



 **MITSUBISHI ELECTRIC**
Changes for the Better

**DIGIAL INPUT _OUTPUT
(DIDO) CONTROLLER
MODEL - PAC-YG66MCA**

Full Version
September 1st, 2007

CITY MULTI

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PRESENTATION OVERVIEW TOPICS

- **General Specifications and Outline**
- **Controller Wiring Examples**
- **Web Browser Set-up and Functions**
- **Web Monitoring Access and Functions**
- **M-Tool Set-up and Functions**

 **R-410A**
OZONE-FRIENDLY
REFRIGERANT

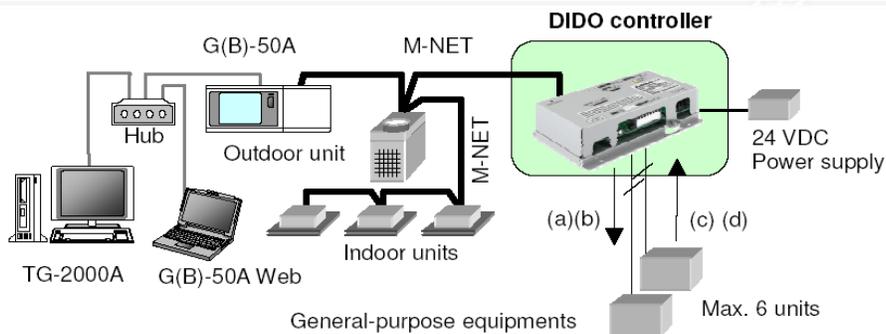
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General Specifications

- What is a DIDO Controller?
- DIDO Controller Concept
- System Configurations
- Software Requirements
- Product Specifications
- Installation Procedures
- Controller Board Layout
- Initial Setting Procedures
- Controller Display Content List
- Error Status Display Procedures



DIDO controller(PAC-YG66DCA) can be used in combination with a system controller (G(B)-50A or TG-2000A) to operate/stop general-purpose equipment, as well as to monitor the operating status and error status.



- (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



CONCEPT

- Control of equipments other than Aircon using the same PC.
- Control of other manufacturers Aircon (or old aircon) using same PC.
- General Equipment PLC is available but to control only few equipments its really costly. Need something cheap.
- DIDO controller is a system device that enables to operate and monitor general equipment such a ventilation fans, lights and so on.
- DIDO controller is equipped with 2 sets (channel 1 and2) of standard terminals and 4 sets of expansion connectors as the input/output terminals
- Cheaper than PLC

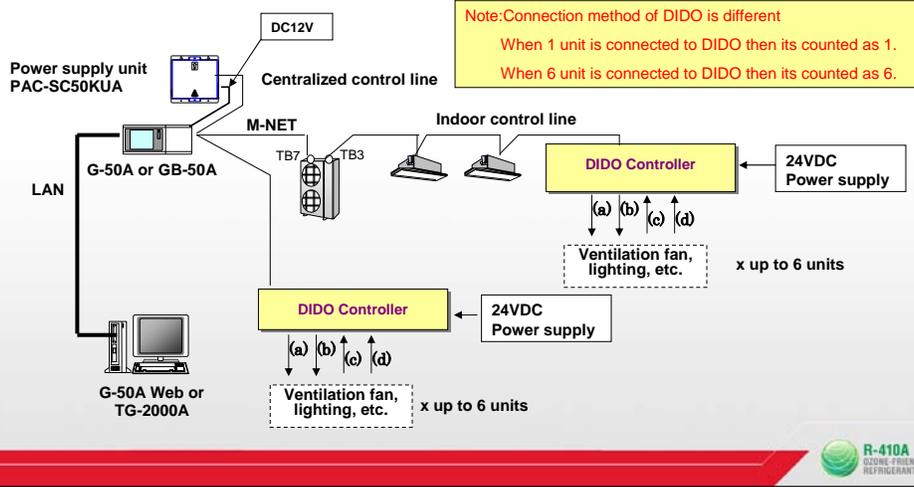


Difference between DIDO and GE PLC

	DIDO	GE control PLC
Monitoring function	Operation/monitor is possible from G-50Web and TG2000 (Not possible from G-50 body)	Operation/Monitor is only possible from TG2000 (Not possible from G-50Web or G-50 body)
Connectable units	6GE per DIDO In one G-50 system, 50GE is connectable. Maximum connectable DIDO is 9 if call 6 contacts of 8 DIDO is used and 2 contact used from last 9 th DIDO controller. If only one contact of each DIDO is used then 50DIDO can be connected. (50 DIDO *1contact) = 50GE.	32GE per PLC In one TG2000 system 20 PLC's are connectable(Max.640GE)
Interlock	Event settings:24setting 1 condition>1 action Interlock target: Units under G-50 to which DIDO is connected. Interlock control of one unit for one event INPUT TARGET:DIDO contact input state(ON/OFF, Normal/Error) (Note:Indoor unit ON/OFF cannot be set in input state) OUTPUT TARGET: Indoor unit(ON/OFF,mode,set temperature), DIDO(ON/OFF) (Note:Maintenance tool is required for interlock settings)	Event settings:200setting 1 condition>50 actions Interlock target:Units under 2 G-50's Interlock control of one group for one event. INPUT TARGET:Indoor (ON/OFF), GE(ON/OFF,Normal/Error) OUTPUT TARGET: Indoor(ON/OFF,Mode,set temperature,Prohibition,fan speed) GE (ON/OFF) (Table setting tool is required for interlock setting)
Merit	1.Small projects with few GE can be established cheaply 2.Operation/Monitor of GE with indoor units from G-50 web.	1.Projects with large number of GE can be established in small space. 2.Easy for connection when the number of GE increases in a system.

System Configuration

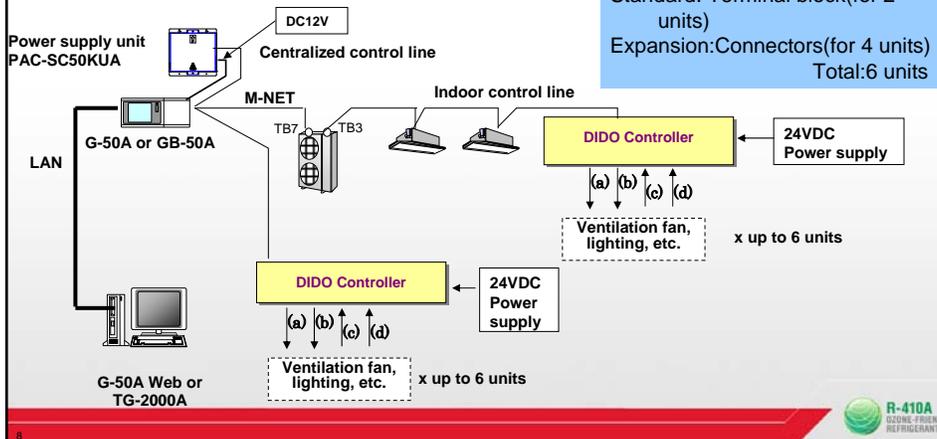
Up to 50 units per 1G-50 system Indoor unit + Lossnay + DIDO points = 50)



System Configuration

- (a) ON/OFF output (Level signal)
- (ON) output (Pulse signal)
- (b) (OFF) output (Pulse signal)
- (c) ON/OFF input (Level signal)
- (d) Error/Normal input (Level signal)

Standard: Terminal block (for 2 units)
Expansion: Connectors (for 4 units)
Total: 6 units



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Operation and monitor is not possible from G-50A screen

DC24V
Fan, etc

ME remote controller ME remote controller

Monitor and Operate from Web browser or TG-2000A

Using Non-voltage contact output
When driving a load directly, use Power supply within the ranges of up to DC24V, 5W.
(Incase of use with AC power supply an External relay is needed)

Operation/monitoring of GE can only be done from Web or TG-2000A.
Confirmation of status or operation is not possible from G-50A body screen.
Only error can be detected on G-50A.
Error history can also be accessed.

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Using Non-voltage contact output
When driving a load directly, use Power supply within the ranges of up to DC24V, 5W.
(Incase of use with AC power supply an external relay is needed)

DIDO

Lighting

Other manufacturer's packaged air-conditioning units

Other manufacturer's fan coil units

Card-key system

Chiller/heat source machine

TG-2000A or Web

●Central control/monitor of general equipments from G-50A Web or TG-2000A

Advantage over PLC:When controlling GE via PLC or TG-2000A software is compulsory but with DIDO it can be controlled/monitored from G-50A web.

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AC&R System Works

DIDO Interlock Capabilities

Interlock is possible:

Input Target : DIDO contact input state

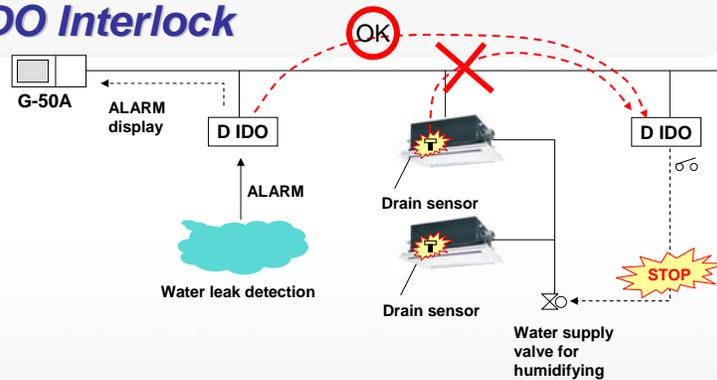
Output Target : - Indoor unit ON/OFF
- Mode change
- Temperature setting
- DIDO ON/OFF

Setting: Max. 24 settings

Note: Please use the interlock control with systems that has G-50A connection.

Note: Interlock function is set at DIDO using maintenance tool.

DIDO Interlock



When interlocking, DIDO can send signals to Indoor unit or other DIDO controller but it can not receive signals from indoor units to which it is interlocked to.

Note: Please use the interlock control with systems that has G-50A connection.

Note: Interlock function is set at DIDO using maintenance tool.

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DIDO Controller (Interlock with card key)

Maintenance Tool (interlock setting)

Application

- card key interlock
- backup operation

DC24V

Card key Example
Insert
Remove

PAC-YG66DCA

- 1) 1 input – 1 output (target: one IU or DIDO)
- 2) 24 setting
- 3) INPUT: DIDO – Input
- 4) OUTPUT: DIDO – Output IU-On/Off, Mode, Set-temp

ON
OFF

ME remote controller

ME remote controller

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DIDO Controller (Interlocking with BMS)

G-50A

D I/DO

ZONE A

ZONE B

BMS or security system

ZONE A ON/OFF

ZONE B ON/OFF

Note: Signal is sent to each unit.

G-50A

D I/DO

Office

Computer Room

Emergency Stop INPUT

ON/OFF of each zone from BMS
Switching OFF the aircon which were forgot to be switched OFF by security signals.

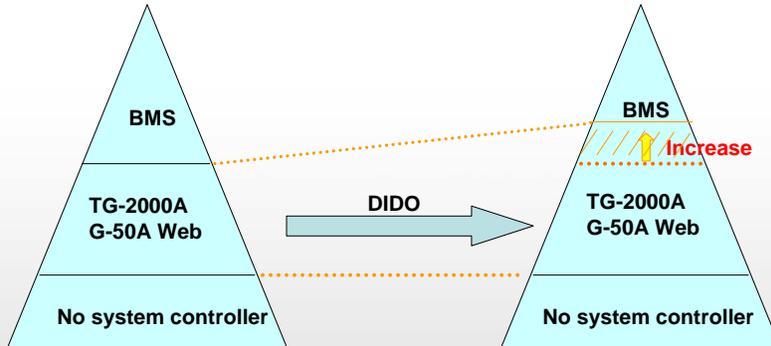
Switching OFF the aircon of Office etc (excluding computer room) when there is emergency stop input.

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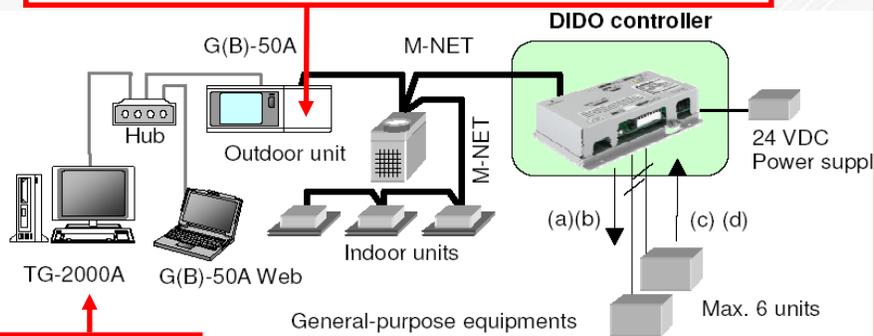
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SALES TARGET

Buildings that does not need BMS but wants to control GE from same system.

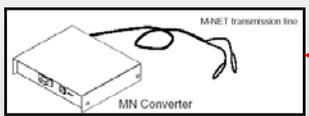


G-50 Software Ver 3.20 or Higher
Web Browser Pin Code required for PC Web Monitoring (Recommended)



AC Loads CANNOT BE Connected to DIDO Controller

TG-2000A Software Ver 5.10 or Higher OPTIONAL



MN Converter model CMS-MNG required to access data via M-Tool



The functions allocated of the DIDO controller, G(B)-50A, TG-2000A and M-Tool is as follows.

[Note] ○:Operation and Monitoring, △:Monitoring only, ×:None

Function name	DIDO controller	G(B)-50A Web	TG-2000A	Maintenance Tools
Address setting	○	×	×	△
Output method (Level/pulse) setting	○	×	×	△
Error input logic (a contact/b contact) setting	○	×	×	△
Group registration	×	○	○	×
Operation and monitoring	×	○	○	△ (Compulsion operation is possible.)
Time setting	×	○	○	△ (Operation is possible)*1

*1 When G(B)-50A or TG-2000A is connected, the time setting must be made on G(B)-50A Web Browser or TG-2000A.



Item	Rating and Specification					
Power Supply	24 VDC±10%: 5 W (*1)		Screw terminal block (M3)			
Interface	M-NET communication		17 to 30 VDC (*2)			
	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)
			(OFF) (*4)	Transistor (2)	24 VDC 40 mA or less (*5)	Screwless terminal block
		Input	ON/OFF Error/Normal	Non-voltage a contact (2 each)	24 VDC 1 mA or less (*6)	Screwless terminal block
			Output (*3)	ON/OFF, (ON) (*4)	Transistor (4 each)	24 VDC 40 mA or less (*5)
	Expansion	(OFF) (*4)	24 VDC input (4 each)	24 VDC 1 mA or less (*7)	9 pin connector	
		Input	ON/OFF Error/Normal			
	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 / 7.716 (W) × 4.714 (H) × 1.7532 (D) in					
Weight	0.6 kg / 1.38 lb					
Current Time Backup during Power Failure	If the power is cut, the internal capacitor will keep counting the current time normally for approximately one week. (The internal capacitor takes approximately a day to charge. Replacement of a 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 "6-1 Parts to be Procured Locally"
 *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 "1W" (equivalent to one M/E 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: Interlock control is performed from the Maintenance Tool. For details, refer to the instruction manual for the Maintenance Tool.



Required Part	Specification
Unit fixing screws	M4 screw × 4
Power supply for this unit	Power source: 24 VDC±10% 0.2 A (Minimum loading), SELV circuit, power line with grounding terminal Ripple noise: Lower than 200 mVp-p Compatible specification Authorized or CE marked products Subject to regulations: - IEC60950 (or EN60950) - CISPR22/24 (or EN55022/24) - IEC61000-3-2/3-3 (or EN61000-3-2/3-3) When using transistor output (including extension output) for the 24 VDC output of this device, increase the capacity to match the number used. • 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) * The increase of the power supply capacity is 0.1 ADC for every set.
Power line	Use a sheathed vinyl cord or cable. At least 0.75 mm ² (AWG18)
M-NET transmission line	Type of the cable: Sheathed vinyl cords or cable which comply with the following specifications or equivalent. • CPEV ϕ 1.2 mm to ϕ 1.6 mm • CVVS 1.25 mm ² to 2 mm ² (AWG 16 to 14) * CPEV: PE insulated PVC jacketed shielded communication cable * CVVS: PVC insulated PVC jacketed shielded control cable PE: Polyethylene PVC: Polyvinyl chloride 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.
Signal lines	Use electric wire of an appropriate size for the terminal block of this device. Electric wire size (1) Solid wire: ϕ 0.65 mm (AWG21) – ϕ 1.2 mm (AWG16) (2) Stranded wire: 0.75 mm ² (AWG18) – 1.25 mm ² (AWG16) Single strand: At least ϕ 0.18 mm To use an expansion input/output, use a separately purchased external input/output adapter.

[Parts to be Purchased Separately] **Sold by MESCA**

Name	Model	Application	Remark
Power supply unit	PAC-SC50KUA	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.

Using 1 PAC-YG10HA connector will allow (2) additional channel per adaptor.



Proper DIDO Controller grounding procedures and operations based on configuration

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 without using a power supply unit for the transmission line, use single-point grounding at the TB7 of that outdoor unit. Furthermore, when connecting this device to the M-NET indoor control line, use grounding at the TB3 for each outdoor unit system.
- If 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.
- When G(B)-50A is connected, monitoring control can only be performed from G(B)-50A Web or TG-2000A. Monitoring control cannot be performed from the system remote controller, ON/OFF remote controller or schedule timer.



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Note: The space dimensions shown does not include space for any other accessories (ex. power supply)

Depending on the wiring and accessories used ensure enough space is appropriated for your installation.

Device is not waterproof, while needing to be located indoors preferably installed in a control panel strong enough to withstand a weight of 0.6 kg (1.3 lbs)

Screw pitch

Unit: mm (in)

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LED will light (Green) whenever M-NET 24VDC voltage is present

AC Loads CANNOT BE Connected to DDO Controller

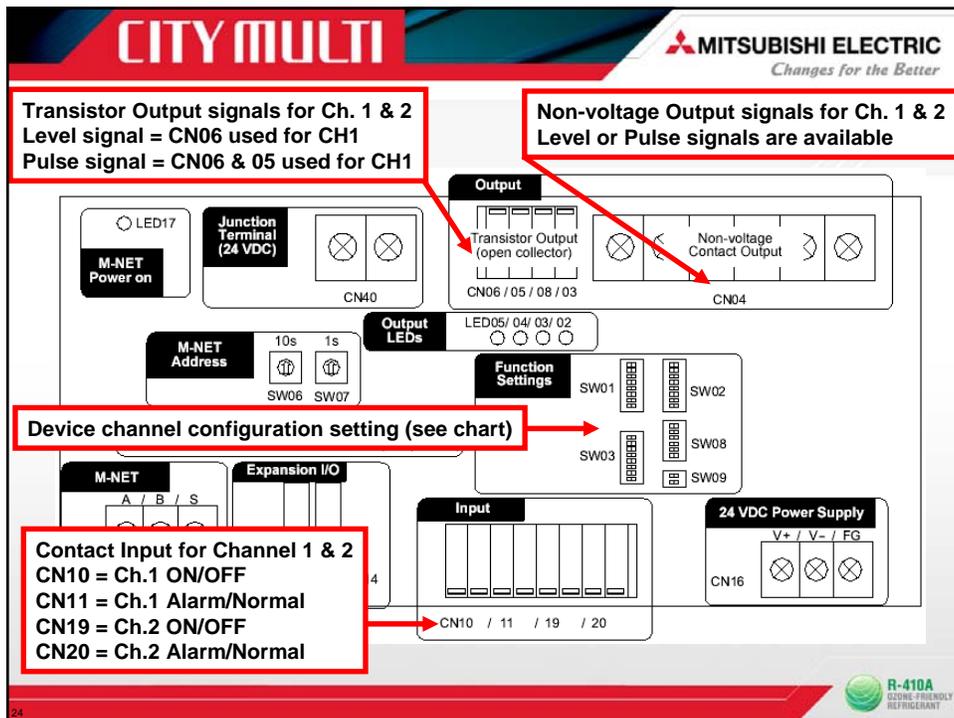
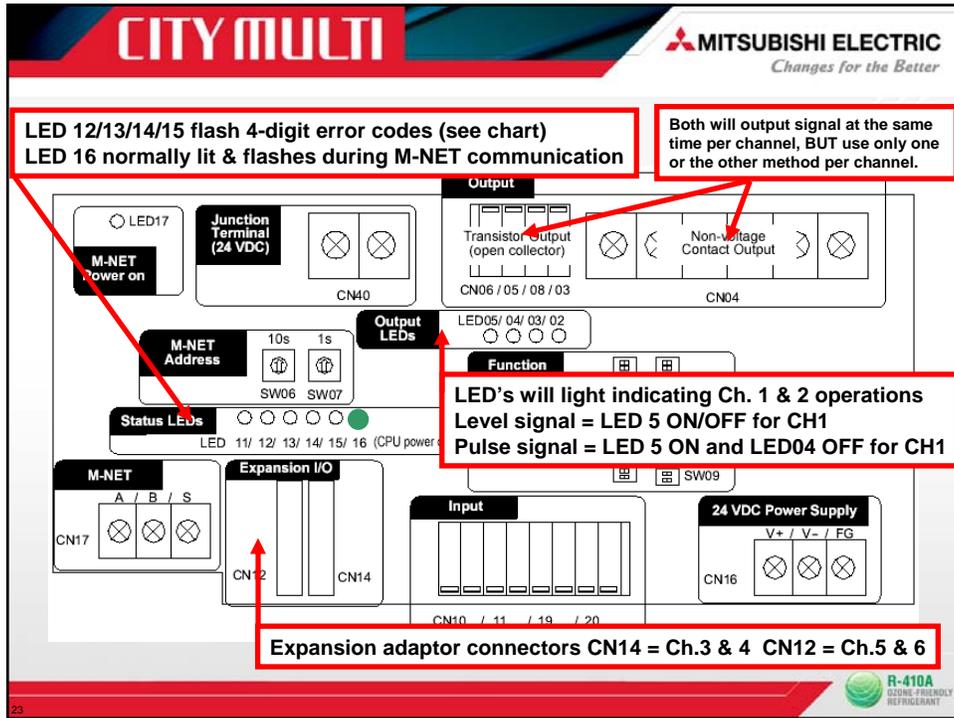
M-NET addressing setting dials

M-NET Wiring from TB7 or TB3/TB5 terminals

24VDC power supply (Field supplied)

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Switch	Channel	Function Setting	OFF	ON	Remark
SW01	1	Emergency stop command enable setting	Disabled	Enabled	Select the output operation for when an emergency stop command is received from a system controller.
	2	Error input logic setting	a contact	b contact	—
	3	Error interlock stop output setting	No	Yes	Select whether to interlock and stop output for error input.
	4	Output operation setting for power failure recovery	Stop	Recover to state prior to power failure	Select the output operation for when there is a recovery from a power failure.
	5	Output method setting	Level output	Pulse output	—
	6	Unused			Set to OFF
	7	Unused			Set to OFF
	8	Unused			Set to OFF

SW1 Disabled DIDO will still function independently if G(B)-50A emergency stop signal is received. Enabled G(B)-50A emergency stop signal is received, DIDO stops all commands and interlocks.

SW2 Using “a contact” NO relay, error occurs changing relay to NC position which produces an error status within web browser and M-Tool monitoring screen as well lighting LED14.

Using “b contact NC relay, error occurs changing relay to NO position which produces an error status within web browser and M-Tool monitoring screen as well lighting LED 14.

SW3 OFF “No” = Error reported controller will still function independently. ON “Yes” = Error reported signal commands Output signal off.

Remaining setting are self explanatory

Channel 2 offers same function via DIPSW setting SW02







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SW03	1	Emergency stop command enable setting	Disabled	Enabled	Select the output operation for when an emergency stop command is received from a system controller.
	2	Error input logic setting	a contact	b contact	—
	3	Error interlock stop output setting	No	Yes	Select whether to interlock and stop output for error input.
	4	Output operation setting for power failure recovery	Stop	Recover to state prior to power failure	Select the output operation for when there is a recovery from a power failure.
	5	Output signal setting	Level output	Pulse output	—
	6	Selection of status display mode: (1) Normal display (input status or error status of channels 1 and 2):	SW03-6:	SW03-7:	Select the display mode for the status display LED mode.
		(2) Operation input status display of channels 3 to 6:	OFF	OFF	
		(3) Operation output status display of channels 3 to 6:	ON	OFF	
	(4) Error input status display of channels 3 to 6:	ON	ON		
8	Error display is cancelled (for 10 seconds).	Change the switch to ON once and then return it to OFF.		Only enabled while communication error status is displayed. * The communication error status display is masked for 10 seconds and the status set with SW03-6 and 7 is displayed.	

SW03 Settings are common for channels 3,4,5 and 6

SW03-2 a contact = NO b contact = NC

Remaining setting are self explanatory.



SW06	M-NET address	(Address 10s) 0 to 9 (decimal)	An address from 01 to 50 can be set. Set an address that is not the same as that of another unit.
SW07		(Address 1s) 0 to 9 (decimal)	

SW08	No	Yes	Error input usage setting		Select whether to use error/normal input for channel 1.
			Channel 1 (standard)	Channel 2 (standard)	
1	No	Yes	Channel 1 (standard)	Channel 2 (standard)	Select whether to use error/normal input for channel 1.
2	No	Yes	Channel 3 (expansion)	Channel 4 (expansion)	Select whether to use error/normal input for channel 2.
3	No	Yes	Channel 5 (expansion)	Channel 6 (expansion)	Select whether to use error/normal input for channel 3.
4	No	Yes	Channel 4 (expansion)	Channel 5 (expansion)	Select whether to use error/normal input for channel 4.
5	No	Yes	Channel 5 (expansion)	Channel 6 (expansion)	Select whether to use error/normal input for channel 5.
6	No	Yes	Channel 6 (expansion)	Unused	Select whether to use error/normal input for channel 6.
SW09	1	Unused	Unused		Set to OFF
	2	Unused	Unused		Set to OFF

Set the dip switches for function selection according to the system to be used.
At the time of shipment, all dip switches are set to OFF and the M-NET address is set to 01.

Remaining setting are self explanatory.



Controller Display Content List

Display Item	Display LED	Content	Condition		
			Switch		
			03-6	03-7	
Power supply status	(1) Power supply to CPU	LED16 (CPU power on)	●: Lights when the CPU is energized. ⚡: Flashes during M-NET communication.	-	-
	(2) Power supply to M-NET circuit	LED17 (M-NET power on)	●: Lights when the M-NET is energized.	-	-
Input/output status	Ch1, 2	(1) Operation output status	LED05/04/03/02 (Output LEDs)	-	-
		(2) Operation/error input status	LED12/13/14/15 (Status display LEDs)	OFF	OFF

Note ●: On, ○: Off, ⚡: Flashing

Output Method	Ch1		Ch2	
	LED5	LED4	LED3	LED2
Level Output	●: ON ○: OFF	-	●: ON ○: OFF	-
Pulse Output	●: ON	●: OFF	●: ON	●: OFF

* In the case of pulse output, the LED only lights during pulse output period.

Input Method	Ch1 Operation	Ch2 Operation	Ch1 Error	Ch2 Error
	LED12	LED13	LED14	LED15
Level Input	●: ON ○: OFF		●: Error ○: Normal	

* LED11 flashes each time a change in input is detected. (*1)



Controller Display Content List

Input/output status	Ch3-6	(1) Operation input status	LED12/13/14/15 (Status display LEDs)	<table border="1"> <tr> <td>Input Method</td> <td>Ch3</td> <td>Ch4</td> <td>Ch5</td> <td>Ch6</td> </tr> <tr> <td></td> <td>LED12</td> <td>LED13</td> <td>LED14</td> <td>LED15</td> </tr> <tr> <td>Level Input</td> <td colspan="4"> <input checked="" type="radio"/> ON <input type="radio"/> OFF </td> </tr> </table> <p>* LED11 flashes each time a change in input is detected. (*1)</p>	Input Method	Ch3	Ch4	Ch5	Ch6		LED12	LED13	LED14	LED15	Level Input	<input checked="" type="radio"/> ON <input type="radio"/> OFF				OFF	ON
		Input Method	Ch3	Ch4	Ch5	Ch6															
			LED12	LED13	LED14	LED15															
Level Input	<input checked="" type="radio"/> ON <input type="radio"/> OFF																				
(2) Operation output status	LED12/13/14/15 (Status display LEDs)	<table border="1"> <tr> <td>Output Method</td> <td>Ch3</td> <td>Ch4</td> <td>Ch5</td> <td>Ch6</td> </tr> <tr> <td></td> <td>LED12</td> <td>LED13</td> <td>LED14</td> <td>LED15</td> </tr> <tr> <td>Level/ Pulse Output</td> <td colspan="4"> <input checked="" type="radio"/> ON <input type="radio"/> OFF </td> </tr> </table> <p>* LED11 flashes each time a change in input is detected. (*1) * In the case of pulse output, the LED only lights during pulse output period.</p>	Output Method	Ch3	Ch4	Ch5	Ch6		LED12	LED13	LED14	LED15	Level/ Pulse Output	<input checked="" type="radio"/> ON <input type="radio"/> OFF				ON	OFF		
Output Method	Ch3	Ch4	Ch5	Ch6																	
	LED12	LED13	LED14	LED15																	
Level/ Pulse Output	<input checked="" type="radio"/> ON <input type="radio"/> OFF																				
(3) Error input status	LED12/13/14/15 (Status display LEDs)	<table border="1"> <tr> <td>Input Method</td> <td>Ch3</td> <td>Ch4</td> <td>Ch5</td> <td>Ch6</td> </tr> <tr> <td></td> <td>LED12</td> <td>LED13</td> <td>LED14</td> <td>LED15</td> </tr> <tr> <td>Level Input</td> <td colspan="4"> <input checked="" type="radio"/> Error <input type="radio"/> Normal </td> </tr> </table> <p>* LED11 flashes each time a change in input is detected. (*1)</p>	Input Method	Ch3	Ch4	Ch5	Ch6		LED12	LED13	LED14	LED15	Level Input	<input checked="" type="radio"/> Error <input type="radio"/> Normal				ON	ON		
Input Method	Ch3	Ch4	Ch5	Ch6																	
	LED12	LED13	LED14	LED15																	
Level Input	<input checked="" type="radio"/> Error <input type="radio"/> Normal																				
Communication error status (*2)	(1) 4-digit error code	LED12/13/14/15 (Status display LEDs)	Refer to "10-2 Communication Error Status Display".	When a communication error occurs																	

*1: If LED11 flashes quickly three times in any of the display states, it is an indication that an error input has been detected on one of channels 3 to 6. To confirm the details, turn ON both of SW03-6 and 7 and select to "(3) Error Input Status Display of Channels 3 to 6".
*2: If a communication error occurs in any of the display states, switch to "Communication Error Status Display". Changing SW03-8 from ON to OFF masks the "Communication Error Status Display" for 10 seconds so that the input/output status display set with SW03-6 and 7 can be confirmed.

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If a sensor error or communication error occurs, a 4-digit error code will be repeatedly displayed according to the steps shown below.

Error status display consists of the following 10 steps. This operation is performed repeatedly to indicate the 4-digit error code for the error.

Note ●: On, ○: Off, ✨: Flashing

	LED11	LED12	LED13	LED14	LED15	Function	Remark
	Common	Error code display (Binary number indication)					
		$2^3=8$	$2^2=4$	$2^1=2$	$2^0=1$		
STEP1	○	✨	✨	✨	✨	"Error Status Display" Starting Point Indication	LEDs 12 to 15 flash 3 times
STEP2	○	○	○	○	○	Blank	Turn Off
STEP3	●	●/○	●/○	●/○	●/○	Error code 1000's digit	Error code 1000's digit indication In the case of 6, ●●●○
STEP4	○	○	○	○	○	Blank	Turn Off
STEP5	●	●/○	●/○	●/○	●/○	Error code 100's digit	Error code 100's digit indication In the case of 6, ●●●○
STEP6	○	○	○	○	○	Blank	Turn Off
STEP7	●	●/○	●/○	●/○	●/○	Error code 10's digit	Error code 10's digit indication In the case of 0, ○○○○
STEP8	○	○	○	○	○	Blank	Turn Off
STEP9	●	●/○	●/○	●/○	●/○	Error code 1's digit	Error code 1's digit indication In the case of 7, ○●●●
STEP10	○	○	○	○	○	Blank	Turn Off

Furthermore, changing SW03-8 from ON to OFF masks the "Communication Error Status Display" for 10 seconds so that the input/output status set with SW03-6 and 7 can be displayed.

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Error code Example

Error Code	Description of Error
6600	Multiple address error
6601	M-NET polarity unset error
6602	Transmission processor hardware error
6603	Transmission circuit bus-busy error
6606	Communications with transmission processor error
6607	No ACK error
6608	No return of response frame

Note ● On, ○ Off, ✨ Flashing

	LED11	LED12	LED13	LED14	LED15	Function	Remark
	Error code display (Binary number indication)						
	Common	2 ³ =8	2 ² =4	2 ¹ =2	2 ⁰ =1		
STEP1	○	●	●	●	●	"Error Status Display" Starting Point Indication	LEDs 12 to 15 flash 3 times 1 = Error active
STEP2	○	○	○	○	○	Blank	Turn Off 2 = All flash OFF
STEP3	●		●	●		Error code 1000's digit indication In the case of 6: ●●●○	3 = L13 (4) + L14 (2) = 6
STEP4	○	○	○	○	○	Blank	Turn Off 4 = All flash OFF
STEP5	●		●	●		Error code 100's digit indication In the case of 6: ●●○●	5 = L13 (4) + L14 (2) = 6
STEP6	○	○	○	○	○	Blank	Turn Off 6 = All flash OFF
STEP7	●					Error code 10's digit indication In the case of 0: ○○○○	7 = No Yellow lights = 0
STEP8	○	○	○	○	○	Blank	Turn Off 8 = All flash OFF
STEP9	●			●	●	Error code 1's digit indication In the case of 7: ○●●●	9 = L13 (4) + L14 (2) = 6
STEP10	○	○	○	○	○	Blank	Turn Off 10 = All flash OFF

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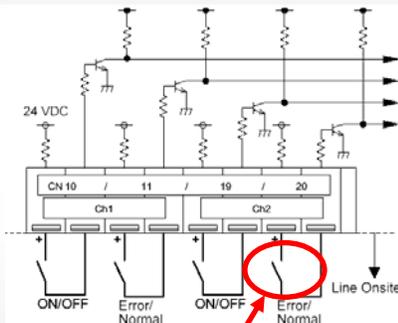
Controller Wiring Examples

- Installation Manual Wiring Explanations
- Non-voltage Contact Input Wiring Examples
- Transistor Outputs Wiring Examples
- Non-voltage Relay Contact Wiring Examples

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Non-voltage Contact Inputs

Standard Terminals (Channels 1 and 2)



- Note
- Connect the operate/stop (ON/OFF) inputs so that closing the contact operates (ON) the device and opening the contact stops (OFF) the device.
 - The error/normal inputs of channels 1 and 2 can be switched between a contact and b contact. For details, refer to "9 Switch List".
- Caution
- The polarity of the input terminals is important, so be sure to match the polarity when using contacts that have polarity.
 - Select a contact with a minimum applicable load of 1 mA/DC or less.
 - Supply 24 VDC 1 mA from the positive terminal to the external contacts.
 - Strip 12±1 mm (15/32 ±1/32 in) of the wire coating and insert firmly into the terminal.
 - Make sure that the copper wiring is not short-circuiting the plates (cover, lower case) or neighboring wires.
 - Perform wiring so that the terminal block is not strained. If strained, use a wire guide or junction terminal to alleviate the stress on the terminal block.

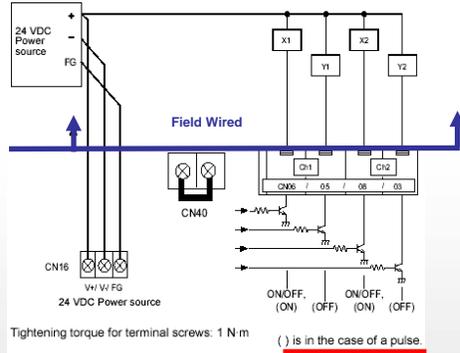
When this contact is "a-contact (normally open), then the dip switch should be set to "a-contact". So when there is error and "a-contact " closes, DIDO realizes the error and sends signal to G-50 web changing the color of icon indicating error.

If its "b-contact (normally close) then DIDO dip switch is set to "b-contact" making DIDO realize there is error when circuit breaks.



Transistor Outputs (Open Collector) Installation Manual Documentation

Transistor Outputs (Open Collector)
* To use these, various settings need to be configured.



- Caution
- When X1, X2, Y1 and Y2 relays are used, select ones that satisfy the following specifications.
- Operating coil
Rated voltage: 24 VDC (Built-in diode)
Power consumption: 0.9 W or less
- (*1) Be sure to use the ones with the voltages rated above. Exceeding the rated voltage may affect the ON/OFF of other outputs.
- (*2) When using a separate power supply for this device, connect GND of the power supply to V- of CN16 of the terminal block of this device.
- (*3) Use a relay with a withstanding voltage of at least 2000 VAC between the coil and contact. Otherwise, there is the likelihood of an electric shock or fire.
- Strip 12±1 mm (15/32 ±1/32 in) of the wire coating and insert firmly into the terminal.
 - Make sure that the copper wiring is not short-circuiting the plates (cover, lower case) or neighboring wires.
 - Perform wiring so that the terminal block is not strained. If strained, use a wire guide or junction terminal to alleviate the stress on the terminal block.
 - Do not connect the wires directly from the top of the control panel to the terminal block. Moisture may enter this device along the wiring and cause electric shock or fire.

Note: The junction terminal CN40 is provided. Use them as relay terminals if necessary.

Switch	Channel	Function Setting	OFF	ON	Remark
SW01	5	Output method setting	Level output	Pulse output	-



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Transistor Output Signal Only Wiring Example 1

Step 2 – Issue “ON” command for light via
 - Web Browser Screen
 - TG-2000A Screen
 - M-Tool Interface

Step 1 - Complete wiring & DIPSW Setting

Step 3 – Verify Output status via
 - Controller LED05 lights
 - M-Tool Interface
 - TG-2000A Screen
 - Web Browser

Note concerning this example Web Browser status (showing on) is ONLY set-up to indicate DIDO controller Output signal. See initial setting for further clarification

12VDC Light

24VDC

NO NC C
Org Yel Blu
X1 (Signal on/off)
Black Red

SW1-1off
SW1-2off
SW1-3off
SW1-4off
SW1-5off

24 VDC Power Supply
V+ V- GND

DDO controller (48C) Input/output status monitoring

Address 004 Attribute DC Address Change 6/17/2007 2:32:44 PM

Ch.No. Operation output status : Operation input status : Error input status : Operation output time (min.) : Operation input time (min.)
 Ch.1 ON OFF Normal 00000 00000

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Non-voltage Contact Inputs Status Example 1

Step 1 - Complete wiring & DIPSW Setting

Step 2 – Issue “ON” command for light via
 - Web Browser Screen
 - TG-2000A Screen
 - M-Tool Interface

Step 3 – Verify Input status via
 - Controller LED12 lights
 - M-Tool Interface
 - TG-2000A Screen
 - Web Browser

Note concerning this example Web Browser status (showing on) is set-up to indicate DIDO controller Input signal (status ON/OFF). See initial setting for further clarification

12VDC Light

24VDC

Black Red
X2 (Status)
Org Yel Blu
NO NC C

NO NC C
Org Yel Blu
X1 (Signal on/off)
Black Red

SW1-1off
SW1-2off
SW1-3off
SW1-4off
SW1-5off

24 VDC Power Supply
V+ V- GND

DDO controller (48C) Input/output status monitoring

Address 004 Attribute DC Address Change 6/17/2007 9:10:43 AM

Ch.No. Operation output status : Operation input status : Error input status : Operation output time (min.) : Operation input time (min.)
 Ch.1 ON OFF Normal 00014 00014

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Non-voltage Contact Inputs Alarm Example 1

Step 1 - Complete wiring & DIPSW Setting

Step 2 - Verify Alarm Signal via
- Controller LED14 light
- M-Tool Interface
- Web Browser
- TG-2000A

Note in an ALARM state
LED12 status light is OFF
M-Tool operation input OFF

Note DIPSW setting
required to Enable
Alarm/Normal signal

SW1-1off
SW1-2off
SW1-3off
SW1-4off
SW1-5off
SW8-1on

Switch added to
break circuit to
show Alarm state

12VDC Light

24VDC Power Supply

24VDC

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Non-Voltage Relay Contact Outputs Installation Manual Documentation

Field Wired

Caution:

- To use X1 and Y1 relay, obtain one that satisfies the following specifications.
Operating coil
[Applied load]
MAX: 24 VDC, 5 W (Built-in diode)
MIN: 5 VDC, 2 mW (Built-in diode)
*1 AC loads cannot be connected.
*2 Provide a power supply (V1, V2) that matches the load and relay to be used.
- To drive a direct load, use ones within the following.
[Applied load]
MAX: 24 VDC, 5 W
MIN: 5 VDC, 2 mW
* AC loads cannot be connected.
- Make sure that the copper wiring is not short-circuiting the plates (cover, lower case) or neighboring wires.
- Perform wiring so that the terminal block is not strained. If strained, use a wire guide or junction terminal to alleviate the stress on the terminal block.
- Do not connect the wires directly from the top of the control panel to the terminal block. Moisture may enter this device along the wiring and cause electric shock or fire.

Switch	Channel	Function Setting	OFF	ON	Remark
SW01	5	Output method setting	Level output	Pulse output	-

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Non-Voltage Relay Contact Outputs Only Wiring Example 2

Step 2 – Issue “ON” command for light via
- Web Browser Screen
- TG-2000A Screen
- M-Tool Interface

Step 1 - Complete wiring & DIPSW Setting

Step 3 – Verify Output status via
- Controller LED05 lights
- M-Tool Interface
- TG-2000A Screen
- Web Browser

Note concerning this example Web Browser status (showing on) is ONLY set-up to indicate DIDO controller Output signal. See initial setting for further clarification

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Non-voltage Contact Inputs Status Example 2

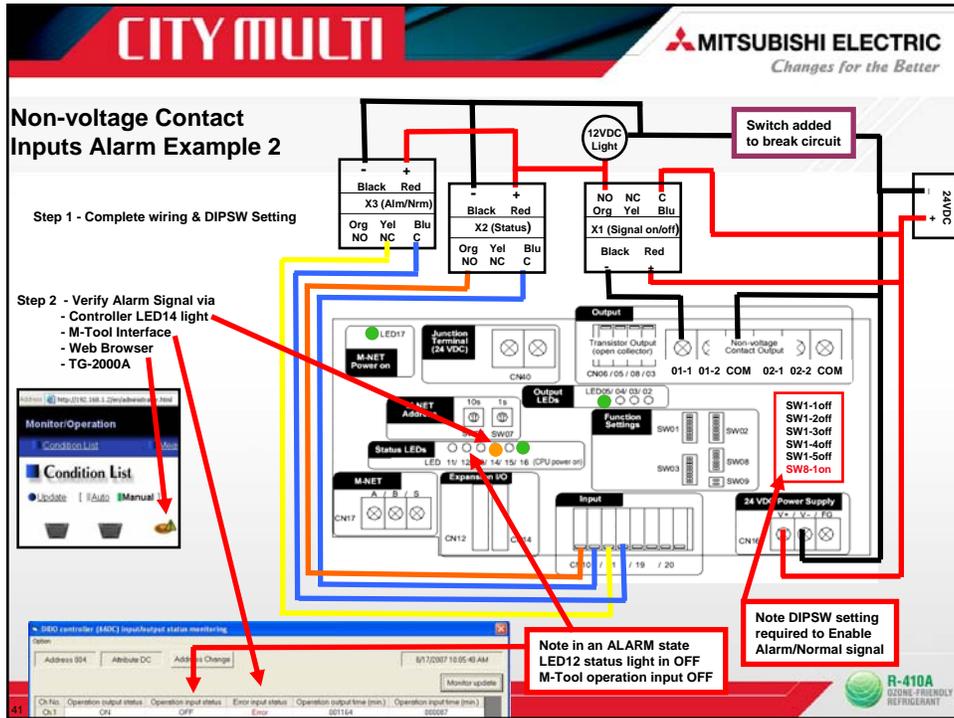
Step 1 - Complete wiring & DIPSW Setting

Step 2 – Issue “ON” command for light via
- Web Browser Screen
- TG-2000A Screen
- M-Tool Interface

Step 3 – Verify Input status via
- Controller LED12 lights
- M-Tool Interface
- TG-2000A Screen
- Web Browser

Note concerning this example Web Browser status (showing on) is set-up to indicate DIDO controller Input signal (status ON/OFF) See initial setting for further clarification

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Web Browser Set-up and Functions

- Logging into G-50 Initial Setting Web Brower
- Initial Setting Passwords
- Web Brower Screen Layout and Terminology
- Controller Address Assignment
- Group Setting Terminology and Examples
- Controls Setting Terminology and Examples

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Step 1: Open "G-50 Initial Setting Web Browser"

Step 2: Type Address to access Initial Web Browser Settings

<http://192.168.1.2/g-50/en/administrator.html>
/fr/ (for French)

G(B)50-A assigned IP Address

Note: Default IP address of G(B)50-A is "192.168.1.1" (Factory setting)

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Step 1: Open "G-50 Initial Setting Web Browser"

Step 2: Type Address to access Initial Web Browser Settings

<http://192.168.1.2/g-50/en/administrator.html>
/fr/ (for French)

G(B)50-A assigned IP Address

Note: Default IP address of G(B)50-A is "192.168.1.1" (Factory setting)

User	Default user name	Default password	Available functions
Maintenance user	initial	init	Initial settings Date and Time, Basic System, Groups, Interlocked LOSSNAY, Blocks
			Functions 1 E-Mail, Peak cut, Measurement
			Functions 2 Set Temperature Range Limit, Night Mode Schedule, Auto-changeover
Building manager	administrator	admin	Out of the functions listed above, the items to which access rights have been given on the user settings screen are available.

Note: The user name and the password for building manager are the same as those of the building manager of the Web for monitoring/operation.

Note: Maintenance users can make available to the administrator only the information necessary for normal operations (group name setting etc.)

Note: It is recommended to change the user name and password not to allow users other than the building manager to change the settings.

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Initial Settings | Date and Time | Basic System | **Groups** | Functions 1 | Functions 2 | User Settings

Date and Time

Day: 28 / Month: 08 / Year: 2007

Hour: 08 : Minute: 41 : Second: 37

Automatically adjust clock for daylight saving changes
[Canada]

Refresh Save Settings

Groups

Group name for Web: []
Group name for LCD of the G-50A: []

Group	Unit	System Structure
1	1	101
2	2	102
3		
4	1-004	4-1
5	11-004	

Refresh Save Settings

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Once logged in Date & Time page appear Set Date and Time for G(B)-50A controller

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Initial Settings | Date and Time | Basic System | **Groups** | Functions 1 | Functions 2 | User Settings

Groups

Group name for Web: []
Group name for LCD of the G-50A: []

Group	Unit	System Structure
1	1	101
2	2	102
3		
4	1-004	4-1
5	11-004	

Refresh Save Settings

Group number

Unit address

Controller address

Indoor unit symbol

System controller assignment

Must always Save Setting to store changes

Group name for Web

Retrieves data from G(B)50-A

Group name for LED of the G-50A only

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Initial Settings

Groups

Group name for Web
Group name for LCD of the O-55A

System Structure

1 [i] 1 101
2 [i] 2 102
3 [i] 3
4 [i] 4
5 [i] 5

Refresh Save Settings

Select Unit Addresses

Air-conditioners
 General Equipment (via PAC-Y066DCA)

Unit Addresses

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Cancel OK

Click on Icon opening "Select Unit Address"

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Initial Settings

Groups

Group name for Web
Group name for LCD of the O-55A

System Structure

1 [i] 1 101
2 [i] 2 102
3 [i] 3
4 [i] 4
5 [i] 5

Refresh Save Settings

Select Unit Addresses

Air-conditioners
 General Equipment (via PAC-Y066DCA)

Unit Addresses

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
41	42	43	44	45	46	47	48	49	50

Allow Operation
 In batch and on individual group

Contact Points

1	2	3	4	5	6
---	---	---	---	---	---

Output status
 Input status

Cancel OK

Each DIDO controller has 6 "Contact Points"

Each "Group" is able to control Max.16 GE (General Equipment) "Contact Points"
Each "Group" will represent one (1) icon on G(B)-50 or TG-2000A screens
Also each "Group" is able to control Max.16 IC (Indoor units)
Combination of GE and IC in one group is not permitted

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Step 1: Highlight "General Equipment" button "Select Unit Address" box will open

Step 2: Toggle through the various icons available

Step 3: Select address to which controller has been programmed via rotary dials

Step 4: Select the "Contact Points" to be used

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Example 1
Single Group assigned Max. 16 Contact Points
Three DIDO controller addressed 03,04,05

Max. 16 GE per Group

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Example 2
Single M-NET Address used
Single Contact Point used

Controller assigned address 04

This example only One (1) contact point are being used

4-1
4 = Address
1 = Channel

Single contact point attached to Address 04

Determine required parameters

Web browser showing single icon for device ON/OFF.
Output status = command sent by controller (lights ON)
Input status = light status feedback from device (lights ON)

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Example 3
Single M-NET Address used
Two Contact Point used

Controller assigned address 04

This example only Two (2) contact point are being used

Two contact points Ch1 & Ch2 attached to Address 04.

Determine required parameters

Web browser showing single icon for device ON/OFF.
ON signal sent, icon Lights indicates ON (Output signal)
Issuing signal for points 1 (Ch1) and point 2 (Ch2)

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Example 4
Multiply Groups used
Individual Contact Point assigned

Each time contact point is assigned to different Group individual icons are created

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Example 5
Batch & Individual Set-up Control

1) Individual lights can be turned ON/OFF
2) Selecting "Batch Operations" both lights can be turned ON/OFF with one command

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Example 6
Individual Set-up Control

1) Individual lights can only be turned ON/OFF

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Example 7
No Operations Set-up Control

1) No control is permitted
2) Output status or Input status monitoring only

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Web Browser Access and Functions

- Logging into G-50 Web Brower
- Web Browser Pin Code Activation Process
- Web Brower Access Passwords
- Web Monitoring Screen Terminology

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Step 1: Open " G-50 Web Browser"
Web Browser Pin Code required

Step 2: Type Address to access Initial Web Browser Settings

`http://192.168.1.2/en/administrator.html`

`/fr/ (for French)`

G(B)50-A assigned IP Address

Note: Default IP address of G(B)50-A is "192.168.1.1" (Factory setting)

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Login Page Registration of Optional Functions

Type your user name and password.

User name:

Password:

Registration of Optional Functions Login Page

Selecting Optional Function

(a) Web Monitor
 (b) Annual Schedule, Weekly Schedule
 (c) Charge
 (d) Sending Error Mail
 (e) Saving Energy Control
 (f) Saving Energy Control/Peak Cut
 (g) Personal Web
 (h) Maintenance Tool

xxxx - xxxx - xxxx - xxxx

Software Version
Ver. 3.20

Ensure most recent software version has been updated →

Select pin code to activate →

Enter provided pin code →

Select register license button →

Pin code successfully entered →

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Login Page Registration of Optional Functions

Type your user name and password.

User name: administrator

Password: xxxx

User	Web page address	Default user name	Default password	Accessible functions
Public users	http:// [IP address of G-50A]/ index.html	guest	guest	Monitor / operation
Managers	http:// [IP address of G-50A]/ administrator.html	administrator	admin	Monitor / operation Measurement monitor Schedule settings (Optional function) Malfunction log monitor Date/time adjustment User registration Send mail log monitor Optional function registration

Note: You can register a maximum of 50 public users and it is possible to individually specify which air conditioners can be operated by each user. (The use of this function requires a license registration.)

Note: It is recommended to change the user name and password not to allow users other than the building manager to change the settings.

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MITSUBISHI Air Conditioner Control System - Microsoft Internet Explorer

Address: http://192.168.1.2/en/administrator.html

Monitor/Operation Schedule Settings Malfunction Log System Settings Maintenance

Condition List Measurement List Malfunction List Filter Sign List

Condition List

Update [Auto Manual] Batch Operations

Select the operation units

- All Air-conditions
- Other Equipment

Block

Condition List

Other Equipment

ON OFF

Condition List

2nd Floor Lights

ON OFF

Right click on icon

General Equipment icons may represent:
a) Individual contact points
b) Multiply contact points

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M-Tool Set-up and Functions

- M-Tool Screen Layout Terminology
- Controller Interlock Enable/Disable Function
- Controller Setting & Interlock Terminology
- DIP Switch Monitoring
- Interlock Special Condition Setting
- Interlock Screen Layout Terminology

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M-NET Maintenance Tool - MN CONVERTER [Maintenance mode]

Connect Infor Monitor Malfunc Log Optional Set Operation

Address 0 1 2 3 4 5 6 7 8 9 Address 130 131 132 133 134 135 136 137 138 139

0 IC IC [DC]

10

20

30

40

50 OC

60

70

80

90

100 RC RC

110

120

190

200 TR

210

220

230

240

250

Indicates last Error which was generated but may have already been cleared. Once the Error Log is totally purged the following will be shown as below

66DC = DIDO Controller

DC = DIDO controller

Address assigned to controller

Individual Monitor

Address	Attribute	Model	Ver	G_NO	Capacity	Branch/Pair	ON/OFF	Mode	Intake	Set	Error CD
4	DC	66DC		3			OFF				---

Connecting Information

Address	Attribute	Model	Ver	G_NO	Capacity	Branch/Pair	ON/OFF	Mode	Intake	Set	Error CD
201	TR										

Friday, August 31, 2007 13:41

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M-NET Maintenance Tool - MN CONVERTER [Maintenance mode]

File Option Print Help

Automatic searching
IC free contact...
DIDO/AI/PI
Error notification mode
Address 0
0 IC

Monitor Malfunc

AI/PI setting
DIDO setting
DIDO/AI interlock setting
Interlock control option

Interlock control option

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

1. This feature must not be used for disaster prevention or security purposes. (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 functions 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 the 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.

I agree Password

OK Close

For Interlock control function to operate you need to complete the following:

- 1) Read disclaimer
- 2) Check box "I agree"
- 3) Enter password and select "OK" (Password used by Distributor)

Applies to both DIDO & AI Controllers

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M-NET Maintenance Tool - MN CONVERTER [Maintenance]

File Option Print Help

- Automatic searching
- IC Free contact...
- DIDO/AI/PI
- Error notification mode

Address 0

- AI/PI setting
- DIDO setting
- DIDO/AI interlock setting
- Interlock control option

Steps required to pick the desired function

- 1) Select "Options"
- 2) Select "DIDO/AI/PI"
- 3) Select either of the four items listed
- 4) Select the device. This example DC (04)

DIDO controller (660C) input/output status monitoring

Ch.No.	Operation output status	Operation input status	Error input status	Operation output time (min.)	Operation input time (min.)
Ch.1	OFF	OFF	Normal	007453	004971
Ch.2	OFF	OFF	Normal	004259	000000
Ch.3	OFF	OFF	Normal	000000	000000
Ch.4	OFF	OFF	Normal	000000	000000
Ch.5	OFF	OFF	Normal	000000	000000
Ch.6	OFF	OFF	Normal	000000	000000

DIDO controller (660C) Interlock control setting

Interlock operation conditions setting

Emergency stop detection Interlock disable [Disable] [Disable] [Disable] [Disable] [Disable] [Disable]

DC communication error detection Interlock disable [Disable] [Disable] [Disable] [Disable] [Disable] [Disable]

Interlock operation error Error report output [Output] [Output] [Output] [Output] [Output] [Output]

Note: for enable Interlocks a password is required

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DIDO controller (660C) input/output status monitoring

Option

Address 004 Attribute DC Address Change 8/31/2007 1:52:26 PM

Monitor update

Ch.No.	Operation output status	Operation input status	Error input status	Operation output time (min.)	Operation input time (min.)
Ch.1	OFF	OFF	Normal	007453	004971
Ch.2	OFF	OFF	Normal	004259	000000
Ch.3	OFF	OFF	Normal	000000	000000
Ch.4	OFF	OFF	Normal	000000	000000
Ch.5	OFF	OFF	Normal	000000	000000
Ch.6	OFF	OFF	Normal	000000	000000

GE operational Input time durations

DIDO Signal Output time durations

GE Error Input status

General Equipment (GE) Input status

DIDO Signal Output status

Output control File output Close

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Changes for the Better

Channel On/Off Operation from M-Tool

Output control

Ch.1 Operation Stop Ch.4 Operation Stop
 Ch.2 Operation Stop Ch.5 Operation Stop
 Ch.3 Operation Stop Ch.6 Operation Stop

The pressed (sunken) button shows the current status. Ex, Ch.1 "Stop"

1) Time must be set via M-Tool for DIDO controller if G(B)-50 or TG-2000A controllers are not used
2) G(B)-50 or TG-2000A controller will set DIDO time

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Select which format you wish

Mni Tool32
Please select symbols for use as delimiters
Use , Use ; Cancel

Data which is provided

Ch No.	Operation output status	Operation input status	Error input status	Operation output time (min.)	Operation input time (min.)
Ch.1	OFF	OFF	Normal	7453	4971
Ch.2	OFF	OFF	Normal	4259	0
Ch.3	OFF	OFF	Normal	0	0
Ch.4	OFF	OFF	Normal	0	0
Ch.5	OFF	OFF	Normal	0	0
Ch.6	OFF	OFF	Normal	0	0

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DIDO controller (66DC) input/output status monitoring

Option
DIP switch setting monitoring...
Operation time reset... DC

Ch No.	Operation output status	Operation input status
Ch.1	OFF	
Ch.2	OFF	

Address 004 Attribute DC
Monitor Date 9/4/2007 10:25

Data which is provided

	SW01	SW02	SW03	SW08	SW09
1	OFF	OFF	OFF	ON	OFF
2	OFF	OFF	OFF	OFF	OFF
3	OFF	OFF	OFF	OFF	
4	ON	OFF	OFF	OFF	
5	OFF	OFF	OFF	OFF	
6	OFF	OFF	OFF	OFF	
7	OFF	OFF	OFF		
8	OFF	OFF	OFF		

DIP switch setting monitoring

SW01 SW02 SW03 SW08 SW09

1 OFF ON
2 OFF ON 2 OFF ON 2 OFF ON 2 OFF ON 2 OFF ON
3 OFF ON 3 OFF ON 3 OFF ON 3 OFF ON 3 OFF ON
4 OFF ON 4 OFF ON 4 OFF ON 4 OFF ON 4 OFF ON
5 OFF ON 5 OFF ON 5 OFF ON 5 OFF ON 5 OFF ON
6 OFF ON 6 OFF ON 6 OFF ON 6 OFF ON 6 OFF ON
7 OFF ON 7 OFF ON 7 OFF ON 7 OFF ON 7 OFF ON
8 OFF ON 8 OFF ON 8 OFF ON 8 OFF ON 8 OFF ON

File output Close

The pressed (sunken) button shows the current status. Ex, SW01-4 ON

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DIDO controller (66DC) input/output status monitoring

Option
DIP switch setting monitoring...
Operation time reset... DC Address Change 9/4/2007 10:34:28 AM

Monitor update

Ch No.	Operation output status	Operation input status	Error input status	Operation output time (min.)	Operation input time (min.)
Ch.1	OFF	OFF	Normal	007453	000000
Ch.2	OFF	OFF	Normal	000000	000000
Ch.3	OFF	OFF	Normal	000000	000000
Ch.4	OFF	OFF	Normal	000000	000000
Ch.5	OFF	OFF	Normal	000000	000000
Ch.6	OFF	OFF	Normal	000000	000000

Operation time reset

Ch No.	Operation output time	Operation input time
Ch.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ch.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ch.3	<input type="checkbox"/>	<input type="checkbox"/>
Ch.4	<input type="checkbox"/>	<input type="checkbox"/>
Ch.5	<input type="checkbox"/>	<input type="checkbox"/>
Ch.6	<input type="checkbox"/>	<input type="checkbox"/>

Send settings Close

Resetting of time values

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Changes for the Better

DIDO controller (660C) Interlock control setting

Option: Address 004 Attribute DC Address Change 9/4/2007 11:40:40 AM

Interlock No.	Ch. No.	Interlock operation conditions	Interlock target	Transmission intervals (min.)	Output	Interlock control contents
1	Ch.1	Operation	001	-	ON/OFF Operation	Interlocked LOSSNAY unit Run
2	Ch.1	Operation	001	-	Mode Cool	
3	Ch.1	Operation	001	-	Set temp. 22.0°C	
4	Ch.1	Error occurrence	001	-	ON/OFF Stop	Interlocked LOSSNAY unit Run/High
5	Ch.1	Error reset	001	-	ON/OFF Operation	Interlocked LOSSNAY unit Run
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Interlock special conditions setting: Ch.1 Ch.2 Ch.3 Ch.4 Ch.5 Ch.6
Emergency stop receive: Interlock disable [Disable] [Disable] [Disable] [Disable] [Disable] [Disable]

SC communication error: Interlock operation error

Not applicable to DIDO controller

Interlock operation (start/stop etc.) as shown

The unit address of the interlock target is shown

The Ch No. of the interlock source and the interlock condition. (Operation, Stop, Error occurrence and Error Reset are shown)

The pattern No. of interlock setting is shown. Up to 24 patterns can be set.

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DIDO controller (660C) Interlock control setting

Option: Address 004 Attribute DC Address Change 9/4/2007 11:40:40 AM

Interlock No.	Ch. No.	Interlock operation conditions	Interlock target	Transmission intervals (min.)	Output	Interlock control contents
1	Ch.1	Operation	001	-	ON/OFF Operation	Interlocked LOSSNAY unit Run
2	Ch.1	Operation	001	-	Mode Cool	
3	Ch.1	Operation	001	-	Set temp. 22.0°C	
4	Ch.1	Error occurrence	001	-	ON/OFF Stop	Interlocked LOSSNAY unit Run/High
5	Ch.1	Error reset	001	-	ON/OFF Operation	Interlocked LOSSNAY unit Run
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

Interlock special conditions setting: Ch.1 Ch.2 Ch.3 Ch.4 Ch.5 Ch.6
Emergency stop receive: Interlock disable [Disable] [Disable] [Disable] [Disable] [Disable] [Disable]

SC communication error: Interlock operation error

Each Interlock No. 1-24 represents an individual operation

Ch.1 Operation ON (Light is turned ON via web browser):

Line 1 = Turns Interlock target "ON"
Line 2 = Puts Interlock target to "Mode Cool"
Line 3 = Puts Interlock target to "22°C"

Upon Error occurrence (communication or power loss)

Line 4 = Turns interlock target "OFF"

Upon Error rest (communication or power is restored)

Line 5 = Turns interlock target "ON"

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DIDO controller (66DC) Interlock control setting

Option

When the emergency stop command is received from G(B)-50A, will determine whether to enable or disable the interlock operation for individual channels.

Emergency stop receive: Interlock disable setting

Input channel

Ch1 Disable

Ch2 Disable

Ch3

Change in input contact status

DIDO Controller (66DC)

M-NET

G(B)-50A

Emergency stop command

Interlock operation

Interlock special conditions setting

	Ch.1	Ch.2	Ch.3	Ch.4	Ch.5	Ch.6
Emergency stop receive : Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
SC communication error detection : Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
Interlock operation error : Error report output	Output	Output	Output	Output	Output	Output

The pressed (sunken) button shows the current status. Ex, Ch.1 "Disable"

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DIDO controller (66DC) Interlock control setting

Option

Address 004 Attribute DC Address Change 9/4/2007 11:40:40 AM

When Communication error is detected from G(B)-50A, will determine whether to enable or disable the interlock operation for individual channels.

SC communication error detection: Interlock disable setting

Input channel

Ch1 Disable

Ch2 Disable

Ch3

Change in input contact status

DIDO Controller (66DC)

M-NET

G(B)-50A

Communication error

Interlock operation

Interlock special conditions setting

	Ch.1	Ch.2	Ch.3	Ch.4	Ch.5	Ch.6
Emergency stop receive : Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
SC communication error detection : Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
Interlock operation error : Error report output	Output	Output	Output	Output	Output	Output

The pressed (sunken) button shows the current status. Ex, Ch.1 "Enable"

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DIDO controller (66DC) Interlock control setting

Option
Address 004 Attribute DC Address Change 9/4/2007 11:40:40 AM

When Interlock Ch# operation error is detected, signal will determine whether to Output "Error report" interlock operation for individual channels.

3	Ch.1	Operation	001	Set temp. 22.0°C
4	Ch.1	Error occurrence	001	ON/OFF Stop Interlocked LOSSNAY unit Run/High
5	Ch.1	Error reset	001	ON/OFF Operation Interlocked LOSSNAY unit Run
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

Interlock operation error: Error report output setting

Output channel

Indoor unit M-NET DIDO Controller (66DC) Ch1 Output Ch2 Output Ch3 Output Error report No response

Interlock special conditions setting

	Ch.1	Ch.2	Ch.3	Ch.4	Ch.5	Ch.6
Emergency stop receive Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
SC communication error detection Interlock disable	Disable	Disable	Disable	Disable	Disable	Disable
Interlock operation error Error report output	Output	Output	Output	Output	Output	Output

The pressed (sunken) button shows the current status. Ex, Ch.1 "Output" (OFF)

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DIDO controller (66DC) interlock control setting

Interlock No. 1

Ch No. Ch.1

Interlock operation conditions

Operation

Interlock control contents

Interlock target 1

DIDO operation Operation Stop

ON/OFF Operation Stop Test-run Inter

Mode Fan Dry Cool Heat Auto Ventilation

Set temp. °C

The pattern No. of interlock setting is shown

Set the input Ch. No. of interlock source

Set the interlock condition of the interlock source input channel (Ch. No.)

Select the unit address to be controlled

Select the channel to be output, and set whether to (Operate or Stop) the selected channel

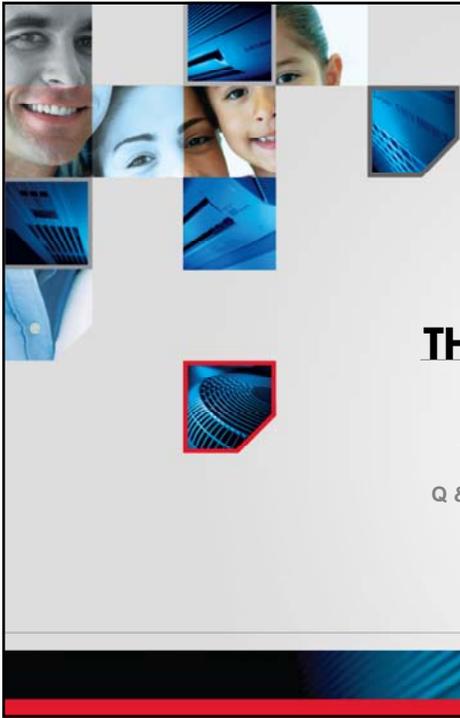
ON/OFF as well Lossnay must be set to "Enable" (Operation, Stop, Test-run)

Mode selection (Fan, Dry, Cool, Heat)

Input set temperature value

OK Close

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THANK YOU VERY MUCH!

Q & A

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