



# **DSS (Data Storage Server)**

## Model BCY46300M

#### General

DSS (Data Storage Server) is a data server for **savic-net FX** BMS (building management system).

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

4,000,000 data items (= data points to collect  $\times$  collecting cycle  $\times$  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 solid-sate drive.

DSS Model BCY46300M conforms to all the applicable standards of CE Marking (Class A).

## **Specifications**

| Item                  | Specification                           |
|-----------------------|---|
| CPU                   | 32-bit CPU                              |
| Main storage capacity | 512 MB SDRAM                            |
| Auxiliary storage     | SSD (Solid-State Drive)                 |
| OS                    | Linux                                   |
| Max. BACnet objects   | 30,000 objects                          |
| Communication         | BACnet® IP                              |
|                       | (Ethernet: 100BASE-TX / 1000BASE-T),    |
|                       | 1 channel                               |
| Time backup           | 72 hours                                |
| Allowable voltage     | 90 V AC to 264 V AC                     |
| range                 |   |
| Environmental         | 5 °C to 40 °C (in operation)            |
| operating conditions  | 10 %RH to 85 %RH (non-condensing)       |
|                       | 2000 m or lower altitude                |
| Dimensions (mm)       | 130 (W) × 120 (D) × 140 (H)             |
| Weight                | 1.2 kg                                  |
| Grounding condition   | 100 $\Omega$ or lower ground resistance |

### **CE Marking Conformity**

This product must be installed in a panel cabinet. Besides, the product in the panel cabinet must be out of reach of unauthorized people who are not well-trained for electric facilities

This product complies with the following Electromagnetic Compatibility (EMC) and the Low Voltage Directive (LVD).

EMC : EN61326-1 Class A, Table 2 (For use in an

industrial electromagnetic

environment)

LVD : EN61010-1 Overvoltage category II

Pollution degree 2



## **Model Numbers**

| Model number |              |   |   |   |   | Description                 |
|--------------|--------------|---|---|---|---|-----------------------------|
| IV           | Model number |   |   |   |   |                             |
| BCY46300     |              |   |   |   |   | DSS                         |
|              |              |   |   |   |   | base model number           |
|              | М            |   |   |   |   | 100 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 | 3 |   | Fixed                       |
|              |              |   |   |   | 0 | DIN rail mount type         |
|              |              |   |   |   | 1 | Sub panel mount type        |



#### **Dimensions**

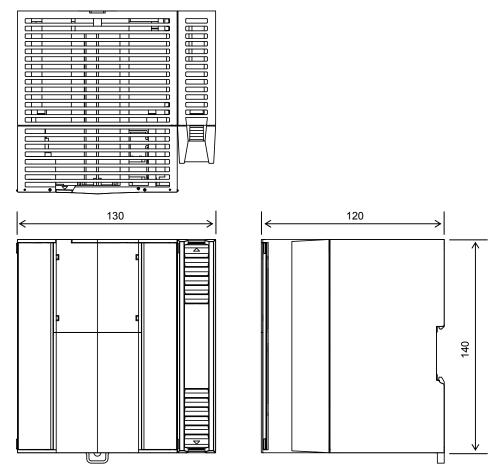


Figure 1. Dimensions of DSS (mm)

## **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 Azbil Corporation's sales representative. Azbil Corporation will not bear any responsibility for the results produced by the operators.

## ⚠ CAUTION



Installation must be performed by qualified personnel in accordance with all applicable safety standards.



• Use the product under the operating conditions (temperature, humidity, power, vibration, shock, mounting direction, atmospheric condition, etc.) as listed in the specifications.

Failure to do so might cause fire or device failure.



• Use the product within the rated operating ranges as listed in the specifications. Failure to do so might cause device failure.

Trademark information:

Infilex, PARAMATRIX, and savic-net are trademarks of Azbil Corporation in Japan or in other countries.

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.

LonTalk is a trademark of Echelon Corporation registered in the United States and other countries.

#### **System Configurations** savic-net FX BMS configuration 3rd Party Intelligent Client PCs Building (Web Access Management via Browser) Annunciator (ANN) System System Data Storage and Management Server Graphic Driver (GDR) Server (DSS) (SMS) Annunciator Graphic Driver Master (AGM) Laser printer Cellular phone for Alarm e-mail or Short Message Service BACnet IP network Virtual Private Client PCs (Web Network **Energy Data Server** Access via (EDS) Antivirus Firewalls Browser) 3rd Party 3rd Party Remote Access via 3rd Party System **BACnet** telephone line PLC Modbus Core Systems\*\* Devices Azbil Corporation Server R series NC-bus (SCS) \*\* Fire Alarm, Controllers Devices Chiller, etc. Controllers for IP LC-bus (LonTalk) Infilex GD (Operator Panel I-type Option) Infilex GC Operator Panel P-type (Operator Panel or Neopanel I-type Option) or Neoplate UT module Neopanel Infilex AC (Operator or Neoplate Panel I-type Option) or Operator Panel P-type UT module Neoplate or Neopanel PARAMATRIX (PMX) for or Operator Panel P-type Pump/Chiller control UT module Infilex SC Neopanel Infilex VC Neoplate Neopanel Infilex FC Neoplate LS-bus (LonTalk) Infilex ZM Neopanel Neopanel 3rd Party Lon Infilex VC

Figure 2. savic-net FX BMS configuration example

Infilex SC

Devices

Neoplate

Infilex FC

Neoplate

#### **AS-960E**

Items shown in Fig. 2 indicate the devices and protocols configuring the system. See Table 1 for the descriptions.

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

| Item                    | Description   |  |  |  |  |
|-------------------------|---|--|--|--|--|
| AGM                     | Azbil Corporation's Annunciator/Graphic Driver Master   |  |  |  |  |
| ANN                     | Annunciator   |  |  |  |  |
| BACnet®                 | Data communication protocol for Building Automation and Control Networks (developed by ASHRAE)      |  |  |  |  |
| DSS                     | Azbil Corporation's Data Storage Server   |  |  |  |  |
| GDR                     | Graphic Driver  |  |  |  |  |
| Infilex <sup>™</sup> AC | Azbil Corporation's AHU (air handling unit) controller for LonTalk® protocol                        |  |  |  |  |
| Infilex <sup>™</sup> FC | Azbil Corporation's FCU (fan coil unit) controller for LonTalk® protocol                            |  |  |  |  |
| Infilex <sup>™</sup> GC | Azbil Corporation's multipurpose controller for LonTalk® protocol                                   |  |  |  |  |
| Infilex <sup>™</sup> GD | Azbil Corporation's multipurpose data gathering panel for LonTalk® protocol                         |  |  |  |  |
| Infilex <sup>™</sup> SC | Azbil Corporation's AHU (air handling unit) controller for LonTalk® protocol                        |  |  |  |  |
| Infilex <sup>™</sup> VC | Azbil Corporation's VAV (variable air volume) controller with damper actuator for LonTalk® protocol |  |  |  |  |
| Infilex <sup>™</sup> ZM | Azbil Corporation's zone manager for LonTalk® protocol  |  |  |  |  |
| IP                      | Internet Protocol   |  |  |  |  |
| LC-bus                  | LonTalk® protocol Controller bus (provided by Azbil Corporation)                                    |  |  |  |  |
| LonTalk <sup>®</sup>    | Communication protocol for LONWORKS network   |  |  |  |  |
| LS-bus                  | LonTalk® protocol Sub-controller bus (provided by Azbil Corporation)                                |  |  |  |  |
| Modbus                  | Serial communication protocol for PLC (developed by Modicon)  |  |  |  |  |
| Neopanel                | Azbil Corporation's digital user terminal   |  |  |  |  |
| Neoplate                | Azbil Corporation's analog user terminal  |  |  |  |  |
| Operator Panel (I-type) | Azbil Corporation's Integral type Operator Panel  |  |  |  |  |
| Operator Panel (P-type) | Azbil Corporation's Panel-mount type Operator Panel   |  |  |  |  |
| PLC                     | Programmable Logic Controller   |  |  |  |  |
| PMX                     | Azbil Corporation's PARAMATRIX™ DDC controller for LonTalk® protocol                                |  |  |  |  |
| R series controllers    | Azbil Corporation's single loop controllers   |  |  |  |  |
| SCS                     | Azbil Corporation's System Core Server  |  |  |  |  |
| SMS                     | Azbil Corporation's System Management Server  |  |  |  |  |
| UT module               | Azbil Corporation's user terminal interface   |  |  |  |  |



Specifications are subject to change without notice.

Azbil Corporation **Building Systems Company** 

http://www.azbil.com/

Rev.2.0 Sep. 2015

AS-960E