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# Kiwis Pie Documentation

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Contents:



## 1.1 Subpackages

### 1.1.1 kiwis\_pie.testing package

#### Submodules

kiwis\_pie.testing.test\_kiwis\_pie module

#### Module contents

## 1.2 Submodules

### 1.3 kiwis\_pie.kiwis module

**class** kiwis\_pie.kiwis.**KIWIS** (*server\_url*, *strict\_mode=True*)

Bases: object

Provides access to the KiWIS API at a specified end point.

#### Parameters

- **server\_url** (*string*) – The URL to the KiWIS server.
- **strict\_mode** (*boolean*) – Perform validation on query options passed as kwargs and the return\_fields list if True. Otherwise pass through to the KiWIS API which may result in a 500 error if the query option/return field isn't valid. Default: True

**get\_parameter\_list** (*return\_fields=None*, *keep\_tz=False*, *\*\*kwargs*)

Python method to query the 'getParameterList' KiWIS method.

Keyword arguments are those available in the 'Query field' name list below. That is the keywords match the Queryfield names used by KiWIS.

### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - station\_no,
  - station\_id,
  - station\_name,
  - site\_no,
  - site\_id,
  - site\_name,
  - stationparameter\_id,
  - stationparameter\_name,
  - stationparameter\_no,
  - stationparameter\_longname,
  - parametertype\_id,
  - parametertype\_name,
  - parametertype\_longname,
  - parametertype\_shortunitname,
  - parametertype\_unitname.
- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
site_False	no	yes
stationparameter_longname	yes	yes
station_no	no	yes
stationparameter_no	no	yes
station_id	no	yes
stationparameter_id	no	yes
parametertype_longname	yes	yes
site_id	no	yes
stationparameter_name	yes	yes
station_name	yes	yes
parametertype_name	yes	yes
site_name	yes	yes
parametertype_id	no	yes

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the return\_fields specified.

**Return type** pandas.DataFrame



**get\_parameter\_type\_list** (*return\_fields=None, keep\_tz=False, \*\*kwargs*)

Python method to query the ‘getParameterTypeList’ KiWIS method.

Keyword arguments are those available in the ‘Query field’ name list below. That is the keywords match the Queryfield names used by KiWIS.

#### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - .
- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
parametertype_id	no	yes
parametertype_name	yes	yes

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the return\_fields specified.

**Return type** pandas.DataFrame

**get\_site\_list** (*return\_fields=None, keep\_tz=False, \*\*kwargs*)

Python method to query the ‘getSiteList’ KiWIS method.

Keyword arguments are those available in the ‘Query field’ name list below. That is the keywords match the Queryfield names used by KiWIS.

#### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - site\_no,
  - site\_id,
  - site\_name,
  - site\_latitude,
  - site\_longitude,
  - site\_carteasting,
  - site\_cartnorthing,
  - site\_type\_name,
  - site\_type\_shortcode,
  - parametertype\_id,
  - parametertype\_name,

- stationparameter\_name,
  - site\_georefsystem,
  - custom\_attributes.
- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
parametertype_id	no	yes
site_id	no	yes
site_no	no	yes
bbox	n/a	n/a
parametertype_name	yes	yes
site_name	no	yes
stationparameter_name	yes	yes

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the return\_fields specified.

**Return type** pandas.DataFrame

**get\_station\_list** (*return\_fields=None, keep\_tz=False, \*\*kwargs*)

Python method to query the ‘getStationList’ KiWIS method.

Keyword arguments are those available in the ‘Query field’ name list below. That is the keywords match the Queryfield names used by KiWIS.

#### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - station\_no,
  - station\_id,
  - station\_name,
  - catchment\_no,
  - catchment\_id,
  - catchment\_name,
  - station\_latitude,
  - station\_longitude,
  - station\_carteasting,
  - station\_cartnorthing,
  - site\_no,
  - site\_id,
  - site\_name,
  - parametertype\_id,

- `parametertype_name`,
- `stationparameter_name`,
- `object_type`,
- `station_georefsystem`,
- `station_longname`,
- `custom_attributes`.
- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
<code>catchment_no</code>	no	yes
<code>station_no</code>	yes	yes
<code>catchment_name</code>	yes	yes
<code>station_id</code>	no	yes
<code>site_no</code>	no	yes
<code>stationgroup_id</code>	no	no
<code>catchment_id</code>	no	yes
<code>parametertype_id</code>	no	yes
<code>site_id</code>	no	yes
<code>station_name</code>	yes	yes
<code>parametertype_name</code>	yes	yes
<code>site_name</code>	no	yes
<code>stationparameter_name</code>	yes	yes

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the `return_fields` specified.

**Return type** `pandas.DataFrame`

**get\_timeseries\_list** (*return\_fields=None, keep\_tz=False, \*\*kwargs*)

Python method to query the 'getTimeseriesList' KiWIS method.

Keyword arguments are those available in the 'Query field' name list below. That is the keywords match the Queryfield names used by KiWIS.

#### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - `station_no`,
  - `station_id`,
  - `station_name`,
  - `station_latitude`,
  - `station_longitude`,
  - `station_carteasting`,
  - `station_cartnorthing`,

- station\_georefsystem,
- station\_longname,
- ts\_id,
- ts\_name,
- ts\_shortcode,
- ts\_pat,
- parametertype\_id,
- parametertype\_name,
- stationparameter\_name,
- stationparameter\_longname,
- ts\_unitname,
- ts\_unitsymbol,
- ts\_unitname\_abs,
- ts\_unitsymbol\_abs,
- coverage,
- ts\_density,
- datacart.

- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
ts_id	no	yes
station_name	yes	yes
station_no	yes	yes
stationparameter_no	no	yes
station_id	no	yes
ts_shortcode	yes	yes
timeseriesgroup_id	no	no
ts_name	yes	yes
fulltext	yes	no
stationparameter_name	yes	yes
ts_path	yes	yes
ts_type_id	no	yes
parametertype_name	yes	yes
ts_unitname	yes	yes
parametertype_id	no	yes

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the return\_fields specified.

**Return type** pandas.DataFrame

**get\_timeseries\_values** (*return\_fields=None, keep\_tz=False, \*\*kwargs*)

Python method to query the 'getTimeseriesValues' KiWIS method.

Keyword arguments are those available in the ‘Query field’ name list below. That is the keywords match the Queryfield names used by KiWIS.

#### Parameters

- **keep\_tz** (*boolean*) – Set to true to prevent the series datetimes from being converted to UTC. This optional argument only applies when the returned data includes data with timestamps.
- **return\_fields** (*list(string)*) – Optional keyword argument, which is a list made up from the following available fields:
  - Timestamp,
  - Value,
  - Interpolation Type,
  - Quality Code,
  - Aggregation,
  - Accuracy,
  - Absolute Value,
  - AV Interpolation,
  - Type,
  - AV Quality Code,
  - Runoff Value,
  - RV Interpolation,
  - Type,
  - RV Quality Code.
- **kwargs** – Queryfield name for keyword argument. Refer to table:

Queryfield name	* as wildcard	accepts list
to	n/a	n/a
from	n/a	n/a
ts_path	yes	yes
timezone	no	n/a
timeseriesgroup_id	no	yes
ts_id	no	yes
period	n/a	n/a

**Returns** Pandas DataFrame with columns based on the default return from KiWIS or based on the return\_fields specified.

**Return type** pandas.DataFrame

**exception** `kiwis_pie.kiwis.KIWISError`

Bases: Exception

Exception for when the KiWIS service responds with an error.

**exception** `kiwis_pie.kiwis.NoDataError`

Bases: Exception

Exception for when there was no data returned by the KiWIS service.

```
class kiwis_pie.kiwis.QueryOption (wildcard, list, parser)
```

```
    Bases: tuple
```

```
    list
```

```
        Alias for field number 1
```

```
    parser
```

```
        Alias for field number 2
```

```
    wildcard
```

```
        Alias for field number 0
```

## 1.4 Module contents

## CHAPTER 2

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### Indices and tables

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