Periodic and Event File Reporting

Last updated: November 13, 2008

This built-in reporting package is accessed from any HMI screen that contains the report object. This object is an HMI resource object with the Type set to "Historical files".

To bring up the reporting package click the report button on an HMI screen. You may retrieve data from any of the four periodic or event files and display in tabular format on the screen, display as an HTML web page (which can be printed by your web browser) or saved to your disk in HTML or plain ASCII format (for importing into spread sheets). You may also graph data from the periodic or event files.

Basic Setup

1. Use the "File type" drop down list to select "Periodic" files or "Event" files. Periodic files save data on a fixed time base such as every hour. Values can include average, standard deviation, maximum and minimum for each recording interval. Event files save data whenever a particular "event" occurs. This might be a high temperature alarm or the result of a calibration.
2. Use the "File #" drop down list to select one of four files. There may be up to four periodic and four event files.
3. You may view the file status information which includes "Number of Records", "Current record" and start and end dates. For the periodic files, the recording interval is also displayed.
4. You may click the "Refresh" button to update the last record written information.
5. Now enter the desired bins or events. You may click the drop down list button to view your choices. If you click on a choice it will automatically be added to your list. The report will display in the bin order entered.
6. Select the "bin" numbers if displaying data from a periodic file. Each "bin" is a separate field in a record for displaying data. There can be up to 1024 different bins per periodic file. You may enter individual values separated by commas and you can include a range with -. For instance the entry "1-128" would select 128 bin fields. An entry of "1,4-6" would select bins 1, 4, 5 and 6 from the selected periodic file.
7. If your data contains status information, check the "Use selection set" box.
8. If you have selected an event file then you can specify which events you wish to view. Again there can be up to 1024 different event definitions per file. As before, an entry of "1,4-6" would select events 1, 4, 5 and 6 from the selected event file.
9. Enter a start and end time to choose the time range for the desired data.
10. Click the "Retrieve" button to transfer the data from the ICON to your computer. A display in the lower left of the screen will display the record numbers as data is retrieved.
11. Data is displayed in the right pane. Before you click the "Retrieve" button "No Data Available" will be displayed at the top indicating that you have not transferred data from the ICON yet.
12. If you wish to remove this data from your PC click the "Clear" button.

13. You may select the data range an alternate way by specifying a start and end record number.
14. Then click to check the "Select by record".
15. You may optionally click "Show record number" to also display the ICON's record numbers.
16. Click "Retrieve" to again get the selected data.
17. This alternate method of retrieving data is intended for troubleshooting problems should dates and times get messed up for some reason. This alternate retrieval method allows you to get data records without regard to the time stamps.

Once you have data displayed on your PC you can do three things:

1. Click the "Graph" button to graph your data.
2. Note that after the graph is displayed you may change Min and Max Y and change the time interval. Click the "Refresh graph" button to create a new display with your changed parameters.
3. Click the "Display as HTML" button to display your report in a web browser as an HTML page. You may use your web browser to print the report.
4. Click the "Save" button to save your data to a local PC file.
5. If you select a file extension of .html the report data will be saved as an HTML page.
6. Otherwise the report data will be saved in ASCII format. A spread sheet can import this ASCII format data file.

Periodic record dates

The dates and times indicate the end of the period for data in the periodic file. If data is recorded once per hour and the time on a record is 09:00:00 this indicates that the data was collected (for example averaged) between 08:00:00 and 09:00:00. A time of 24:00:00 indicates a midnight recording of data averaged from 11:00PM to 12:00PM. Note that the ICON only displays time in 24 hour format.

Spreadsheet Operation

The reporting functions of this HMI object are very rudimentary and are really only designed to give you a quick look at the data. It is expected that you use a spreadsheet to format your data for viewing, graphing and printing. Therefore, the primary function will be to transfer data from the ICON to a disk file for importing into your spreadsheet. To import into Excel or Open Office:

1. For usability name your file something like "Sitename_filedescription_date". For instance "home_houly_12_02_07" to indicate the data came from your "home" ICON that is recording hourly data and it was created on 12/02/2008.
2. From the Excel "File" menu select "Open...".
3. Locate your ASCII file and open it.
4. A text import wizard will appear informing you that it is a delimited text file. This is correct so just click the "Finish" button.
5. The ICON data has now been imported into your spreadsheet.
6. If importing into Open Office you should use a file extension of .csv when naming your file.
7. Then select your delimiters as a space and a tab when requested on the import screen

for Open Office.

It is beyond the scope of this help to instruct you on the use of your spreadsheet, but, if properly programmed, you may manipulate the data in a variety of ways, graph and print the results and save in Excel standard format. Of coarse other spreadsheets may be used instead of Excel.