

GPRSEx 1.0

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1 Pre-thoughts

The data transmission via GPRS should preferably occur as compact as possible since usually many packets are transmitted per day (e.g. 288 in a 5 minute rythm).

A general format requirement is the clear recognition, the good readability and the clearness of the data.

The specification of a version makes subsequent extension possible and distinguishable.

2 Specification

A GPRS file in the GPRSEx format consists of lines that end with linefeeds (0x0A). The character encoding is ISO-Latin-1.

The lines consist of fields that are separated by semicolon.

The first two lines form the header, the other lines contain the data.

The first line contains Format name; Version; Station identifier. The format is GPRSEx and the version is 1.0. The station identifier can contain arbitrary characters (except semicolons).

The second line contains a field for each sensor (channel), with specification of the sensor number and the unit (separated by a comma). Sensor numbers and units are not allowed to have a semicolon.

In the first field, the data lines contain the timestamp in the format YYYYmmddHHMMSS. Then a field for each sensor follows. A field either contains a number (with decimal point), an F as gap identifier or nothing at all when there is no value for the sensor for this timestamp.

Blank lines and comments are not allowed.

3 Example

```
GPRSEx;1.0;Faak am See  
W10,m ü.A.;130,°C;998,V;999,V  
20100127151100;423.21;4.3;;  
20100127151200;423.21;4.2;;  
20100127151300;423.22;4.2;;  
20100127151400;F;4.2;;  
20100127151500;423.22;4.1;13.8;11.9
```

At the measuring station Faak am See water level and water temperature are measured. The station has a battery which is charged by a solar module. The waterlevel has a measurement failure on the 27.1.2010 between 15:13 and 15:15. Both voltages are output only every 15 minutes.

4 Usability

This protocol can be used freely.