www.dwd.de

Deutscher Wetterdienst
Wetter und Klima aus einer Hand

DATASET DESCRIPTION

TA-Luft-windroses of the annual hours in % from station measurements for Germany

Version: v24.3

Publication date: 2024

Cite data set as:	TA-Luft-windroses of the annual hours in % from station measurements for Germany, Version v24.3
Dataset-ID:	urn:x-wmo:md:de.dwd.cdc::derivgermany-techn-multi_annual-windroses_qpr_ta_luft
Dataset-URL:	https://opendata.dwd.de/climate_environment/CDC/derived_germany/techn/multi_annual/windroses_qpr_ta_luft/

ABSTRACT

Based on hourly averages of the wind speed and wind direction, multi year strength windroses (at least 5 connected or consecutive years are used) of the relevant stations during the rolling 10 years back are created.
In order to be able to make representative statements about the wind conditions at a station with the help of a starch wind rose, conditions regarding data availability, continuity of the measuring site, the homogeneity of the measuring method and uniform sensor height per site were taken into account.

Quality conditions are:

• at least 85 % of the data are available per month
• not any relocation of the measuring site during the evaluation period
• not any relocation of the sensor height during the evaluation period
• the sensor height is situated within an interval of height from 7 m to 25 m over ground (including outside barriers)

These data originate from stations of the DWD and legally and qualitatively equivalent partner network stations.

POINT OF CONTACT

Deutscher Wetterdienst
CDC - Vertrieb Klima und Umwelt
Frankfurter Strasse 135
63067 Offenbach
Tel:+ 49 (0) 69 8062-4400
Fax:+ 49 (0) 69 8062-4499
E-Mail:klima.vertrieb@dwd.de

DATASET DESCRIPTION

Parameter	wind direction, wind velocity
Unit(s)	%, degree, m/s
Statistical processing	multi-annual averages
Temporal coverage	2013-01-01 -- 2023-12-31
Spatial coverage	stations in Germany
Projection	WGS 84 (EPSG:4326)
Format description	: formate(s): - png (starch wind rose), - csv and txt (basic data of wind direction and wind speed and results of the correlation), - zip (csv, txt and png)

DATA ORIGIN

These data are obtained from the station measuring networks of the German Weather Service. For more detailed information on the current observation and measurement procedures, see VuB 3 Observer Manual (DWD, 2014a), VuB 3 Technician Manual (DWD, 2014b) and VuB 2 Weather Key Manual (DWD, 2013).The stations are set up and operated according to WMO regulations.

RESOURCE MAINTENANCE

The data is updated annually and extended to include the last year that has elapsed.

VALIDATION AND UNCERTAINTY ESTIMATE

All offered measuring stations meet parameter-related homogeneity and inventory criteria, for example wind sensor relocation is permitted during the evaluation period. In addition a data stock of at least 85 % is guaranteed for every month of the reference years.

UNCERTAINTIES

uncertainities: Uncertanities result from incorrect or missing observations/measurements.

CONSIDERATIONS FOR APPLICATIONS

The quality of the starch wind roses depends on the quality of the station readings. These are subjected to a continuous quality check. The stations were selected according to WMO criteria.

ADDITIONAL INFORMATION

parameters: hourly average of wind speed (scalar averaging) and wind direction (vectorial averaging)

LITERATURE

Behrendt, J., et al.: Beschreibung der Datenbasis des NKDZ. Version 3.5, Offenbach, 15.02.2011.

DWD Vorschriften und Betriebsunterlagen Nr. 2 (VuB 2), Wetterschlüsselhandbuch Band D, Nov 2013.

DWD Vorschriften und Betriebsunterlagen Nr. 3 (VuB 3), Beobachterhandbuch (BHB) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014a.

DWD Vorschriften und Betriebsunterlagen Nr. 3 (VuB 3), Technikerhandbuch (THB) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014b.

Kaspar, F., et al.: Monitoring of climate change in Germany – data, products and services of Germany`s National Climate Data Centre. Adv. Sci. Res., 10, doi:10.5194/asr-10-99-2013, 99–106, 2013.

Spengler, R.: The new Quality Control- and Monitoring System of the Deutscher Wetterdienst. Proceedings of the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation, Bratislava, 2002.

COPYRIGHT

REVISION HISTORY

This document is maintained by Deutscher Wetterdienst, Zentrales Klimabüro, last edited at 2024-06-06.