固定墒情仪时间序列查询接口：

GET

https://paas.agrivy.com/weatherstation2/api/v1/MonitorData/QueryTimeScaleMonitorData? deviceName=STD8\_2104002&beginTime=2021-09-04&endTime=2021-09-05

入参：

deviceName //设备名称（必填）

beginTime //查询的数据时间上限（必填）yyyy-mm-dd格式默认时间00:00:00，也可输入类似 2021-09-04T13:00:00

endTime //查询的数据时间下限（必填）yyyy-mm-dd格式默认时间00:00:00，也可输入类似 2021-09-05T13:00:00

签名：

用户在HTTP请求中增加Sign的Header来包含签名(Signature)信息,表明这个消息已被签名

签名算法使用HMACSHA256，

签名方式的Demo如下（Python）：

# -\*- coding:utf-8 -\*-

import urllib.request

import urllib.parse

import ssl

import hmac

import hashlib

import binascii

ssl.\_create\_default\_https\_context = ssl.\_create\_unverified\_context

#请求地址

url = 'https://paas.agrivy.com/weatherstation2/api/v1/MonitorData/QueryTimeScaleMonitorData?deviceName=STD8\_2104002&beginTime=2021-09-04&endTime=2021-09-05'

#签名secret key

key = '55PLlVaB/VRy25z8DYE6Yuge7yEAaBhtogBGLgrxAoRibvyjJlruCaXWJtQtAUVeFWsuMHEISKMehT52yDUWNg=='

#url参数作为签名对象

params = '?deviceName=STD8\_2104002&beginTime=2021-09-04&endTime=2021-09-05'

#HMAC-SHA256签名

byte\_key = bytes(key, 'ascii')

message = bytes(params, 'ascii')

sign = hmac.new(byte\_key, message, hashlib.sha256).hexdigest()

print(sign)

req = urllib.request.Request(url)

#Header中添加签名字符串

req.add\_header('Sign', sign)

#发出GET请求

r = urllib.request.urlopen(req)

print(r.read().decode('utf-8'))

C#版签名Demo

1. **public** **static** **string** GetHash(**string** text, **string** key)
2. {
3. ASCIIEncoding encoding = **new** ASCIIEncoding();
4.
5. Byte[] textBytes = encoding.GetBytes(text);
6. Byte[] keyBytes = encoding.GetBytes(key);
7.
8. Byte[] hashBytes;
9.
10. **using** (HMACSHA256 hash = **new** HMACSHA256(keyBytes))
11. hashBytes = hash.ComputeHash(textBytes);
12.
13. **return** BitConverter.ToString(hashBytes).Replace("-", "").ToLower();
14. }

结果样例：

{

 "success": true,

 "data": {

 "timeArray": ["2021-09-05T21:00:05", "2021-09-05T20:00:23", "2021-09-05T19:00:05", "2021-09-05T18:00:22", "2021-09-05T17:00:05", "2021-09-05T16:00:05", "2021-09-05T15:00:05", "2021-09-05T14:00:23", "2021-09-05T13:00:05", "2021-09-05T12:00:23", "2021-09-05T11:00:05", "2021-09-05T10:00:22", "2021-09-05T09:00:05", "2021-09-05T08:00:05", "2021-09-05T07:00:05", "2021-09-05T06:00:23", "2021-09-05T05:00:05", "2021-09-05T04:00:23", "2021-09-05T03:00:05", "2021-09-05T02:00:25", "2021-09-05T01:00:05", "2021-09-05T00:00:23", "2021-09-04T23:00:05", "2021-09-04T22:00:22", "2021-09-04T21:00:05", "2021-09-04T20:00:05", "2021-09-04T19:00:05", "2021-09-04T18:00:24", "2021-09-04T17:00:05", "2021-09-04T16:00:05", "2021-09-04T15:00:05", "2021-09-04T14:00:25", "2021-09-04T13:00:05", "2021-09-04T12:00:31", "2021-09-04T11:00:05", "2021-09-04T10:00:05", "2021-09-04T09:00:05", "2021-09-04T08:00:23", "2021-09-04T07:00:05", "2021-09-04T06:00:22", "2021-09-04T05:00:05", "2021-09-04T04:00:05", "2021-09-04T03:00:05", "2021-09-04T02:00:23", "2021-09-04T01:00:05", "2021-09-04T00:00:25"],

 "adc1AvgArray": [],

 "adc2AvgArray": [],

 "adc3AvgArray": [24.0, 24.1, 24.0, 24.1, 24.0, 24.0, 24.0, 24.0, 24.0, 24.1, 24.0, 24.1, 24.0, 24.0, 24.1, 24.1, 24.1, 24.1, 24.1, 24.1, 24.1, 24.2, 24.1, 24.2, 24.1, 24.1, 24.1, 24.2, 24.2, 24.1, 24.2, 24.2, 24.2, 24.3, 24.2, 24.2, 24.1, 24.3, 24.2, 24.3, 24.2, 24.3, 24.3, 24.3, 24.3, 24.4],

 "adc4AvgArray": [23.1, 23.1, 22.7, 22.5, 21.9, 21.4, 21.0, 20.9, 20.5, 20.7, 20.7, 20.9, 21.0, 21.3, 21.5, 21.8, 21.9, 22.2, 22.3, 22.7, 22.7, 23.0, 23.0, 23.1, 23.0, 22.8, 22.5, 22.3, 21.9, 21.5, 21.1, 20.9, 20.7, 20.8, 20.8, 20.9, 21.2, 21.4, 21.5, 21.8, 21.9, 21.9, 22.2, 22.3, 22.5, 22.7],

 "adc5AvgArray": [],

 "adc6AvgArray": [],

 "adc7AvgArray": [],

 "adc8AvgArray": []

 },

 "prop": {

 "devices\_id": "FfFdVwxHneqhIZxxUTa3000000",

 "adc1": null,

 "adc2": null,

 "adc3": "土壤体积含水率（%）",

 "adc4": "土壤温度（℃）",

 "adc5": null,

 "adc6": null,

 "adc7": null,

 "adc8": null,

 "sw": null

 }

}

其中：

timeArray：时间序列（注意是倒序的）

adc?AvgArray：要素数值（对应prop中的要素名称，时间对应timeArray）

prop：各通道名称（前端只显示有名称的要素）