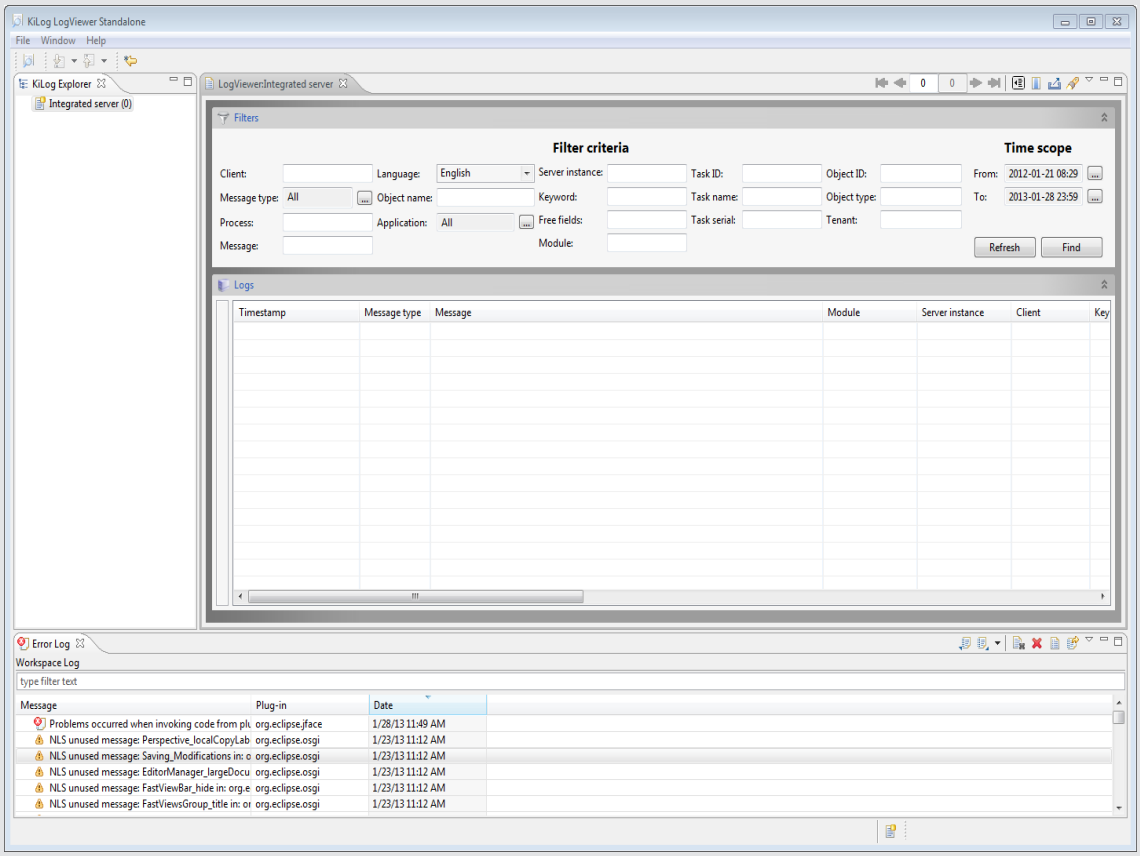
ZRXP

IMPORT/EXPORT

Data Exchange Format ZRXP

User Manual



KISTERS
Pioneering Technologies.

The software programs described in this document and the information contained in this document are confidential and proprietary products of KISTERS or its licensors. KISTERS waives copyright for licensed software users to print out parts of the documentation in hard copy for their own use only. This documentation may not be transferred, disclosed, or otherwise provided to third parties. In duplicating any part of this document, the recipient agrees to make every reasonable effort to prevent the unauthorized use and distribution of the proprietary information.

No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

KISTERS reserves the right to make changes in specifications and other information contained in this publication without prior notice.

KISTERS makes no warranty of any kind with regard to this material including, but not limited to, the implied warranties or merchantability and fitness for a particular purpose.

KISTERS shall not be liable for any incidental, indirect, special or consequential damages whatsoever (including but not limited to lost profits) arising out of or related to this documentation, the information contained in it or from the use of programs and source code that may accompany it, even if KISTERS has been advised of the possibility of such damages.

Any errors found in any KISTERS product should be reported to KISTERS where every effort will be made to quickly resolve the problem.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

Leonardo da Vinci

Copyright 2015 KISTERS
Internet: www.kisters.de
eMail: info@kisters.de

Author: KISTERS
Date of print of current edition: 09 2015
1st edition
Current software version: 3.0.x

Table of Contents

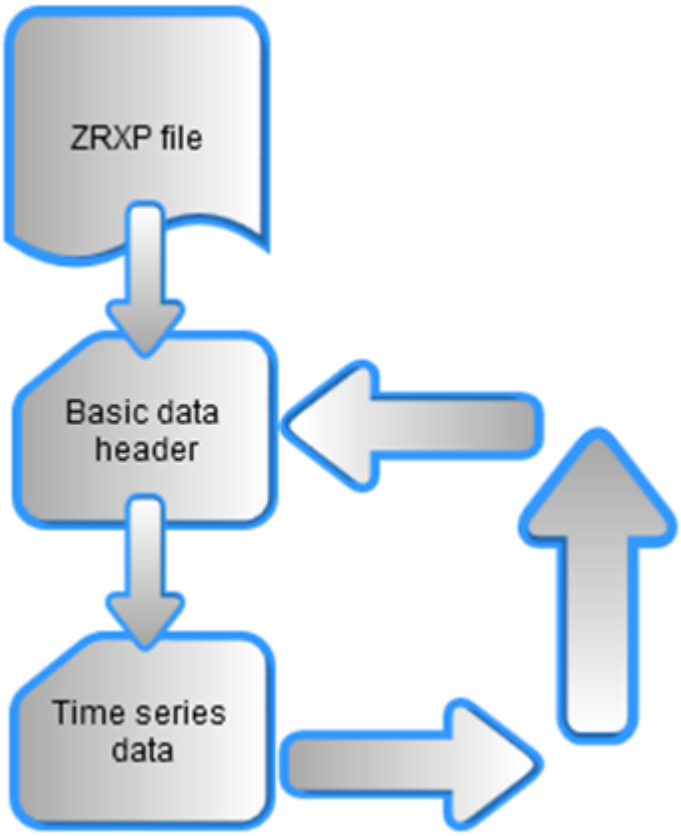
Part I

1 The Data Exchange Format ZRXP

The data format ZRXP is a line-oriented text file format having ISO-8859-1 encoding which corresponds to ISO-LATIN-1. It allows to export various information about time series values (time stamp, the value itself; the status of a value (encoded); the status as short text. the status as long text, influences, etc.). The related column definition is contained in the block header.

A file in ZRXP format consists of one or several segments (blocks) with each segment being divided into a basic data header and a time series value block.

Each segment always begins with a basic data header. At least one block with time series value(s) must follow the basic data header. After each block the file can end or a further segment can follow. Empty lines and comments are ignored; they can stand in any place in the file.



Comments must begin with the character sequence "##" at the start of line.

The line can contain blanks at the start and the end.

The format is backward compatible with older format versions.

Note: It is not allowed to mix different ZRXP versions in one file: All time series segments must have the same version.

1.1 Basic Data Information

Each line begins with a number sign (#).

The fields are separated by a separator (`|*|` or `;*;`).

Each field contains one pair consisting of a keyword and a value. The order of fields depending on keywords is free.

The format of a basic data header line is:

```
#Keyword[value]>;*;[ <Keyword[value]>;*;]...
```

or

```
#<Keyword[value]>|*|[ <Keyword[value]>|*|]...
```

with the number of basic data lines being irrelevant, irrespective of which keywords have been used.

All key words require a value: the values for the keywords are described in the next chapter Keywords.

Keywords are case-sensitive, the values for them are can be case-sensitive or case-insensitive depending on the key word, this will be described for each key word.

Keywords can define the time series uniquely or declare some properties that the time series should comply.

Some keywords allow alternative values with the same meaning. Default for keyword means that if this keyword is not provided in header, the default value will be used.

There are some keywords that are used to modify the imported data, such as unit conversion or to remove the target time series data before importing.

It can happen, that a combination of a keyword and its value build another keyword, for example pair `CTAGkey1` and keyword `CTAGKEY`.

Those keywords that are substrings from other keywords have lower precedence, so the longest match will be a correct keyword. In the above example the pair will be treated as a keyword `CTAGKEY` and its value `1`.

Note: The first line in an export file gives the version number and mode of ZRXP and the creation tool as well as the time zone:

```
#ZRXPVERSION2209.265|*|ZRXPMODEStandard|*|ZRXPCREATORZRXP-Fileexport|*|
TZMEZ|*|
```

More information about ZRXPVERSION, ZRXPMODE and ZRXPCREATOR can be found when following the links.

1.1.1 Keywords

The following keywords are used to describe the basic data information of the ZRXP file:

Key word	Description	Values	compared with ZRXP 2
`SANR`	Alphanumerical station number; is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
`SNAME`	Station name; metadata, ignored by import	alphanumeric	used by import in ZRXP 2
`SWATER`	River name; metadata, ignored by import	alphanumeric	used by import in ZRXP 2
`CDASA`	Remote call logger/meter (DASA) number; is used as part of the import number being defined in the	Integer	

© 2015 KISTERS

	import agents		
CDASANAME	Remote call logger/meter (DASA) name; is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
CCHANNEL	Remote call logger/meter (DASA) channel name; is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
CCHANNELNO	Remote call logger/meter (DASA) channel number; is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
CMW	Values per day for equidistant time series values; is used as part of the import number being defined in the import agents; the value will be converted to distance in seconds defining the time grid of the equidistant time series. For example, 96 means 96 values per day equal to 900 sec time grid. Non-equidistant time series and time series without high resolution will have the suffix ".0"	positive Integer	
CNAME	Parameter name; is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
CNR	Parameter number; metadata, ignored by import	alphanumeric	used by import in ZRXP 2
CUNIT	Unit of the data value column; in the KiTSM context it can be either unit symbol or unit short name	alphanumeric, case-sensitive	
REXCHANGE	Import number of import agent for time series; because the time series search is implemented	alphanumeric, case-sensitive	

	within your client application, the interpretation of this keyword value by TCA may vary.		
RINVAL	Value for missing or invalid data record	numeric with dot as decimal separator; default: -777.0	
RTIMELVL	Time series time level; metadata, ignored by import	alphanumeric	used by import in ZRXP 2
XVLID	Time series internal ID as defined by KiTSM	Integer	
TSPATH	Time series absolute path as defined by KiTSM	valid KiTSM absolute path	first available in ZRXP2 for WISKI7
CTAG	Special tag, is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
CTAGKEY	Special tag, is used as part of the import number being defined in the import agents	alphanumeric, case-sensitive	
XTRUNCATE	removes all time series data before import	required; select between ▪ true ▪ 1 ▪ yes	
METCODE	metering code for energy market instance	as defined by BDEW	
METERNUMBER	meter number for energy market instance	as defined by BDEW	new in ZRXP 3
EDIS	EDIS/OBIS code for energy market instance	as defined by BDEW	
TZ	time zone of all time stamps in the time series block, both header and data if omitted, the time zone provided by target time series will be assumed as follows: 1. default time zone provided by TCA for this time series 2. time zone of target time series	Time zone as defined by Olsen TZ database UTC[±]hours time zone specified as offset in hours from UTC, to specify UTC use "UTC0" **Note**: With software written in C++, such as WISKI7 and BelVis3, only a subset of time zones is allowed: ▪ MEZ / MESZ ▪ CET / CEST ▪ UTC[±]hours and GMT[±] hours (here the time zone is specified as offset in hours from UTC or GMT, to specify UTC, use "UTC0") ▪ Etc/UTC[±] hours and Etc/	only some shortcuts were allowed

© 2015 KISTERS

		GMT[±] hours ▪ Europe/Amsterdam ▪ Europe/Berlin ▪ Europe/Brussels ▪ Europe/Luxembourg ▪ Europe/Madrid ▪ Europe/Paris ▪ Europe/Rome ▪ Europe/Vienna ▪ Europe/Zurich	
ZDATE	time stamp of meter reading for energy market	time stamp in format yyyymmdd[hhmmss]	
ZRXPVERSION	ZRXP format release	required Format: VVYY.MM ▪ VV is the version without dot ▪ YY are the two last year digits when this version was issued ▪ MM is the month of issue Example: 3014.03	was optional in ZRXP 2
ZRXPCREATOR	name of the creation tool of the current ZRXP file; metadata, ignored by import; used only by ZRXP creation tools to set who or what has created the ZRXP block Recommended approach is to use the name of the tool and its version		
LAYOUT	specifies the column layout for the ZRXP data	required see Column Layout Definition for details	was optional in ZRXP 2
TASKID	internal information; specifies the task identifier, only first occurrence is considered during import This ID is generated by SODA or KiDSM within their tasks and stays the same throughout all import processes; is then written into the import log file to be evaluated by KiLog. All logs contain this task ID which makes it possible to identify the task by this identification string.	alphanumeric, case-sensitive	new in ZRXP 3
SOURCESYSTEM	designator of source system, for example SODA	alphanumeric, case-sensitive	new in ZRXP 2.3 and 3

SOURCEID	time series identifier by this source	alphanumeric, case-sensitive	new in ZRXP 2.3 and 3

1.1.2 Column Layout Definition

The column layout in ZRXP file describes the data columns for this block for the time series data. The layout is obligatory. The order of columns is arbitrary, the names of columns are case-insensitive. The format of the layout definition is:

`LAYOUT(column_alias,…)`, for example: `#LAYOUT(timestamp,value,primary_status)`.

The table below lists all available layout attributes to be used within the column definition of the ZRXP file.

Column_alias	Description	compared with ZRXP 2
`timestamp`	primary time stamp column format `yyyymmdd[hhmmss]` if the time is omitted, 00:00:00 is assumed, time can be incomplete, the missing time part will be assumed as 00 if treating as GMT, no duplicates allowed, the order of primary time stamps is ascending	definition precised
`value`	primary numeric value column floating-point numerical with decimal part, number of decimal places is arbitrary. Decimal separator is a dot [.], scientific notation is allowed. If the value is equal to the value for `RINVAL` key word, then this data record must be treated as missing	definition precised
`primary_status`	primary status column decimal Integer values from 0 to 255	new in ZRXP 3, the combination of `primary_status` and the optional `system_status` layout attribute replaces the ZRXP2 status column
`system_status`	system status column system status as string, case sensitive, this can be several comma-separated; if the string contains blanks, it must be enclosed in quotation marks "" this column, also optional, can be only in conjunction with `primary_status`	new in ZRXP 3
`additional_status`	additional status column additional status as string, case sensitive, this can be several comma-separated; if the string contains blanks, it must be enclosed in quotation marks ""	new in ZRXP 3

© 2015 KISTERS

interpolation_type	interpolation type TCA column; decimal Integer, will be treated "as is";	first available in ZRXP2 for WISKI7
remark	remarks column character string containing printable symbols; single quotation marks ', are allowed; if the string contains blanks it must be enclosed in quotation marks ""; From ZRXP format version 2209.265 the remark field can contain several remarks: both free text and standard remarks. Each remark in remark field is enclosed in quotation marks, inside the remark no quotation mark (") is allowed. The format of remark field is: "remark""remark" only standard remarks with parametrised values are allowed, they will be recognized by two colons :: as separator between the standard remark short name and its parameter value	standard remarks and multiple remarks are first available in ZRXP2 for WISKI7
timestampoccurence	time stamp column for occurrence format yyyymmdd[hhmmss] this column is only available in WISKI7/ TSM for aggregated time series such as daily minimum and contains time stamp in ZRXP format; using it for other time series will cause an error	first available in ZRXP2 for WISKI7
occurrencecount	reset number column decimal integer this column is available only for Energy/ TSM billing data time series, using it for other time series will cause an error	new in ZRXP 3
member	member column character string containing printable symbols; single quotation marks ', are allowed; if the string contains blanks it must be enclosed in quotation marks ""; this column is available only in ensemble time series in WISKI7/TSM, using it for other time series will cause an error	first available in ZRXP2 for WISKI7
forecast	time stamp column for forecast format yyyymmdd[hhmmss] this column is available only in ensemble	first available in ZRXP2 for WISKI7

	time series in WISKI7/TSM, using it for other time series will cause an error	
`signature`	column for signature code of a value decimal Integer	new in ZRXP 3
`reset_number`	reset number column decimal Integer this column is available only for Energy/ TSM billing data time series, using it for other time series will cause an error	new in ZRXP 3
`reset_timestamp`	reset time stamp column format `yyyymmdd[hhmmss]` this column is available only for Energy/ TSM billing data time series, using it for other time series will cause an error	new in ZRXP 3
`releaselevel`	release level column character string containing printable symbols; single quotation marks ', are allowed; if the string contains blanks it must be enclosed in quotation marks ""; this column is available only in time series in WISKI7/KiTSM using virtual columns for export, using it for import of time series will cause an error	new in ZRXP 2.3 and 3

`dispatch_info`
or
`dispatchinfo`
	dispatch information column;
	character string containing printable symbols;
	simple quotation marks are allowed ', if the string contains blanks it must be enclosed in quotation marks "";
	this column is available only in extended ensemble time series in WISKI7/TSM
		new in ZRXP 2.3 and 3

1.1.3 Additional Information

- `CDASA`: Interesting only for manual readout devices (e.g. OTT Vota); can be combined only with the origin Sample device data
- `CTAG *CMD`: Time series additional attribute
- `CTAGKEY *CMD`: Time series tag key, a time series attribute (from ZFlex2 1.5.2.0)
- `CCHANNEL *CMD`: Transducer name (from ZFlex2 1.5.2.0)

1.2 Time series identification methods and their priority

- `REXCHANGE` value for the import agent import number.
- Master data, assembled to import number of import agent:
  - `CTAG`, `CTAGKEY`

© 2015 KISTERS

Depends on value of CTAG:
- SODATSID: Import agent import number is expected as value for CTAGKEY
- y other values, will be assembled from key word values as follows CTAG.CTAGKEY

- SANR,CNAME, CMW
  The value of these key words will be used as import agent import number and will be assembled as follows:
  - CMW exists in header: SANR.CNAME.CMW
  - CMW does not exist in header: SANR.CNAME.0
- CDASA, CDASANAME, CCHANNEL, CCHANNELNO
  The value of these key words will be used as import agent import number and will be assembled as follows (pipeline means OR depending on presence of key word):
  CDASA|CDASANAME.CCHANNEL|CCHANNELNO

- Time series source source system and its identifier (SOURCESYSTEM and SOURCEID)
- Time series absolute path (TSPATHpath) as defined by KiTSM
- Internal time series ID (XVLID) as defined by KiTSM
- METCODE and EDIS for energy market objects
- METERNUMBER and EDIS for energy market objects

If several time series identification keywords were detected in the ZRXP block header, then the above provided priority will be used. Inside one identification method the order will be as in the provided sub-list.

If one method was applied and some time series was found, no further methods will be tried, otherwise the next applicable identification method will be tried to identify the time series.

1.3 Time Series Values Information

Each row of time series data contains one record with the columns defined by the layout for the time series defined by basic data header. The column must comply its format and data type as described under Column Layout Definition.

The columns in the record are separated with white spaces (space or tab). The sequential white spaces will be collated and on begin and the end of line will be ignored.

Empty lines will be ignored as well.

The column may be empty if allowed by its definition; empty columns are represented by **""** or just omitted if it is the last column of a ZRXP file.

1.4 Appendix

In the appendix you find diverse information in the context of ZRXP.

- Example Files For ZRXP 3.0
- Example Files For ZRXP 2.2
- Keywords Removed from ZRXP2 to ZRXP3

1.4.1 Example Files For ZRXP 3.0

The format of a ZRXP import or export file can be of increasing complexity. The example below shows a simple time series identified by an import number (that is specified in the import agent) with one value column. Unit and time zone are provided within the file.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#REXCHANGE0001|*|TZUTC+1|*|CUNITcm|*|
#LAYOUT(timestamp,value,primary_status)|*|
20030120000000 9.72 0
20030120001600 9.72 0
```

```
20030120003500 9.72 0
20030120004400 9.59 0
20030120010100 9.58 0
20030120011300 9.58 0
20030120013200 9.575 0
20030120014500 9.57 0
20030120020000 9.65 0
20030120021500 -777 255
```

The next example shows a simple time series identified by energy attributes with one value column.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#METCODEDEGENERATED00000000000000000000001|*|EDIS1-1:1.8.2|*|
#LAYOUT(timestamp,value,primary_status)|*|
20120101000000 10 0
20120101001500 11 0
20120101003000 12 0
20120101004500 14 0
20120101010000 12 0
20120101011500 11 0
20120101013000 10 0
20120101014500 11 0
20120101020000 10 0
```

The next example shows a time series with a remark column; the remark in this example is a standard remark.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#REXCHANGE0001|*|
#TZEurope/Berlin|*|
#LAYOUT(timestamp, value, primary_status, remark)|*|
20120520140000 18.0 0 "weather::good"
```

The next example shows a special use case: a time series with an occurrence time stamp.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#REXCHANGE0001|*|
#TZEurope/Berlin|*|
#LAYOUT(timestamp,value,primary_status,timestampoccurence)|*|
20120401000000 10 0 20120416154500
```

The next example shows an ensemble time series with member and forecast

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#REXCHANGE0001|*|
#TZEurope/Berlin|*|
#LAYOUT(timestamp,value,primary_status,member,forecast)|*|
20120401000000 10 0 "Yes,mate!" 20120416154500
```

Note that the content of the member column is a string and may contain not only numbers.

The next example shows a time series having a composite status.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#METCODEDEGENERATED00000000000000000000001|*|EDIS1-1:1.8.2|*|
#TZEurope/Berlin|*|
#LAYOUT(timestamp, value, primary_status, system_status, additional_status)
20131210154500 2.870000 128 "edt,fro" "B83,BZC4"
```


© 2015 KISTERS

```
20131210164500 3.620000 254 "edt,fro,meo,ipl"  "A38,BZC4"
```

The next example shows a time series with billing data (reset number and time stamp). This example file contains the ZDATE key word.

```
#ZRXPVERSION3014.03|*|ZRXPCREATORKiIOSystem.Manual|*|
#METCODEDEGENERATED00000000000000000001|*|EDIS1-1:1.8.2|*|
#TZEurope/Berlin|*|
#ZDATE201312151745|*|
#LAYOUT(timestamp, value, primary_status, system_status, reset_number,
reset_timestamp)
20131210154500 2.870000 128 "edt,fro" 1 20130415
20131210164500 3.620000 254 "edt,fro,meo,ipl" 1 20130415
```

1.4.2 Example Files For ZRXP 2.2

- Stage Data
- Main Values
- Gaugings

Here are three examples of a basic data record (for version 2.2).

#SSNR4	|*|SANR2330002	|*|SNAMEWEIL	|*|SWATERRHEIN	|*|
#CNR210	|*|CMW96	|*|CNAMEV	|*|CTYPE n-min-equi	|*|
#RINVAL-777.0	|*|RNR-1	|*|RID-1	|*|	

#CKONV271148	|*|
#RINVAL-777.0	|*|

#REXCHANGE256987	|*|
RINVAL-777.0	|*|

If the basic data is specified by a converter number / exchange number, the segment header will consist of two / one line, or otherwise it will be three lines.

If several data (e.g. converter number and exchange number) exists, the basic data is selected according to the following priorities:

- Converter number
- Exchange number
- Data logger number and transducer number
- Station number, parameter name, type of time series.

Each of these lines begins with a double cross (#).

The fields are separated by a separator (|*| or ;*;).

Each field contains one pair consisting of a keyword and a value. The order of fields depending on keywords is free.

1.4.2.1 Stage Data

In the following you will find a complete file in the format `ZRXP2.2` as an example of an import carried out on the basis of a data exchange number only.

```
#SANR200003|*|SNAMEGreim|*|SWATER ---|*|CNR101155|*|CNAMEW|*|
#CTYPEn-min-equi|*|CMW96|*|CUNITcm|*|RINVAL-777|*|RNR96|*|
#RTYPEmean values|*|
19801001001500 108.0
19801001003000 108.0
19801001004500 108.0
19801001010000 108.0
19801001011500 108.0
19801001013000 108.0
```

In this example (usually, files of this form exist if an automatic import has been carried out with the WSP Service Provider), the time series is uniquely specified by the data exchange number "`159357`" (`REXCHANGE159357`) in the header. The exchange number must be unique in the whole system!

The second data `RINVAL-777` defines which identifier is to be used by the importer as gap identifier.

1.4.2.2 Main Values

The import process described here only works with ZRXP version 2.2.

The following settings apply to the import of main values via ZRXP:

RTIMELVL

- Time level of values
  - Possible keys:
    `high-resolution` or `Hochaufloesend` for high-resolution values
    `daily` or `Tageswerte` for daily values
    `weekly` or `Wochenwerte` for weekly values
    `monthly` or `Monatswerte` for monthly values
    `annual` or `Jahreswerte` for annual values

RTYPE

- Value type
  - Possible keys:
    `instantaneous values` or `Momentanwerte` for instantaneous values
    `mean values` or `Mittelwerte` for mean values
    `amounts` or `Summen` for totals
    `minima` for minimum values
    `maxima` for maximum values

The second line of the ZRXP header must say, among others:

`|*|CMW1|*|` values per day for equidistant values (e.g. month=1)

The third line has to be completed with (example: monthly values):

for the monthly maximum value:

`|*|RTIMELVLmonthly|*|RTYPEMaximum|*|` time level of the values (monthly value) value type

for the monthly minimum value:

`|*|RTIMELVLmonthly|*|RTYPEMinimum|*|` time level of the values (monthly value) value type

Example:

© 2015 KISTERS

```
#SANRxxxx|*|SNAMExxxxx|*|
#CMW1|*|CNAMEW|*|CUNITcm|*|
#RINVAL-777.0|*|RNR1|*|RTIMELVLmonthly|*|RTYPEMaximum|*|
199908011200 25.4
199909011200 28.0
199910011200 35.8
199911011200 34.3
#SANRxxxx|*|SNAMExxxxx|*|
#CMW1|*|CNAMEW|*|CUNITcm|*|
#RINVAL-777.0|*|RNR1|*|RTIMELVLmonthly|*|RTYPEMinimum|*|
199908011200 5.4
199909011200 8.0
199910011200 5.8
199911011200 4.3
```

- Main value totals time series must have the time stamp 00:00 hrs;
- main value time series must have the origin **UNKNOWN** or **IMPORT**;
- the entry `Auswahldialog=1` should be set in the `wiski5.ini` in the section [Im-Exporter];
- for an import by a converter number, the `RTIME` and `RTYPE` entries are not necessary.

1.4.2.3 Gaugings

In the following you will find a complete file in ZRXP2.2 format for the import of flow measurements by a data exchange number.

```
#REXCHANGE159357|*|RINVAL-777.0|*|
19800403161500 207.7  92.8 42.8 2.16  61.4 1.51 28.1 1.52 28.8 0.47
19860124061500 176.2  64.1 34.2 1.87  43.5 1.47 27.0 1.27 27.7 0.19
19950125090000 279.8 162.2 65.7 2.47 120.9 1.34 29.7 2.21 31.3 0.47
```

In this example, a gauging time series is determined from the header information `REXCHANGE159357` (exchange number of the number 159357).

The time series contains the following parameters:

`S value` (stage, float),

`Q value` (discharge, float),

`area` (float),

`v value` (velocity, float),

`P value` (profile parameter, float),

$c\sqrt{I}$ `value` (float),

`width` (float),

`depth` (float),

`catchment` (float) and

`specific discharge` (float).

Thus, the data line is structured as follows:

`time stamp`,

`S value`.

`Q value`,

`area`,

`v value`,

`P value`,

$c\sqrt{I}$ `value`,

`width`,

`depth`,

`catchment` and

`specific discharge`.

1.4.3 Keywords Removed from ZRXP2 to ZRXP3

- PNP *CMD
  Usage of surface datum:
  Possible keys:
  `0`: values are measured without gauge datum (standard)
  `1`: values are measured with gauge datum

- SSNR
  WISKI-internal station identification number (record number), is ignored

- VOLATILE *CMD
  Instantaneous record identification for data collector, this is not a time series:
  Instantaneous values are imported via a ZRXP block the header of which contains the keyword `CINSTANTyes` and the specifications `CDASA` and `CCHANNEL`. This data is then written into the instantaneous value time series (provided this time series was created). Import into non-equidistant time series is performed if the header contains the keywords `CDASA` and `CCHANNEL`; instantaneous value time series are excluded.

- CKONV
  Converter number

- CNTYPE
  Type of the precipitation parameter
  Possible keys:
  `totalisator` or `Messer` for totalisator
  `recorder` or `Schreiber` for recorder
  The indication of the internal specification as value is also possible *CMD.

- CTYPE
  Channel or value type
  Possible keys:
  `n-min-equi` for equidistant values with n values per day
  `n-min-ip` for non-equidistant values (time interval between values is irregular)

- CUNIT
  Unit of time series

- CTABLE *CMD
  Parameter type

- REXTR *CMD
  Extreme value optimisation method
  Possible keys:
  `on` or value for: the more extreme value is saved
  `time` for: the later value is saved
  `off` for: all values are maintained

- RID

 © 2015 KISTERS

Always set to -1, without importance

- RIMPORT
  Check of origin (Import or Unknown)
  Possible keys:
  `1` for: origin is checked (standard)
  `0` for: origin is not checked

- RNR
  Values per day for equidistant values for -1 for non-equidistant values.

- RORPR
  Quality of values
  Possible keys:
  `production` or `Produktion` for production values
  `original` for original values

- RSTATE *CMD
  Kind of status conversion
  Possible keys:
  `w4`: ZRXP file contains WISKI V. 4 status values
  `w5`: ZRXP file contains WISKI V. 5 status values
  `w6`: ZRXP file contains WISKI V. 6 status values (default)

- RTIMELVL
  Time level of values
  Possible keys:
  `high-resolution` or `Hochaufloesend` for high-resolution values
  `daily` or `Tageswerte` for daily values
  `weekly` or `Wochenwerte` for weekly values
  `monthly` or `Monatswerte` for monthly values
  `annual` or `Jahreswerte` for annual values

- RTYPE
  Value type
  Possible keys:
  `instantaneous values` or `Momentanwerte` for instantaneous values
  `mean values` or `Mittelwerte` for mean values
  `amounts` or `Summen` for totals
  `minima` for minimum values
  `maxima` for maximum values

- XCLEAN
  remove the interval in time series data between "DATEFROM:DATETILL", date in format `yyyymmdd[hhmmss]`.

- EUNIT
  BelVis time series type:
  `mittel_lp`
  `mittel_imp`: Power data (default)
  `abrechenwerte`: Charging data

- CINSTANT
  Affiliation of instantaneous values to time series and instantaneous record for data collector can be used only with `CDASA`, `CCHANNEL` or their alternatives:
  "`yes`", "`true`" or "`1`": This is an instantaneous record for data collector, the data will be written to the instantaneous time series as well. This instantaneous time series has a particular specification.
  "`no`", "`false`" or "`0`": This value is a “normal” (non instantaneous) time series with the origin using data-collector (default).

- METERSITE
  BelVis only: type of meter used for charging data (see `EUNIT`)
  "`feeding`": Charging data for feeding point
  "`extraction`": Charging data for extraction point

- REMDST
  Treating of the comment column
  "`ts`": Time series comments (default)
  "`param`": Parameter comments
  "`station`": Station comments
  "`sdrem_id`": Time series standard remark, the comment string will be treated as a standard remark ident
  "`stdrem_code`": Time series standard remark, the comment string will be treated as a standard remark code

- EQFLAG
  defines the subset of external flags types to be used, assumes that all states in this block are external flags of this type; overrides `RSTATE` by setting it to `w6`.

- ZRXPMODE
- Specifies the ZRXP format derivate.
- `extended` mode means that this block was created either by ZExp tool or by another tool supporting extended column layouts (having columns not listed below), such as time series with good, estimated etc. percentage information or special time series
- `standard` mode means that the column layout will be used (default)
-

© 2015 KISTERS

Index