# WSLink data upload API

For custom weather server with WSLink device

VERSION: 0.6

# Feature

WSLink data upload API is for end user to develop their own web-based weather data server which collecting the weather station data of the WSLink compatible device(s)

# General information

| | |
|---:|---|
| **Protocol:** | http or https |
| **Port:** | Default 80 |
| **Request method:** | GET |
| **Data format:** | UTF8 |

# URL formats

| Parameter | Description |
|---:|---|
| https://xxxxx.xxx/data/upload.php | xxxxx.xxx is user define domain name |
| https://xxxxx.xxx:443/data/upload.php | URL with define port (example: 443) |

# Upload parameters

| Sensor type | Parameter | Description | Data type | Unit |
|---|---:|---|---|---|
| | ?wsid= | Device ID (user define) | string | |
| | &wspw= | Device password (user define) | string | |
| | &datetime= | YYYY-MM-DD+hh%3Amm%3Ass<br>e.g.<br>2000-01-01 10:32:25<br>2000-01-01+10%3A32%3A25<br>(Can ignore this parameter if use server time) | string | |
| | &rbar= | Relative air pressure | float | hPa |
| | &abar= | Absolute air pressure | float | hPa |
| | &intem= | Indoor temperature | float | ℃ |
| | &inhum= | Indoor humidity | integer | % |
| | &inbat= | Console battery level | integer | |
| Type1 | &t1tem= | Outdoor temperature | float | ℃ |
| | &t1hum= | Outdoor humidity | integer | % |
| | &t1feels= | Feels like temperature | float | ℃ |
| | &t1chill= | Wind chill temperature | float | ℃ |
| | &t1heat= | Heat index temperature | float | ℃ |
| | &t1dew= | Dew point temperature | float | ℃ |
| | &t1wdir= | Wind direction | integer | deg |
| | &t1ws= | Wind speed | float | m/s |
| | &t1ws10mav= | 10 minutes average wind speed | float | m/s |
| | &t1wgust= | Wind gust | float | m/s |

| | | | | |
|---|---|---|---|---|
| Type1 | &t1rainra= | Rain rate | float | mm/h |
| | &t1rainhr= | Hourly rainfall | float | mm |
| | &t1raindy= | Daily rainfall | float | mm |
| | &t1rainwy= | Weekly rainfall | float | mm |
| | &t1rainmth= | Monthly rainfall | float | mm |
| | &t1rainyr= | Yearly rainfall | float | mm |
| | &t1uvi= | UVI | float | |
| | &t1solrad= | Light intensity | float | W/m$^2$ |
| | &t1wbgt= | WBGT temperature | float | ℃ |
| | &t1bat= | Outdoor wireless sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t1cn= | Outdoor wireless sensor connection status (Connected=1, No connect=0) | integer | |
| Type2,3,4 | &t234c1tem= | CH1 temperature | float | ℃ |
| | &t234c1hum= | CH1 humidity | integer | % |
| | &t234c1bat= | CH1 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c1cn= | CH1 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c1tp= | CH1 sensor type | integer | |
| | &t234c2tem= | CH2 temperature | float | ℃ |
| | &t234c2hum= | CH2 humidity | integer | % |
| | &t234c2bat= | CH2 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c2cn= | CH2 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c2tp= | CH2 sensor type | integer | |
| | &t234c3tem= | CH3 temperature | float | ℃ |
| | &t234c3hum= | CH3 humidity | integer | % |
| | &t234c3bat= | CH3 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c3cn= | CH3 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c3tp= | CH3 sensor type | integer | |
| | &t234c4tem= | CH4 temperature | float | ℃ |
| | &t234c4hum= | CH4 humidity | integer | % |
| | &t234c4bat= | CH4 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c4cn= | CH4 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c4tp= | CH4 sensor type | integer | |
| | &t234c5tem= | CH5 temperature | float | ℃ |
| | &t234c5hum= | CH5 humidity | integer | % |
| | &t234c5bat= | CH5 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c5cn= | CH5 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c5tp= | CH5 sensor type | integer | |
| | &t234c6tem= | CH6 temperature | float | ℃ |
| | &t234c6hum= | CH6 humidity | integer | % |
| | &t234c6bat= | CH6 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c6cn= | CH6 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c6tp= | CH6 sensor type | integer | |
| | &t234c7tem= | CH7 temperature | float | ℃ |
| | &t234c7hum= | CH7 humidity | integer | % |
| | &t234c7bat= | CH7 sensor battery level (Normal=1, Low battery=0) | integer | |
| | &t234c7cn= | CH7 sensor connection status (Connected=1, No connect=0) | integer | |
| | &t234c7tp= | CH7 sensor type | integer | |

| | | | | |
|---|---|---|---|---|
| | &t5lst= | Last Lightning strike time | integer | |
| | &t5lskm= | Lightning distance | integer | km |
| | &t5lsf= | Lightning strike count last 1 Hours | integer | |
| | &t5ls5mtc= | Lightning count total of during 5 minutes | integer | |
| Type5 | &t5ls30mtc= | Lightning count total of during 30 minutes | integer | |
| | &t5ls1htc= | Lightning count total of during 1 Hour | integer | |
| | &t5ls1dtc= | Lightning count total of during 1 day | integer | |
| | &t5lsbat= | Lightning Sensor battery (Normal=1, Low battery=0) | integer | |
| | &t5lscn= | Lightning Sensor connection (Connected=1, No connect=0) | integer | |
| | &t6c1wls= | Water leak sensor CH1 (Leak=1, No leak=0) | integer | |
| | &t6c1bat= | Water leak sensor CH1 battery (Normal=1, Low battery=0) | integer | |
| | &t6c1cn= | Water leak sensor CH1 connection (Connected=1, No connect=0) | integer | |
| | &t6c2wls= | Water leak sensor CH2 (Leak=1, No leak=0) | integer | |
| | &t6c2bat= | Water leak sensor CH2 battery (Normal=1, Low battery=0) | integer | |
| | &t6c2cn= | Water leak sensor CH2 connection (Connected=1, No connect=0) | integer | |
| | &t6c3wls= | Water leak sensor CH3 (Leak=1, No leak=0) | integer | |
| | &t6c3bat= | Water leak sensor CH3 battery (Normal=1, Low battery=0) | integer | |
| | &t6c3cn= | Water leak sensor CH3 connection (Connected=1, No connect=0) | integer | |
| | &t6c4wls= | Water leak sensor CH4 (Leak=1, No leak=0) | integer | |
| Type6 | &t6c4bat= | Water leak sensor CH4 battery (Normal=1, Low battery=0) | integer | |
| | &t6c4cn= | Water leak sensor CH4 connection (Connected=1, No connect=0) | integer | |
| | &t6c5wls= | Water leak sensor CH5 (Leak=1, No leak=0) | integer | |
| | &t6c5bat= | Water leak sensor CH5 battery (Normal=1, Low battery=0) | integer | |
| | &t6c5cn= | Water leak sensor CH5 connection (Connected=1, No connect=0) | integer | |
| | &t6c6wls= | Water leak sensor CH6 (Leak=1, No leak=0) | integer | |
| | &t6c6bat= | Water leak sensor CH6 battery (Normal=1, Low battery=0) | integer | |
| | &t6c6cn= | Water leak sensor CH6 connection (Connected=1, No connect=0) | integer | |
| | &t6c7wls= | Water leak sensor CH7 (Leak=1, No leak=0) | integer | |
| | &t6c7bat= | Water leak sensor CH7 battery (Normal=1, Low battery=0) | integer | |
| | &t6c7cn= | Water leak sensor CH7 connection (Connected=1, No connect=0) | integer | |
| | &t8pm25= | PM2.5 concentration | integer | ug/m$^3$ |
| | &t8pm10= | PM10 concentration | integer | ug/m$^3$ |
| Type8 | &t8pm25ai= | PM2.5 AQI | integer | |
| | &t8pm10ai = | PM10 AQI | integer | |
| | &t8bat= | PM sensor battery level (0~5) remark: 5 is full | integer | |
| | &t8cn= | PM sensor connection (Connected=1, No connect=0) | integer | |
| | &t9hcho= | HCHO concentration | integer | ppb |
| Type9 | &t9voclv= | VOC level (1~5) 1 is the highest level, 5 is the lowest VOC level | integer | |
| | &t9bat= | HCHO / VOC sensor battery level (0~5) remark: 5 is full | integer | |
| | &t9cn= | HCHO / VOC sensor connection (Connected=1, No connect=0) | integer | |
| | &t10co2= | $CO_2$ concentration | integer | ppm |
| Type10 | &t10bat= | $CO_2$ sensor battery level (0~5) remark: 5 is full | integer | |
| | &t10cn= | $CO_2$ sensor connection (Connected=1, No connect=0) | integer | |
| | &t11co= | CO concentration | integer | ppm |
| Type11 | &t11bat= | CO sensor battery level (0~5) remark: 5 is full | integer | |
| | &t11cn= | CO sensor connection (Connected=1, No connect=0) | integer | |
| | &apiver= | API version | float | |

The upload parameters depend on the device type.

# Compatible sensor list

| Sensor type | Channel | Compatible sensors Types |
|---|---|---|
| Type1 | | 3-in-1 rain gauge<br>3-in-1 wind speed sensor<br>5-in-1 Outdoor sensor<br>7-in-1 Outdoor sensor<br>8-in-1 Outdoor WBGT sensor |
| Type2,3,4 | Ch1~7 | Thermo-hygrometer sensor<br>Pool sensor<br>Soil moisture & temperature |
| Type5 | | Lightning sensor |
| Type6 | Ch1~7 | Water leak sensor |
| Type8 | | PM2.5 / 10 sensor |
| Type9 | | HCHO with VOC sensor |
| Type10 | | $CO_2$ sensor |
| Type11 | | CO sensor |

# Upload data example

https://xxxxx.xxx/data/upload.php?wsid=wsabcde123&wspw=a123456789&datetime=2000-01-01+10%3A32%3A25&rbar=1008.8&abar=990.5&intem=25.8&inhum=22&inbat=1&t1tem=38&t1hum=88&t1wdir=359&t1ws=40.1&t1ws10mav=20.9&t1wgust=49.9&t1rainra=20.8&t1rainhr=10&t1raindy=33.5&t1rainwy=15&t1rainmth=30.8&t1rainyr=40.5&t1uvi=8.8&t1solrad=679&t1bat=1&t1cn=1&t234c1tem=35.9&t234c1hum=56&t1feels=&t1chill=38&t1heat=&t1dew=33.9&t1wbgt=42.1&t234c1bat=0&t234c1cn=0&t234c1tp=2&t234c2tem=35.9&t234c2hum=56&t234c2bat=2&t234c2cn=0&t234c2tp=2&t234c3tem=35.9&t234c3hum=56&t234c3bat=1&t234c3cn=0&t234c3tp=2&t234c4tem=40.1&t234c4hum=39&t234c4bat=1&t234c4cn=0&t234c4tp=3&t234c5tem=23.6&t234c5hum=33&t234c5bat=0&t234c5cn=0&t234c5tp=3&t234c6tem=35.9&t234c6hum=57&t234c6bat=1&t234c6cn=0&t234c6tp=4&t234c7tem=18.1&t234c7hum=19&t234c7bat=2&t234c7cn=0&t234c7tp=4&t5lst=9999&t5lskm=40.1&t5lsf=30&t5ls5mtc=65536&t5ls30mtc=65536&t5ls1htc=6553336&t5ls1dtc=65536&t5lsbat=1&t5lscn=1&t6c1wls=1&t6c1bat=0&t6c1cn=0&t6c2wls=1&t6c2bat=0&t6c2cn=0&t6c3wls=1&t6c3bat=0&t6c3cn=0&t6c4wls=1&t6c4bat=0&t6c4cn=0&t6c5wls=1&t6c5bat=0&t6c5cn=0&t6c6wls=1&t6c6bat=0&t6c6cn=0&t6c7wls=1&t6c7bat=0&t6c7cn=0&t8pm25=450.5&t8pm10=300.5&t8pm25ai=999&t8pm10ai=88&t8bat=0&t8cn=0&t9hcho=1000&t9voclv=3&t9bat=0&t9cn=0&t10co2=400&t10bat=0&t10cn=0&t11co=500.0&t11bat=5&t11cn=1&apiver=1.00

# Server response codes

| Code | Description |
|---|---|
| 200 | Success |
| 400 | Bad request |
| 401 | Incorrect device id or device password |
| 404 | Too many request |
| 405 | Incorrect data format |

# Revision history

| Version | Description | Date |
|---|---|---|
| 0.1 | Draft release | 28 Apr 2023 |
| 0.2 | - Change time parameter name and format<br>- Add feels like, heat index, wind chill and dewpoint parameter<br>- Updated the API example<br>- Adjust the document format | 12 May 2023 |
| 0.3 | Add description for the sensor connection | 13 Jun 2023 |
| 0.4 | Add compatible sensor list | 4 Jul 2023 |
| 0.5 | - Add leak status description for the leak sensors<br>- Add VOC level description | 15 Sep 2023 |
| 0.6 | - Add WBGT temperature parameter<br>- Add compatible sensor types | 7 Nov 2023 |