

Mobile Alerts REST API

The REST API provides read access to the most recent received measurement for ID01, ID08, ID09, ID0B and ID0E sensors.

Overview

Requests are made using HTTPS. All requests are POST request. Request parameters are encoded in the “application/x-www-form-urlencoded” format. All requests return data encoded in json. Datetime values are encoded as the number of seconds since 1.1.1970.

The base url of the REST API is <https://www.data199.com/api/pv1>.

Successful calls return json using the following structure:

```
{
  "success" : true,
  [Response data],
}
```

Calls with errors return json using the following structure:

```
{
  "success" : false,
  "errorcode" : 1,
  "errormessage" : "Some error message",
}
```

API Rate Limits

Rate limiting is considered on a per sensor basis. Allowed are up to 3 calls for a sensor within one minute. If more than 3 calls are made within one minute further calls are blocked for 7 minutes.

If rate limiting is applied the server returns the HTTP response code “429 Too Many Requests”.

Invalid call blocking

To prevent misuse, if more than 5 calls with invalid parameters are made from the same ip address within 15 minutes, further calls from the same ip address within the 15 minute time window will be blocked.

If invalid call blocking is applied the server returns the HTTP response code “403 Forbidden”.

Last Measurement Query

Request Url

<https://www.data199.com/api/pv1/device/lastmeasurement>

Request Parameters

deviceids=0E7EA4A71203,09265A8A3503&phoneid=880071013613

deviceids: One or more sensor ids, separated by colons.

phoneid: The phone id of an app where the provided sensor ids are part of the dashboard. This parameter can be omitted. If the phone id is provided alert flags will be added to returned measurements that have active alert conditions and to measurements that ended active alert condition. Otherwise no alert flags are added to the measurements even if a phoneid has been provided.

Response

```
{
  "success": true,
  "phoneid": "880071013613",
  "devices": [
    {
      "deviceid": "0E7EA4A71203",
      "lastseen": 1466501944,
      "lowbat": false,
      "measurement": {
        [General measurement properties]
        [Sensor type specific measurement properties]
        [Sensor type specific alert flags]
      }
    },
    {
      "deviceid": "09265A8A3503",
      "lastseen": 1466768149,
      "lowbat": false,
      "measurement": {
        [General measurement properties]
        [Sensor type specific measurement properties]
        [Sensor type specific alert flags]
      }
    }
  ]
}
```

}

success: If the request was successful.

phoneid: The phone id of an app where the sensor is part of the dashboard. May be omitted if no phoneid has been provided in the request.

devices: Array of sensors, one for each queried sensor id.

deviceid: The id of a sensor.

lastseen: The timestamp when a sensor was last seen by the server in epoch time.

lowbat: If a sensor was low on battery when sending the measurement.

measurement: The last received measurement of a sensor. General measurement properties are returned for all sensor types. Sensor type specific measurement properties and alert flags are different from sensor type to sensor type. The alert flags are only part of the response if a phone id has been provided when requesting. Also, alert flags will be added only if there is currently an active alert condition for a measurement or a measurement ended an active alert condition. Otherwise no alert flags are added to the response even if a phoneid has been provided.

General measurement properties

```
"measurement": {
  "idx": 3935,
  "ts": 123123123,
  "c": 1466501944,
  [Sensor type specific measurement properties]
  [Sensor type specific alert flags]
}
```

idx: Unique id of the measurement.

ts: Timestamp of the measurement in epoch time.

c: Timestamp when the measurement was received by the server.

Special measurement values

- If a sensor was not connected the value 43530 is returned.
- If the measurement of a sensor was out of range the value 65295 is returned.

ID01 measurement and alert properties

Measurement properties

```
"measurement": {  
  [General measurement properties]  
  "t1": 23.4,  
  "t2": 20.4,  
  [Sensor type specific alert flags]  
}
```

t1: The measured temperature in celsius.

t2: The measured temperature in celsius of the cable sensor.

Alert flags

```
"measurement": {  
  [General measurement properties]  
  [Sensor type specific measurement properties]  
  
  "t1hi": true,  
  "t1hise": true,  
  "t1hiee": false,  
  "t1his": 20.0,  
  
  "t1lo": false,  
  "t1lose": false,  
  "t1loee": false,  
  "t1los": 0.0,  
  
  "t2hi": true,  
  "t2hise": true,  
  "t2hiee": false,  
  "t2his": 20.0,  
  
  "t2lo": false,  
  "t2lose": false,  
  "t2loee": false,  
  "t2los": 0.0  
}
```

Temperature High Alert

t1hi: If there is an active temperature high alert condition.

t1hise: If the alert condition started because of this measurement.

t1hiee: If an alert condition ended because of this measurement.

t1his: The alert treshhold. Measurements above this treshhold have an active alert condition.

Temperature Low Alert

t1lo: If there is an active cable sensor temperature low alert condition.

t1lose: If the alert condition started because of this measurement.

t1loee: If an alert condition ended because of this measurement.

t1los: The alert treshhold. Measurements below this treshhold have an active cable sensor low alert condition.

Cable Sensor Temperature High Alert

t2hi: If there is an active cable sensor temperature high alert condition.

t2hise: If the cable sensor alert condition started because of this measurement.

t2hiee: If an cable sensor alert condition ended because of this measurement.

t2his: The alert treshhold. Measurements above this treshhold have an active cable sensor alert condition.

Cable Sensor Temperature Low Alert

t2lo: If there is an active cable sensor temperature low alert condition.

t2lose: If the cable sensor alert condition started because of this measurement.

t2loee: If an cable sensor alert condition ended because of this measurement.

t2los: The alert treshhold. Measurements below this treshhold have an active cable sensor low alert condition.

ID08 measurement and alert properties

Measurement properties

```
"measurement": {  
  [General measurement properties]  
  "t1": 23.4,  
  "r": 11.352,  
  "rf": 44,  
  [Sensor type specific alert flags]  
}
```

t1: The measured temperature in celsius.

r: The rain value in mm. 0.258 mm of rain are equal to one flip.

rf: The flip count of the rain sensor. A flip equals 0.258 mm of rain.

Alert flags

```
"measurement": {
  [General measurement properties]
  [Sensor type specific measurement properties]

  "rhi": true,
  "rhis": 20.0,
  "rhist": 12,

  "rlo": false,
  "rlos": 1.0,
  "rlost": 168,

  "rb": false
}
```

rhi: If this measurement triggered a rain max alert.

rhis: The amount of rain that will trigger a rain max alert.

rhist: The timespan in hours within which the rain must fall to trigger a rain max alert.

rlo: If this measurement represents a rain lo alert.

rlos: The low rain treshhold in mm. If the rain is below this value for a longer period of time than the configured timespan *rlost*, a low rain alert will be triggered.

rlost: The timespan in hours the fallen rain must stay below the *rlos* treshhold before a low rain alert is triggered.

rb: If this measurement triggered a rain begin alert.

ID09 measurement and alert properties

Measurement properties

```
"measurement": {
  [General measurement properties]
  "t1": 23.4,
  "t2": 20.4,
  "h": 53.8,
  [Sensor type specific alert flags]
}
```

t1: The measured temperature in celsius.

t2: The measured temperature in celsius of the cable sensor.

h: The measured humidity.

Alert flags

```
"measurement": {  
  [General measurement properties]  
  [Sensor type specific measurement properties]  
  
  "t1hi": true,  
  "t1hise": true,  
  "t1hiee": false,  
  "t1his": 20.0,  
  
  "t1lo": false,  
  "t1lose": false,  
  "t1loee": false,  
  "t1los": 0.0,  
  
  "t2hi": true,  
  "t2hise": true,  
  "t2hiee": false,  
  "t2his": 20.0,  
  
  "t2lo": false,  
  "t2lose": false,  
  "t2loee": false,  
  "t2los": 0.0,  
  
  "hhi": true,  
  "hhise": true,  
  "hhiee": false,  
  "hhis": 40,  
  
  "hlo": false,  
  "hlose": false,  
  "hloee": false,  
  "hlos": 10  
}
```

Temperature High Alert

t1hi: If there is an active temperature high alert condition.

t1hise: If the alert condition started because of this measurement.

t1hiee: If an alert condition ended because of this measurement.

t1his: The alert treshhold. Measurements above this treshhold have an active alert condition.

Temperature Low Alert

t1lo: If there is an active cable sensor temperature low alert condition.

t1lose: If the alert condition started because of this measurement.

t1loee: If an alert condition ended because of this measurement.

t1los: The alert treshhold. Measurements below this treshhold have an active cable sensor low alert condition.

Cable Sensor Temperature High Alert

t2hi: If there is an active cable sensor temperature high alert condition.

t2hise: If the cable sensor alert condition started because of this measurement.

t2hiee: If an cable sensor alert condition ended because of this measurement.

t2his: The alert treshhold. Measurements above this treshhold have an active cable sensor alert condition.

Cable Sensor Temperature Low Alert

t2lo: If there is an active cable sensor temperature low alert condition.

t2lose: If the cable sensor alert condition started because of this measurement.

t2loee: If an cable sensor alert condition ended because of this measurement.

t2los: The alert treshhold. Measurements below this treshhold have an active cable sensor low alert condition.

Humidity High Alert

hhi: If there is an active humidity high alert condition.

hhise: If the alert condition started because of this measurement.

hhiee: If an alert condition ended because of this measurement.

hhis: The alert treshhold. Measurements above this treshhold have an active high alert condition.

Humidity Low Alert

hlo: If there is an active humidity high alert condition.

hlose: If the alert condition started because of this measurement.

hloee: If an alert condition ended because of this measurement.

hlos: The alert treshhold. Measurements above this treshhold have an active high alert condition.

ID0B measurement and alerts properties

Measurement properties

```
"measurement": {  
  [General measurement properties]  
  "ws": 0.0,  
  "wg": 0.0,  
  "wd": 6,  
  [Sensor type specific alert flags]  
}
```

ws: The measured windspeed in m/s.

wg: The measured gust in m/s.

wd: The wind direction. 0: North, 1: North-northeast, 2: Northeast, 3: East-northeast, 4: East, 5: East-southeast, 6: Southeast, 7: South-Southeast, 8: South, 9: South-southwest, 10: Southwest, 11: West-southwest, 12: West, 13: West-northwest, 14: Northwest, 15: North-northwest

Alert Flags

```
"measurement": {  
  [General measurement properties]  
  [Sensor type specific measurement properties]  
  "wsa": false,  
  "wsaactive": false,  
  "wsas": 20.0,  
  
  "wga": false,  
  "wgaactive": false,  
  "wgas": 20.0,  
  
  "wds": 0  
}
```

wsa: If there is an active windspeed alert condition.

wsaactive: If the wind speed alert setting was active.

wsas: The configured wind speed alert treshhold.

wga: If there is an active gust alert condition.

wgaactive: If the gust alert setting was active.

wgas: The configured gust alert treshhold.

wds: The wind and gust alert direction setting flags. One bit per wind direction. From least significant bit to most significant bit: N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW.

ID0E measurement and alerts properties

Measurement properties

```
"measurement": {  
  [General measurement properties]  
  "t1": 23.4,  
  "h": 53.8,  
  [Sensor type specific alert flags]  
}
```

t1: The measured temperature in celsius.

h: The measured humidity.

Alert flags

```
"measurement": {  
  [General measurement properties]  
  [Sensor type specific measurement properties]  
  
  "t1hi": true,  
  "t1hise": true,  
  "t1hiee": false,  
  "t1his": 20.0,  
  
  "t1lo": false,  
  "t1lose": false,  
  "t1loee": false,  
  "t1los": 0.0,  
  
  "hhi": true,  
  "hhise": true,  
  "hhiee": false,  
  "hhis": 40,  
  
  "hlo": false,  
  "hlose": false,  
  "hloee": false,  
  "hlos": 10  
}
```

Temperature High Alert

t1hi: If there is an active temperature high alert condition.

t1hise: If the alert condition started because of this measurement.

t1hiee: If an alert condition ended because of this measurement.

t1his: The alert treshhold. Measurements above this treshhold have an active alert condition.

Temperature Low Alert

t1lo: If there is an active temperature low alert condition.

t1lose: If the alert condition started because of this measurement.

t1loee: If an alert condition ended because of this measurement.

t1los: The alert treshhold. Measurements below this treshhold have an active low alert condition.

Humidity High Alert

hhi: If there is an active humidity high alert condition.

hhise: If the alert condition started because of this measurement.

hhiee: If an alert condition ended because of this measurement.

hhis: The alert treshhold. Measurements above this treshhold have an active high alert condition.

Humidity Low Alert

hlo: If there is an active humidity high alert condition.

hlose: If the alert condition started because of this measurement.

hloee: If an alert condition ended because of this measurement.

hlos: The alert treshhold. Measurements above this treshhold have an active high alert condition.