General Specifications

InfoEnergy Optional Software

GS 34P03A42-01E

■ GENERAL

This GS describes the following Optional Software of InfoEnergy:

- InfoEnergy Demand Monitoring Portfolio License
- InfoEnergy Time Scheduler Portfolio License

InfoEnergy is a system supporting processes of energy conservation activity, using STARDOM autonomous controller FCN (Field Control Node)/FCJ (Field Control Junction).

■ InfoEnergy DEMAND MONITORING PORTFOLIO

● Overview

InfoEnergy Demand Monitoring Portfolio is to predict the electric energy at the end of demand monitoring period and monitor alarms by monitoring electric energy within demand monitoring period.

The predicted demand and alarm status can be monitored on the Demand Monitoring Window.

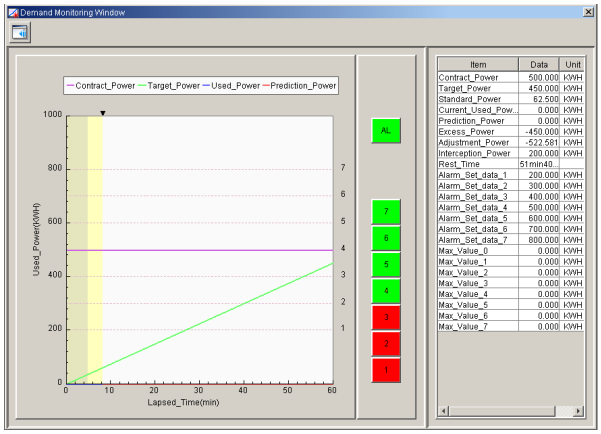

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Figure Demand Monitoring Window

● Feature

- Demand Monitoring Portfolio can be setup easily without programming
- Similar to the other InfoEnergy Monitoring Window, Demand Monitoring Window can be monitored on Web browser of any PC on network without requiring any exclusive software.

● Hardware requirement

FCN/FCJ
Follow InfoEnergy's hardware requirement

PC for Setting/Monitoring
Follow hardware requirement of InfoEnergy's PC for setting/monitoring

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GS 34P03A42-01E

1st Edition Mar.18,2005

● Functional specification

Demand monitoring

Electric energy at the end of demand monitoring period is predicted by monitoring the electric energy during demand monitoring period.

The electric energy at the end of demand monitoring period (predicted demand) is calculated from the current rate of electric energy rise (graph curve). If that predicted demand exceeds alarm set value, basic alarm will be notified.

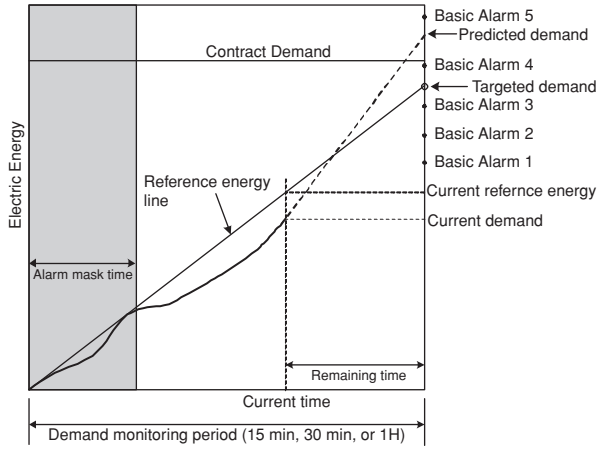

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Figure Demand monitoring calculation

If the predicted value exceeds the targeted demand, the following calculation is processed using the remaining time, when load shedding is required then shedding alarm is nortified.

- Shedding alarm occur status:
  Adjustable demand > Allowed demand
  AND
  Current demand > Current reference energy
- Shedding alarm recover status:
  Adjustable demand ≤ Allowed demand
  AND
  Current demand ≤ Current reference demand

Adjustable demand:

The amount of predicted demand exceeding the targeted demand per unit of time:

Adjustable demand =
(Predicted demand – Targeted demand)
* (Demand monitoring period / Remaining time)

Allowed demand:

Electric load that can be shed.

At the end of demand monitoring period, the actual demand value is saved.

Table Demand monitoring specification

Function	Specification
Monitoring data item number	1 (Specify power monitor active energy, integrated energy of pulse input, and addition value of both.)
Demand monitoring period	It synchronizes with logging interval of daily report data. (1 hour, 30 minutes, 15 minutes)
Demand starting time	It synchronizes with logging timing of daily report data. • 1H : Hourly 00 min. • 30 minute : Hourly 00, 30 min. • 15 minute : Hourly 00, 15, 30, 45 min.
Data sampling / calculation period	10 seconds (fixed)
Number of basic alarms	Up to 7 level (Alarm is notified according to each level)
Number of cutoff alarms	1
Data save	The actual demand value at the end of demand monitoring period is saved as report data.
Predicted demand calculation period (*1)	Specify 10 to 600 seconds with 10 seconds unit
Alarm mask time (*2)	Specify it with minute unit
Alarm notification destination	Alarm summary (Alarm can be sent via e-mail) (*3)

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*1 : When calculating the rate of electric energy rise (graph curve), predicted demand calculation period is used. Rate of electric energy rise is calculated by comparing the current demand with the electric energy before this time.

*2 : Alarm detection is ignored during alarm mask time just after the demand monitoring starts.

*3 : The control application outputs the contact output using Basic alarm, Shedding alarm. (Logic designer and I/O credits are required.)

Demand Monitoring Window
The predicted demand and alarm status etc. can be monitored on the Demand Monitoring Window.

Table Demand Monitoring Window specification

Function	Explanation
Number of window	1
Display data items	Graph display: Contract demand, Targeted demand, Used demand, Predicted demand Alarm display: Basic alarm (max 7 level), Shedding alarm Tabular display: Various demand set value, Various demand calculation value, Max actual demand value (today, and the previous 7days)
Data display update	Manual update (Auto-update is enabled. Update cycle is 10 seconds or longer)

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● Style of software supply

Software
Software of InfoEnergy Demand Monitoring Portfolio is supplied on “InfoEnergy software medium (Model : NT206AJ)”. Software is available by downloading to FCN/FCJ via PC.

Demand monitoring portfolio license
“InfoEnergy Demand Monitoring Portfolio License” comes with an Order ID sheet with the Order ID and password. Access the specified Web site of Yokogawa and enter the order ID number and password shown. Then, the License ID will be issued. By registering the supplied license ID to FCN/FCJ system card, demand monitoring function can be used.

■ InfoEnergy TIME SCHEDULER PORTFOLIO

● Overview

InfoEnergy Time Scheduler Portfolio is to enable automatic start/stop control in HVAC and shared lighting, etc. Start/Stop control is processed according to the schedule setup with a day of week, date and time etc. The operation mode can be changed to manual mode per equipment, which can be manually started and stopped.

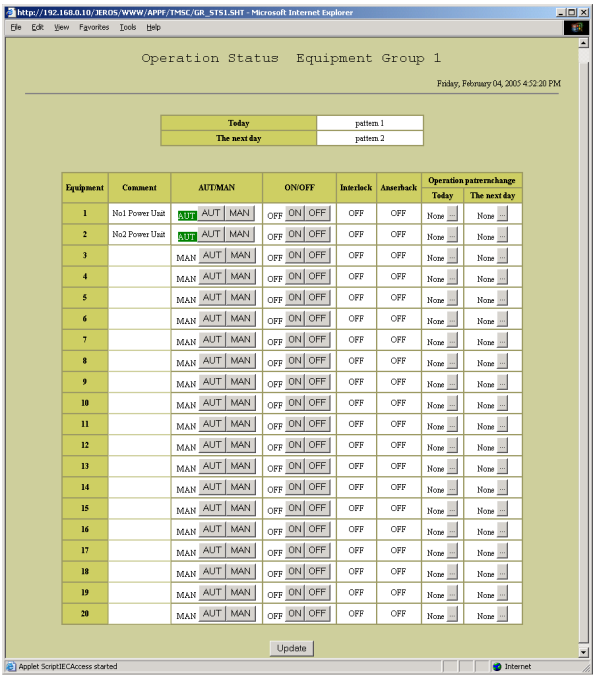

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Figure Time scheduler start/stop status monitoring window

● Feature

- Time scheduler can be easily set without any programming.
- ON/OFF schedule of equipment can be easily set with scheduling and operational pattern setting.

● Hardware requirement

FCN/FCJ
Follow InfoEnergy’s hardware requirements

PC for Setting/Monitoring
Follow hardware requirements of InfoEnergy’s PC for setting/monitoring

● Functional specification

Start/Stop control of equipment is managed with scheduling function, operational pattern setting function and equipment control function.

Scheduling function

The operation day, holiday in the building/ factory, where equipments are being controlled, is set in scheduling function.

Table Scheduling function specification

Function	Explanation
Setting date	Workday, Holiday, Specific day 1 to 4
Setting period	Day of week, Date (*1)

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*1: Setting date can be set by a day of week, month and date or term.

Operational pattern setting function

Start/Stop time of equipment for a day is set in operational pattern setting function.

Table Operational pattern setting function specification

Function	Explanation
Operational pattern	Max 8 operational patterns
Start/Stop time	Max 8 times per Operational pattern
Setting method	Specify ON/OFF status with time (*1)

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*1: Specify time by 5 minutes unit

Equipment control function

ON/OFF command is sent to the equipment in equipment control function.

Start/Stop control is processed by equipment group containing multi-equipments. (ON/OFF command is sent to all the equipments in an equipment group in AUT (automatic start/stop) mode. In MAN (manual operation) mode, it is possible to start and stop manually each of equipments.)

By specifying operational pattern of workday, holiday, specific day 1-4 to each equipment group, ON/OFF command time is set.

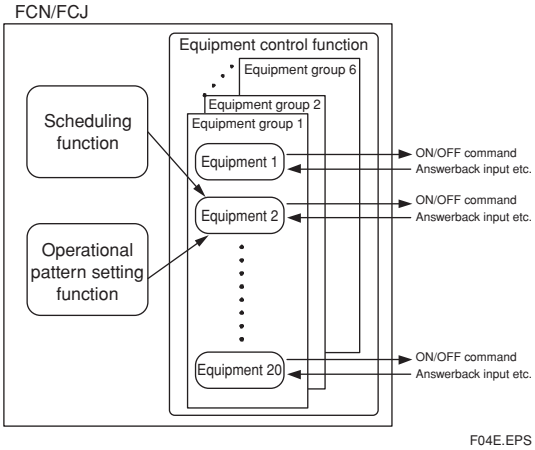

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Figure Equipment control function overview

Table Equipment control function specification

Function	Explanation
Number of equipment groups	6
Number of equipments	20 equipments per equipment group
Delay processing (*1)	It can be specified to each group (0 to 60 seconds)
Operation mode	AUT (automatic start/stop) / MAN (manual operation) can be specified to each of equipment.
Manual scheduling	Operational pattern on “today” or “next day” can be specified to each of equipment.
Answerback check (*2)	It can be specified to each of equipment. Mask time is definable (0 to 60 seconds)
Interlock (*3)	It can be specified to each of equipment. • Detection condition: “Always” or “only AUT” • Mode specification : Forced OFF output, Forced MAN in operation mode can be specified.
Output velocity message notification (*4)	It can be specified to each of equipment.

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*1: It is a function to turn the equipment ON or OFF in the constant interval to prevent the over current.
*2: It checks whether ON/OFF command is executed normally. Alarm is generated if there is difference between the status of answerback signal and ON/OFF command.
*3: It carries out Interlock processing when Interlock signal is ON.
*4: It outputs the message when equipment ON/OFF status changes.

Table Equipment I/O specification

Function	Explanation
ON/OFF command output	1 output (status output) or 2 output (pulse output)
Answerback signal	1 input
Interlock signal	1 input

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● Style of software supply

Software
Software of InfoEnergy Time Scheduler Portfolio is supplied on “InfoEnergy software medium (Model : NT206AJ)”. Software is available by downloading to FCN/FCJ via PC.

Time Scheduler Portfolio License
“InfoEnergy Time Scheduler Portfolio License” comes with an Order ID sheet with the Order ID and password. Access the specified Web site of Yokogawa and enter the order ID number and password shown. Then, the License ID will be issued. By registering the supplied license ID to FCN/FCJ system card, time scheduler function can be used.

■ MODEL AND SUFFIX CODES

● InfoEnergy Demand Monitoring Portfolio License

		Description
Model	NT8600J	InfoEnergy Demand Monitoring Portfolio License
Suffix Codes	-L	License
	W	Issued at Web
	1	Always 1
	1	Always 1
	A	Standard

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Note: This license can be applied to NT8880J.
Note: This license is required for each controller.

● InfoEnergy Time Scheduler Portfolio License

		Description
Model	NT8103J	InfoEnergy Time Scheduler Portfolio License
Suffix Codes	-L	License
	W	Issued at Web
	1	Always 1
	1	Always 1
	A	Standard

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Note: This license can be applied to NT8880J.
Note: This license is required for each controller.

■ ORDERING INSTRUCTIONS

Please specify models and suffix codes.

■ RELATED DOCUMENTS

InfoEnergy Overview GS 34P03A41-01E

■ TRADEMARKS

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- Microsoft, Windows, Internet Explorer, Excel
- Ethernet
- MELSEC, SYSMAC

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