

### Quality Control of Nergica©

The data coming from the met masts (mmv\*), joined with the scripts of Nergica, have been run through an in-house quality control. The methodology is based upon directives from the World Meteorological Organization<sup>1</sup> and on the quality control of Nordic data from the Klima project<sup>2</sup>. This quality control adds columns which contain Boolean data type and allows the user to discard data according to various criteria based upon thresholds related to the location of the met masts. Those criteria are named RXXX and INFOXX. The ones used to remove data from our sets are explained herein below.

- R101:** Verifies if at least one column (min, max, average, standard deviation) is empty or “not a number (nan)”, value in this column is 1.
- R103:** Verifies if there is enough data in the ten-minute interval to obtain good statistics (mean, standard deviation, etc.). If not the case, the value is 1
- R104:** Verifies if sensors or infrastructure was under maintenance in this ten-minute interval. If this is the case, value in this column is 1.
- R105:** Verifies if the data acquisition system was running and saving data correctly in this ten-minute interval. If not the case, the value is 1
- R201:** Verifies if maximum value in the ten-minute interval is superior to a specific value considered too high for the type of data. If this is the case, value in this column is 1.
- R202:** Verifies if minimum value in the ten-minute interval is inferior than a specific value considered too low for the type of data. If this is the case, value in this column is 1.
- R203:** Verifies if the standard deviation in the ten-minute interval is superior to a specific value considered too high for the type of data. If this is the case, value in this column is 1.
- R204:** Verifies if the standard deviation in the ten-minute interval is inferior than a specific value considered too low for the type of data. If this is the case, value in this column is 1.
- R205:** Verifies if data in this ten-minute interval are in an appropriate range for the current month. If not the case, the value is 1
- R206:** Verifies that the average in a ten-minute interval is between the min and the max value. If not the case, the value is 1
- INFO01:** Verifies the ice presence with the double anemometry method using both a heated and a none-heated anemometer. If ice detected, value in this column is 1.

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<sup>1</sup> [https://old.wmo.int/extranet/pages/index\\_en.html](https://old.wmo.int/extranet/pages/index_en.html)

<sup>2</sup> <https://docplayer.net/21635600-Nordic-methods-for-quality-control-of-climate-data.html>