



Dream REPORT

CSV/Text Driver Definition Guide

1. General information about CSV/Text driver:

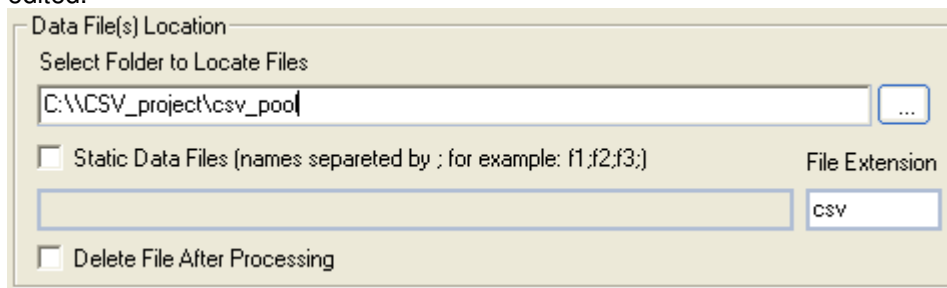
Introduction:

CSV/Text drivers is Dream Report communication online drivers that permit to transfer data and alarms from Data and Alarms CSV/ASCII files that were generated by industrial equipment one like PLCs, RTUs etc. into Dream Report database. CSV Driver provides automated browse of data items and automated periodical data extraction from any types of CSV/Text files. Driver periodically check for data updates in specified data file(s) and convert this data into a Dream Report database. Then these data is available for fast and efficient reports generation and creation. It can be accessed also as open database by any 3-d party applications.

User interface common definition:

User interface configuration dialog designed so it will require minimum user actions to be tuned up.

1. In Data File(s) Location part user has to provide full path to CSV/Text files location from where data will be converted into Dream Report Database: "Select folder to locate files" option is used to provide location of file from where data is going to be exported into Dream Report db, it is "dynamically" scanned folder. Data from all files located in it will be exported.
2. "Static data file" option has to be use in case and user has only specific files to be scanned for data export. In dialog user can specify only one file, however by editing xml configuration file it is possible to add several files.
3. User has to provide extension of files. By default it configured for CSV file types, but can be manually edited.



pic-01a

4. Processed CSV/Text file(s) can be removed by selecting "Delete File After Processing" option
5. Update checkup rate indicates how often Dream Report run time is checking for new updates in specified above directory or if static Data files are renewed.
6. Data delimiter provides indication of text to column separation.
7. Text qualifier



pic-01b

2. Description of Time Stamp Settings:

Preset Formats:

Dream Report CSV driver preset timestamp formats that user can specify in case and CSV files based on one of those formats:

1. 'Seconds since 1970' – This format corresponds to seconds since 01 January 1970.
2. 'Seconds and Milli' – This format corresponds to Seconds and milliseconds separated by delimiter. For example: "1196858560,968"
3. 'Milliseconds' – Similar format as above one without delimiter: "1196858560968"
4. 'mm/dd/YYYY'
5. 'mm/dd/YYYY H:M:S'
6. 'dd/mm/yyyy'
7. 'dd/mm/yyyy H:M:S'
8. 'yyyy-mm-dd H:M:S'

See screen shot below:

pic-02a

Custom Date and Time Format:

In case and timestamp format that used in CSV files is not exist in predefined list user can select "Custom" option and build his own format which will correspond to defined in CSV files. It even does not need to be in a human-recognizable format; e.g. a date passed as "02:1999:9" is acceptable, even though it is ambiguous without context. As long as the format string matches the input string the function will succeed. The user has to make sure, though, that the input can be parsed in an unambiguous way. The string "1999112" can be parsed using the format "%Y%m%d" as 1999-1-12, 1999-11-2, or even 19991-1-2. It is necessary to add appropriate separators to reliably get results.

The formats are:

- %a or %A** The weekday name in English, in abbreviated form or the full name.
- %b or %B or %h** The month name in English, in abbreviated form or the full name.
- %C** The century of the year. It makes sense to use this format only if the format string also contains the %y format.
- %d or %e** The day of the month as a decimal number (range 1 through 31). Leading zeroes are permitted but not required.
- %D** Equivalent to %m/%d/%y.
- %F** Equivalent to %Y-%m-%d, which is the ISO 8601 date format.



- %H or %k** the hour as a decimal number, using a 24-hour clock (00 through 23).
- %l** the hour as a decimal number, using a 12-hour clock (01 through 12).
- %j** The day of the year as a decimal number (range 1 through 366). Leading zeroes are permitted but not required.
- %m** The month as a decimal number (range 1 through 12). Leading zeroes are permitted but not required.
- %M** The minute as a decimal number (range 0 through 59). Leading zeroes are permitted but not required.
- %n or %t** Matches any white space.
- %p** The `AM` or `PM`. This format is not useful unless %l or %l is also used.
- %r** The complete time using the AM/PM format of the current locale.
The same as %l:%M:%S %p
- %R** The hour and minute in decimal numbers using the format %H:%M.
- %S** The seconds as a decimal number (range 0 through 60). Leading zeroes are permitted but not required.
- %T or %X** Equivalent to the use of %H:%M:%S in this place.
- %u** The day of the week as a decimal number (range 1 through 7). Monday being 1. Leading zeroes are permitted but not required.
- %U** The week number of the current year as a decimal number (0 through 53). Leading zeroes are permitted but not required.
- %V** The ISO 8601:1988 week number as a decimal number (1 through 53). Leading zeroes are permitted but not required.
- %w** The day of the week as a decimal number (0 - 6), Sunday being 0. Leading zeroes are permitted but not required.
- %W** The week number of the current year as a decimal number (0 - 53). Leading zeroes are permitted but not required.
- %x** The same as %Y:%m:%d.
- %y** The year without a century as a decimal number (range 0 - 99). Leading zeroes are permitted but not required. It is best to avoid %y completely and use %Y instead.
- %Y** The year as a decimal number, using the Gregorian calendar.
- %%** A literal `%` character.

All other characters in the format string must have a matching character in the input string. Exceptions are white spaces in the input string which can match zero or more whitespace characters in the format string.

Examples of Custom formats and its usage mask in CSV driver definition:

- b. “%d/%m/%Y %H:%M:%S” correspond to “12/09/2007 10:11:29”
- c. “%Y-%m-%d %H:%M:%S” correspond to 2007-09-13 23:12:30”
- d. “%d-%m-%y %H:%M:%S” correspond to “12-09-07 10:11:29”
- e. %Y-%m-%d %l:%M:%S %p correspond to “2007-09-13 11:59:01 PM.
- f. %H:%M:%S %d/%b/%Y where %b correspond to 3 first letters of the month – “11:59:01 11/SEP/2007”.

Dream Report CSV driver handle 4 possible options with milliseconds available in CSV file:

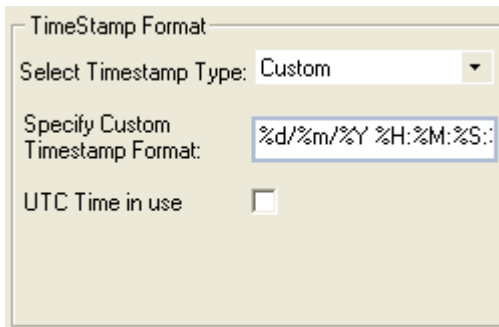
1. Milliseconds since 01 January 1970.
2. Seconds and milliseconds separated by delimiter: 1196858560,968
3. Standard Date & Time format with milliseconds: “12/09/2007 10:11:29.493”
4. Milliseconds in separate column.

For two last cases user have to select “Custom” Time format and adjust time format manually. See examples how to configure CSV configuration when milliseconds are exist in CSV files:

- %d/%m/%Y %H:%M:%S:%Z correspond to “12/09/2007 10:11:29:493”



- %d/%m/%Y %H:%M:%S.%Z correspond to “12/09/2007 10:11:29” and “493”, here user have to specify also the column name where milliseconds are located. See pic-03b below.



pic-02b

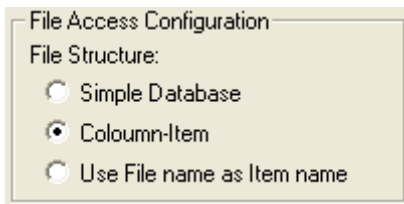
UTC time:

In case and timestamps in CSV files defined as UTC, user will have to select “UTC time in use” check box. See pic-02b.

3. Data Items CSV/Text columns mapping:

In “File Access Configuration” user has to specify file structure. Currently dream report supports 3 file structures:

- i. **“Column – Item”** If this option is selected user will have to specify column name correspond to Timestamp
- ii. **“Simple Database”** If this option is selected user will have to specify column correspond to Item Name, Item Value and Timestamp.
- iii. **“File Name is Item Name”** If this option is selected user will have to specify column correspond to Timestamp and to Item Value.



pic-03a

User have to press connect button in order to read structure and retrieve appropriate information from CSV/Text files, then to specify which field in CSV/Text driver “Data Access Configuration” corresponds to which column in CSV/Text files:



pic-03b

Note: Some CSV/Text files include 2 or 3 separate columns for Date, Time and Milliseconds. If mentioned columns are not used please keep those columns empty.

4. Alarms CSV/Text columns mapping:

Columns from CSV/Text files that include information about alarms have to be mapped according the Dream Report structure. User has to specify column correspond to start time of alarm, acknowledge time of alarm, end time of alarm, alarm description and priority. Please note that Start Time column and Description are mandatory to be selected, however rest of columns can be kept empty in case and it is not exist in CSV/Text files structure.

pic-04

Note: Some CSV/Text files include 2 separate columns for Date and Time. If it is not the case please keep Time column empty.

5. Transfer of CSV/Text based project to another computer.

Transfer of the Dream Report project which is based on CSV/Text converter has to be done in 3 simple steps:

1. Copy Dream Report project to destination computer
2. Copy from <Program Files>\ODS\Dream Report\System directory subfolder "CSVCFG". This directory includes configuration XML files that were defined in project.



3. Ensure that location of CSV/Text files is the same as it was defined on computer where project had been developed.

6. Restrictions and components that have to be included in alarms information CSV/Text files.

1. Header has to be included.
2. Column delimiter must be different than “:”, for example “;”, it is also recommended to avoid “,” delimiter due to the fact that in some locales it correspond to decimal point separator.
3. Strings that don't include Time Stamp aren't allowed.

For example:

Original files can't include the following lines:

“ Coolant Temp 20 - 40 Deg C: 0:00:38”.It has to be replaced by “00:00:58 1 Sep 2007; Coolant Temp 20 - 40 Deg C: 0:00:38”.

4. While defining instance of Dream Report CSV/Text driver, all CSV files correspond to this instance have to be located in same folder.