

### ■ GENERAL

The NT302AJ trend package acquires values of held in control objects from a data server at a fixed interval and graphs changes in the values (trend graph) on the screen. With the package, it is possible to create 1) a real-time trend graph whose data is automatically updated, 2) a historical trend graph that represents data stored in a long-term archive file, and 3) a batch trend graph for which data acquisition is started or stopped according to external commands. The trend package consists of:

- historical data (\*1) acquisition function;
- trend graph display function;
- historical data access function; and
- ASTMAC Historical Data Converter.

\*1: A collection of property values acquired at a fixed interval from a control object.

### ■ OPERATING ENVIRONMENT

The system requirements follow those required for VDS specified in VDS Versatile Database Server Software, GS 34P02A02-01E, or for the ASTMAC base type specified in ASTMAC Overview, GS 34P02A03-01E.

\*1: ASTMAC is Japanese domestic market only (Not sales for overseas).

### ■ FUNCTION SPECIFICATIONS

#### ● Configuration of Trending Function

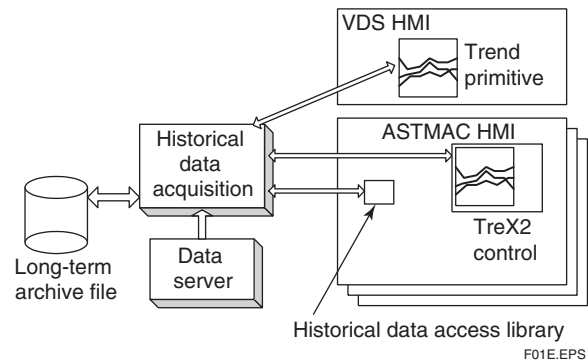


Figure Configuration of Trending Function

#### ● Historical Data Acquisition Function

The historical data acquisition function acquires the property values of control objects from a data server at a fixed interval, according to the definitions of acquisition format, sampling period, acquisition time and deadband limits shown in the following table.

- Data to be acquired: Property values (numerical) of control objects in data server
- Number of maximum history blocks: 32
- Number of groups within history block: 4
- Number of objects within history group: 8
- Maximum number of history objects per system:  
1024 tags (= 32 blocks X 4 groups X 8 tags)
- Sampling period (\*1): 1 to 86400 sec (where the period must be a divisor of 86400)
- Acquisition time: 60 to 86400 sec
- Long-term storage: Possible with long-term archive files
- Acquisition format: Continuous type/rotary, batch type/ auto-stop, batch type/rotary, and non-acquisition type.
- Type of acquired data: Double precision real number
- Deadband limits: The range for which changes in data are ignored can be set in units of 0.1%.
- Guaranteed data simultaneity: Ensured within a history block.
- Acquisition delay: Selectable between -1 period and +1 period (unit: ms).

\*1: The sampling period can be set to 10 sec or below for up to 16 history blocks only.

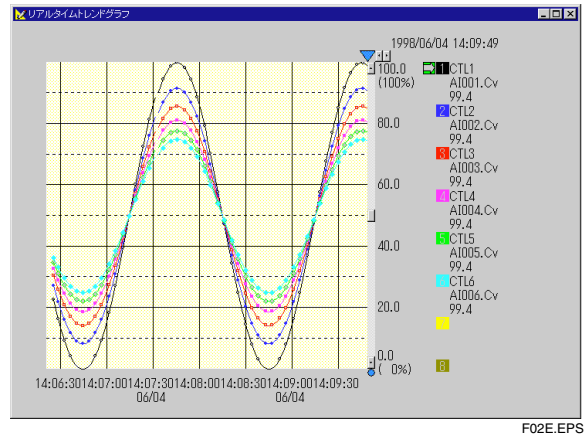
● **Trend Graph Display Function (ASTMAC)**

The trend graph display function shows acquired or stored historical data on an application form by means of trend graph ActiveX controls (TreX2 controls).

- Graph type (\*1): Real-time trend, historical trend
- View mode: Analog, contact
- Number of pens: 8/graph
- Number of graphs shown: Two or more graphs can be shown on each screen at the same time.
- Shown data items: Name of control object, property name, control object comment, and data value and engineering unit for any desired point on the time axis of a trend graph
- Scaling: The upper and lower limits of a control object are scaled as 100% and 0%, respectively, for each pen.
- Scrolling: Possible for both the time and data axes.
- Expanding/reducing:
  - Time axis: Any desired number of data items, from 2 to 10800, can be shown.
  - Data axis: Any desired magnitude of scale, from 300% to 10%, can be applied.
- Graph viewing function: Saves a graph and its on-screen state of view in a file, replays the saved file, and overlays a view of the saved file on an on-screen graph.

\*1: The data items to be configured differ depending on the type of graph.

● **Example of Real-time Trend Graph Screen (ASTMAC)**



● **Historical Data Access Function**

The historical data access function allows access to acquired or stored historical data from VBA on an application form or from a VB program by way of a historical data access library. This function is used when directly accessing data, which has been acquired using the historical data acquisition function, from VBA or the VB program, rather than graphing the data. With this function, it is also possible to export the historical data to a CSV-format text file.

■ **MODEL AND SUFFIX CODES**

Model	Suffix Code	Description
NT302AJ	-LW11A	Trend package for Full-time Version
NT302RJ	-LW11A	Trend package for Run-time Version

T01E.EPS

■ **ORDERING PROCEDURE**

Specify the model and suffix codes.

■ **RELATED DOCUMENTS**

- VDS, GS34P02A02-01E
- ASTMAC Overview, GS34P02A03-01E

■ **TRADEMARKS**

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