Automatic weather stations

Around 160 stations of the automatic measurement network SwissMetNet comprise a complete measurement programme.

They deliver temperature, precipitation, wind, sunshine, humidity, radiation and pressure – every 10 minutes.

The network is supplemented by around 100 automatic precipitation stations. Together, these stations form the basis for the creation of reliable local weather forecasts as well as severe weather and flood warnings. Additionally MeteoSwiss operates 3 automatic tower stations at 150m to 230m above ground for boundary layer measurements.

Data download

The Open Data from MeteoSwiss may be used without restriction; the **source must be cited** when reproducing or redistributing ("**Source: MeteoSwiss**").

✅ By using 'Open Data' from MeteoSchweiz, you confirm that you have taken note of the Terms of use.

Download data automatically

Download **files per station** automatically via FSDI's REST API: `https://data.geo.admin.ch/api/stac/v1/collections/ch.meteoschweiz.ogd-smn`

Read our documentation on how to download files automatically.

The STAC Browser can be a useful tool to facilitate the use of the API: `https://data.geo.admin.ch/browser/index.html#/collections/ch.meteoschweiz.ogd-smn`

Download data manually

Select and download **files per station** manually via MeteoSwiss' Open Data Explorer

Data structure

Files per station | **One file with all stations**

The data is split by measuring station. A file for a station contains all available parameters in one file. There are files with 10-minute `t`, hourly `h`, daily `d`, monthly `m` and yearly `y` values.

We strongly recommend that you download the corresponding aggregated data granularity instead of calculating it yourself (see also our information on data quality).

Depending on the granularity there are files with update frequency `now`, `recent` and `historical`.

The update interval for files with 10-minute values is set to 20 minutes. If you require a higher update frequency, use the **One file with all stations** instead.

Time series can begin before the introduction of automatic measurements in the year 1981. Before 1981 at least three values per day were manually measured. They are stored as individual 10-minute values (synoptic observations .

Data format

`CSV` with an estimated volume of ≤5.3 MB per file.

Metadata

Parameter **Stations** **Data inventory**

All parameters have a unique identifier that depends on the time resolution (e.g. `dkl010z0` for "wind direction; ten-minute average").

`ogd-smn_meta_parameters.csv` provides a list of all parameter identifiers with explanation, time interval, decimal places, data type and unit of measurement.

Data usage

See e.g. MeteoSwiss' SwissMetNet network map

> **INFO**
>
> For **climate analyses (long-term evolution or change)**, use the Homogeneous data series instead.

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