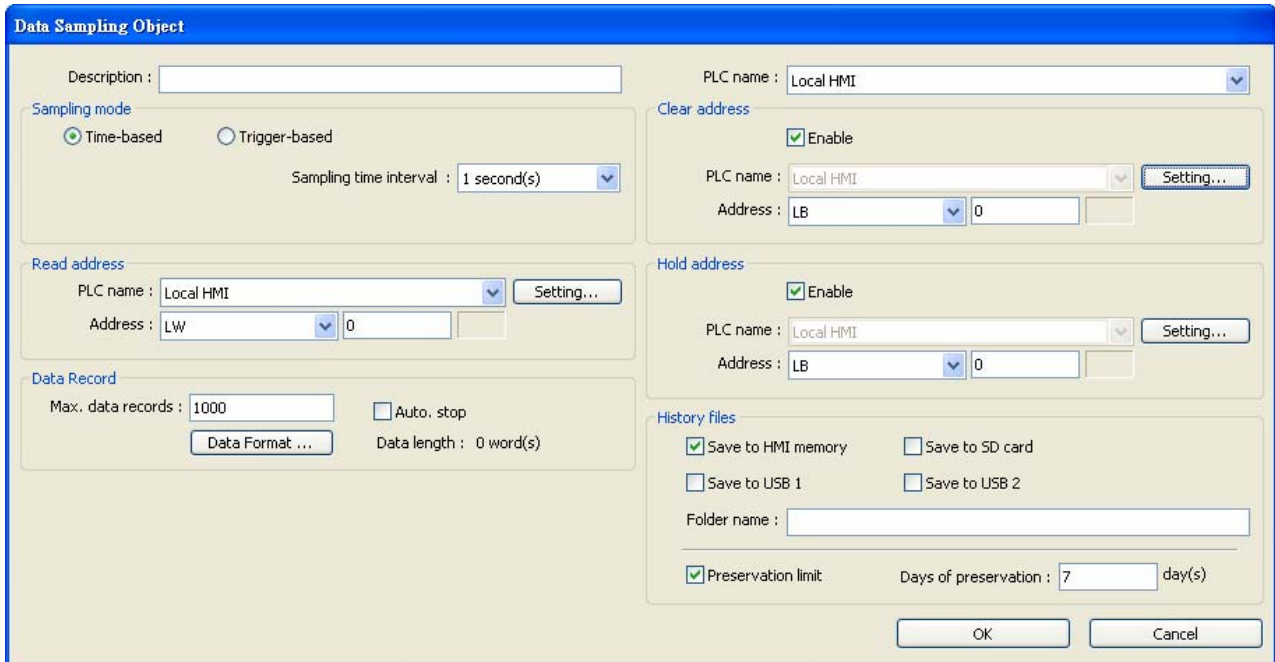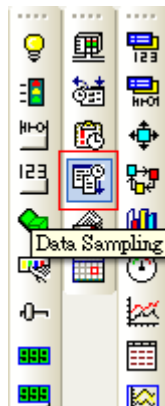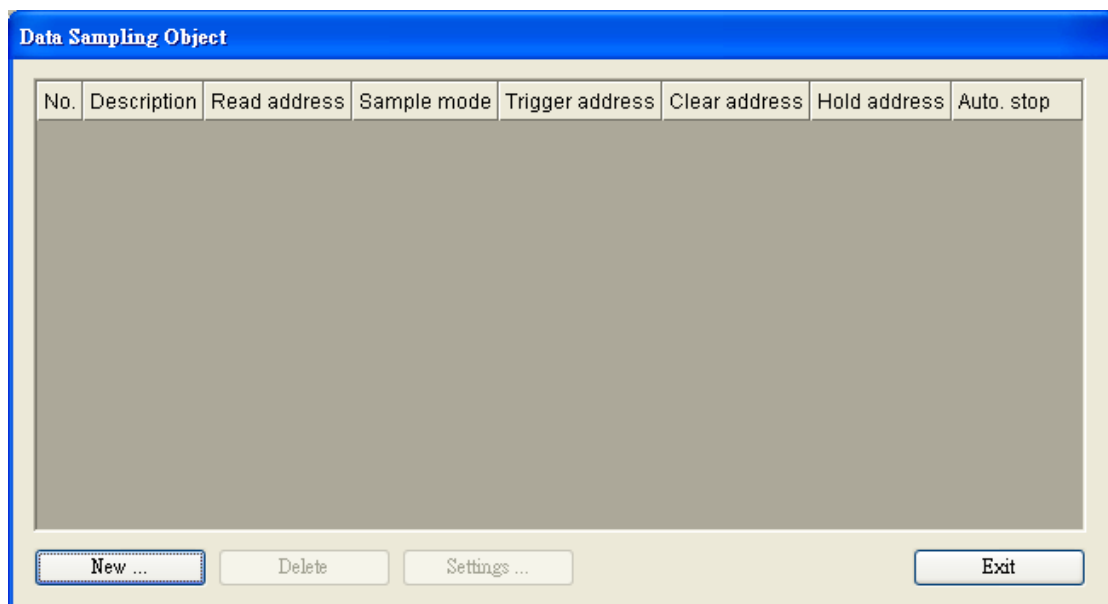# 8.1 Data Sampling Management

Before using [Trend display] or [History data display] objects to review the content of data sampling, the method of how the data is sampled has to be defined. Click **[Data Sampling]** on the toolbar and then **[Data Sampling Object]** dialog appears as below.

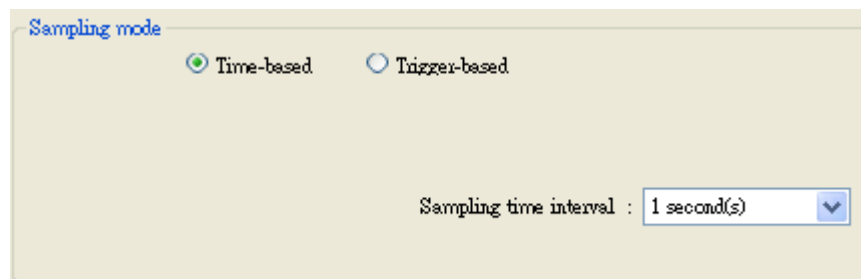| Setting	Description
New	Add a new "data sampling" definition.
Delete	Delete a specific "data sampling" definition.
Settings	Modify a "data sampling" definition.

8.2 Create a New Data Sampling

Click **[New…]** and the **[Data Sampling Object]** setting dialog appears as below:
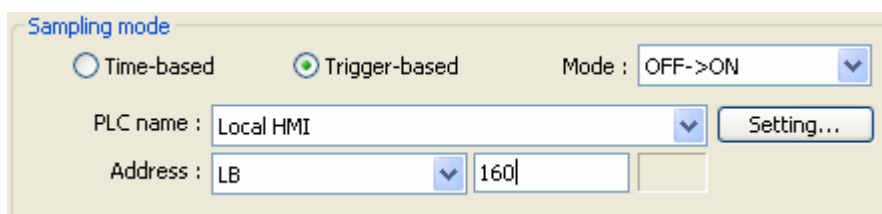

[Sampling mode]

EB8000 provides two methods of data sampling: **[Time-based]** and **[Trigger-based]**.

If **[Time-based]** mode is selected, EB8000 samples the data in a fixed frequency. Users have to set the **[sampling time interval]**.

If **[Trigger-based]** mode is selected, users can use the status of specific address to trigger the data sampling.

[Mode]

Conditions to trigger the data sampling:

[OFF → ON] This will trigger data sampling when the status of assigned address changes from OFF to ON.

[ON → OFF] This will trigger data sampling when the status of assigned address changes from ON to OFF.

[ON←→ OFF] Trigger data sampling when the status of assigned address is changed.

[Read address]

Select a device type to be the source of data sampling.

[Data Record]

[Max. data records]

Max. number of data records that can be saved by one data sampling definition in one day. If **[sampling time interval]** is set as 0.1 second then the max number of data records is 86400.

1. If the data source of **[trend display]** is in **[real-time]** mode, the earlier record will be deleted and new record will be added and displayed in the [trend display] object.
2. If the data source of **[trend display]** is in **[historical]** mode, the data will still be sampled.

[Auto stop]

When the number of data sampling equals to **[Max. data records]**, and the [Auto stop] option is selected, HMI will stop sampling data automatically.

Example:

Condition	Set **[Max. data records]** as 10 **without** checking **[auto. Stop]**	Set **[Max. data records]** as 10 and check **[auto. Stop]**
Trend display – real time	The data will keep the latest 10 records in the screen	Stop displaying after reaching 10 data records.
Data sampling	Keep recording and delete the earlier data	Stop recording after reaching 10 data records.

[Data Format]

The formats of different data in one data sampling: A data sampling may include more than one type of records. Data sampling in EB8000 is able to retrieve different types of

records at the same time. Users can click **[Data Format]** to open the dialog to define the content in one data sampling.

Take the following as an example, user defines three types of data: "Index" (16-bit Unsigned), "Pressure 1" (16-bit Signed) and "Temperature" (32-bit Float) respectively, which makes data length to be 4 words in total. In this way, EB8000 retrieves a 4-words-lengthed data each time from the assigned address to be the content in one data sampling.
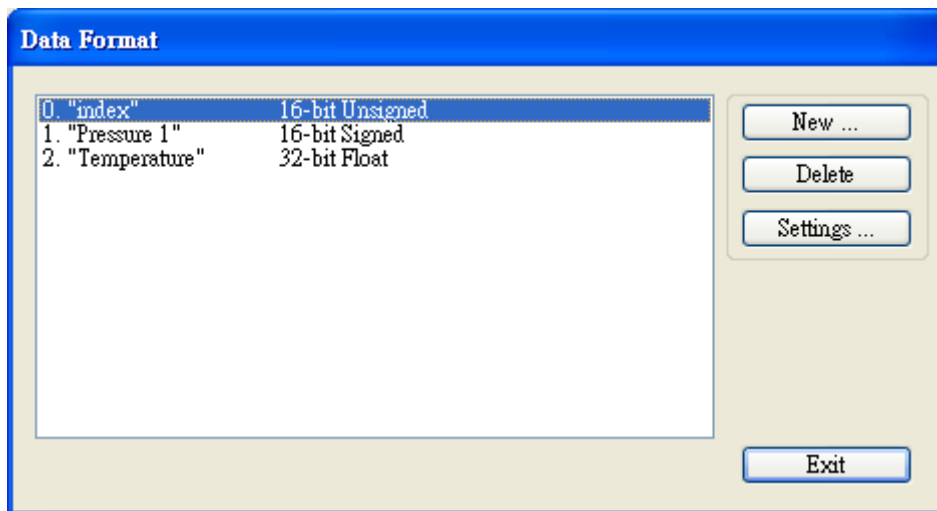
Caution:
After executing off-line simulation, if users need to change data format, please delete data log file in **C:\EB8000***\datalog** and then run off-line simulation again. The symbol "***" means the storage location of data files.

[Clear address]
If the status of the assigned address is set ON, the obtained data will be cleared and the number of data sampling will go back to zero. This won't affect sampled data that is already saved in file.
Caution: this function is used for **[trend display]** in **[real-time]** mode only.

[Hold address]
If the status of the assigned address is set ON, sampling will be paused until the status of assigned address returns to OFF.

[History files]
Assign the storage location for data sampling. However, when users execute simulation on PC, all data will be saved to the same subdirectory of datalog as EasyBuilder 8000.exe.

[Save to HMI memory]

Save the data sampling in MT8000 HMI.

Caution:

The data can only be saved when its size reaches 4kb; otherwise, users need to use [LB-9034] to force storing this data.

[Save to SD card]

Save the data sampling in SD card.

[Save to USB 1]

Save the data sampling in USB disk no.1. Numbering rule of USB disk is: the disk inserted to the USB interface in the first place is numbered 1, next is numbered 2 and the last is numbered 3. It is not related to the interface position.

[Save to USB 2]

Save the data sampling to USB disk no.2.

[Folder name]

Set the file name of the data sampling.

[Preservation limit]

This setting determines how many days the data to be preserved.

For example, the preservation time is set two days, which means USB 1 will keep the data of yesterday and the day before yesterday. Data that is not built in this period will be deleted automatically to prevent the storage space from running out.

If today were July 1st, the USB 1 will keep the data of June 30th and June 29th in the memory but the data of June 28th will be deleted.