

MANUFACTURED FOR: MITSUBISHI ELECTRIC TRANE HVAC US LLC



AIR-CONDITIONER NETWORK SYSTEM
MN CONVERTER

Instruction Manual

PAC-USCMS-MN-1

1 | Safety precautions

- Please read and follow the safety precautions.
- Symbol explanations are shown below.

 WARNING	This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or death.
 CAUTION	This symbol indicates that failure to follow the instructions exactly as stated poses the risk of serious injury or damage to the unit.

- After reading this manual, give it to the user to retain for future reference.
When the user changes, make sure that the new user receives this manual.

WARNING

Only use specified cables. Securely connect each cable so that the terminals do not carry the weight of the cable.
Improperly connected or fixed cables or short-circuited cables may produce heat and start a fire.

If malfunctions occurs, power down the device immediately.
Continuous use of the device after malfunction may result in electric shock or fire. If the device malfunctions (if there is a burning smell), stop operation and disconnect the transmission line.

Only use the rated power supply.
Improper rated power supply may result in fire or malfunction.

Check the installation site and the connection status.
If the device is installed in an unstable place, where the unit may fall, in a place where the device may get wet, or in a place where the wiring may be easily disconnected, fire or electric shock may result.

Do not make any modifications or alternations to the device.
Improper modifications or alternations may result in electric shock or fire. Consult the dealer for alternations.

Do not dispose of the device by yourself.
To dispose of the device, consult your dealer.

CAUTION

Do not place the device in highly dusty, humid or damp locations.
Doing so may result in electric shock or fire.

Do not use in any place at a temperature of more than 40°C (104°F) or less than 0°C (32°F) or exposed to direct sunlight.
Doing so may cause deformation or malfunction.

Do not put dangerous goods around the device.
Do not install the device where there is a risk of leakage of flammable gas. If gas leaks and accumulates around the device, fire or burst may result.

Do not use the device in an unusual environment.
Do not install the device where a large amount of oil (including the machine oil), steam, or sulphide gas is present. Doing so may lead to a remarkable drop in performance, or malfunction.

Never supply AC power such as AC100V or AC200V and/or a voltage greater than DC 30V.
Doing so may result in breakdown, ignition or fire. Supplied voltage of this device is DC30V maximum.

Never pull or twist the transmission line.
Doing so may result in fire or malfunction.

If water, metal objects or extraneous matter enters the device, stop the operation and disconnect the transmission line.
Continuous use of the device may result in fire or electric shock.

Never wipe the device with benzene, thinner, chemical rags, etc.
Doing so may result in discoloration or malfunction. To remove heavy stains, soak a cloth in neutral detergent mixed with water, wring it out thoroughly, wipe the stains off, and wipe again with a dry cloth.

Do not use the device for special environment.
This device is exclusively for maintenance. Do not use it for any purpose other than maintenance. Doing so may cause malfunction.

Use standard wires with the proper current capacity.
Improper current capacity may result in electrical leakage or fire.

Always disconnect the transmission line by grasping the plug.
Pulling the cord may damage the transmission line, preventing normal measurement or causing equipment breakdown.

Do not splash water on the device or touch it with wet hands.
Doing so may result in electric shock or equipment breakdown.

Do not use the device if the cables or transmission line are damaged.
There is a risk of equipment breakdown, or measurement errors from a transmission line short circuit.

Do not place objects on top of the device.
There is a risk of malfunction or injury.

Do not spray any insecticide or flammable spray to the device.
Do not place such as the flammable spray around this device, or spray it directly to the device. Doing so may result in fire or burst.

Do not touch any PCB (Printed Circuit Board) with your hands or with tools. Do not allow dust to collect on the PCB.

2 | What's in the Box

Check that the box contains the following parts:

- (1) PAC-USCMS-MN-1 (aka MN CONVERTER) (Including the M-NET transmission line and SD card)
- (2) This manual

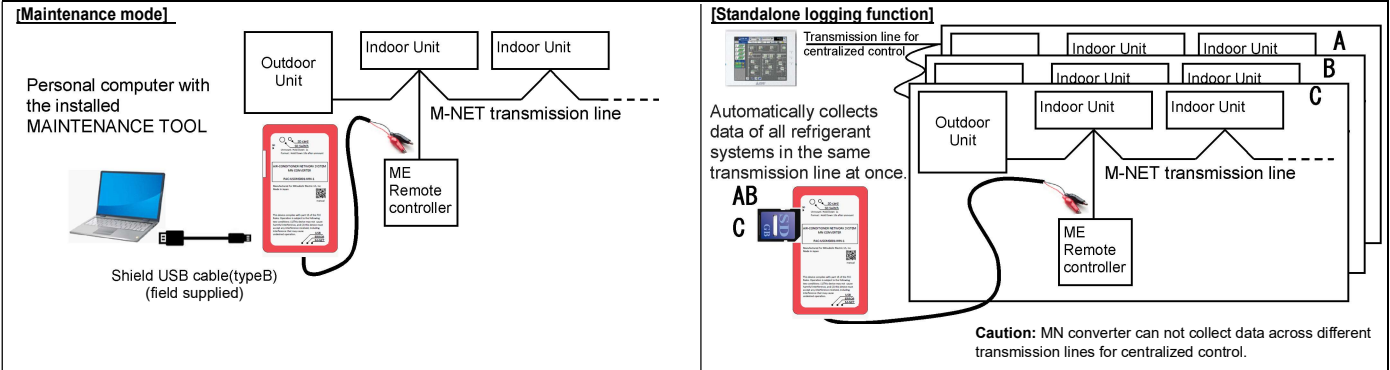
3 | Functions

MN Converter has the following two functions.

- (1) Maintenance mode: In order to confirm the operation status of the air conditioner using MAINTENANCE TOOL, the signal from the M-NET transmission line is converted to the USB signal.
- (2) Standalone logging function: MN converter autonomously collects maintenance data for MAINTENANCE TOOL on SD card.

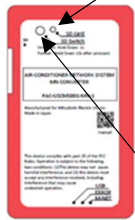
4 | Connections

Maintenance mode: Please refer to the operating manual of the MAINTENANCE TOOL.



5 | SD LED SW Functions

SD LED Description



Pattern	status	Blinking pattern	Operation status
1	Slow Blink	1 second period blink (1s ON ⇔ 1s OFF)	Full.
2	Fast Blink	1/2 second period blink (1/2 s ON ⇔ 1/2 s OFF)	Access error.
3	Flash	Flash when accessing SD card.	Normal Read/Write.
4	LED OFF	OFF	Not inserted or not mounted.

SD Switch Description

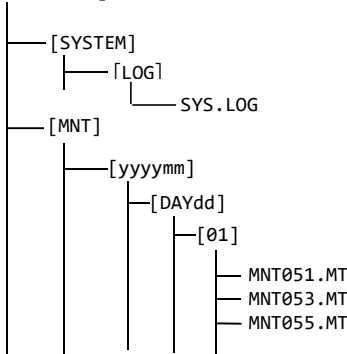
- (1) Unmount : Hold for 1 second. (OK when LED is off)

Be sure to unmount SD card before disconnecting M-NET cables, otherwise the logging data can become corrupted.

- (2) Format: Keep pressing for 10 seconds after unmounting. (OK when LED is off)

6 | SD CARD folder Structure

[SD card ROOT]



Maintenance data logs are saved in the following format.
 "MNT***.MT" (***) is the address of the OC).
 "MNT ***.M" T data can be imported it into the Maintenance Tool software. For instructions on how to import, refer to the MAINTENANCE TOOL instruction manual.

7 | Specification

Item	Specification		
Dimensions	140(W) × 80 (H) × 42 (D) mm / 5 ^{1/2} (W) × 3 (H) × 1 ^{2/3} (D) in		
Weight	332 g / 7 ¹⁰ / ₁₀ lb		
Power Supply	30 VDC / 24 VDC (From M-NET) or USB		
Rated Power Consumption	1/2 W		
Environment Conditions	Temperature	Operating temperature range	0 to 40°C [32 to 104°F]
		Storage temperature range	-20 to 60°C [-4 to 140°F]
	Humidity	30 to 90%RH (no condensation)	
Interface	USB connector (Type B)		