Configuring Periodic Files

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Each ICON can have four separate periodic data files. Each periodic file can record from 1 to 1024 different items (bins or fields) per record on a periodic time base. Each file can have a different time base. The time base can range from once per second to once per day in one second steps.

The file is circular. You may specify the length of the periodic file in records. At the end of the first recording interval, data is written to record 0. At the end of the second recording interval, data is written to record 1. This continues until all periodic file records have been written to. Now at the end of the next recording interval, the data in record 0 is overwritten. Each record also contains the date and time the record was written. If the data is of long term importance, it must be transferred from the ICON's periodic file to another file located on your computer.

To configure periodic historical data files:

1. Select from the drop down list in the upper middle of the "Program View" screen titled "System Parameter Config".
2. Select Periodic file 1-4. The General Parameters configuration window for the periodic file entry is then displayed.
3. Select the "Table" button from the Periodic General Parameters window to access the table (bin) parameters.
4. For tables, you may click the "Resize" button to change the length of the table.
5. The length of the table can be set from 1 to 1024 and sets the number of data items (bins or fields) that can be recorded in each record.

Periodic Files 1-4

General Parameters

Parameter	Example	Description
Create file:	Create	After setting or changing any of following general or table parameters (or resizing the number of table parameter entries) you must recreate the file. 1. Set this parameter to "No operation" 2. Configure all general parameters and click the update button. 3. Select the table button. 4. Resize the table to the desired number of separate data bins. 5. Configure the table parameters. 6. Click the update button. 7. Click the refresh button to verify your entries. 8. When done configuring the table parameters click the OK button. 9. Select "Create" for this parameter and click the update

		button. Now a new file will be created with your new configuration. If you do not change the number of bins (length of table parameters) number of data records and the recording interval and offset, your previously recorded data will not be destroyed. Otherwise all data records will be initialized to the "no data" condition. You may delete all data records in a periodic file but retain all the general and table parameter configurations by setting the "Records" field to 0. Now make sure the "Create file" field is set to "No operation" and click the update button. Now set the "Create file" field to "Create" and click the update button again and all the data records will be deleted.
Record interval:	00:01:00:00	Set the time interval between recordings. This example records a new record of data every hour.
Record offset:	00:00:00:00	Set the time offset after midnight for the first recording. For example, an entry of 00:00:10:00 would record 10 minutes after the hour. Normally it is set to 0.
Records:	10000	Enter number of records in file.
Email 1:	3	Enter the index number for the first e-mail address.
Email 2:	5	Enter the index number for the last e-mail address.
Selection Set	Periodic status	Often times it is desired to map a set of text messages to integer values. Then, instead of displaying an integer value, the corresponding text message (with color) is found and displayed instead of the number. So the value recorded in the file becomes a sort of index to select a text message. See the “Configuring selection sets” document for a detailed description of creating these sets. For most recorded data you do want to display the value so “none” is selected here. But you may select a selection set to map the values to text if desired.

Note: Set both email address indexes to 0 to disable the email function. If valid indexes are set, every time the ICON writes a new record of data to the periodic data file, this data is also sent to the email addresses configured for the range of indexes between Email 1 and Email 2. For example, entering "3" in Email 1 and "5" in Email 2 will send the same Email of periodic data to email addresses referenced by indexes under 3, 4 and 5. The actual Email addresses are configured as the table parameters under the "Internet Connections" selection under “System Parameter Config”.

Table Parameters

Parameter	Example	Description
Bin name:	Greenhouse 1 temp	Enter a description for the data item (bin).
Decimal point:	1	Use the drop down list to select the number of decimal places to be used in data display 0-5 or select "Digital 1" or "Digital 2". If Digital 1 or 2 is selected then a a decimal position of 0 is assumed. For the Graph_bin object in the HMI, if Digital 1 or 2 is selected then a value of 0 will represent a logic 0 and a non zero value will represent a logic 1. For Digital 1 the first trace will toggle between 0 and 10% of full scale, the second between 20 and 30%, the third between 40 and 50%, the fourth between 60 and 70% and the fifth between 80 and 90%. Digital 2 works like digital 1 except that a logic 0 is at the bottom of the graph for all 5 traces. Digital 1 and Digital 2 allows easy creation of digital strip charts with up to five digital traces per graph.)
Status bin	2	This feature allows you to associate a second bin to display status for the bin you are configuring. Select a value of 0 to disable (no separate status bin), 1-1024 to point to the associated status bin or 255 to indicate that this bin is a status bin. This feature is used by the HMI reporting object to display a status string next to the data bin if a decoding selection set is specified.

Note: If you resize the table containing the bin definitions you must recreate the file as described above under "General parameters"

Tip: You can determine how much free disk space you have by going to the "File Transfer" tab and reading the "Server's Available Disk Space:" value. Press the "Refresh" button to ensure you have the latest value. You must not build a file bigger than this number, and if you are going to be creating up to four periodic and four event files you must allocate all files from this available disk space. A periodic file takes up a little more than ((number_of_bins+1) X 4) X number_of_records. It is a "little more" because of the file header which includes record pointers, description strings and decimal point positions.