



## Description of data file format ----- easy to handle for the ISMN

### Data file example:

```

Date;Time;sm_5cm;sm_5cm_oqf;sm_10cm;sm_10cm_oqf;st_5cm; st_5cm
2011-01-01;01:00:00;8.70;U;8.80;U;8.90;U
2011-01-01;02:00:00;8.70;U;8.80;U;8.80;U
2011-01-01;03:00:00;8.60;U;8.70;U;8.80;U
...

```

### Data format examples from existing networks:

#### Example 1:

```

date-stamp,time-stamp,sm_m3m-
3_5cm_5TM_Decagon,st_degreeC_5cm_5TM_Decagon,p_mm_2m_TRWS_200E_Logotronic
2020-02-01,00:00:00,0.196,2.8,0
2020-02-01,01:00:00,0.196,2.9,0
2020-02-01,02:00:00,0.196,2.9,0
2020-02-01,03:00:00,0.197,3,0
...

```

#### Example 2:

```

Time_utc_shift,AirHumidity_Relative_2m, AirHumidity_Relative_2mQualityFlag
2019-08-29T06:06:00.000+02:00,noData,noData
2019-08-29T06:10:00.000+02:00, 92.6,M
..

```

### You could define a timeseries (column header) using following descriptive information:

sensor	Brand/name of the sensor
<b>variable</b>	sm = soil moisture ts = soil temperature ta = air temperature p = precipitation sd = snow-depth sweq = snow water equivalent
Variable_oqf	_oqf = own quality flag ( <b>special case</b> ) <ul style="list-style-type: none"> <li>- if you have your own quality flags and want to share them with the ISMN you can add “_oqf” to the variable (e.g.: for soil moisture --&gt; “sm_oqf”)</li> <li>- a description of your flags is sufficient in the metadata file</li> </ul>

unit	% volume	soil moisture
	mm	precipitation, snow-depth, snow water equivalent
	degree C	soil temperature air temperature surface temperature
<b>depth</b>	The top of the depth range represented by the sensor.	
sensor_position	Two options possible: <ul style="list-style-type: none"> <li>- Vertical (depth_from - depth_to :eg.: 0.00 [m] – 0.10 [m] )</li> <li>- Horizontal (depth_from = depth_to: e.g.: 0.05 [m])</li> </ul>	

### Other important information

NaN values	<ul style="list-style-type: none"> <li>- Periods where no measurement occurred (e.g. sensor malfunction, etc.)</li> <li>- No inclusion in the database</li> <li>- Info on your Nan values used, need to be stated in the metadata file</li> </ul> <p>Examples for NaN values from existing networks:</p> <p>99</p> <p>99.90</p> <p>9999</p> <p>-9999</p> <p>Nan</p>
.	Dot for floating-point numbers only e.g.: 0.62 (see data format example)
, or ;	Commas for separation of single entries (column separation) in the file (see data format example)
Spaces	No spaces in between

For more information please don't hesitate to contact us: [ismn@bafg.de](mailto:ismn@bafg.de)

We are always happy to help!

Thank you for participating and sharing your data with us!

Your ISMN team