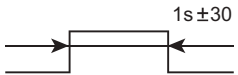


3. SYSTEM CONTROLLER

3-13-1. Specifications

3-13-1-1. Device Specifications

Item	Rating and Specification					
Power Supply	24 VDC ±10%: 5 W (*1)				Screw terminal block (M3) (*8)	
Interface	M-NET communication		17 to 30 VDC (*2)		Screw terminal block (M3) (*8)	
	Standard	Output (*3)	ON/OFF, (ON) (*4)	Non-voltage Relay contact (2)	Applied load MAX: 24 VDC, 5 W MIN: 5 VDC, 2 mW * AC loads cannot be connected.	Screw terminal block (M3.5) (*8)
				Transistor (2)	24 VDC 40 mA or less (*5)	Screwless terminal block
			(OFF) (*4)	Non-voltage Relay contact (2)	Applied load MAX: 24 VDC, 5 W MIN: 5 VDC, 2 mW * AC loads cannot be connected.	Screw terminal block (M3.5) (*8)
				Transistor (2)	24 VDC 40 mA or less (*5)	Screwless terminal block
	Input	ON/OFF	Non-voltage a contact (2 each)	24 VDC 1 mA or less (*6)	Screwless terminal block	
		Error/Normal				
	Expansion	Output	ON/OFF, (ON) (*4)	Transistor (4 each)	24 VDC 40 mA or less (*5)	9 pin connector
			(OFF) (*4)			
	Input	ON/OFF	24 VDC input (4 each)	24 VDC 1 mA or less (*7)	9 pin connector	
Error/Normal						
Output Pulse Width		1s ± 30 ms				
Interlock Function	Interlock M-NET devices and output contacts according to status of input contacts. (*8)					
Environment Conditions	Temperature		Operating temperature range	0 to 40°C[32°F to 104°F]		
			Storage temperature range	-20 to 60°C[-4°F to 140°F]		
	Humidity		30 to 90%RH (no condensation)			
Dimensions	200 (W) × 120 (H) × 45 (D) mm / 77/8 (W) × 43/4 (H) × 125/32 (D) in					
Weight	0.6 kg / 13/8 lb					
Time Backup During Power Failure	In the event of power failure or shut-off, the internal capacitor will continue to track time for approximately one week. (The internal capacitor takes about 24 hours to fully charge; a replacement battery is not necessary.)					
Installation Environment	Inside a control panel (indoors) * Use this product in a hotel, a business office environment or similar environment.					

*1: For details, refer to "3-13-1-2. Parts Purchased Separately".

*2: Supply electric power from a power unit for the transmission line or an outdoor unit.

Furthermore, the power consumption factor of the M-NET circuitry of this device is "1/4" (equivalent to one ME Remote Controller).

*3: Non-voltage Relay contact or transistor is available for output. Only one can be used at a time.

*4: () is in the case of a pulse.

*5: The output is open collector type. Power must be supplied from an external power source to the output circuit of this device.

*6: Power is supplied from this device to the external contacts.

*7: Power must be supplied from an external power source.

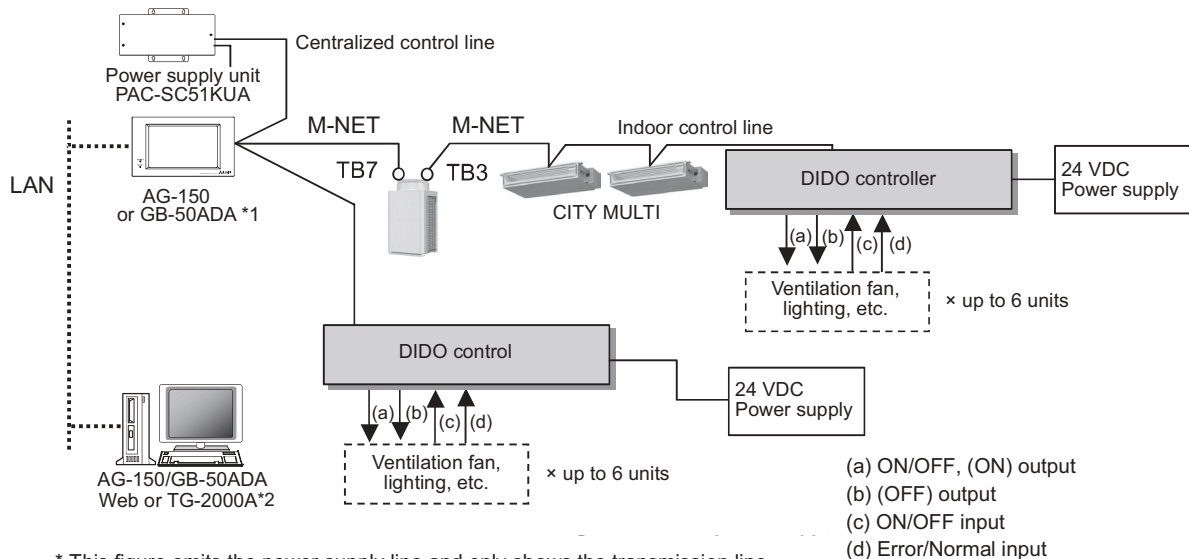
*8: M3 and M3.5 are sizes of the screw on the terminal block (ISO metric screw thread).

The number indicates the screw diameter (mm).

3. SYSTEM CONTROLLER

3-13-1. Specifications

3-13-1-1. Device Specifications



* This figure omits the power supply line and only shows the transmission line.

*1: The GB-50ADA will be supported on TG-2000 Ver. 6.3 or later.

*2: The DIDO controller can be connected to TG-2000 with Ver.5.60/5.30 or later.

- (a) ON/OFF, (ON) output
 (b) (OFF) output
 (c) ON/OFF input
 (d) Error/Normal input

Standard: Terminal block (for 2 units)

Expansion: Connectors (for 4 units)

Total: 6 units

<Restrictions>

Maximum of 50 units (50 channels) per AG-150/GB-50ADA, 24 units (24 channels) per GB-24A and TC-24.

However, the number of units that can be connected to a(n) AG-150/GB-50ADA is up to 50 (24 for the GB-24 and TC-24) including the number of contacts used on this device, an indoor unit, LOSSNAY unit, etc.

Up to 6 contacts can be connected to the DIDO controller (1 M-NET address per contact). One contact connected to this device is calculated as the equivalent of one indoor unit connected to AG-150/GB-50ADA/GB-24/TC-24.

For example, 5 contacts connected to the DIDO controller are calculated as the equivalent of 5 indoor units connected to AG-150/GB-50ADA/GB-24/TC-24.

NOTE

- For the shield ground of the M-NET centralized control line, use single-point grounding at the power unit for the transmission line.
 However, when supplying electric power to the M-NET centralized control line from the R410A series outdoor unit*1 without using a power supply unit for the transmission line, use single-point grounding at the TB7 of that outdoor unit. *1 Except PUMY.
 Furthermore, when connecting this device to the M-NET indoor control line, use grounding at the TB3 for each outdoor unit system.
- If the M-NET transmission line of this device is connected to the M-NET indoor control line and the outdoor unit is down because, for example, the power supply is interrupted for servicing or there is a failure, the DIDO controller cannot be controlled from the system controller.
- Controlling the system remote controller, ON/OFF remote controller, and schedule timer is only possible with channel 1 of a standard terminal block.
- DIDO controller can only be monitored or performed from AG-150 and TC-24 LCD, AG-150/GB-50ADA/GB-24 Web browser, and TG-2000.
- When AG-150/GB-50ADA/GB-24 is connected, monitoring control can only be performed from AG-150/GB-50ADA/GB-24 Web Browser or TG-2000. Monitoring control cannot be performed from the system remote controller (ON/OFF remote controller or schedule timer).

3. SYSTEM CONTROLLER

3-13-1. Specifications

3-13-1-2. Parts Purchased Separately

Prepare the following parts to install this device.

Required Part	Specification
Unit fixing screws	M4 screw × 4 (*M4: ISO metric screw thread)
Power supply for this device	<p>Commercially available power source: 24 VDC±10% 0.2 A (Minimum loading), SELV circuit, power line with grounding terminal</p> <p>Ripple noise: Lower than 200 mVp-p</p> <p>Compatible specification</p> <p>Authorized or CE marked products</p> <p>Subject to regulations: - IEC60950 (or EN60950) - CISPR22/24 (or EN55022/24) - IEC61000-3-2/3-3 (or EN61000-3-2/3-3)</p> <p>When using transistor output (including extension output) for the 24 VDC output of this device, increase the capacity to match the number used.</p> <p>• 1 set used: 0.3 ADC (Minimum) • 2 sets used: 0.4 ADC (Minimum) • 3 sets used: 0.5 ADC (Minimum) • 4 sets used: 0.6 ADC (Minimum) • 5 sets used: 0.7 ADC (Minimum) • 6 sets used: 0.8 ADC (Minimum)</p> <p>* The increase of the power supply capacity is 0.1 ADC for every set.</p>
Power line	Use a sheathed vinyl cord or cable. At least 0.75 mm ² (AWG18)
M-NET transmission line	<p>Type of the cable: Sheathed vinyl cords or cable which comply with the following specifications or equivalent.</p> <p>• CPEV \varnothing1.2 mm to \varnothing1.6 mm • CVVS 1.25 mm² to 2 mm² (AWG 16)</p> <p>* CPEV: PE insulated PVC jacketed shielded communication cable * CVVS: PVC insulated PVC jacketed shielded control cable</p> <p>PE: Polyethylene PVC: Polyvinyl chloride</p> <p>Power needs to be supplied to the M-NET circuitry of this device. Use an outdoor unit or a separately purchased power supply unit for the transmission line.</p>
Signal lines	<p>Use electric wire of an appropriate size for the terminal block of this device.</p> <p>Electric wire size … (1) Solid wire: \varnothing0.65 mm (AWG21) - \varnothing1.2 mm (AWG16) (2) Stranded wire: 0.75 mm² (AWG18) - 1.25 mm² (AWG16)</p> <p>Single strand: At least \varnothing0.18 mm</p> <p>To use an expansion input/output, use a separately purchased external input/output adapter.</p>

[Parts to be Purchased Separately]

Name	Model	Application	Remark
Power supply unit	PAC-SC51KUA	Power supply to the M-NET transmission line	This is not required when power is to be supplied from an outdoor unit.
External I/O adapter	PAC-YG10HA	Connection adapter for using an expansion input/output	This is required when an expansion input/output is used.

[Commercially available parts]

Name	Application	Remark
External 24 VDC power source	Supplies power when to use the DIDO controller or transistor output.	Refer to "Power supply for this device" in "Required Part" above for the power supply capacity.
Relay device	Requires commercially available relay device depending on the electric specifications with an external device.	

3. SYSTEM CONTROLLER

3-13-3. Interlock control

The DIDO controller (PAC-YG66DCA) has an interlock control function, which enables operation or set temperature change on the M-NET devices such as indoor units and also enables signal output to the contacts on the DIDO controller.

Interlock control covers the units connected to the DIDO controller with M-NET system. AG-150/GB-50ADA/GB-24/TC-24 must be connected to use the function. Ask your dealer for interlock control setting. The setting requires special tool support.

CAUTION

Before using the interlock control, you must agree to the following.

1. This feature must not be used for disaster prevention or security purpose.
(Not designed to be used in situations that are life-threatening)
2. No functions must be added that allow the malfunctioning unit to run by defeating the safety features, such as an external ON/OFF switch or a short-circuit.
3. Those settings for the function that are not supported by the interlocked units must not be made. All the settings must be made within the specified range.
(Failure to observe these precautions may result in malfunctions and failures.)
4. Perform a test run for interlock control, and confirm the correct settings and normal operation.
5. The system must be configured in the way that integrates the operation of the interlocked fire and emergency control systems.

Item	Content	Remarks
Number of events	24 events	1 event interlock with 1 unit
Determinant condition for interlock control	At input contact change	<ul style="list-style-type: none"> • Operation input ON/OFF • Error input Error/Normal
Interlock control contents (to be output)	1 action for 1 condition <ul style="list-style-type: none"> • ON/OFF operation of indoor units • Operation mode change of indoor units • Temperature setting of indoor units • Contact output to DIDO controller (*1) 	Interlock control covers the units connected to DIDO controllers with M-NET system. (*1) DIDO controller itself or other DIDO controllers in the same M-NET system.
Other	Interlock control prohibition function is enabled at emergency stop from AG-150/GB-50ADA/GB-24	