor /Probe:</p> <ul style="list-style-type: none"> * Upload water flow volume * Monitor water waste * Support Data log Feature, Alarm Feature <p>General Features:</p> <ul style="list-style-type: none"> * Ultra-low power consumption * Support Bluetooth v5.1 remote configure and OTA update firmware * Uplink on periodically * GNSS for Location Report (for -CB & -CS models only) * Downlink to change configure 					
Battery & Power	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-on Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-on Battery	 * 8500 mAh Li/SOCI2 Battery	 * Solar + 3000 mAh Li-on Battery
Power Consumption	* Sleep Mode: 5uA @ 3.3v * LoRa Transmit Mode: 125mA @ 20dBm, 82mA @ 14dBm	* Sleep mode: 74uA@3.8V * LoRa Transmit Mode: 206mA@14dBm, 236mA@20dBm	* Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V	* Sleep mode: 74uA@3.4V * Max Transmit power: 350mA@3.4V	* Sleep mode: 14uA@3.3V * Max Transmit power: 350mA@3.3V	* 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	2.6v ~ 3.6v	3.7v ~ 4.2v
Operating Temperature	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C	-40 ~ 85°C

Battery & Enclosure Option:

Li-SOCI2 Battery & Enclosure:



- 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 & Enclosure:



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



- This icon means support location feature by: GPS/GLONASS/BDS/Galileo/QZSS

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



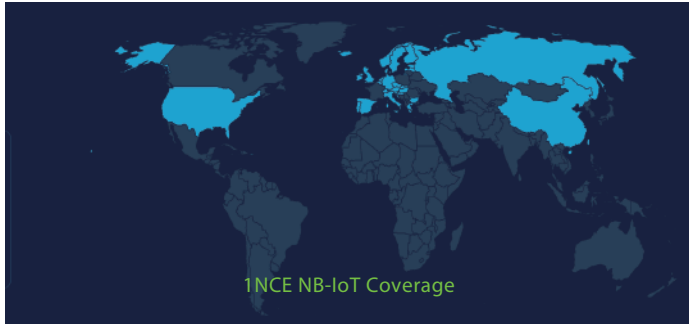
- **CAT NB2 Bands:**
- For -NB & -NS: B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66/B70/B85
- For -CB & -CS: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85
- Uplink via MQTT, MQTTs, TCP, UDP or CoAP
- Multiply Sampling and one uplink



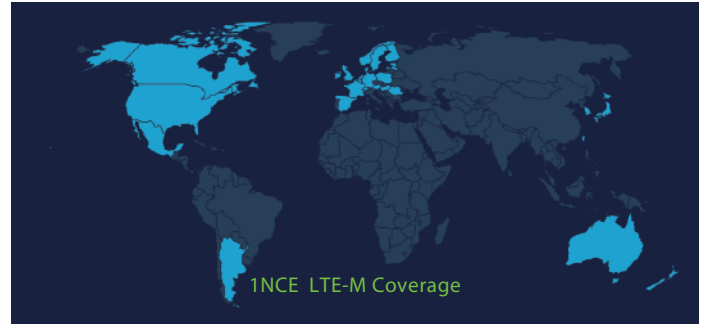
- CAT-M1 / LTE-M Bands: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85
- Uplink via MQTT, MQTTs, TCP, UDP or CoAP
- Multiply Sampling and one uplink

What is 1T version for NB-IoT version?

The 1T version of NB-IoT Flow Sensor is with 1) 1NCE SIM Card & 2) ThingsEye Pre-configured. 1NCE SIM Card (10 Years Cellular service with 500MB Data Traffic, Enough for devices to uplink 10 years at 1hour interval).



NB-IoT Network : Austria, Belgium, Bulgaria, China, Croatia, Czech Republic, Denmark, Estonia, Finland, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Malta, Netherlands, Norway, Portugal, Puerto Rico, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.

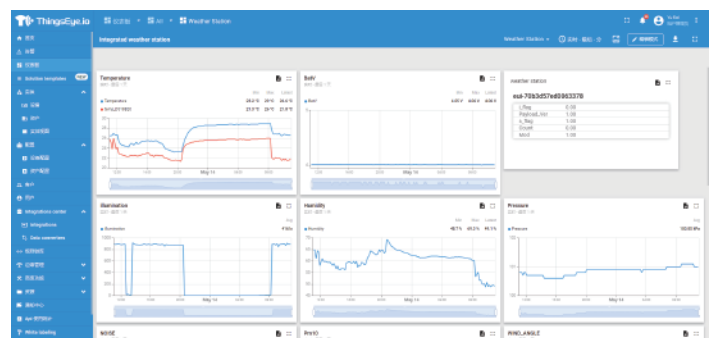


LTE-M Network : Argentina, Austria, Australia, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Japan, Jersey, Korea, Republic of, Latvia, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Puerto Rico, Romania, Spain, Sweden, Switzerland, Taiwan, USA, US Virgin Islands.

ThingsEye.io platform:

1T version with ThingsEye 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 ThingsEye.io.



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-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-NB-XX-YY

XX:

- GE: General version (Exclude SIM card)
- 1T: with 1NCE* 10 years 500MB SIM card Pre-configure to ThingsEye 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-NS-XX-YY

XX:

- GE: General version (Exclude SIM card)
- 1T: with 1NCE* 10 years 500MB SIM card Pre-configure to ThingsEye 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-CB-XX-YY

XX:

- GE: General version (Exclude SIM card)
- 1T: with 1NCE* 10 years 500MB SIM card Pre-configure to ThingsEye 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-CS-XX-YY

XX:

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