General Specifications

/M3: Report computation function For data aquisition unit DA100 and hybrid recorder DR series

DARWIN

GS 04M01B01-31E

Outline

This function assigns measurement and/or computation channels as report channels, and creates statistical information. The report computation can be selected from hourly report, daily report and monthly report. Chart printing takes place automatically whenever the report creation time (in the case of the DR recorder) is reached. The results of report computation can also be output by communication.

Applicable recorders

Hybrid recorders:
DR130, DR231, DR232, DR241 and DR242
Data acquisition unit:
DA100
The /M3 option is necessary for the above units.
Refer GS 4M1J1-31E for /M3 option of data collector DC100.

Report computation channels

DR130:R01 to R30
DR231, DR232, DR241, DR242: R01 to R60
DA100:R01 to R60

Kinds of report computations

Hourly report:
Statistical information for one hour (starting on the hour)
Daily report:
Statistical information for one day (starting from a reference time)
Monthly report:
Statistical information for one month (starting from a reference date and time)
Each of the hourly report, daily report and monthly report can be set to ON or OFF.

Report computation result output

Hybrid recorder:
Printed output to recording paper or communication output
Data acquisition unit:
Communication output

Report computation mode

Hourly report:
One kind
Daily report:
Basic mode or extension mode
Basic mode: Only daily report computation results are output
Extension mode: Daily report results + hourly report data
Monthly report:
Basic mode or extension mode
Basic mode: Only the results of monthly report computations are output
Extension mode: Monthly report results + daily report data
If the daily report and monthly report are both ON, it is possible to specify the extension mode for either report.

Kinds of report computations

AVE:
Average value and minimum and maximum values for each measurement interval
INST:
Instantaneous value at the report creation time
SUM:
Integrated value for each measurement interval, and total value (A total value cannot be obtained in the case of a monthly report.)
Hourly report:
Integrated value ... Integrated value for each hour
Total value ... Total value for 24 hours; Reset at the starting time each day.
Daily report:
Integrated value ... Integrated value for each day
Total value ... Total value for one month. Reset at the starting date and time for each month.
Monthly report:
Integrated value ... Integrated value for one month

Unit conversion (effective in the SUM mode)

The integrated value and total value are converted into values per unit time. These values can be set for each report channel.
INTVL:
Not converted (Σ (measurement result))
/sec:
Converted to second units (Σ (measurement value) $\times$ measurement interval)
/min:
Converted to minute units (Σ (measurement value) $\times$ measurement interval $\div$ 60)
/hour:
Converted to hour units (Σ (measurement value) $\times$ measurement interval $\div$ 3600)
/day:
Converted to day units (Σ (measurement value) $\times$ measurement interval $\div$ 86400)

Report computation reference date and time

Reference date:
1st to 28th day of the month (The 29th to 31st days of the month cannot be set.)
Reference time:
Time between 0 and 23 hours on the hour

Display format and range of report computation result output value

AVE:
-9999999 to 99999999 (The position of the decimal point depends upon the measurement/computation channels selected as the report channels.)
INST:
-9999999 to 99999999 (The position of the decimal point depends upon the measurement/computation channels selected as the report channels.)
SUM:
Mantissa 7 digits + index 2 digits

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Abnormal data processing

Out-of-range values, error values, and data generated during a power failure are treated as abnormal data and excluded from computations. The following marks are appended to the report computation results for a report channel in which abnormal data occurs.

If an error occurs: × is printed

If a power failure occurs: × is printed
(This mark is printed in the time part and also at the beginning of the data of all channels.)

If an out-of-range value occurs, "******" (with + or - sign) is printed when the following result computation results are printed: Minimum value (AVE), maximum value (AVE), instantaneous value (INST)

If the report computation result values cannot be finalized because of the occurrence of abnormal data, "xxxxxx" is printed.

Power failure processing

Power failure processing in the case of a DR recorder:

Report computation processing continues even after the power is restored.

Data generated during a power failure is excluded from report computation processing.

The × mark is appended to the time part when printing takes place immediately after power is restored.

During a power failure, the data that existed immediately before the power failure is maintained by means of a battery backup function.

If the report creation time is reached during a power failure, report printing starts as soon as the power is restored.

However, if the next report creation time arrives while printing is taking place, that report will not be printed (one printing operation will be skipped).You can recall printing of data that was not printed and also refer to it by communication.

Power failure processing in the case of the DA100:

After the power is restored, the internal clock of the DA100 starts. Consequently, as soon as the power is restored, a report is created, then the report operation ends.

Printing function (in the case of a DR recorder)

Printing at the reference time:

Printing can be turned ON or OFF.

Recall printing control (for a DR recorder):

If printing could not take place because the end of the chart was reached, for example, the report computation results can be re-printed.

Recall printing start: The computation results of a report created at the immediately preceding report creation time start to be printed.

Recall printing stop: The ongoing recall printing operation stops.

However, if the next report creation time arrives during recall printing, that report will not be printed (one printing operation will be skipped). You can recall printing of data that was not printed or refer to it by communication.

Printing speed:

Basic mode for hourly, daily and monthly reports : Approx. 4 minutes

Extension mode for daily reports : Approx. 22 minutes

Extension mode for monthly reports (31 days) : Approx. 27 minutes

Max printing time when the hourly, daily and monthly reports are issued simultaneously : Approx. 35 minutes

Report printing format:

Refer to the attached print image.

Printing format: Vertical printing

TAG/CH: Set in the setup mode.

MIN and TOTAL share the same field.

Number of digits printed, necessary record length, printing period

	Max number of digits printed	Necessary recording length (cm)	Printing period (approx.)
Hourly report	77	20	4 minutes
Daily report (basic mode)	77	20	4 minutes
Daily report (extension mode)	437	114	22 minutes
Monthly report (basic mode)	77	20	4 minutes
Monthly report (extension mode)	542	141	27 minutes

Event action function pertaining to report computation

Report start, report stop

Communication output format:

Binary format

■ Precautions for Using the Report Software (DP380-13)

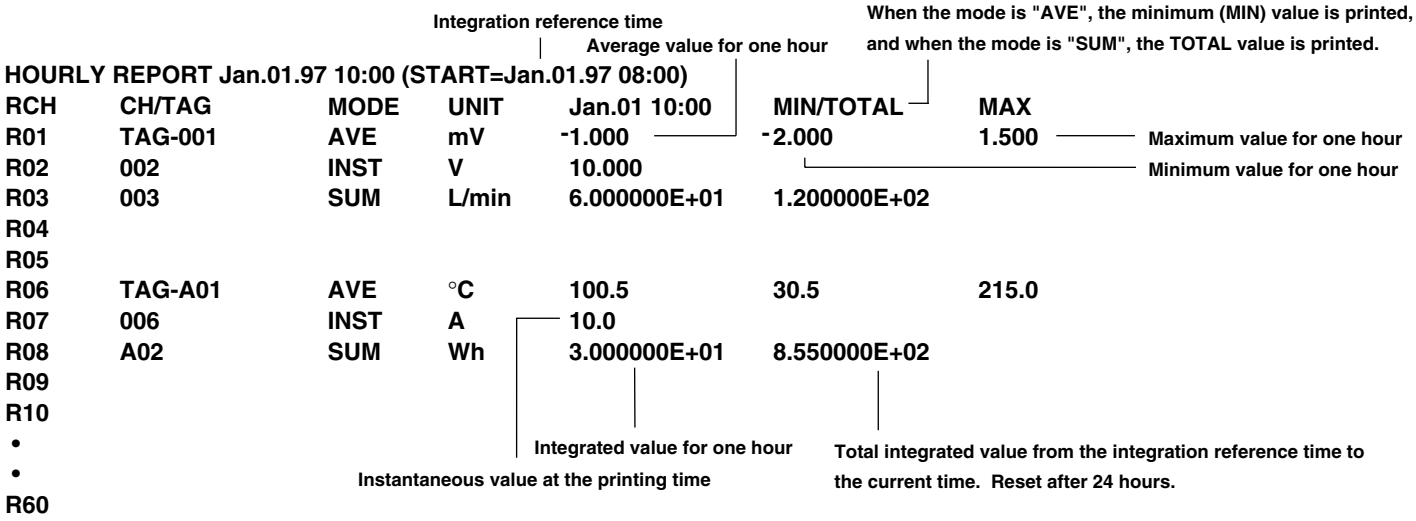
The Report Software (DP380-13) and the following software applications cannot be executed at the same time.

- DAQ 32
- DAQ 32 Plus

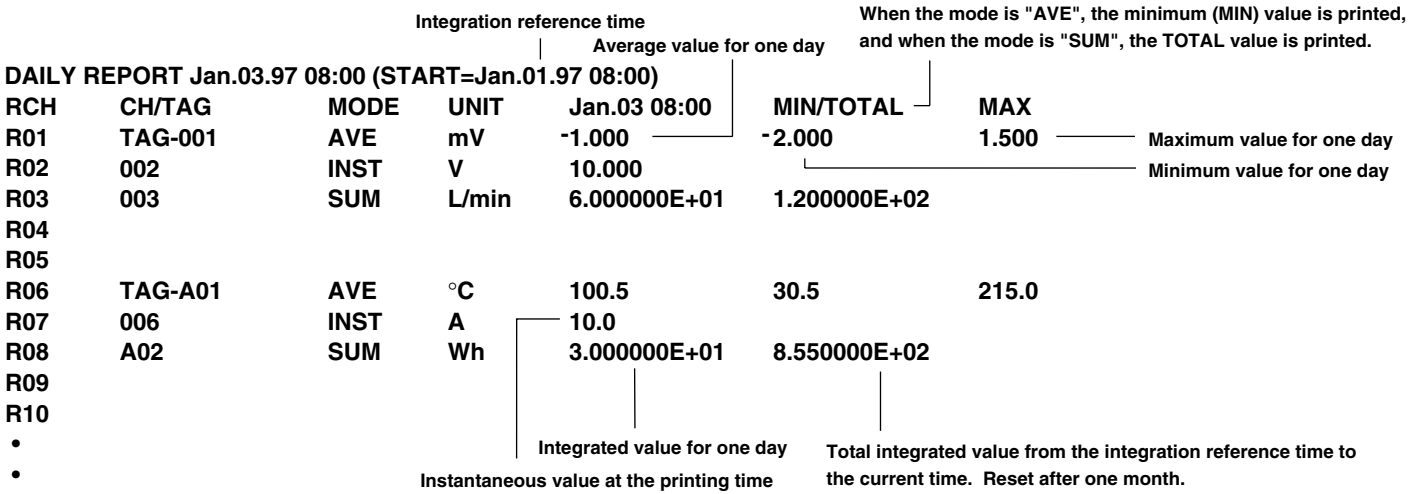
Note the following points when using the various software applications:

- Before starting the Report Software (DP380-13), exit the DAQ 32 (DP120-13) and the DAQ 32 Plus (DP320-13).
  This is due to the fact the DAQ 32 (DP120-13) and the DAQ 32 Plus (DP320-13) are applications that are designed to run on a 32-bit OS environment, while the Report Software (DP380-13) is designed to run on a 16-bit OS environment. And thus, the two applications cannot be executed together.
- If you need to start the Report Software (DP380-13) while collecting continuous data using the Data Logging Software, use the Enhanced Data Logging Software (DP300-13). The Enhanced Data Logging Software is designed to run on a 16-bit OS and is functionally different from the DAQ 32 (DP120-13) and the DAQ 32 Plus (DP320-13). For information about the functional limitations and hardware compatibility, please contact your nearest YOKOGAWA representative.
- The following software applications do not support the Ethernet Module (DT300-41) or a communication data rate of 38400 bps on the RS-232-C Module (DT300-21) and the RS-422-A/RS-485 (DT300-31).
  - DA100 Standard Software (DP100-13).
  - DR Basic Software (DP200-13).
  - Enhanced Data Logging Software (DP300-13).
  - Enhanced Multi Data Logging Software (DP350-13).
  - Report Software (DP380-13).
- The following software applications run on Windows3.1/95/98.
  - Enhanced Data Logging Software (DP300-13).
  - Enhanced Multi Data Logging Software (DP350-13).
  - Report Software (DP380-13).
- For details on the following software, please check the GS 04M01F01-11E.
  - DA100 Standard Software (DP100-13).
  - DR Basic Software (DP200-13).
  - Enhanced Data Logging Software (DP300-13).
  - Enhanced Multi Data Logging Software (DP350-13).
  - Report Software (DP380-13).
- For details on the following software, please check the GS 04M01F02-11E.
  - DAQ 32
  - DAQ 32 Plus

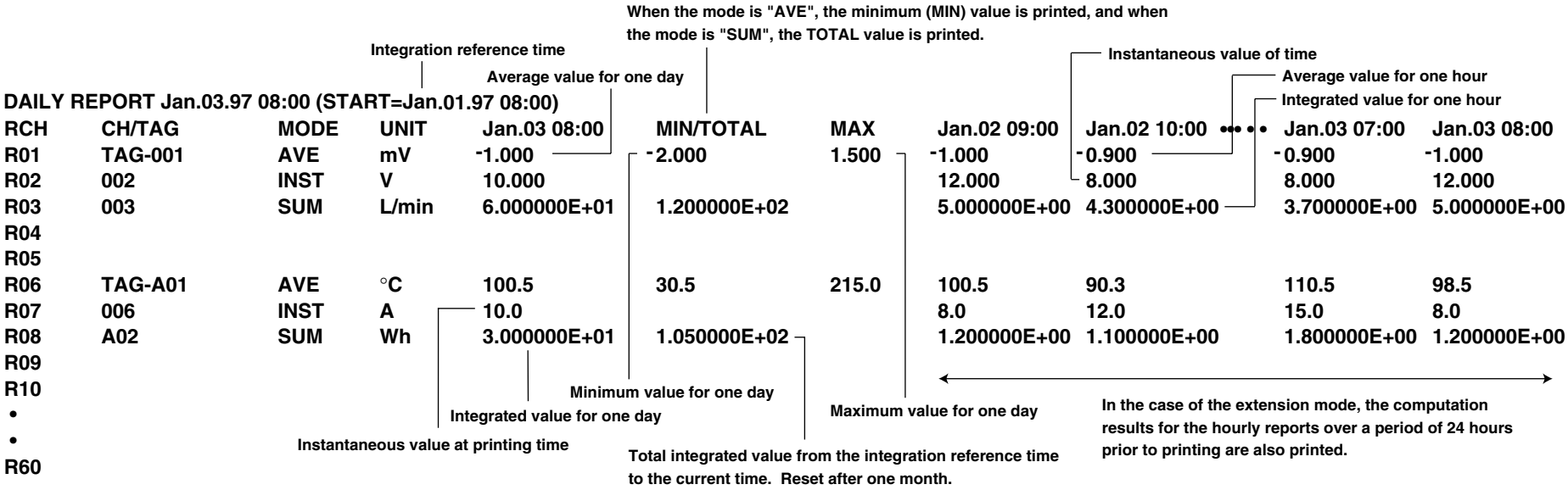
Hourly report



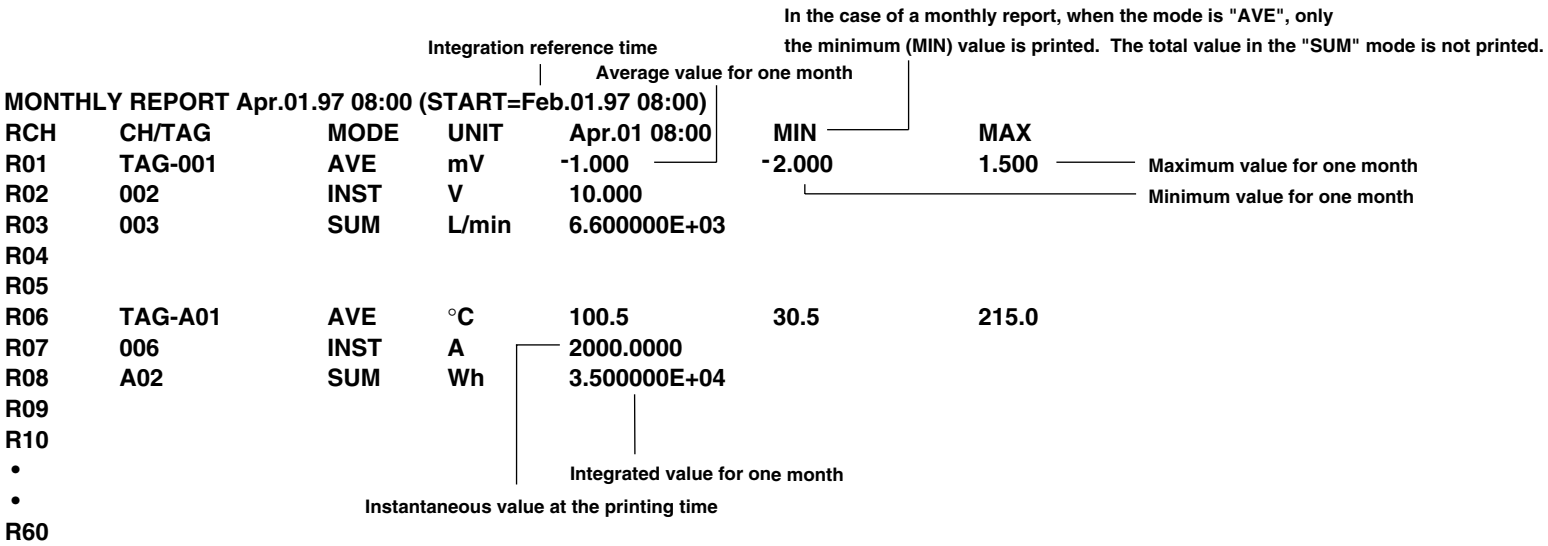
Daily report basic



Daily report extension



Monthly report basic



Monthly report extension