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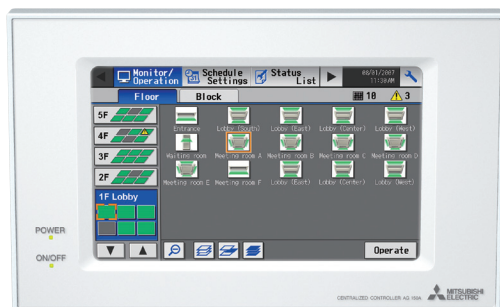
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Schedule No. \_\_\_\_\_

System No.: \_\_\_\_\_

Date: \_\_\_\_\_



## OVERVIEW OF CITY MULTI® CONTROLS NETWORK (CMCN)

- Consists of TG-2000 integrated system software, AG-150/GB-50ADA/GB-24/TC-24 centralized controllers, web browsers, timers, remote controllers, and BMS interfaces.
- TG-2000 integrated system software supports up to 40 AG-150/GB-50ADA centralized controllers (licensed for PC software features) for a maximum of 2,000 indoor units from a single PC.
- AG-150 centralized controller operates up to 50 indoor units with optional control via a field-supplied PC with licensed software.
- GB-50ADA centralized controller operates up to 50 indoor units via a field-supplied PC with licensed software.
- GB-24 central controller operates up to 24 indoor units via a field-supplied PC with licensed software.
- TC-24 standalone centralized controller operates up to 24 indoor units via an integral touch screen interface.
- Remote controllers consist of Deluxe MA, Simple MA Wireless MA, and ME.
- I/O controllers consist of DIDO (PAC-YG66DCA) and AI (PAC-YG63MCA) for third-party equipment control.
- LonWorks® and BACnet® interfaces also available.
- Interlocking of LOSSNAY® ERV units for control via the AG-150/GB-50ADA/GB-24/TC-24 centralized controllers.

## AG-150 STANDARD PACKAGE

- AG-150 Centralized Controller
- PAC-SC51KUA Power Supply
- SW-Mon: PC Monitoring
- SW-Sch: PC Scheduling
- SW-Email: Online Error Email
- SW-Maint: Online Maintenance Tool
- SW-TG-2000: TG-2000 Software

## Optional Software

- SW-Charge: Tenant billing
- SW-Pweb: Online Personal Browser

## Software Features

- SW-Mon: Monitoring enables building manager to customize and operate all indoor units from a network PC's web browser for up to 50 units per AG-150.
- SW-Sch: PC Scheduling enables building manager to customize daily, weekly and annual schedules from a network PC's web browser from up to 50 indoor units per AG-150. Schedules can be applied to a single indoor unit, a group of indoor units or collectively (batch) to all indoor units controlled by the AG-150.
- SW-Email: Online Error Email Distribution when an error occurs on the CITY MULTI system monitored by the AG-150. The fault will be detected and a detailed alert will be sent via email to the necessary personnel.
- SW-Maint: Online Maintenance Tool software performs maintenance diagnostics via network PC and AG-150 Centralized Controller. Does not require CMS-MNG-E convert/cable.
- SW-TG-2000: TG-2000 Integrated System Software enables the building manager to control up to 40 AG-150 Central Controllers with a maximum of 2,000 indoor units across multiple CITY MULTI outdoor units. Requires a dedicated networked PC and AG-150 software licenses (per AG-150 per function.)

## Optional Software Features

- SW-Charge: Tenant "Charge" Billing calculates per tenant CITY MULTI energy usage in kWh and in monetary amount based on the energy consumption of the outdoor unit(s) divided among the associated indoor units. Requires TG-2000 software on a dedicated network PC connected to RS-485 watt hour meter (WHM.)
- SW-Pweb: Online Personal Web Browser allows individual user (up to 50) to control his/her zone conditioning via personal networked PC with or without a remote controller.

# Model: AG-150

## AG-150 CENTRALIZED CONTROLLER SPECIFICATIONS

- 9 inch back lit, high resolution LCD color, touch panel display.
- Manages up to 50 indoor units. Units can be controlled individually, in a group or in a collective batch operation.
- Monitoring and Operation mode selection (Cool, Heat, Auto (R2-Series only), Dry, Fan), temperature setting and air flow direction.
- Scheduling: Supports daily, annual and a two pattern weekly seasonal schedule (SW-Sch required; single weekly schedule does not require SW-Sch) that can be scheduled for seasonal switch over. Supports scheduling fan speed and vane direction.
- Monitor/Control of I/O (AI and DIDO) controllers via touch screen or PC browser.
- 24 hour clock or 12 hour clock (AM/PM).
- SSL (Secure Socket Layer) Security protocol for network communications.
- Memory back up via USB (universal serial bus) port.
- RJ-45 100BASE-TX Ethernet port supports interconnection directly to PC or to Local Area Network (LAN), PC browser and TG-2000 software functions require Mitsubishi Electric HVAC issued software licenses.
- Permits or prohibits remote controller functions such as On/Off, Change Operation Mode and Set Temperature adjustment.
- Error code display with built in HELP Menu for troubleshooting and maintenance diagnostics.
- Requires manual addressing through touch screen or initial settings browser to the M-NET communication bus (default address is 000.)
- Wiring: requires power supply unit (PAC-SC51KUA).
- Dimensions: 7-5/16 H x 11-13/16 W x 1-1/16" D
- External input/output signals can be used for batch operations such as Start/Stop and Emergency Stop.

Item	Specifications		
Power Supply	M-Net Terminal	17VDC-32VDC	*Power Supply: PAC-SC51KUA
	Controller Drive	24VDC	
Environmental Conditions	Temperature	Operating Range	32° - 104°F (0° - 40°C)
		Non-operating Range	-4° - +140°F (-20° - +60°C)
	Humidity	30-90% RH (No condensation)	
Weight	4-5/8 lbs. (2.1kg)		
Dimensions (W x H x D)	11-13/16 x 7-5/16 x 2-13/16" (1-1/16") / 300 x 185 x 70.3mm (25.6 mm) *( ): indicates the thickness from the wall		

## WEB BROWSER REQUIREMENTS

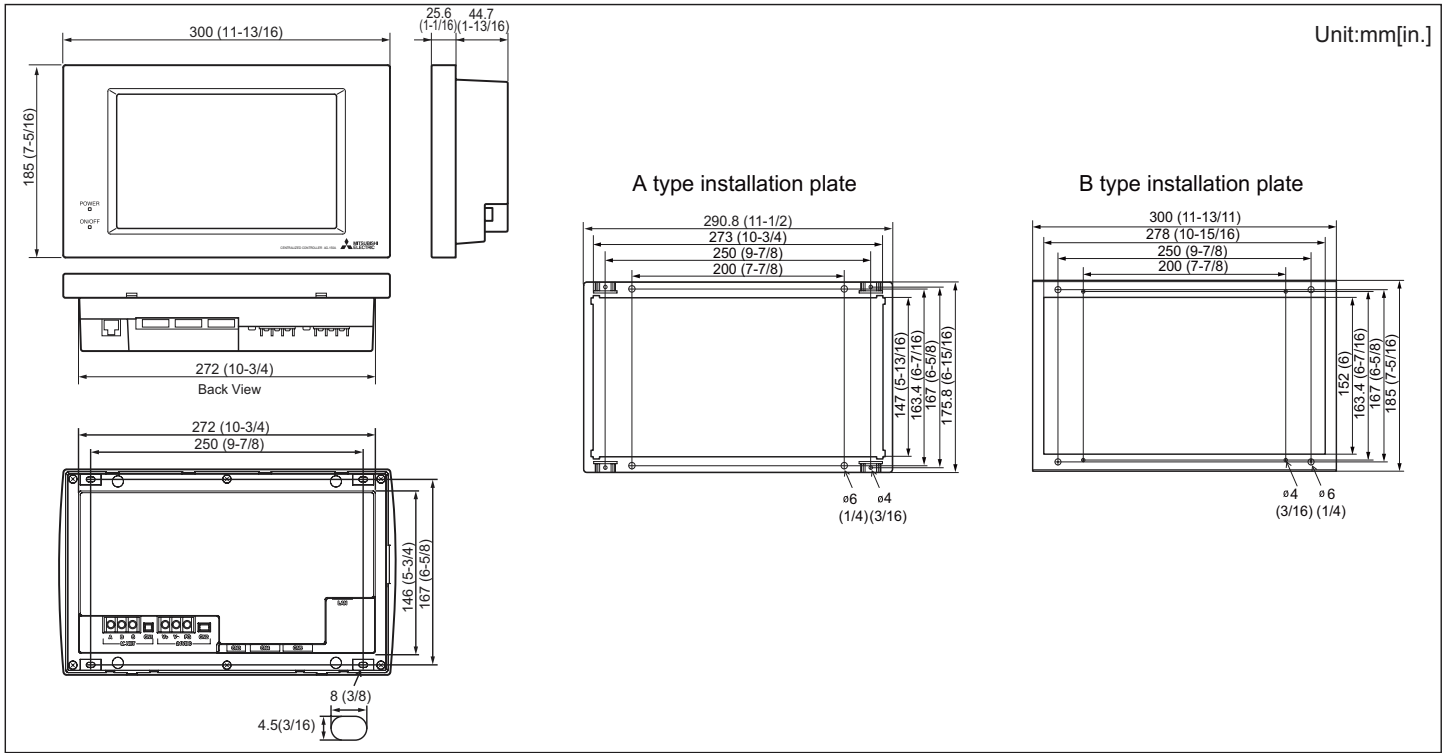
Item	Requirements
CPU	Pentium® 300MHz or faster
Memory	64MB or more (128MB or more recommended)
Screen Resolution	1024 x 768 or higher recommended
Compatible Browser	Windows® Microsoft® Internet Explorer 6.0 or later (Note: Java® execution environment is required [Sun Microsystems® Java Plug-in Ver. 1.6.0 or later]. Check the Sun Microsystems Java Plug-in version in "Java" in the control panel).
	Macintosh® Safari® (with Mac® OS X) (Note: Java execution environment is required [Sun Microsystems Java Plug-in Ver. 1.4.2 or later; can download from Apple® Computer's homepage.]. Check the Sun Microsystems Java Plug-in version at the [Help]-[Installed Plug-ins] on the Safari browser.)
Onboard LAN Port or LAN Card	One connector (100BASE-TX)
Other	Pointing device such as a mouse.

## TG-2000 REQUIREMENTS

Item	Requirements	Recommendations/Notes
When in use with AG-150	TG-2000 Version 5.50 or later (purchase the option or use equipment recommended when purchasing the PC); OS: Windows Vista® / XP	
PC	PC/AT Interchangeable Machine	Dell®, IBM®, Compaq®
CPU	Core™ 2 Duo: 1.66GHz or faster (Windows Vista for Core 2 Duo) Pentium® M: 1.7GHz or faster Pentium® IV: 2.4Ghz or faster	Core 2 Duo: 2.4GHz or faster Pentium M: 2.0GHz or faster Pentium® IV 2.8GHz or faster
OS	Windows Vista® Business Service Pack 1 Windows XP Professional Service Pack 3 Windows 2000 Professional Service Pack 4	English version only. Computer must support each OS. Correct Service Pack version must be installed; if not, TG-2000 will not be set up properly.
Memory	Windows Vista: 1GB or more Windows XP®/ 2000: 512MB or more	Windows Vista: 2GB or more Windows XP / 2000: 1GB or more
HDD	Standard	40GB or more of C-drive free space recommended. When using the trend function, the drive used for automatic control must have the following free space according to the number of groups: 200 groups = 2GB; 500 groups = 5GB; 1,000 groups = 10GB; 2,000 groups = 20GB.
	Wide Area	20GB or more (Free space) Standard: Max. 200MB/site
Serial Port	One port or more	Required when using RS-485 communication for WHM
LAN	10Base-T/100Base-TX	Purchase the option, or use the equipment recommended for the computer when purchasing.
USB	Two ports or more	For use in data backup
Storage Device	CD, USB, etc.	Optional
Resolution	1024 x 768 or higher, 65,536 colors or more	
Other	Computer must be dedicated for use of TG-2000. Requires constant 24-hour operation, Requires UPS.	Requires constant 24-hour operation.

## AG-150 CENTRALIZED CONTROLLER DIMENSIONS

Unit:mm[in.]



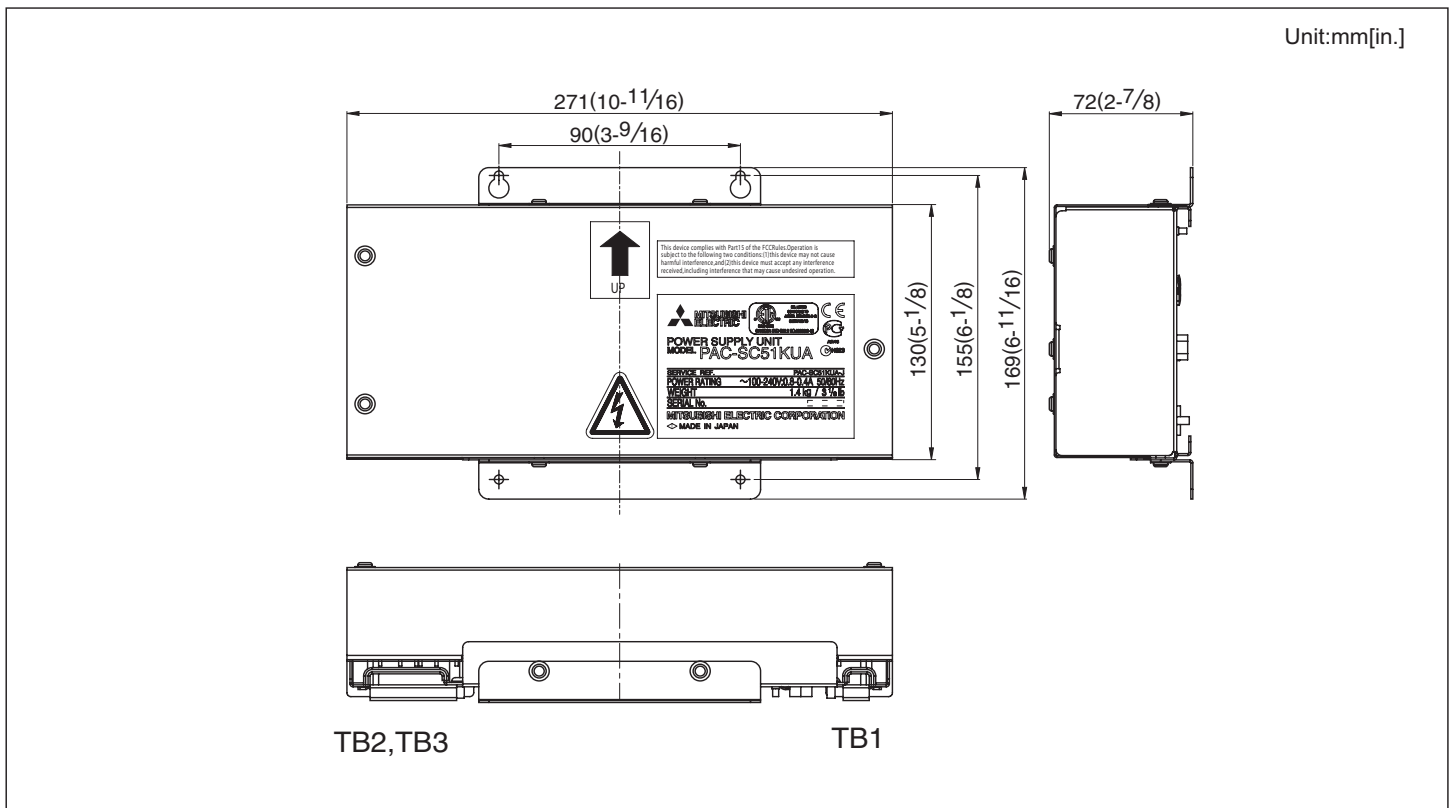
# Model: PAC-SC51KUA

## POWER SUPPLY (PAC-SC51KUA) SPECIFICATIONS

- Rated input voltage and current: 100 - 240VAC ±10 %; 0.8A – 0.4A; 50Hz/60Hz single-phase.
- Fuse: 6.3A time delay type.
- Output voltage/current: M-NET: 23.0 – 32.0VDC; DC power supply: 24VDC ±5% 0-7.5A.
- Dimensions: (H x W x D) 6-11/16 x 10-11/16 x 2-7/8".
- Weight: 3-1/8 lbs.
- Indoor installation in control panel or surface mount attachment (sold separately).

Item	Specifications	
Source Power Requirements	Rated Input Voltage / Current	100 - 240VAC ±10%; 0.8A - 0.4A, 50/60Hz single phase
	Fuse: 6.3 time delay type (IEC127-2 S.S.5)	
Output Voltage / Current	M-NET	23.0 - 32.0VDC
	DC Power Supply	24VDC ±5%; 0 - 0.75A
Load Capacity	One AG-150 Central Controller	
Environmental Conditions	Temperature	Operating Range 14° - 131°F (-10° - +55°C) Storage Range -4° - +140°F (-20° - +60°C)
	Humidity	30-90% RH (no condensation)
	Dimensions (H x W x D)	6-11/16 x 10-11/16 x 2-7/8" (169 x 271 x 72mm)
Weight	3-1/8 lbs. (1.4kg)	
Installation Environment	Indoor installation in field-supplied control panel or surface mount attachment (sold separately).	

## PAC-SC51KUA POWER SUPPLY DIMENSIONS



Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of quality warranties for the production of refrigeration and air conditioning equipment.

ISO Authorization System  
The ISO 9000 series is a plant authorization system relating to quality warranties as stipulated by the ISO. ISO 9001 certifies quality warranties based on the "design, development, production, installation and auxiliary services" for products built at an authorized plant.



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Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired environmental management system standard ISO 14001 certification.

The ISO 14000 series is a set of standards applying to environmental protection set by the International Standard Organization (ISO).