General Specifications

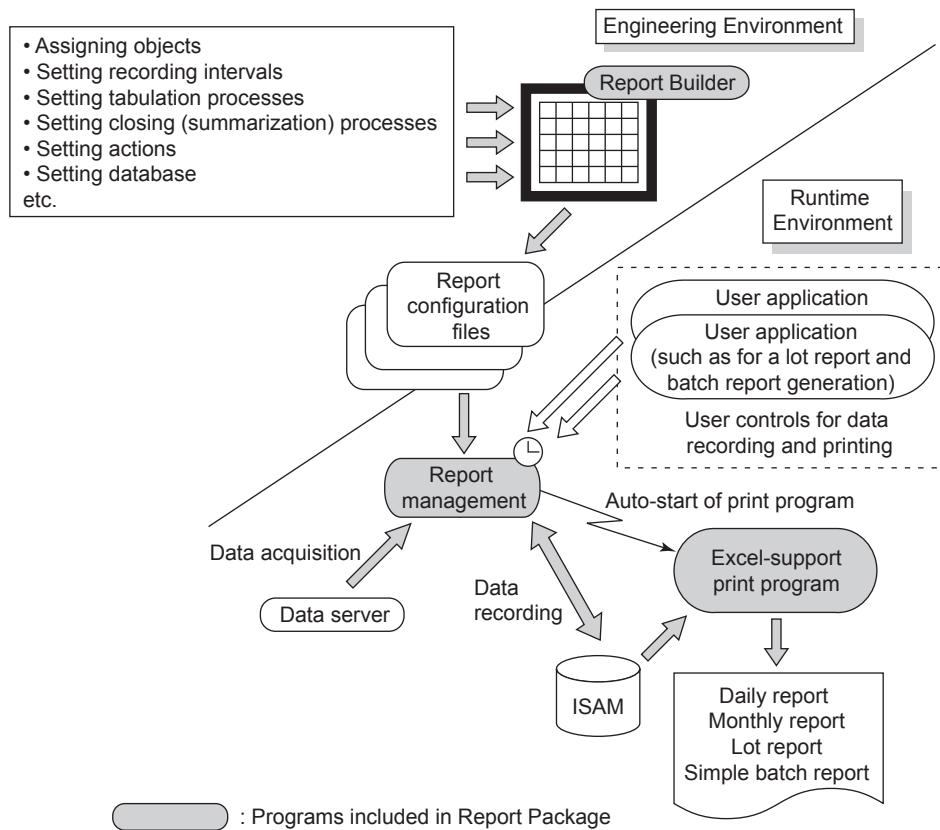## Model NT301AJ Report Package

STARDEM ™
VDS

GS 34P02H01-01E

■ GENERAL

The Report Package provides functions to periodically acquire values held in control objects that reside in a data server inside Versatile Data Server Software (VDS) system, store those values to an indexed sequential access method (ISAM) file, generate reports of an Excel sheet based on the acquired values, and print them.

The Report Package can tabulate and process the acquired data when storing it to a data file to allow efficient generation of daily, monthly, lot, and simple batch reports.

- Assigning objects
- Setting recording intervals
- Setting tabulation processes
- Setting closing (summarization) processes
- Setting actions
- Setting database
etc.

Engineering Environment

Report Builder

Runtime Environment

Report configuration files

User application

User application (such as for a lot report and batch report generation)

User controls for data recording and printing

Report management

Auto-start of print program

Data acquisition

Data server

Data recording

Excel-support print program

ISAM

Daily report
Monthly report
Lot report
Simple batch report

⬭ : Programs included in Report Package

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■ SYSTEM REQUIREMENTS

The system requirements follow those required for VDS specified in VDS Versatile Database Server Software, GS 34P02A02-01E.

As necessary, the following needs to be prepared.

- To create report formats, you need Microsoft Excel.
  Microsoft Excel 2019 32-bit versions (for Windows 10 (IoT) Enterprise 2019 LTSC or Windows 10 Pro)
  Microsoft Excel 2016 32-bit versions (for Windows 10 (IoT) Enterprise 2016 LTSB or Windows 10 Pro)
      Use the Excel included in "Office Standard for business", "Office Professional for business" or "Office Professional Plus 2016 for business".

YOKOGAWA ◆

■ GENERAL SPECIFICATIONS

Table Specifications (1/2)

Item		Specification
Data acquisition and recording	Report types	Daily report Monthly report Daily and monthly report Lot report Simple batch report
	Acquisition blocks	Up to 32 blocks of the report types above. (*1)
	Settings of data items to be acquired	Up to 32 data items per acquisition block
	Acquisition interval (*2)	Daily report and lot report: Selectable from 1, 2, 5, 10, 30, and 60 minutes. Monthly report: Selectable from 30, 60, and 120 minutes.
	Data simultaneity	Guaranteed within the same block
	Recording interval	Daily report and lot report: Selectable from 5, 10, 20, 30, 60 and 120 minutes. Monthly report: Fixed to 1 day.

	Tabulation at recording (*3)	Daily report, monthly report, and lot report:
		    Maximums, minimums, averages, totals, differential totals, tabulation status, snapshot values
		Batch report:
		    Instantaneous values at the batch end.
		    Differences of the respective values from the batch start to the end.

	Closing (summarization) time	Daily report and simple batch report:
		    00:00:00 by default; can be changed by 1-hour increments.
		Monthly report:
		    00:00:00 on the first day of every month by default; the day can be changed to a desired fixed day, and the time by 1-hour increments.

	Tabulation at closing (summarization)	Tabulation of recorded values:
		    Maximums, minimums, averages, totals, and differential totals
		Tabulation of measured values:
		    Maximum snapshot values, minimum snapshot values, average snapshot values, times of maximum snapshot values, times of minimum snapshot values, ratio of normal values acquired

	Data type of acquired data (*4)	Double (double-precision integer)
	Acquisition condition properties	The property Cv of a DI object can be specified.

	Recording start and end condition	Lot report:
		    Specify the property Cv of a DI object.
		    Specify the method.
		Simple batch report:
		    Specify the property Cv of a DI object.
		    Specify the method.
		    Specify the closing (summarization) time.

	Batch start and end condition	Specify the property Cv of a DI object. Specify the method.
	Answerback	Specify the property Cv of a DI object.

*1:   The total of lot reports and simple batch reports cannot exceed 4.
*2:   For a monthly report, data can be created based on the data recorded for daily reports.
*3:   If the acquisition interval is the same as the recording interval, snapshot values are recorded.
*4:   Each tabulation status is a single character, and the time of a maximum value is a character string (the same for the time of a minimum value).

Table Specifications (2/2)

Item			Specification
Data files	ISAM	Files and acquisition blocks	Correspond one-to-one to each other.

		Record storage periods (*5)	Daily report:
			  Stored until the daily closing (summarization) time on the next day after the same date in the next year.
			Monthly report:
			  Stored until the monthly closing (summarization) time in the next month after the same month in the next year.
			Lot report and simple batch report:
			  Stored until 00:00:00 on the next day after the same date in the next month.

		Indexes	Data records' (lines') properties, report names, and times (year/month/day/time) are indexed. The user can additionally index up to 5 data fields (rows).
Report printing (*6)	Print blocks and acquisition blocks		Correspond one-to-one to each other.
	Auto-printing		Specify the delay time in minutes (cannot be specified for a lot report or simple batch report).
	Formats		Specify for each report (for each acquisition block) using a template.
	Saving of report blocks		Possible
	Print block macros		Non-protected, disclosed
	Applicable data file types		ISAM

*5:   The oldest data is overwritten by the latest data.
*6:   Only 97-2003 file format can be used.

■ REPORT FORMAT EXAMPLES

● Daily Report

Data in specified intervals for a day is tabulated for a report.

Settings

Closing (summarization) time: 0:00; recording interval: 60 minutes
Tabulation at closing (summarization): Computing the maximum, minimum, and average for each data field

Recording start time:
Can be changed by modifying the closing (summarization) time.

Data items:
Up to 32

October 10, 2000

<Comments>					Written by	Checked by	Approved by

You can modify a template provided with the Report Package to specify the borders, data names, cell sizes, and font sizes as desired.

	Row Brackish Water Flow	Row Brackish Water Sp. Wgt	Row Material Tank Feed Flow	Heat Intake Temp.	Heat Exhaust Temp.	Topper Feed Flow	Steam Header Flow
	l/h	g/cm^3	l/h	°C	°C	l	l/h
1:00	123.4	567.8	123.4	98.7	98.7	258.1	123.4
2:00	123.4	568.2	123.4	98.7	98.7	258.1	123.4
3:00	124.7	567.8	124.7	98.7	98.7	260.5	123.4
4:00	123.4	567.8	123.4	98.7	98.7	258.1	123.4
5:00	123.4	567.8	123.4	98.7	98.7	258.1	123.5
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
22:00	123.4	566.9	123.4	98.7	98.7	258.1	123.3
23:00	122.1	567.8	123.4	98.7	98.7	258.1	123.4
0:00	123.4	567.8	123.4	98.7	98.7	255.6	123.4
Maximum	124.7	568.2	124.7	98.7	98.7	260.5	123.5
Minimum	122.1	566.9	123.4	98.7	98.7	255.6	123.3
Average	123.4	567.4	123.5	98.7	98.7	258.1	123.4

Recorded data:
Maximums, minimums, totals, and averages can be specified in addition to snapshot values.

Data computed by tabulation at closing (summarization):
Totals, the maximum snapshot values, and times of the maximum snapshot values can also be specified in addition to these.

Recording interval:
Selectable from 5, 10, 20, 30, 60, and 120 minutes.

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● Monthly Report

Daily data for a month is tabulated for a report.

Settings

Closing (summarization) day: End of every month; recording interval: Fixed to 1 day
Tabulation at closing (summarization): Computing the maximum, minimum, and average for each data field
Report name: Preceding day/month

Recording start day:
Can be changed by modifying the closing (summarization) day.

Data items:
Up to 32

October 2000

<Comments>

	Written by	Checked by	Approved by

You can modify a template provided with the Report Package to specify the borders, data names, cell sizes, and font sizes as desired.

	Row Brackish Water Flow	Row Brackish Water Sp. Wgt	Row Material Tank Feed Flow	Heat Intake Temp.	Heat Exhaust Temp.	Topper Feed Flow	Steam Header Flow
	l/h	g/cm^3	l/h	°C	°C	l	l/h
1	123.4	567.8	123.4	98.7	98.7	258.1	123.4
2	123.4	568.2	123.4	98.7	98.7	258.1	123.4
3	124.7	567.8	124.7	98.7	98.7	260.5	123.4
4	123.4	567.8	123.4	98.7	98.7	258.1	123.4
5	123.4	567.8	123.4	98.7	98.7	258.1	123.5
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
29	123.4	566.9	123.4	98.7	98.7	258.1	123.3
30	122.1	567.8	123.4	98.7	98.7	258.1	123.4
31	123.4	567.8	123.4	98.7	98.7	255.8	123.4
Maximum	124.7	568.2	124.7	98.7	98.7	260.5	123.5
Minimum	122.1	566.9	123.4	98.7	98.7	255.6	123.3
Average	123.4	567.4	123.5	98.7	98.7	258.1	123.4

Recorded data: Maximums, minimums, totals, and averages can be specified in addition to snapshot values.

Data computed by tabulation at closing (summarization): Totals, the maximum snapshot values, and times of the maximum snapshot values can also be specified in addition to these.

Recording interval: Fixed to 1 day.

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GS 34P02H01-01E Nov. 12, 2001-00

● Lot Report

Data in specified intervals over the period between the specified start and end times is tabulated for a report. (The data records, however, cannot exceed 512.)

Settings

Time when start conditions were met: 8:24

Time when end conditions were met: 10:47

Closing (summarization) method: Polling; recording interval: 30 minutes

Tabulation at closing (summarization): Computing the maximum, minimum, and average for each data field

Recording interval:
Selectable from 5, 10, 20, 30, 60, and 120 minutes.

Data items:
Up to 32

October 10, 2000; No. 2

You can modify a template provided with the Report Package to specify the borders, data names, cell sizes, and font sizes as desired.

Recorded data:
Maximums, minimums, totals, and averages can be specified in addition to snapshot values.

Data computed by tabulation at closing (summarization):
Totals, the maximum snapshot values, and times of the maximum snapshot values can also be specified in addition to these.

	Written by	Checked by	Approved by

	Row Brackish Water Flow	Row Brackish Water Sp. Wgt	Row Material Tank Feed Flow	Heat Intake Temp.	Heat Exhaust Temp.	Topper Feed Flow	Steam Header Flow
	l/h	g/cm^3	l/h	°C	°C	l	l/h
8:30	123.4	567.8	123.4	98.7	98.7	258.1	123.4
9:00	123.4	568.2	123.4	98.7	98.7	258.1	123.4
9:30	124.7	567.8	124.7	98.7	98.7	260.5	123.4
10:00	123.4	567.8	123.4	98.7	98.7	258.1	123.4
10:30	123.4	567.8	123.4	98.7	98.7	258.1	123.5
10:47	123.4	566.9	123.4	98.7	98.7	258.1	123.3
Maximum	124.7	568.2	124.7	98.7	98.7	260.5	123.5
Minimum	122.1	566.9	123.4	98.7	98.7	255.6	123.3
Average	123.4	567.4	123.5	98.7	98.7	258.1	123.4

Data as at the lot end is also recorded in addition to the periodic-interval data.

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A report of a special time interval, such as a shift report for every 8-hour shift, can be generated by using a lot report.

● **Simple Batch Report**

Data for batches occurring within the period between the specified start and end times is tabulated for a report. (The data records, however, cannot exceed 512.) Batch data to be recorded are the batch start and end times, snapshot values at each batch end or difference of each value from the batch start to the end.
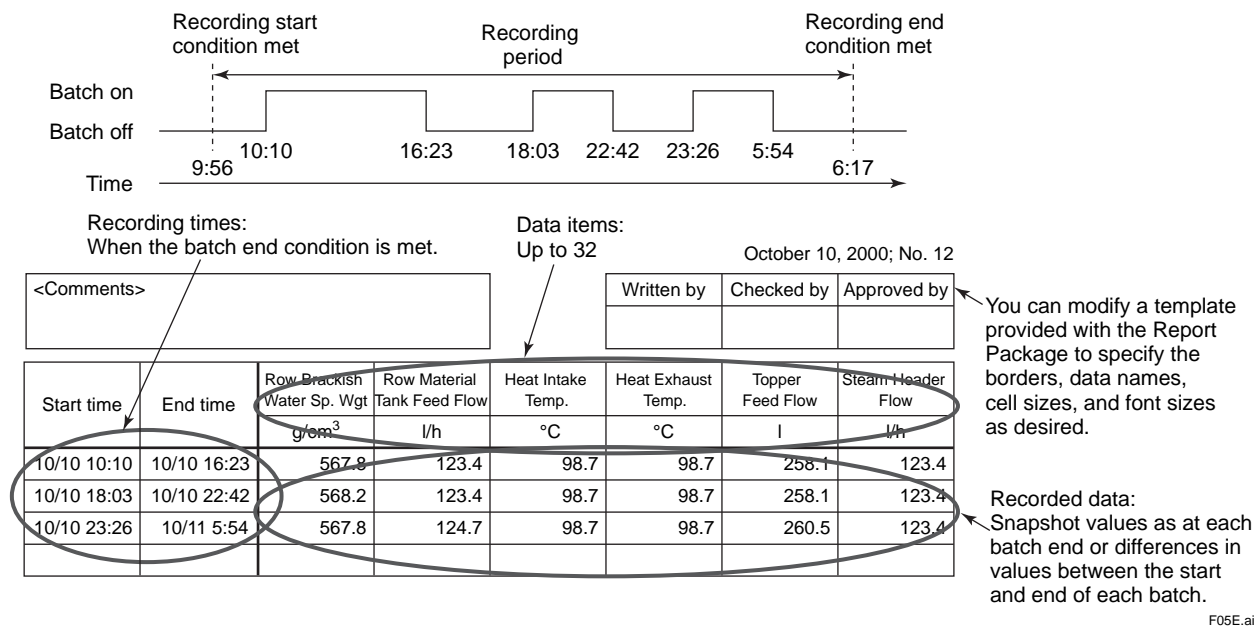
Settings
  Recording start and end conditions: Polling (on/off of a DI)
  Batch start and end conditions: Polling (on/off of a DI)
  Tabulation at closing (summarization): Recording the snapshot value for each data field
      (Shown at the bottom is a printout example provided that the recording start/end and batch start/end conditions were met as shown below.)

Start time	End time	Row Brackish Water Sp. Wgt g/cm³	Row Material Tank Feed Flow l/h	Heat Intake Temp. °C	Heat Exhaust Temp. °C	Topper Feed Flow l	Steam Header Flow l/h
10/10 10:10	10/10 16:23	567.8	123.4	98.7	98.7	258.1	123.4
10/10 18:03	10/10 22:42	568.2	123.4	98.7	98.7	258.1	123.4
10/10 23:26	10/11 5:54	567.8	124.7	98.7	98.7	260.5	123.4

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■ MODEL AND SUFFIX CODES

Model	Suffix Code	Description
NT301AJ	-LW11A	Fulltime Report Package
NT301RJ	-LW11A	Runtime Report Package

■ ORDERING INFORMATION

Specify the model and suffix codes.

■ RELATED DOCUMENT

• VDS, GS 34P02A02-01E

■ TRADEMARK ACKNOWLEDGMENTS

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