



SolarEdge Monitoring Server API

Version 1.2

SolarEdge API

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General

Purpose and scope

The purpose of this document is to outline the Application Programming Interface (API) available via SolarEdge's monitoring server.

The web services allow access to data saved in the monitoring server while keeping the data secured for authorized users.

This document provides information about the technical features of the API, and describes each API with its parameters formats and other details.

Acronyms and abbreviations

The following table lists acronyms used in this document

Abbreviation	Meaning
API	Application Programing Interface
WS	Web Services
REST	Representational State Transfer
CSV	Comma Separated Values
JSON	JavaScript Object Notation
XML	Extensible Markup Language

Introduction

The SolarEdge API allows other software applications to access its monitoring system database for data analysis purposes, fleet management, displaying system data in other applications, etc.

The following is a list of available APIs:

API Name	API Output
Site List	A list of sites for a given account, with the information on each site. This list allows convenient search, sort and pagination
Site Details	Details of a chosen site
Site Data: Start and End Dates	The site energy production start and end dates
Site Energy	Site energy measurements
Site Energy – Time Period	Site energy for a requested timeframe
Site Power	Site power measurements in a 15-minute resolution
Site Overview	Site current power, energy production (today, this month, lifetime) and lifetime revenue
Site Image	The site image as uploaded to the server, either scaled or original size
Installer Logo Image	The installer logo image as uploaded to the server.
Components List	List of inverters with name, model, manufacturer, serial number and status
Inverter Technical Data	Technical data on the inverter performance for a requested period of time
Account List API	The account details and list of all sub-accounts
API Versions	The current and supported version numbers

An API key must be used in order to submit API requests.

Account users should generate an Account Level API Key, and system owners should generate a Site level API Key.

The API link is <https://monitoringapi.solaredge.com>

Please review the API terms and conditions at this link: <http://monitoring.solaredge.com/solaredge-web/termsAndConditionsAPI.html>

Display requirements:

When displaying information from the API, place the SolarEdge logo where it is clear to the user that the information source is SolarEdge's monitoring system.

The logo should link to <http://solaredge.com>

For any assistance with display, send an email to support@solaredge.com

Technical Information

The SolarEdge API is built as RESTful service:

- It uses predictable, resource oriented URLs
- It has built-in HTTP capabilities for passing parameters via the API
- It responds with standard HTTP codes
- It can return results in XML, JSON (including JSONP support) or CSV format.

Security

- The API can be accessed via HTTPS protocol only. SolarEdge monitoring server supports both HTTPS/1.0 and HTTPS/1.1 protocols.
- All APIs are secured via an access token: every access to the API requires a valid token as a URL parameter named `api_key`. For example:
`api_key= L4QLVQ1LOKQCX2193VSEICXW61NP6B10`

▶ To generate an account users API key:

In the Account Admin > Company Details tab > API Access section:

- 1 Acknowledge reading and agreeing to the SolarEdge API Terms & Conditions.
- 2 Click **Generate API key**.
- 3 Copy the key.
- 4 Click **Save**.
- 5 Use the key in all API requests

▶ To generate a Site API key:

In the Site Admin > Site Details tab > API Access section:

- 1 Acknowledge reading and agreeing to the SolarEdge API Terms & Conditions.
- 2 Click **Generate API key**.
- 3 Copy the key.
- 4 Click **Save**.
- 5 Use the key in all API requests

Language and Time Encoding

- When using special characters or spaces in URL, they must be **url encoded**.
- The monitoring server data can be in different languages therefore data is retrieved using UTF-8.
- Date and time formats in all APIs are:
 - Date and time: YYYY-MM-DD hh:mm:ss
 - Date only: YYYY-MM-DD

- Dates are always in the time zone of the site.

Request Format

The request format and parameters are specified per each API, and conform to the HTTP and REST standards.

Parameter order in the request is not significant.

Response Formats

The user can request data in the following formats:

- JSON (application/json)
- XML(application/xml)
- CSV (text/csv).

See specific APIs in the next sections for supported format in each API.

If a specific format is not requested, the data will be retrieved via JSON. If the requested format is invalid, the system will generate HTTP error "Media not supported".

The API user can request the response format in one of the methods below. The system handles the response format as follows:

- URL format Parameter – ...&format=application/json
- Path extension – the name of the API will be followed by the requested format name ../details.json&...
- HTTP header – based on 'Accept' header e.g. Accept application/json

JSONP Support

The API supports JSONP calls by appending a callback parameter with the name of a callback method at the end of the request.

As JSONP content type is application/javascript, make sure the client sends this content type in the Accept header, otherwise HTTP 406 error may occur.

The following example shows a JSON call VS. JSONP call:

■ JSON:

- Request:

```
http://monitoringapi.solaredge.com/1/details.json?api_key=[your_api_key]
```

- Response body:

```
{"details":{..}}
```

■ JSONP:

- Request:

```
http://monitoringapi.solaredge.com/1/details.json?api_key=[your_api_key]&callback=myFunction
```

- Response body:

```
myFunction({"details":{..}});
```

Error Handling

The API system uses standard HTTP error codes for reporting errors that occurred while calling the API. The monitoring server API supports standard HTTP error codes, for example: if the user access is of an unknown resource, an HTTP 404 error will be returned.

Usage Limitations

Usage limitations are enforced to prevent abuse of the monitoring server API, and these limitations may be changed in the future without notice. Additionally, a request rate limit is applied to prevent abuse of the service. If you exceed the limitations, an error message appears in the monitoring server API. If the limitation is further exceeded, the system may temporarily be nonoperational, or your access to the monitoring server API may be blocked.

Specific API Usage Limitations

Specific APIs may enforce different usage limitations based on parameters sent by the client. Refer to the next sections for details on specific API usage limitations.

If there is a violation of a specific API validation, the `HTTP 403 - forbidden` status code is returned.

Daily Limitation

Use of the monitoring server API is subject to a query limit of total 200 requests for a specific account token and a specific site ID from the same source IP.

APIs that do not have a specific ID (e.g. Site List, Account List) will be counted as part of the total query limit.

For example, a user can execute 50 daily site list (account level) API calls, and then 150 API calls for every site in the account (e.g. 150 calls using the account token for "siteId 12345" and 150 calls using the account token for "siteId 12346").

An additional request to site 12345 or 12346 will result in `HTTP 429 error - too many requests..`

Concurrency Limitation

The monitoring server API allows up to 3 concurrent API calls from the same source IP. Any additional concurrent calls will return `HTTP 429 error - too many requests.`

To execute APIs concurrently without exceeding the above limitation, it is the client responsibility to implement a throttling mechanism on the client side.

API Description

Site Data API

Site List

Returns a list of sites related to the given token. This API accepts parameters for convenient search, sort and pagination.

URL: `/sites/list`

Example URL (with all options): `https://monitoringapi.solaredge.com/sites/list?size=5&searchText=Lyon&sortProperty=name&sortOrder=ASC`

Method: GET

Formats: JSON, XML and CSV

- **Request:** The following are parameters to include in the request.

Parameter	Type	Mandatory	Default Value	Description
size	Integer	No	100	The maximum number of sites returned by this call. The maximum number of sites that can be returned by this call is 100. If you have more than 100 sites, just request another 100 sites with startIndex=100. This will fetch sites 100-199.
startIndex	Integer	No	0	The first site index to be returned in the results
searchText	String	No		Search text for this site. Searchable site properties: <ul style="list-style-type: none"> ▪ Name ▪ Notes ▪ Address ▪ City ▪ Zip code ▪ Full address ▪ Country
sortProperty	String	No		A sorting option for this site list, based on one of its properties. Available sort properties: <ul style="list-style-type: none"> ▪ Name – sort by site name ▪ Country – sort by site country ▪ State – sort by site state ▪ City – sort by site city ▪ Address – sort by site address ▪ Zip – sort by site zip code ▪ Status – sort by site status ▪ PeakPower – sort by peak power ▪ InstallationDate – sort by installation date ▪ Amount – sort by amount of alerts ▪ MaxSeverity – sort by alert severity ▪ CreationTime – sort by site creation time
sortOrder	String	No	ASC	Sort order for the sort property. Allowed values are ASC (ascending) and DESC (descending)

- **Response:** The returned data is the site list, including the sites that match the given search criteria. For each entry, the following information is displayed:
 - id - the site ID
 - name - the site name
 - account id - the account this site belongs to
 - status - the site status (see *Site Status* on page 17)
 - peak power - site peak power
 - CURRENCY
 - installationDate – site installation date (format: yyyy-MM-DD hh:mm:ss)
 - notes
 - type – site type (see *Site Type* on page 17)

- location - includes country, state, city, address, secondary address, time zone and zip.
- alertQuantity - number of open alerts this site have.
- alertSeverity - the highest alert severity this site have
- publicSettings - includes if this site is public and its public name

■ **Example:** JSON output:

```
{
  "Sites": {
    "count": 1567,
    "list": [
      {
        "id": 1,
        "name": "Test",
        "accountId": 0,
        "status": "Active",
        "peakPower": 10.0,
        "currency": "EUR",
        "installationDate": "2012-06-08 00:00:00",
        "notes": "test notes",
        "type": "Optimizers & Inverters",
        "location": {
          "country": "the country",
          "state": "the state",
          "city": "the city",
          "address": "the address",
          "address2": "the address 2",
          "zip": "00000",
          "timeZone": "GMT"
        },
        "alertQuantity": 0,
        "alertSeverity": "NONE",
        "uris": {
          "PUBLIC_URL": "the public URL name",
          "IMAGE_URI": "the site image link"
        },
        "publicSettings": {
          "name": "the public name",
          "isPublic": true
        }
      },
      {
        "id": 1,
        "name": "Test",
        "accountId": 0,
        "status": "Active",
        "peakPower": 10.0,
        "currency": "EUR",
        "installationDate": "2012-06-08 00:00:00",
        "notes": "test notes",
        "type": "Optimizers & Inverters",
        "location": {
          "country": "the country",
          "state": "the state",
          "city": "the city",
          "address": "the address",
          "address2": "the address 2",
          "zip": "00000",
          "timeZone": "GMT"
        },
        "alertQuantity": 0,
        "alertSeverity": "NONE",
        "uris": {
          "PUBLIC_URL": "the public URL name",
          "IMAGE_URI": "the site image link"
        },
        "publicSettings": {
          "name": "the public name",
          "isPublic": true
        }
      }
    ]
  }
}
```

Site Details

Displays the site details, such as name, location, status, etc.

URL: `/site/{siteId}/details`

Example URL: <https://monitoringapi.solaredge.com/site/1/details>

Method: GET

Accepted formats: JSON and XML

■ **Request:** The following parameter is included in the request:

Parameter	Type	Mandatory	description
siteId	Integer	Yes	The site identifier

■ **Response:** The returned data includes the following site information:

- id – the site ID
- name – the site name
- account id – the account this site belongs to
- status – the site status (see *Site Status* on page 17)
- peak power – site peak power
- currency
- installationDate – site installation date (format: yyyy-MM-DD hh:mm:ss)
- notes
- type – site type (see *Site Type* on page 17)
- location - includes country, state, city, address, secondary address, zip and time zone.
- alertQuantity - number of open alerts this site have.
- alertSeverity – the highest alert severity this site have
- publicSettings - includes if this site is public (isPublic) and its public name (name)

■ **Example:** JSON output:

```
{
  "details": {
    "id": 0,
    "name": "site name",
    "accountId": 0,
    "status": "Active",
    "peakPower": 9.8,
    "currency": "EUR",
    "installationDate": "2012-08-16 00:00:00",
    "notes": "my notes",
    "type": "Optimizers & Inverters",
    "location": {
      "country": "my country",
      "state": "my state",
      "city": "my city",
      "address": "my address",
      "address2": "",
      "zip": "0000",
      "timeZone": "GMT"
    },
    "alertQuantity": 0,
    "alertSeverity": "NONE",
    "uris": {
      "IMAGE_URI": "site image uri"
    },
    "publicSettings": {
      "name": null,
      "isPublic": false
    }
  }
}
```

Site Data: Start and End Dates

Description: Return the energy production start and end dates of the site.

URL: `/site/{siteId}/dataPeriod`

Example URL: `https://monitoringapi.solaredge.com/site/1/dataPeriod`

Method: GET

Accepted formats: JSON and XML

■ **Request:** The following parameter is included in the request:

Parameter	Type	Mandatory	description
siteId	Integer	Yes	The site identifier

■ **Response:** The returned data includes <start, end> dates of the requested site. In case this site is not transmitting, the response is "null".

■ **Example:** JSON output example:

```
{
  "dataPeriod": {
    "startDate": "2013-05-05 12:00:00",
    "endDate": "2013-05-28 23:59:59"
  }
}
```

For non-transmitting sites:

```
{
  "dataPeriod": {
    "startDate": null,
    "endDate": null
  }
}
```

Site Energy

Description: Return the site energy measurements.

URL: `/site/{siteId}/energy`

Example URL: `https://monitoringapi.solaredge.com/site/1/energy?timeUnit=DAY&endDate=2013-05-30&startDate=2013-05-01`

Method: GET

Accepted formats: JSON, XML and CSV

■ **Usage limitation:** This API is limited to one year when using timeUnit=DAY (i.e., daily resolution) and to one month when using timeUnit=QUARTER_OF_AN_HOUR or timeUnit=HOUR. This means that the period between endTime and startTime should not exceed one year or one month respectively. If the period is longer, the system will generate error 403 with proper description.

■ **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
startDate	String	Yes	The energy measured start date in yyyy-MM-DD format
endDate	String	Yes	The energy measured end date in yyyy-MM-DD format
timeUnit	String		Aggregation granularity, see <i>Time Unit</i> on page 17. Default : DAY Allowed values are: QUARTER_OF_AN_HOUR, HOUR, DAY, WEEK, MONTH, YEAR

■ **Response:** The response includes the requested time unit, the units of measurement (e.g. Wh), and the pairs of date and energy for every date ({`"date": "2013-06-01 00:00:00", "value": null`}).

The date is calculated based on the time zone of the site. "null" means there is no data for that time.

■ **Example:** JSON output:

```
{
  "energy": {
    "timeUnit": "DAY",
    "unit": "Wh",
    "values": [
      {
        "date": "2013-06-01 00:00:00",
        "value": null
      },
      {
        "date": "2013-06-02 00:00:00",
        "value": null
      },
      {
        "date": "2013-06-03 00:00:00",
        "value": null
      },
      {
        "date": "2013-06-04 00:00:00",
        "value": 67313.24
      }
    ]
  }
}
```

Site Energy – Time Period

Description: Return the site total energy produced for a given period.

URL: `/site/{siteId}/timeFrameEnergy`

Example URL: `https://monitoringapi.solaredge.com/site/1/timeFrameEnergy?startDate=2013-05-01&endDate=2013-05-06`

Method: GET

Accepted formats: JSON and XML

- **Usage limitation:** This API is limited to one year when using `timeUnit=DAY` (i.e., daily resolution). This means that the period between `endTime` and `startTime` should not exceed one year. If the period is longer, the system will generate error 403 with proper description
- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
startDate	String	Yes	The energy measured start date in yyyy-MM-DD format
endDate	String	Yes	The energy measured end date in yyyy-MM-DD format

- **Response:** The response includes the energy summary for the given time period with units of measurement (e.g. Wh). The date is calculated based on the time zone where the site is located.
- **Example:** JSON output:

```
{"timeFrameEnergy":{"energy":761985.8,"unit":"Wh"}}
```

Site Power

Description: Return the site power measurements in 15 minutes resolution.

URL: `/site/{siteId}/power`

Example URL: `https://monitoringapi.solaredge.com/site/1/power?startTime=2013-05-5%2011:00:00&endTime=2013-05-05%2013:00:00`

Method: GET

Accepted formats: JSON, XML and CSV

- **Usage limitation:** This API is limited to one-month period. This means that the period between `endTime` and `startTime` should not exceed one month. If the period is longer, the system will generate error 403 with proper description.
- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
startTime	String	Yes	The energy measured start time in yyyy-MM-DD hh:mm:ss format
endTime	String	Yes	The energy measured end time in yyyy-MM-DD hh:mm:ss format

- **Response:** The response includes the time unit (i.e. `QUARTER_OF_AN_HOUR`), the measurement units (e.g. Watt) and the pairs of date and energy for every date (`{"date":"2013-06-04 14:00:00","value":7722.3896}`). The date is calculated in ticks starting 1-1-1970 and presented based on the time zone of the site. "null" means there is no data for that time.
- **Example:** JSON output:

```
{"power":{"timeUnit":"QUARTER_OF_AN_HOUR","unit":"W","values":[{"date":"2013-06-04 11:00:00","value":7987.03}, {"date":"2013-06-04 11:15:00","value":9710.121}, {"date":"2013-06-04 11:30:00","value":8803.309}, {"date":"2013-06-04 11:45:00","value":9000.743}, {"date":"2013-06-04 12:00:00","value":6492.2075}, {"date":"2013-06-04 12:15:00","value":7395.716}, {"date":"2013-06-04 12:30:00","value":8855.878}, {"date":"2013-06-04 12:45:00","value":6551.6655}, {"date":"2013-06-04 13:00:00","value":8114.938}, {"date":"2013-06-04 13:15:00","value":7466.171}, {"date":"2013-06-04 13:30:00","value":7466.171}, {"date":"2013-06-04 13:45:00","value":7466.171}, {"date":"2013-06-04 14:00:00","value":7466.171}, {"date":"2013-06-04 14:15:00","value":7466.171}, {"date":"2013-06-04 14:30:00","value":7466.171}, {"date":"2013-06-04 14:45:00","value":7466.171}, {"date":"2013-06-04 15:00:00","value":7466.171}, {"date":"2013-06-04 15:15:00","value":7466.171}, {"date":"2013-06-04 15:30:00","value":7466.171}, {"date":"2013-06-04 15:45:00","value":7466.171}, {"date":"2013-06-04 16:00:00","value":7466.171}, {"date":"2013-06-04 16:15:00","value":7466.171}, {"date":"2013-06-04 16:30:00","value":7466.171}, {"date":"2013-06-04 16:45:00","value":7466.171}, {"date":"2013-06-04 17:00:00","value":7466.171}, {"date":"2013-06-04 17:15:00","value":7466.171}, {"date":"2013-06-04 17:30:00","value":7466.171}, {"date":"2013-06-04 17:45:00","value":7466.171}, {"date":"2013-06-04 18:00:00","value":7466.171}, {"date":"2013-06-04 18:15:00","value":7466.171}, {"date":"2013-06-04 18:30:00","value":7466.171}, {"date":"2013-06-04 18:45:00","value":7466.171}, {"date":"2013-06-04 19:00:00","value":7466.171}, {"date":"2013-06-04 19:15:00","value":7466.171}, {"date":"2013-06-04 19:30:00","value":7466.171}, {"date":"2013-06-04 19:45:00","value":7466.171}, {"date":"2013-06-04 20:00:00","value":7466.171}, {"date":"2013-06-04 20:15:00","value":7466.171}, {"date":"2013-06-04 20:30:00","value":7466.171}, {"date":"2013-06-04 20:45:00","value":7466.171}, {"date":"2013-06-04 21:00:00","value":7466.171}, {"date":"2013-06-04 21:15:00","value":7466.171}, {"date":"2013-06-04 21:30:00","value":7466.171}, {"date":"2013-06-04 21:45:00","value":7466.171}, {"date":"2013-06-04 22:00:00","value":7466.171}, {"date":"2013-06-04 22:15:00","value":7466.171}, {"date":"2013-06-04 22:30:00","value":7466.171}, {"date":"2013-06-04 22:45:00","value":7466.171}, {"date":"2013-06-04 23:00:00","value":7466.171}, {"date":"2013-06-04 23:15:00","value":7466.171}, {"date":"2013-06-04 23:30:00","value":7466.171}, {"date":"2013-06-04 23:45:00","value":7466.171}, {"date":"2013-06-04 24:00:00","value":7466.171}]}]}
```

```
13:30:00", "value": 6595.561}, {"date": "2013-06-04 13:45:00", "value": 8824.195}, {"date": "2013-06-04 14:00:00", "value": 7722.3896}]]}
```

Site Overview

Description: Display the site overview data.

URL: `/site/{siteId}/overview`

Example URL: `https://monitoringapi.solaredge.com/site/{siteId}/overview`

Method: GET

Accepted formats: JSON and XML

- **Request:** The following parameter is included in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier

- **Response:** The response includes the site current power, daily energy, monthly energy, yearly energy and life time energy.

- **Example:** JSON output:

```
{"overview":{"lastUpdateTime":"2013-10-01 02:37:47","lifeTimeData":{"energy":761985.75,"revenue":946.13104},"lastYearData":{"energy":761985.8,"revenue":0.0},"lastMonthData":{"energy":492736.7,"revenue":0.0},"lastDayData":{"energy":0.0,"revenue":0.0},"currentPower":{"power":0.0}}}
```

Site Image

Description: Display the site image as uploaded by the user.

URL: `/site/{siteId}/siteImage/{name}`

Example URL: `https://monitoringapi.solaredge.com/site/1/siteImage/myname.jpg?hash=123456789`

Method: GET

- **Performance:** The image element returns with a hash element, which is consistent as long as the image is not changed. When executing the Site Image API while using the hash element, the server matches the image hash and the hash sent in the URL. If a match is found, the API returns an HTTP 304 code. In case the image hash that appears in the URL is different than the one stored in the server, the image will be downloaded. When using the `maxWidth` and `MaxHeight` parameters, the hash element will be ignored.
- **Image sizes:** By default, the API returns the same image that was uploaded to the monitoring portal. If an image in a different scale is required, the API supports it via the `maxWidth` and `maxHeight` parameters. The system will scale the image while keeping the aspect ratio of the original image, so the returned image will be smaller.
- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
name	String	No	It is recommended to enter the site image name so the user can save the new image based on the name in the URL
maxWidth	Integer	No	The maximum width to scale this image
maxHeight	Integer	No	The maximum height to scale this image
hash	Integer	No	The image hash

- **Response:** The response includes one of the following:
 - The requested image
 - Error 404 – not found, if the site has no image
 - Error 304 – unmodified, if a hash attribute was specified

Installer Logo Image

Description: Return the site installer logo image as uploaded by the user. If such an image does not exist, the account installer logo is returned.

URL: `/site/{siteId}/installerImage/{name}`

Example URL: `https://monitoringapi.solaredge.com/site/1/installerImage/myname.jpg?hash=123456789`

Method: GET

- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
name	String	No	It is recommended to enter the site image name so the user can save the new image based on the name in the URL

- **Response:** The response includes the requested image.

Site Equipment API

Components List

Description: Return a list of inverters/SMIs in the specific site.

URL: `/equipment/{siteId}/list`

Example URL (with all options): `https://monitoringapi.solaredge.com/equipment/2/list`

Method: GET

Accepted formats: JSON, XML and CSV

- **Request:** The following parameter is included in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier

- **Response:** The response includes a list of inverters/SMIs with their name, model, manufacturer and serial number..

- name – the inverter/SMI name
- manufacturer – the equipment manufacturer e.g. SolarEdge
- model – the inverter/SMI model e.g. SE16K
- serialNumber – the equipment short serial number

- **Example:** JSON output:

```
{"list":[{"name":"Inverter 1","manufacturer":"SolarEdge","model":"SE16K","serialNumber":"12345678-00"}, {"name":"Inverter 1","manufacturer":"SolarEdge","model":"SE16K","serialNumber":"12345678-00"}, {"name":"Inverter 1","manufacturer":"SolarEdge","model":"SE16K","serialNumber":"12345678-00"}, {"name":"Inverter 1","manufacturer":"SolarEdge","model":"SE16K","serialNumber":"12345678-65"}]}
```

Inverter Technical Data

Description: Return specific inverter data for a given timeframe.

URL: `/equipment/{siteId}/{serialNumber}/data`

Example URL (with all options): `https://monitoringapi.solaredge.com/equipment/2/12345678-90/data?startTime=2013-05-5%2011:00:00&endTime=2013-05-05%2013:00:00`

Method: GET

Accepted formats: JSON, XML and CSV

- **Usage limitation:** This API is limited to one-week period. This means that the period between endTime and startTime should not exceed one week). If the period is longer, the system will generate error 403 with proper description.

- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Description
siteId	Integer	Yes	The site identifier
serialNumber	String	Yes	The inverter short serial number
startTime	String	Yes	The energy measured start time in yyyy-MM-DD hh:mm:ss format
endTime	String	Yes	The energy measured end time in yyyy-MM-DD hh:mm:ss format

- **Response:** The response includes technical parameters as for the inverter's performance (e.g., voltage, current, active power etc.), inverter type (1ph or 3ph), and software version. If an attribute is not supported based on the inverter version or type it will be omitted from the response.

Original name	Comment	Data divided per phase
timestamp		no
Ac current		yes
Ac voltage		yes
AC frequency		yes
QRef		yes
CosPhi		yes
Total Active Power		no
apparentPower	Supported starting communication board version 2.474	yes
activePower	Supported starting communication board version 2.474	yes
reactivePower	Supported starting communication board version 2.474	yes
Dc voltage		no
groundFaultResistance		no
powerLimit %		no
Lifetime energy	Supported starting communication board version 2.474	no
vL1ToN		1ph only
vL2ToN		1ph only
vL1To2		3ph only
vL2To3		3ph only
vL3To1		3ph only

■ **Example:**

```
{
  "data": {
    "count": 9,
    "telemetries": [
      {
        "date": "2013-06-04 11:00:00",
        "totalActivePower": null,
        "dcVoltage": 46.9757,
        "L1Data": {
          "acCurrent": 22.653,
          "acVoltage": 11.6201,
          "acFrequency": 41.3468
        }
      },
      {
        "date": "2013-06-04 11:05:00",
        "totalActivePower": null,
        "dcVoltage": 238.514,
        "L1Data": {
          "acCurrent": 9.76655,
          "acVoltage": 19.0102,
          "acFrequency": 49.5571
        }
      },
      {
        "date": "2013-06-04 11:10:00",
        "totalActivePower": null,
        "dcVoltage": 195.84,
        "L1Data": {
          "acCurrent": 11.5758,
          "acVoltage": 16.8566,
          "acFrequency": 36.9939
        }
      },
      {
        "date": "2013-06-04 11:15:00",
        "totalActivePower": null,
        "dcVoltage": 394.716,
        "L1Data": {
          "acCurrent": 21.4308,
          "acVoltage": 20.7485,
          "acFrequency": 10.4653
        }
      },
      {
        "date": "2013-06-04 11:20:00",
        "totalActivePower": null,
        "dcVoltage": 378.997,
        "L1Data": {
          "acCurrent": 5.50747,
          "acVoltage": 7.48402,
          "acFrequency": 46.8013
        }
      },
      {
        "date": "2013-06-04 11:25:00",
        "totalActivePower": null,
        "dcVoltage": 45.9107,
        "L1Data": {
          "acCurrent": 26.3345,
          "acVoltage": 21.2422,
          "acFrequency": 21.1001
        }
      },
      {
        "date": "2013-06-04 11:30:00",
        "totalActivePower": null,
        "dcVoltage": 281.313,
        "L1Data": {
          "acCurrent": 2.6314,
          "acVoltage": 32.9308,
          "acFrequency": 26.677
        }
      },
      {
        "date": "2013-06-04 11:35:00",
        "totalActivePower": null,
        "dcVoltage": 45.9194,
        "L1Data": {
          "acCurrent": 25.7302,
          "acVoltage": 28.5508,
          "acFrequency": 3.33931
        }
      },
      {
        "date": "2013-06-04 11:40:00",
        "totalActivePower": null,
        "dcVoltage": 383.813,
        "L1Data": {
          "acCurrent": 27.6644,
          "acVoltage": 14.0232,
          "acFrequency": 32.8427
        }
      }
    ]
  }
}
```

Account List API

Description: Return the account and list of sub-accounts related to the given token. This API accepts parameters for convenient search, sorting and pagination.

URL: `/accounts/list`

Example URL (with all options):

`https://monitoringapi.solaredge.com/accounts/list?size=5&searchText=someText&sortProperty=name&sortOrder=ASC`

Method: GET

Accepted formats: JSON, XML and CSV

- **Request:** The following are parameters to include in the request:

Parameter	Type	Mandatory	Default Value	Description
size	Integer	No	100	The maximum number of accounts returned by this call. If you have more than 100 sites, just request another 100 sites with startIndex=100. This will fetch sites 100-199.
startIndex	Integer	No	0	The first account index to be returned in the results
searchText	String	No		Search text for this account. Searchable properties: <ul style="list-style-type: none"> ▪ Name – the account name ▪ Notes ▪ Email – contact person email ▪ Country ▪ State ▪ City ▪ Zip ▪ Full address
sortProperty	String	No		A sorting option for this account list, based on one of its properties. Available sort properties: <ul style="list-style-type: none"> ▪ Name – sort by account name ▪ country – sort by account country ▪ city – sort by account city ▪ address – sort by account address ▪ zip – sort by account zip code ▪ fax – sort by account fax number ▪ phone – sort by account phone ▪ notes – sort by account notes
sortOrder	String	No	ASC	Sort order for the sort property. Allowed values are ASC (ascending) and DESC (descending)

- **Response:** The returned data is the account data, including sub-accounts. For each entry, the following information is displayed:

- id – account ID
- name – account name
- location – includes country, state, city, address, address2 (secondary address), zip
- companyWebSite – the company web site
- contactPerson – the account contact person first name and surname
- email – the contact person email
- phoneNumber – account phone number
- faxNumber – account fax number
- notes – account notes
- parentId – account parent identifier

■ **Example:** JSON output example:

```
{
  "accounts": {
    "count": 2638,
    "list": [
      {
        "id": 0,
        "name": " account 1",
        "location": {
          "country": "my country",
          "state": null,
          "city": null,
          "address": "my address 4",
          "address2": "my address 2",
          "zip": "00000"
        },
        "companyWebSite": "",
        "contactPerson": "Saar",
        "email": "mail@mail.com",
        "phoneNumber": "+00000000",
        "faxNumber": "",
        "notes": " ",
        "parentId": 32,
        "uris": null
      },
      {
        "id": 1,
        "name": " account 2",
        "location": {
          "country": "my country",
          "state": null,
          "city": null,
          "address": "my address 4",
          "address2": "my address 2",
          "zip": "00000"
        },
        "companyWebSite": "",
        "contactPerson": "Saar",
        "email": "mail@mail.com",
        "phoneNumber": "+00000000",
        "faxNumber": "",
        "notes": " ",
        "parentId": 32,
        "uris": null
      },
      {
        "id": 2,
        "name": " account 3",
        "location": {
          "country": "my country",
          "state": null,
          "city": null,
          "address": "my address 4",
          "address2": "my address 2",
          "zip": "00000"
        },
        "companyWebSite": "",
        "contactPerson": "Saar",
        "email": "mail@mail.com",
        "phoneNumber": "+00000000",
        "faxNumber": "",
        "notes": " ",
        "parentId": 32,
        "uris": null
      }
    ]
  }
}
```

API Versions

As the monitoring API evolves over time, users of the monitoring API need to make sure their code is interacting with the formally supported version.

The monitoring API supports previous versions to some extent. This can be verified by executing the *Supported Version* API (see below).

The version format is <major.minor.release> where:

- **Major** - The main version number. This number increases when the version includes significant changes, which might not be backward compatible with previous versions in terms of APIs calls and returned results.
- **Minor** – The sub-version number. This number increases when the version includes some changes, which might not affect the APIs, however the returned results can contain more information than the previous minor version.
- **Release** – bug fixes

The user should optionally specify the version as a parameter for each API (except this API) e.g. version=1.0.0. If it is omitted, current version is assumed (see *Current Version* below).

Current Version

Description: Return the most updated version number in <major.minor.revision> format.

URL: */version/current*

Example URL: *https://monitoringapi.solaredge.com/version/current*

Method: GET

Accepted formats: JSON and XML

Method: GET

- **Request:** No parameters
- **Response:** The current version
- **Example:** JSON output:

```
{ "version": "1.0.0" }
```

Supported Version

Description: Return a list of supported version numbers in <major.minor.revision> format.

URL: */version/supported*

Example URL: *https://monitoringapi.solaredge.com/version/current*

Method: GET

Accepted formats: JSON and XML

Method: GET

- **Request:** No parameters

- **Response:** A list of supported versions
- **Example:** JSON output:

```
{"supported":["0.9.5","1.0.0"]}
```

Data Types

Time Unit

Allowed values: DAY, WEEK, MONTH and YEAR

Site Status

- Active – The site is active
- Pending Communication – The site was created successfully however there is no communication yet from its inverters/SMI.

Site Type

- Optimizers and inverters
- Safety and monitoring interface
- Monitoring combiner boxes