

# savic-net™ FX Light

## MISL (Management Integration Server Light)

### Model BCY45102X

#### General

MISL (Management Integration Server Light) is a Web-based data server for *savic-net™ FX Light* BMS (building management system).

MISL provides all the management information (object, program, etc.) of BMS. Management information can be displayed, set (modified), and operated with a client PC via Web browser.

MISL also keeps track of alarm reported, operating/setting information, and operating status change. MISL, in other words, saves the historical data into its hard disk.

In addition, MISL manages the screens to show in the client PC display. Monitoring screens, operating screens, and other Graphic Displays are managed by MISL.

Data collected by SCS (System Core Server) or SCSL (System Core Server Light) is transmitted to MISL. MISL manages the data transmitted from SCSL as BMS databases and provides the data to display/print historical trend graphs as well as daily, monthly and yearly reports. MISL also processes the data for 'user data processing' function.

4,000,000 data items (= data points to collect × collecting cycle × collecting period) of trend graph data, and besides, daily report (for 40 days), monthly report (for 13 months), and yearly report (for 10 years) data can be saved in the hard disk.

MISL Model BCY45102L conforms to all the applicable standards of CE Marking (Class A).



#### Specifications

Item	Specification
CPU	32-bit CPU
Main storage capacity	256 MB SDRAM
Auxiliary memory unit hard disk (HDD)	2.5 inch, 40 GB
OS	Linux
Max. BACnet objects	1,200 objects
Communication	BACnet® IP (Ethernet: 10BASE-T/100BASE-TX), 1 channel
Time backup	72 hours
Rated input voltage	Model BCY45102K: 100 V AC Model BCY45102L: 200 V AC to 240 V AC
Allowable voltage range	Model BCY45102K: 90 V AC to 110 V AC Model BCY45102L: 180 V AC to 264 V AC
Allowable ambient condition	5 °C to 40 °C (in operation) / 10 %RH to 85 %RH (non-condensing)
Dimensions (mm)	150 (W) × 122 (D) × 140 (H)
Weight	1.4 kg
Grounding condition	100 Ω or lower ground resistance



**Model Numbers**

Model number				Description
BCY45102				MISL base model number
	K			100 V AC power
	L			200 V AC to 240 V AC power (CE Marking (Class A) certified)
		1		English version
		2		Chinese simplified version
		3		Chinese traditional version
		4		Korean version
			0 0	Fixed
				0 DIN rail mount type

Note:  
 MISL is always bundled with SCSL/SCS (*savic-net FX Light System Server package*). When ordering *savic-net FX Light System Server package* (MISL and SCSL/SCS), order number is required.

**Order Numbers of MISL and SCS/SCSL**


Order number				Description
83167449				<i>savic-net FX Light System Server package</i> (MISL and SCSL/SCS)
	-			—
		0		MISL with SCSL for NC-bus: 4 NC-bus lines
		1		MISL with SCSL for redundant NC-bus: 4 NC-bus lines
		2		MISL with SCSL for NC-bus/Modbus/CPL: 4 lines
		5		MISL with SCS for NC-bus: 4 NC-bus lines
		6		MISL with SCS for redundant NC-bus: 4 NC-bus lines
		7		MISL with SCS for NC-bus/Modbus/CPL: 4 lines
			0	English version
			1	Chinese simplified version
			2	Chinese traditional version
			3	Korean version
			1	100 V AC power, DIN rail mount type
			3	200 V AC to 240 V AC power, DIN rail mount type




**Safety Instructions**

Please read instructions carefully and use the product as specified in this manual. Be sure to keep this manual near by for ready reference.

**Usage Restrictions**

This product is targeted for general air conditioning. Do not use this product in a situation where human life may be affected. If this product is used in a clean room or a place where reliability or control accuracy is particularly required, please contact Yamatake's sales representative. Yamatake Corporation will not bear any responsibility for the results produced by the operators.

 CAUTION

-  • Installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards.
-  • This product must be installed under the operating conditions (power, temperature, humidity, vibration, shock, installation position, atmospheric condition, etc) specified in this manual to prevent product damages.
-  • This product must be operated within its rated operating ranges specified in this manual. Failure to comply will cause product damages.

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 BACnet is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).  
 Ethernet is a U.S. registered trademark of Xerox Corporation.  
 Linux is a trademark of Linus Torvalds.

### System Configurations

#### savic-net FX Light BMS configuration

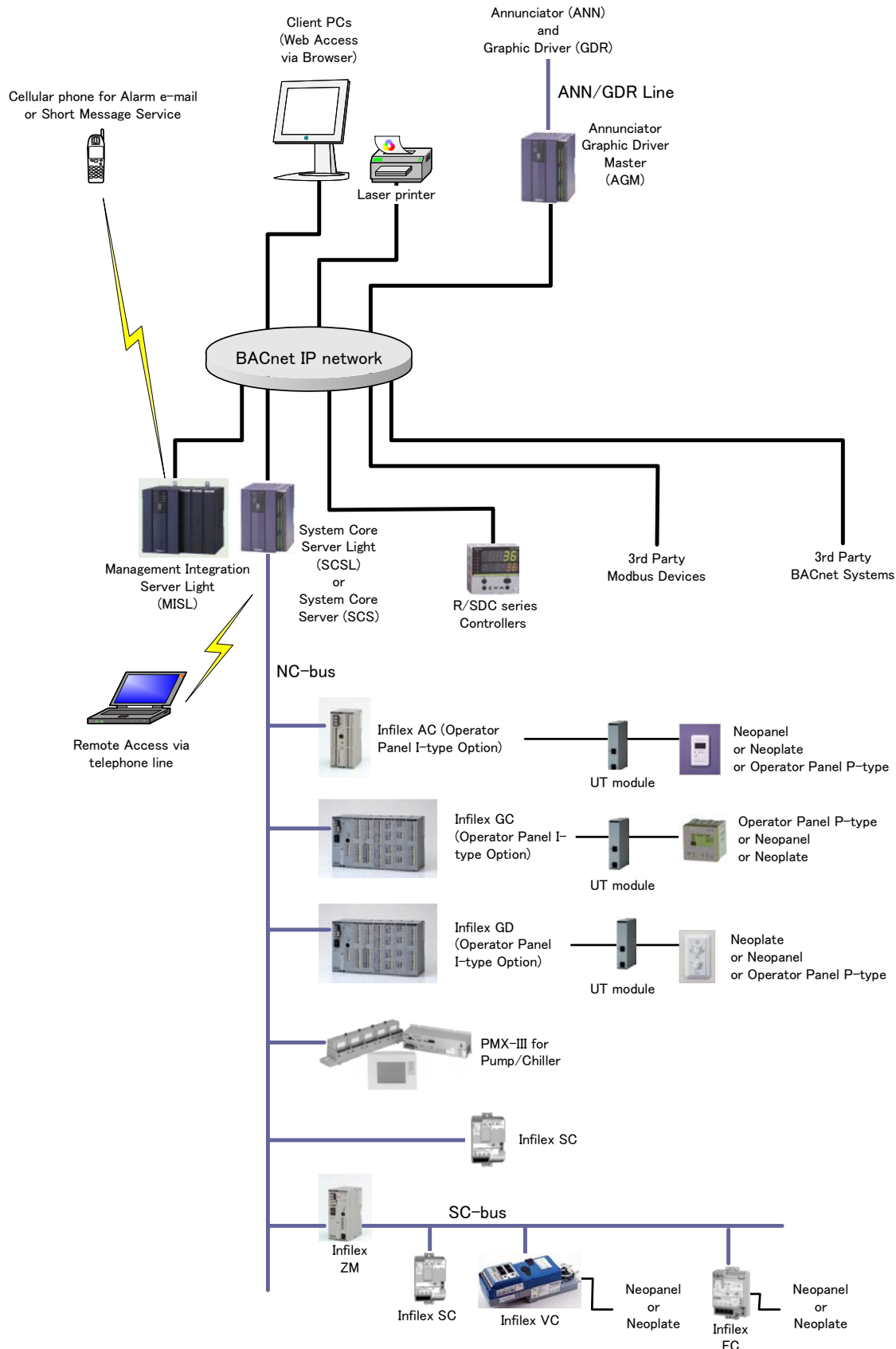


Figure 1. System configuration example

Notes:

- \* Yamatake's Model R/SDC series controllers communicate with CPL (Controller Peripheral Link, developed by Yamatake) over RS-485. Media converter therefore is required to connect to SCSL/SCS (BACnet IP over Ethernet).
- \* Though SCSL/SCS directly communicates with Modbus TCP over Ethernet, SCSL/SCS cannot directly communicate with Modbus RTU over RS-485. Media converter therefore is required to connect to Modbus RTU devices.

Items shown in Fig. 1 indicate the devices and protocols configuring the system. See Table 1 for the descriptions.

Table 1. Devices and protocols configuring *savic-net FX Light* system

Item	Description
AGM	Yamatake's Annunciator/Graphic Driver Master
ANN	Annunciator
BACnet®	Data communication protocol for Building Automation and Control Networks (developed by ASHRAE)
GDR	Graphic Driver
Infilex™ AC	Yamatake's AHU (air handling unit) controller
Infilex™ FC	Yamatake's FCU (fan coil unit) controller
Infilex™ GC	Yamatake's Multipurpose controller
Infilex™ GD	Yamatake's Multipurpose data gathering panel
Infilex™ SC	Yamatake's AHU (air handling unit) controller
Infilex™ VC	Yamatake's VAV (variable air volume) controller with damper actuator
Infilex™ ZM	Yamatake's Zone Manager
IP	Internet Protocol
MISL	Yamatake's Management Integration Server Light
Modbus	Serial communication protocol for PLC (developed by Modicon)
Modbus RTU	Modbus protocol over RS-485 (RTU: Remote Terminal Unit)
Modbus TCP	Modbus protocol over Ethernet (TCP: Transmission Control Protocol)
NC-bus	Yamatake's New Controller Bus protocol
Neopanel™	Yamatake's digital user terminal
Neoplate™	Yamatake's analog user terminal
Operator Panel (I-type)	Yamatake's Integral type Operator Panel
Operator Panel (P-type)	Yamatake's Panel-mount type Operator Panel
PMX-III	Yamatake's PARAMATRIX™-III DDC controller
R series controllers	Yamatake's single loop controllers
SDC series controllers	Yamatake's single loop controllers
SC-bus	Yamatake's Sub Controller Bus protocol
SCS	Yamatake's System Core Server
SCSL	Yamatake's System Core Server Light
UT module	Yamatake's user terminal interface

Dimensions

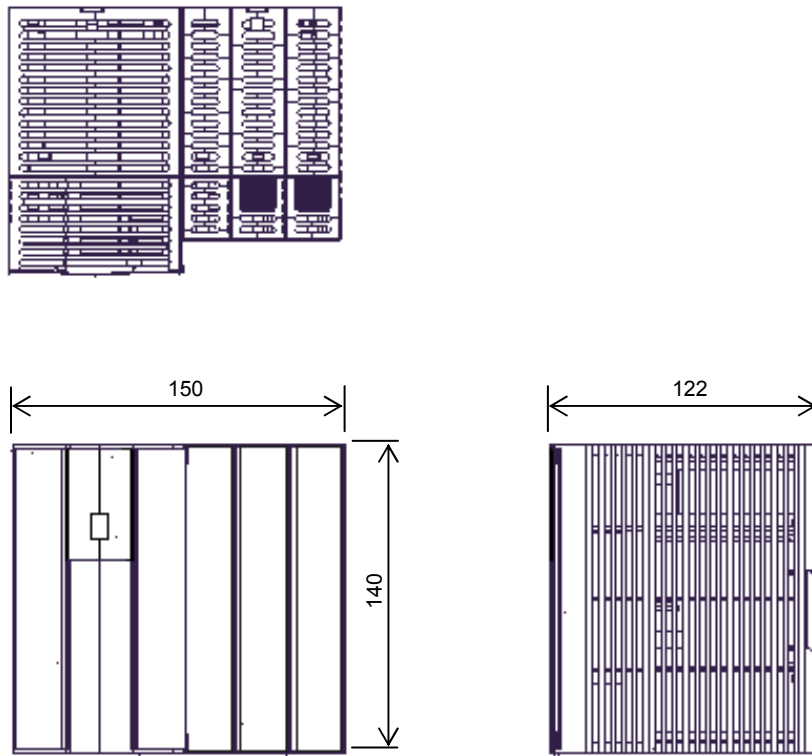


Figure 2. Dimensions of MISL (mm)





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*Specifications are subject to change without notice.*

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