

# Smoke Detector

# MIR-64/MDI-64



**GASDNA Co.,Ltd** 101, Bukhang-ro 193beon-gil, Seo-gu, Incheon, 22856, Republic of Korea

Tell: +82-32-584-7420 Fax: +82-32-584-7424 E-mail: sales@gasdna.com Web: www.gasdna.com

[www.gasdna.com](http://www.gasdna.com)

# CONTENTS

■ 1. Product Introduction	3
• Overview and Applications	3
• Limitations of existing fire prevention at the electrical panel	3
• Specialized temperature monitoring measurements	3
• Product Features	3
• Fields of Industry of Application	3
• Product Specifications MIR-64 / MDI-64 Specifications Table, MIR-64 Measurement Range, MIR-64 / MDI-64 Measurement Range Screen	4
• MIR-64 Parts Name	6
• MDI-64 Parts Name	6
• Product Dimension Drawings MIR-64, MDI-64	7
■ 2. Product Installation and Connection Diagram	8
1) Instructions of MID-64 Installation 7- inch [Panel Cutout Drawing], 10- inch [Panel Cutout Drawing], Bracket Mounting	8
2) 2.2 MIR-64 / MDI-64 Connection Diagram MIR-64, MDI-64	11
■ 3. System Configuration Plan	12
• Communication Configuration	12
• RS 485 communication	12
• Ethernet Communication	13
■ 4. Descriptions of Monitoring Configuration Plan	14
• MDI-64 Basic Screen	14
■ 5. Remote Screen Configuration	16
1) SCADA SYSTEM	16
2) Entry to Setup Screen	16
3) HMI Server Setup	17
4) HMI Network Setup	17
5) ComfileHMI Editor Setup	18
6) Remote Connection Screen	20

Better Technology, Better Customer Service, Better Quality

**GASDNA CO.,LTD**

## 1. Product Introduction

- **Overview and Applications**

Electricity consumption is rapidly increasing with the development of the industry and the resulting fire is also increasing, which makes it a suitable product for prevention of the fire at the high voltage distribution panel, culvert, or secondary battery storage area.

- **Limitations of existing fire prevention at the electrical panel**

The existing fire prevention at the electrical room has been made by measuring the temperature inside the panel or using a smoke detector.

It has been difficult to prevent the fire in advance by the existing method because the method is to detect a fire after it has broken out.

However, Mir-64 not only can prevent a fire in advance by measuring the temperature of a specific part, but also can accurately tell which part of temperature is being measured with a laser pointer. In addition, 24-hour real-time temperature measurement is possible.

- **Specialized temperature monitoring measurements**

Mir-64/Mdi-64 products can not only monitor specific areas with much high temperature load but also measure whether there is a problem in the sub-zero temperature section.

- **Product Features**

Up to 10 MDI-64 products can be used with a single touch screen, and can be controlled by simple monitoring.

The MIR-64 product can be installed in the measurement position, and the MDI-64 product can be installed in the desired position within a 1KM radius.

ETHERNET communication can be used to monitor or control in real time in the control or situation room.

It can be connected to other communication systems using RS232 communication.

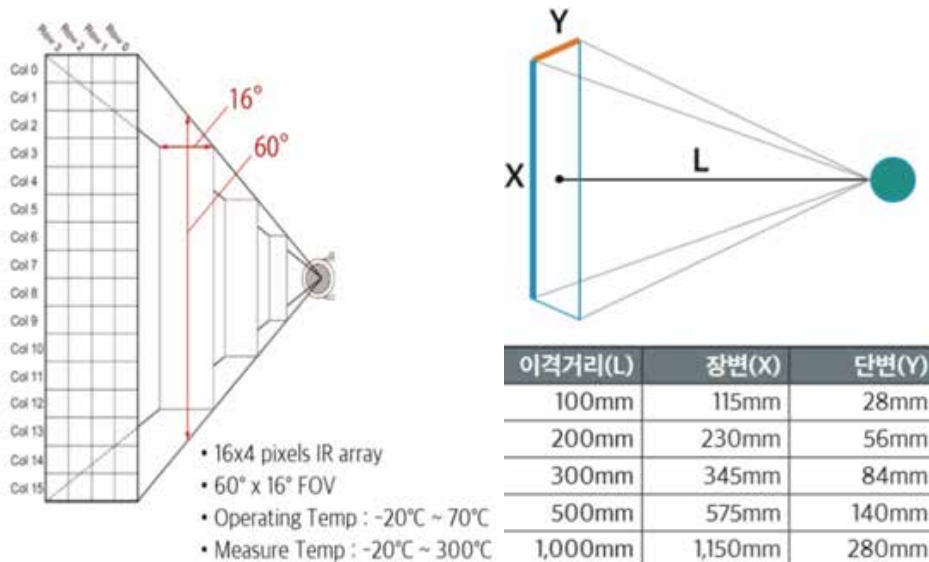
- **Fields of Industry of Application**

- Steel electrical panel
- KEPCO distribution board
- Culvert
- Semiconductor equipment
- Secondary cell charging/discharging device
- Secondary cell storage

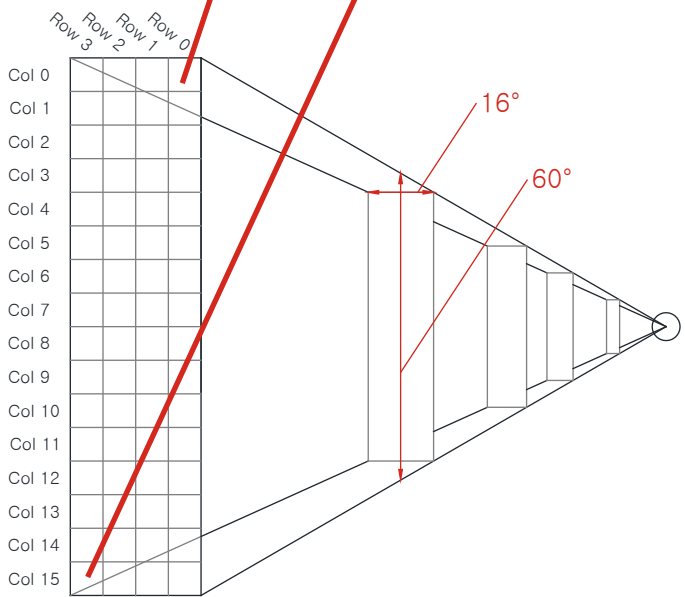
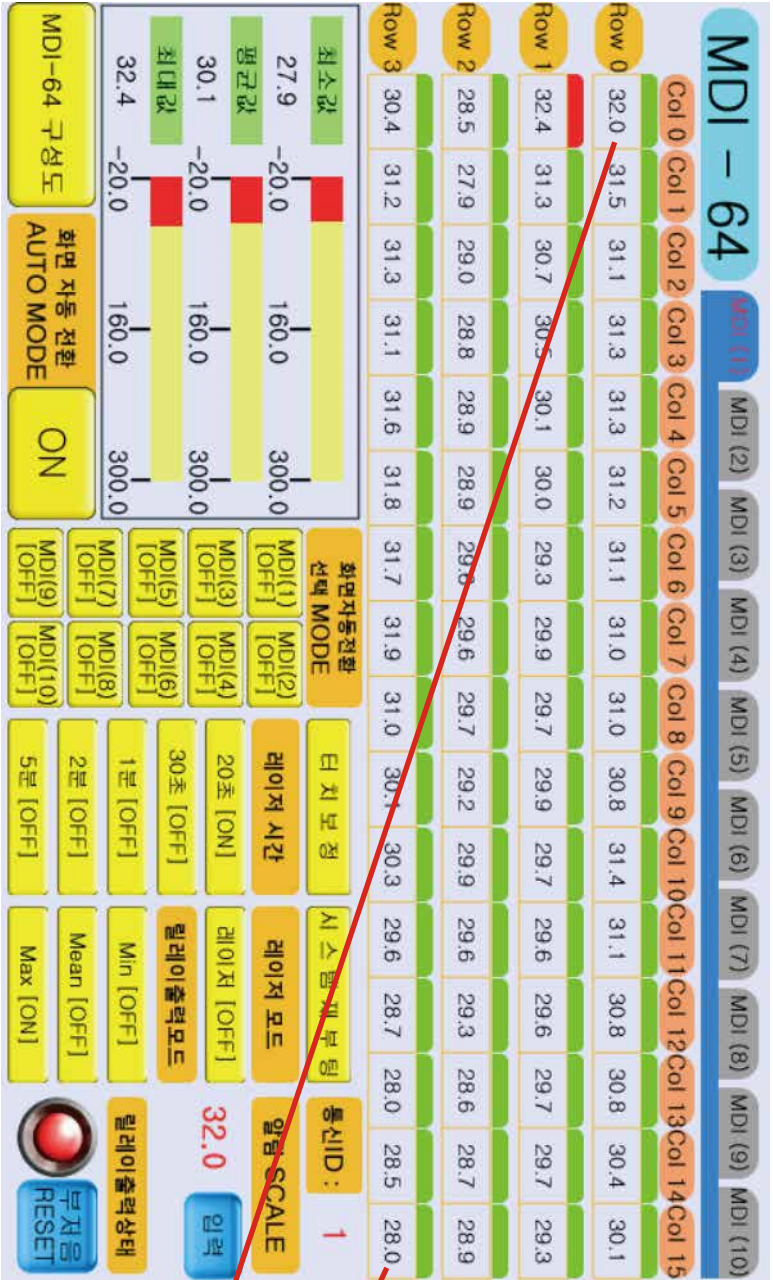
• Product Specifications

Model name	MIR-64	MDI-64
Power source	DC - 24V	DC - 12~24V
Size	48.6 mm x 34 mm	7-inch/800mm x 480mm
Power consumption	0.84W	5W (0.4A@12V)
Temperature measuring range	-20℃~300℃	-
Measurement method	16x4 infrared temperature measurement (64 points)	-
Measuring cycle	5 Seconds	-
Error range	1℃	-
Measurement range	See photo below	-
Relay output	60℃ SPST(NO)	-
Communication port	RS485x1	RS232x2, RS485x1, Ethernetx1
Case		Front waterproof type
Touch method		Pressure sensitive type (resistive film type)
Sound		Speaker (voice file)
Ambient temperature during operation		-10℃~60℃
Storage temperature		-20℃~70℃
Operating humidity		5~95% RH (Non-Condensing)

\* MIR-64 Measurement Range (with Laser Point Switch shown)

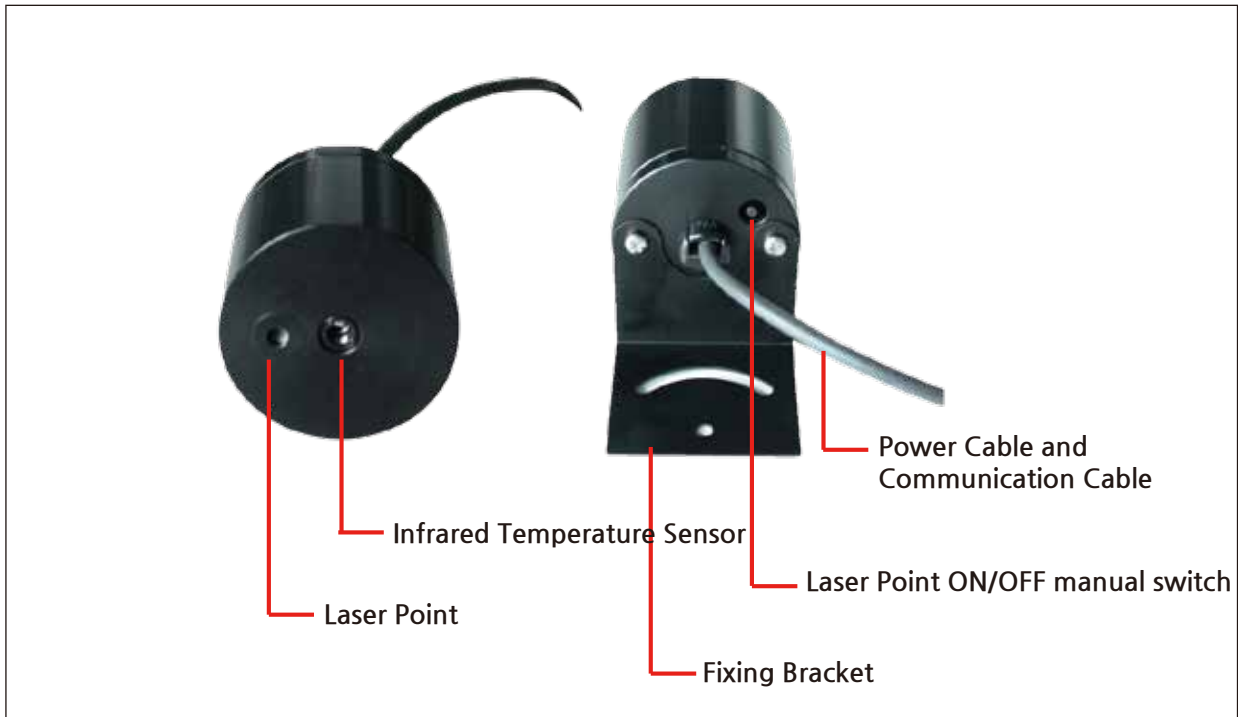


\* MIR64 / MDI64 Measurement

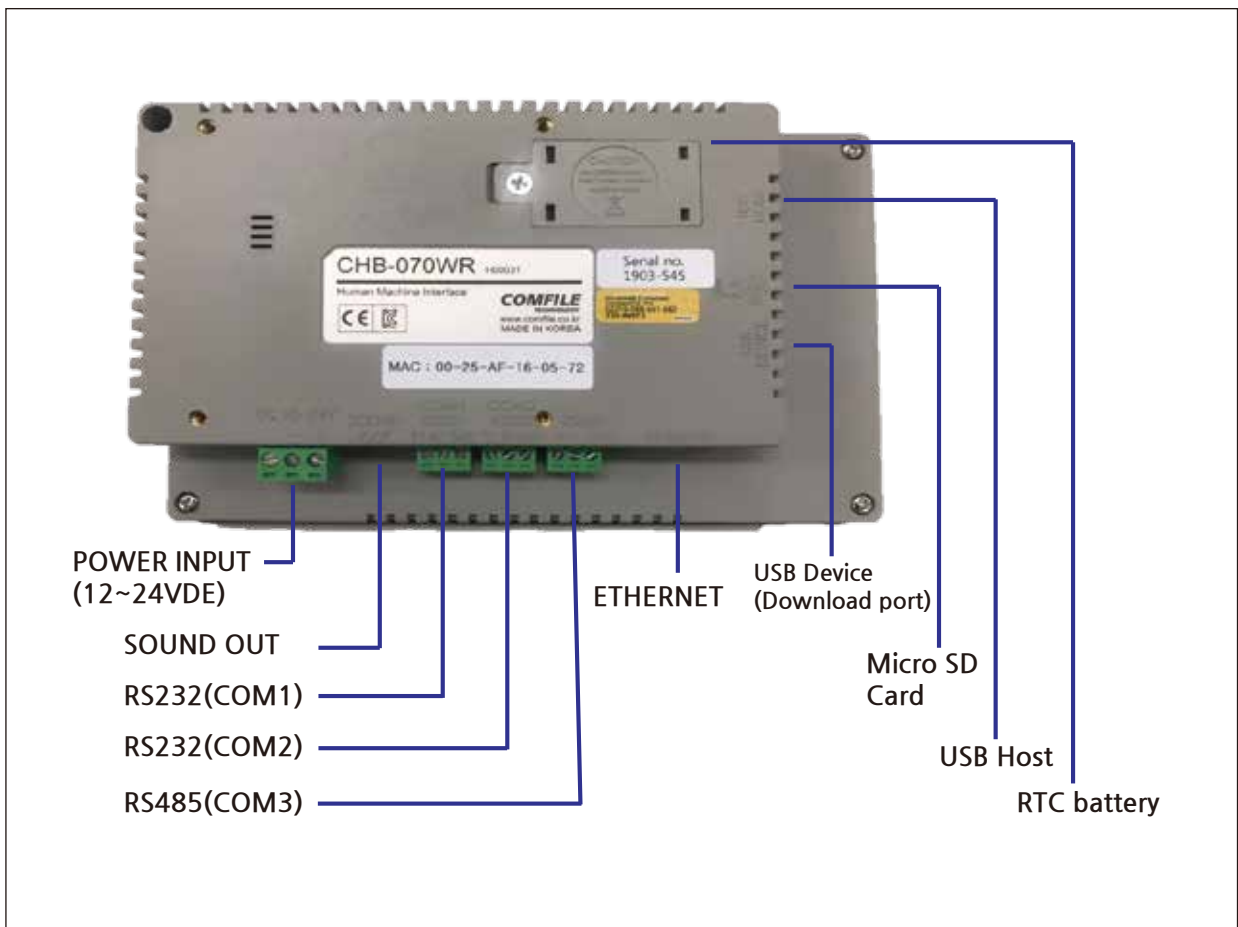


- \* 16x4 pixels IR array
- \* 60° x 16° FOV
- \* Operating Temp : -20°C ~ 70°C
- \* Measure Temp : -20°C ~ 300°C

- The name of MIR-64 Product Parts

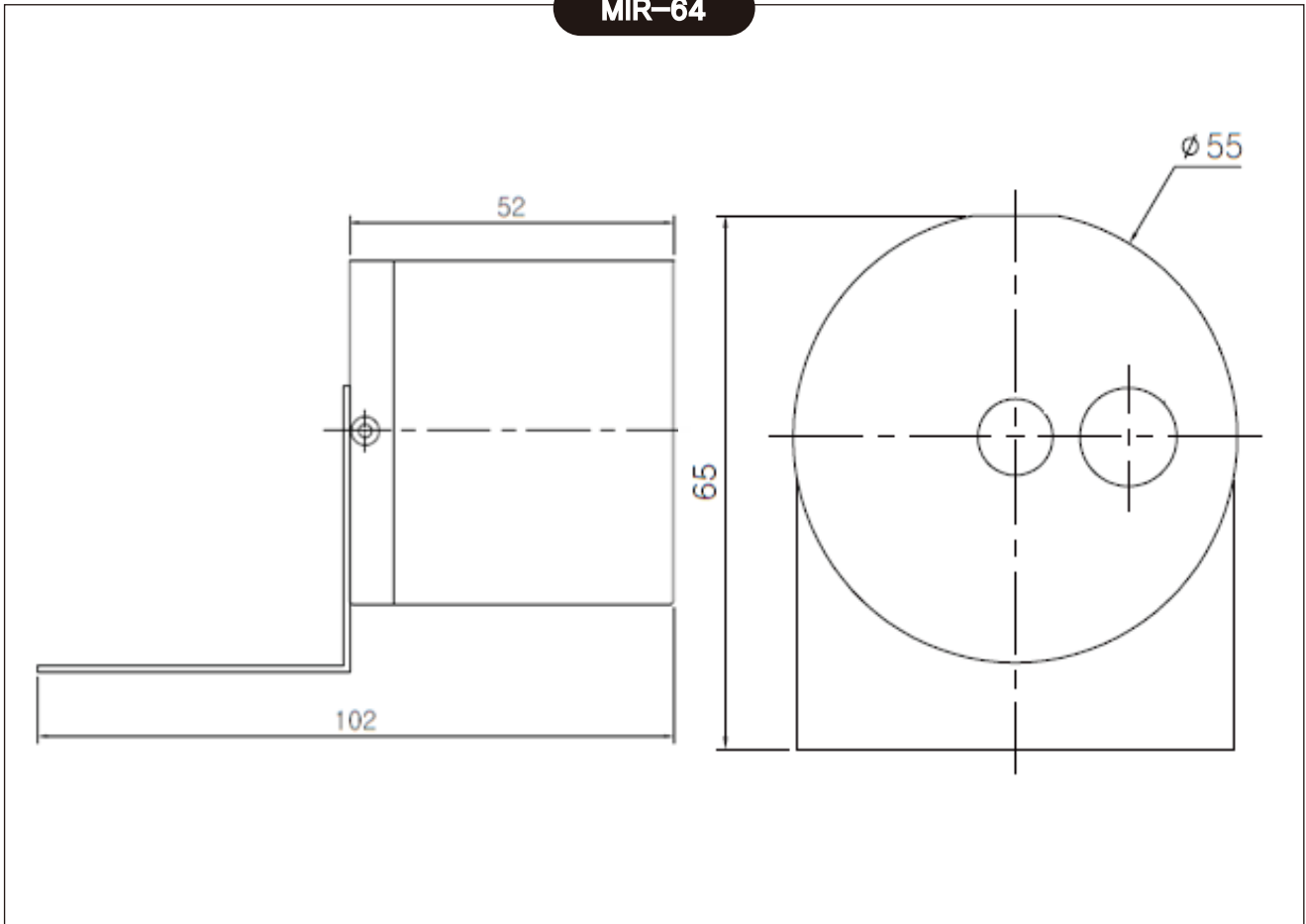


- The name of MDI-64 Product Parts

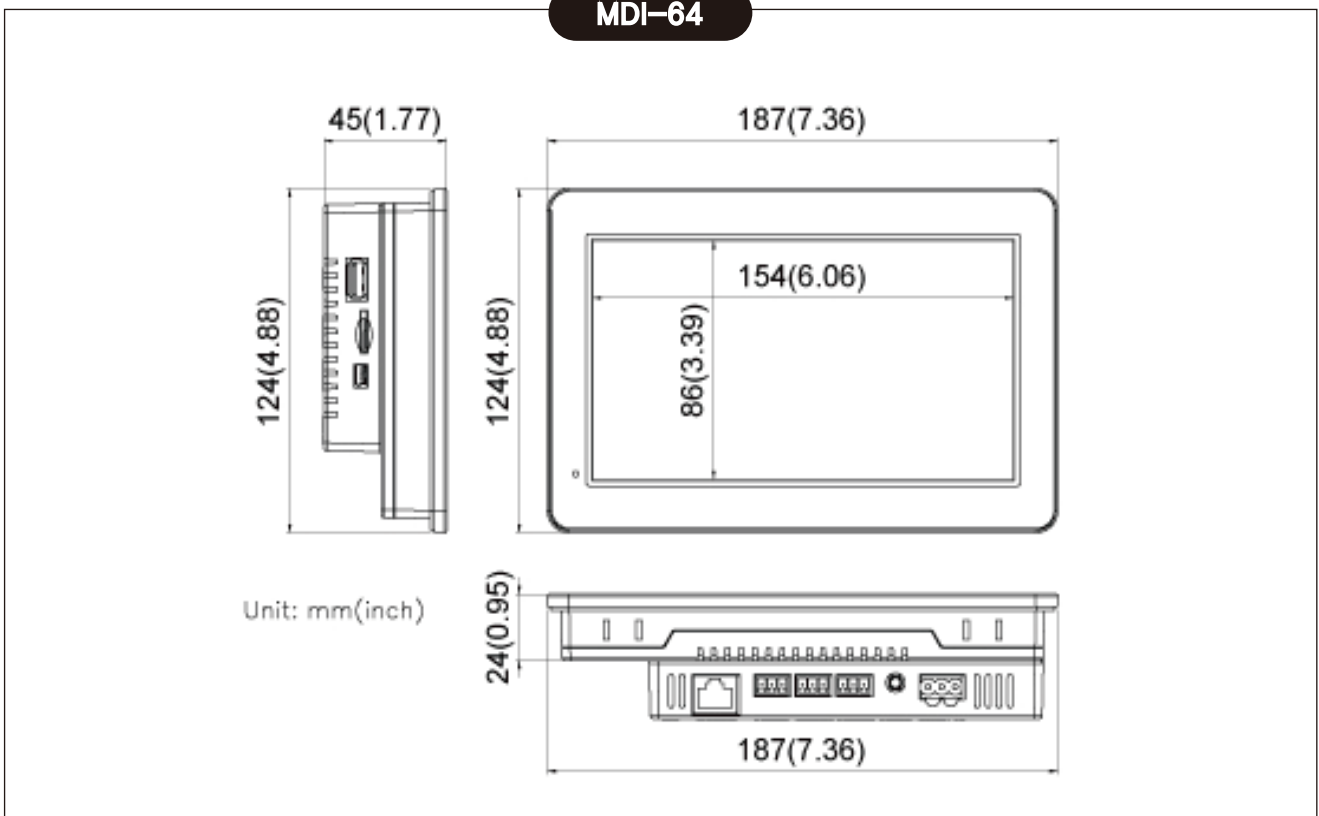


- Size

**MIR-64**



**MDI-64**

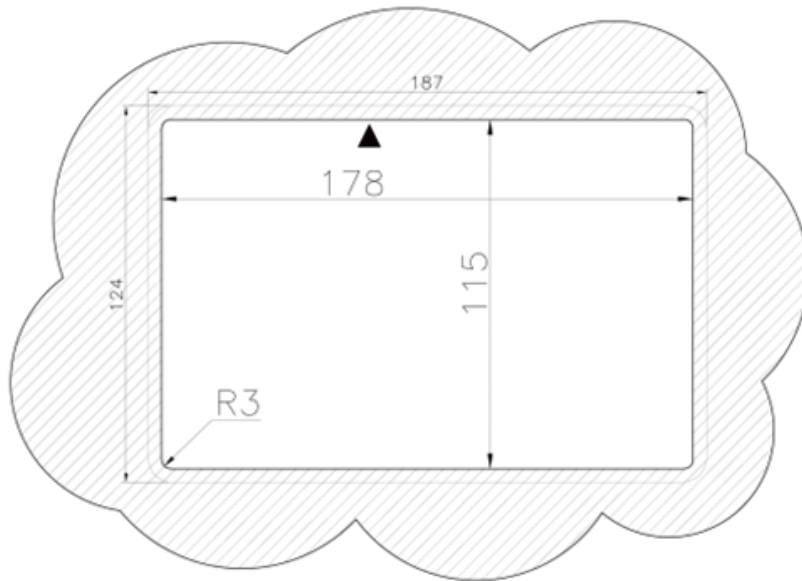


## 2. Product Installation and Connection Diagram

### 1) Instructions of MID-64 Installation

- 7 -inch [panel Cutout Drawing]

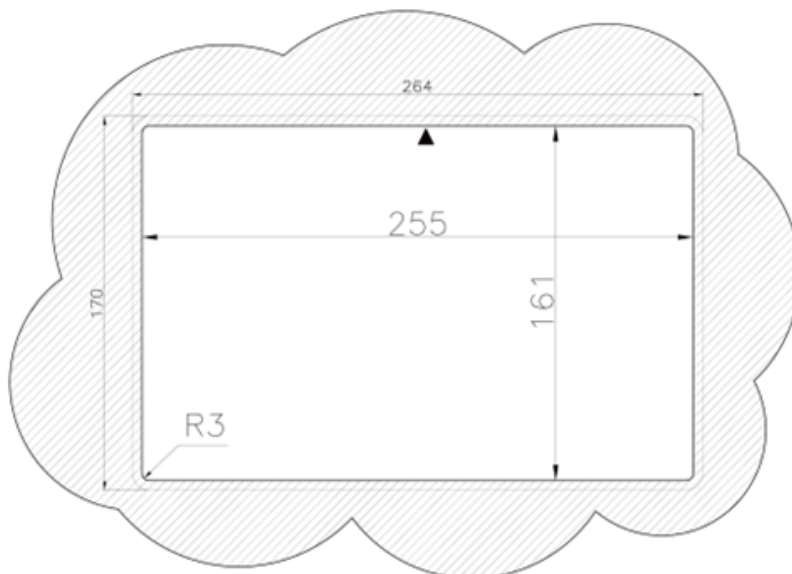
Applicable panel thickness: 1.6 ~ 5.0mm / Strong panel such as steel plate should be used for effective dust-proof and waterproof.



Unit: mm

- 10-inch [panel Cutout Drawing]

Applicable panel thickness: 1.6 ~ 5.0mm / Strong panel such as steel plate should be used for effective dust-proof and waterproof.

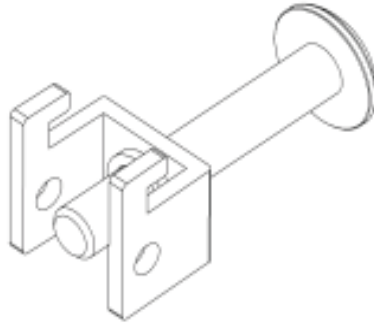


Unit: mm

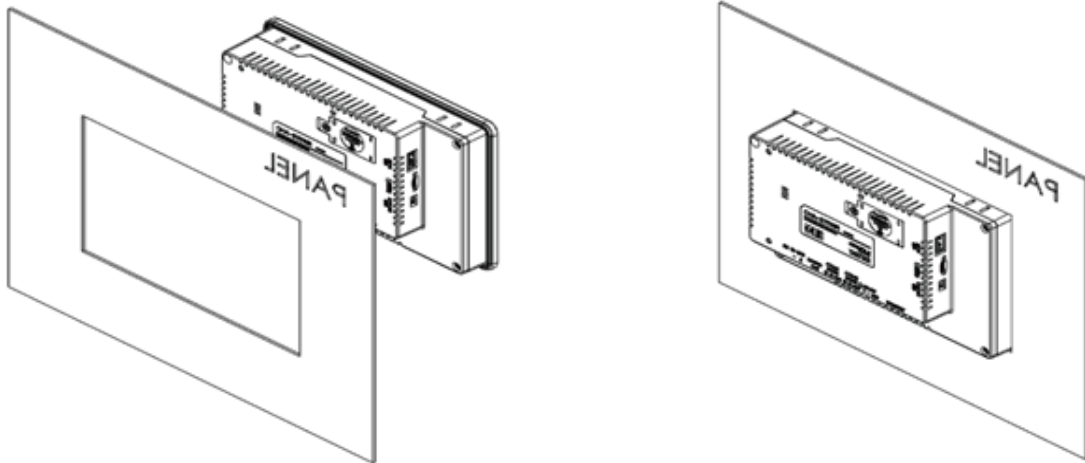


- **Bracket Mounting**

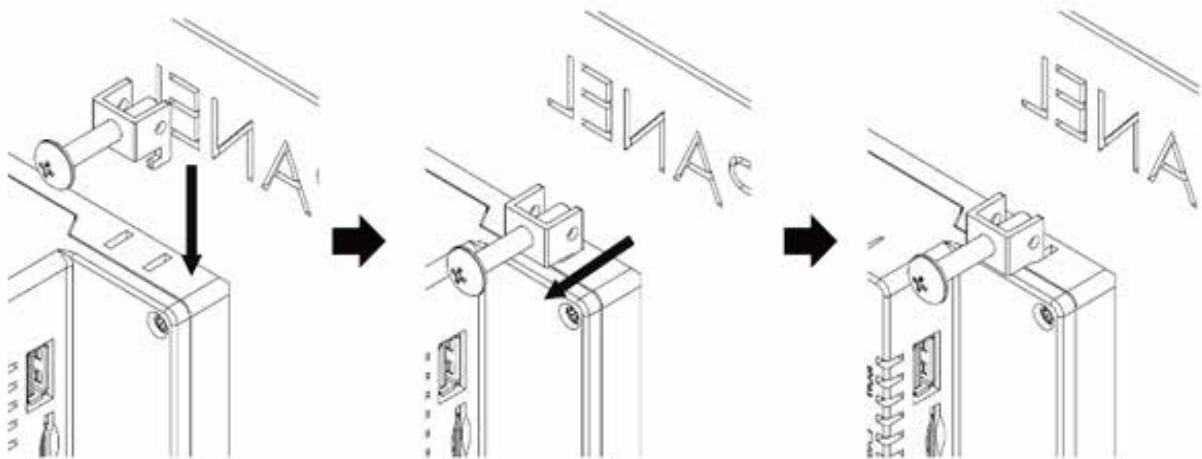
Assemble the supplied bracket body and bolts as shown in the picture so that they do not separate.



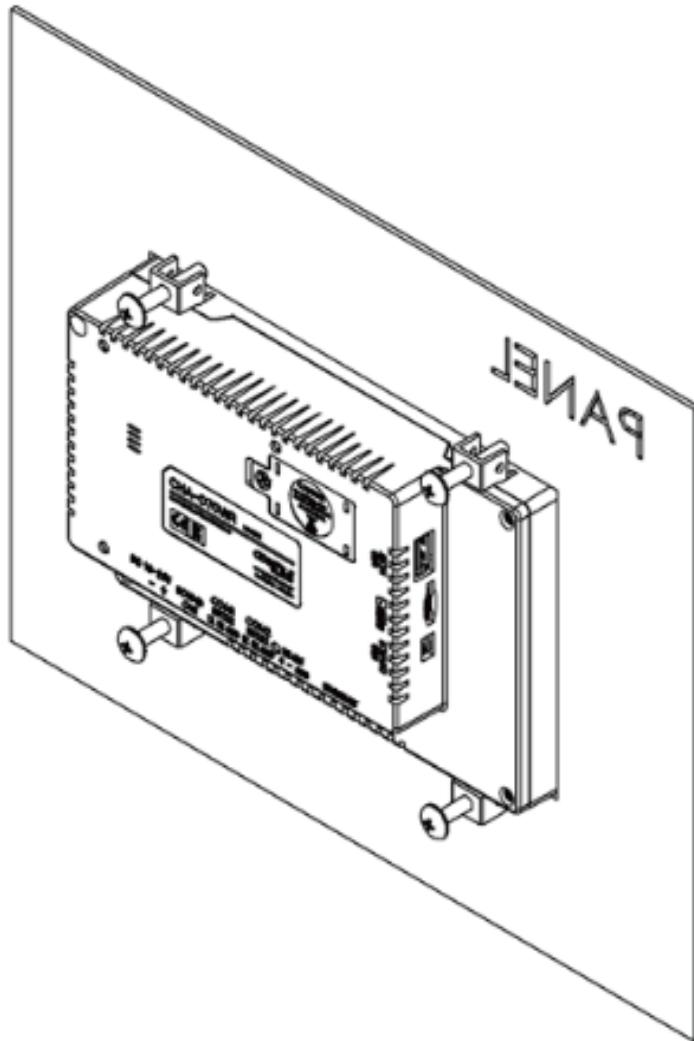
1) Mount MDI-64 product on the panel manufactured to the dimension of Panel Cutout as shown in the picture.



2) Insert the bracket from the back of the operator panel into the groove as shown in the picture and raise it in the direction of the arrow so that the latch may catch the product.

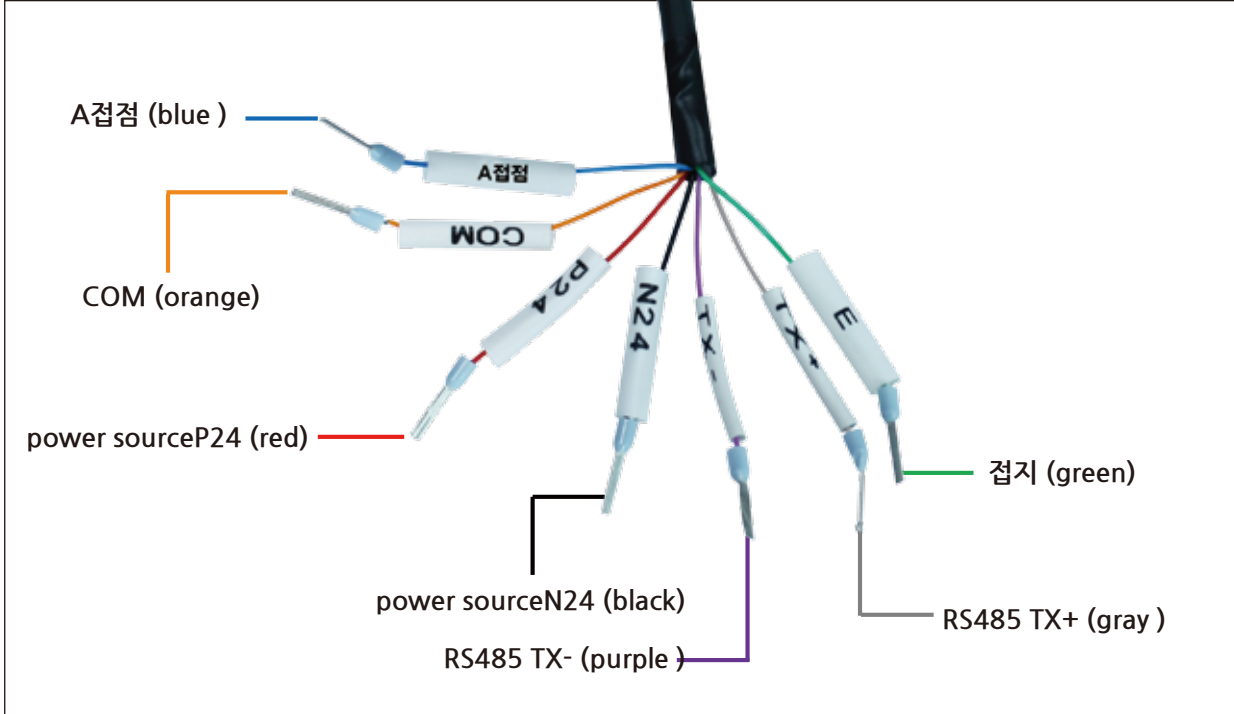


3) Installation example)

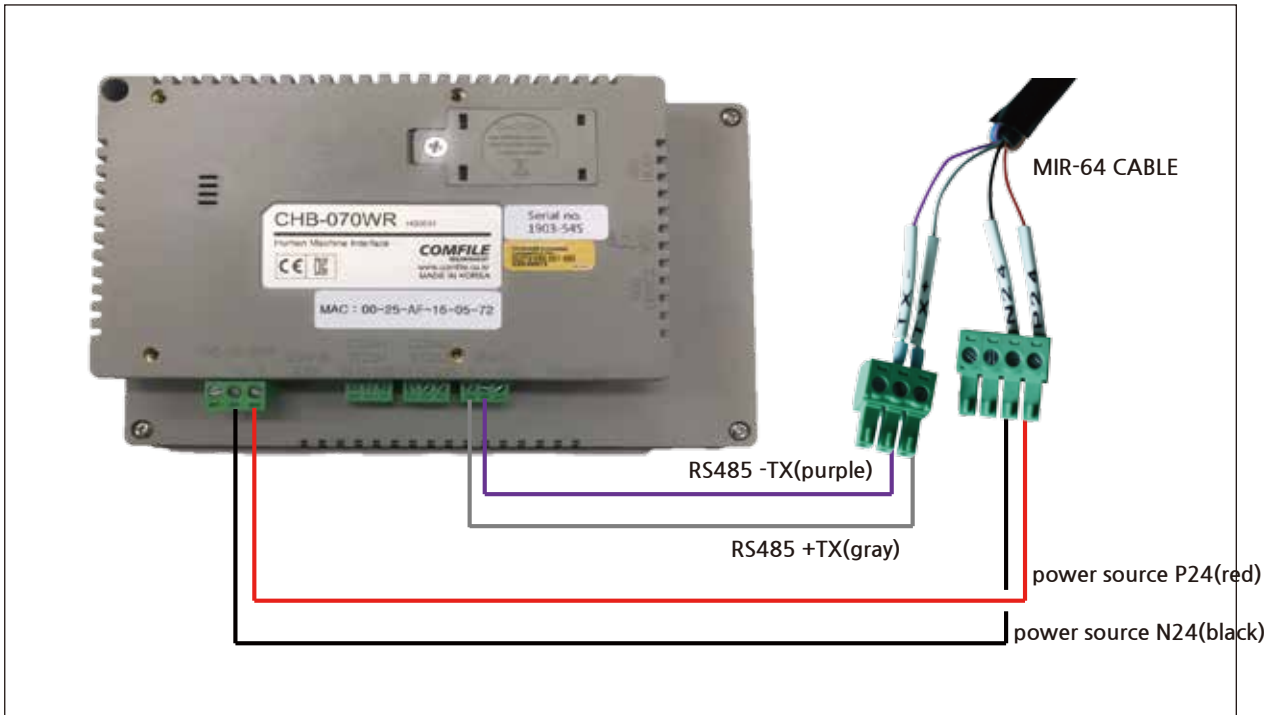


## 2) MIR-64 / MDI-64 Connection Diagram

- MIR-64



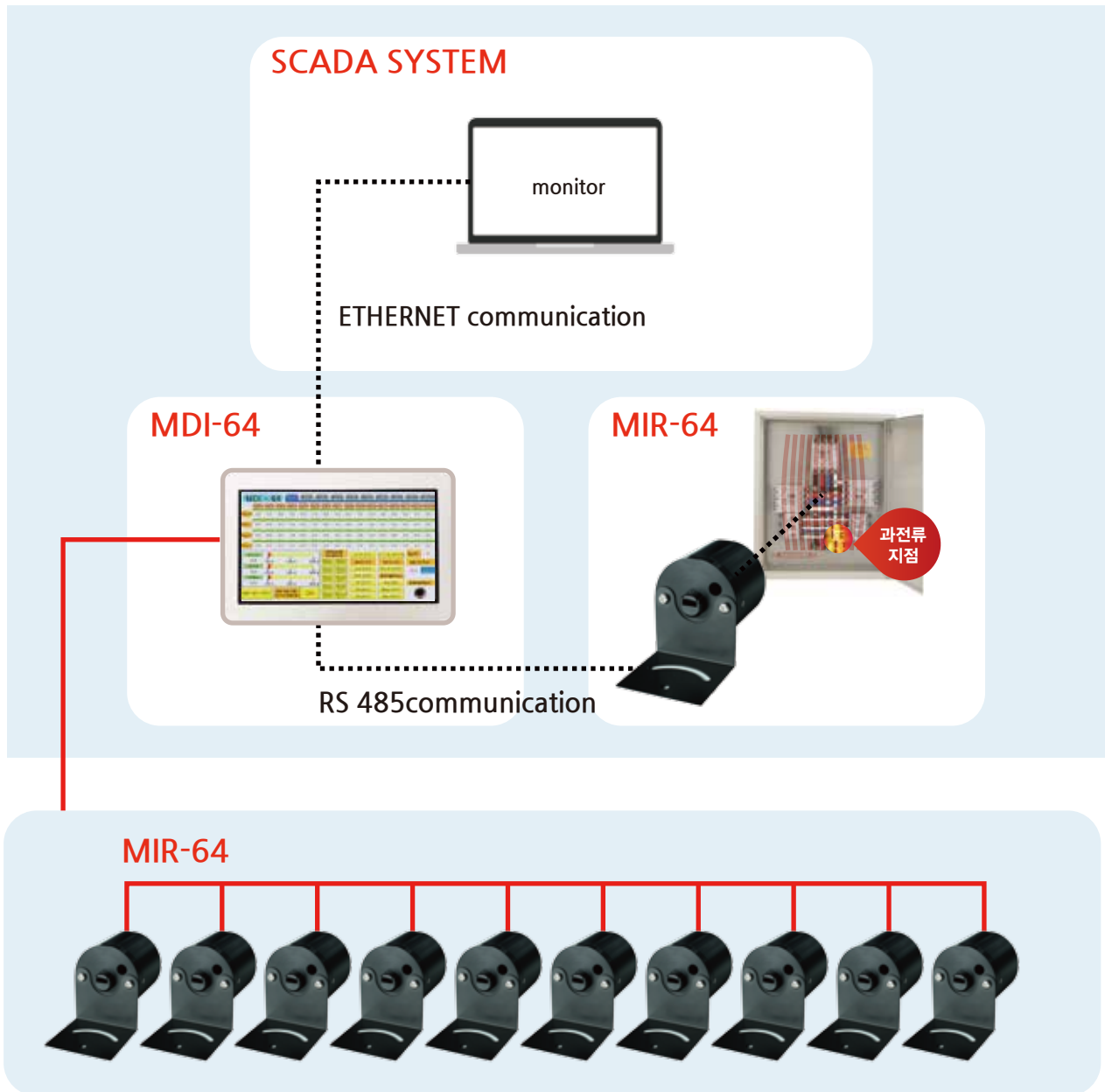
- MDI-64



### 3. Communication Configuration

- Communication Configuration

MDI-64 product consists of 232-communication port, 485-communication port and Ethernet communication port. 232-communication can be configured connecting with additional devices.



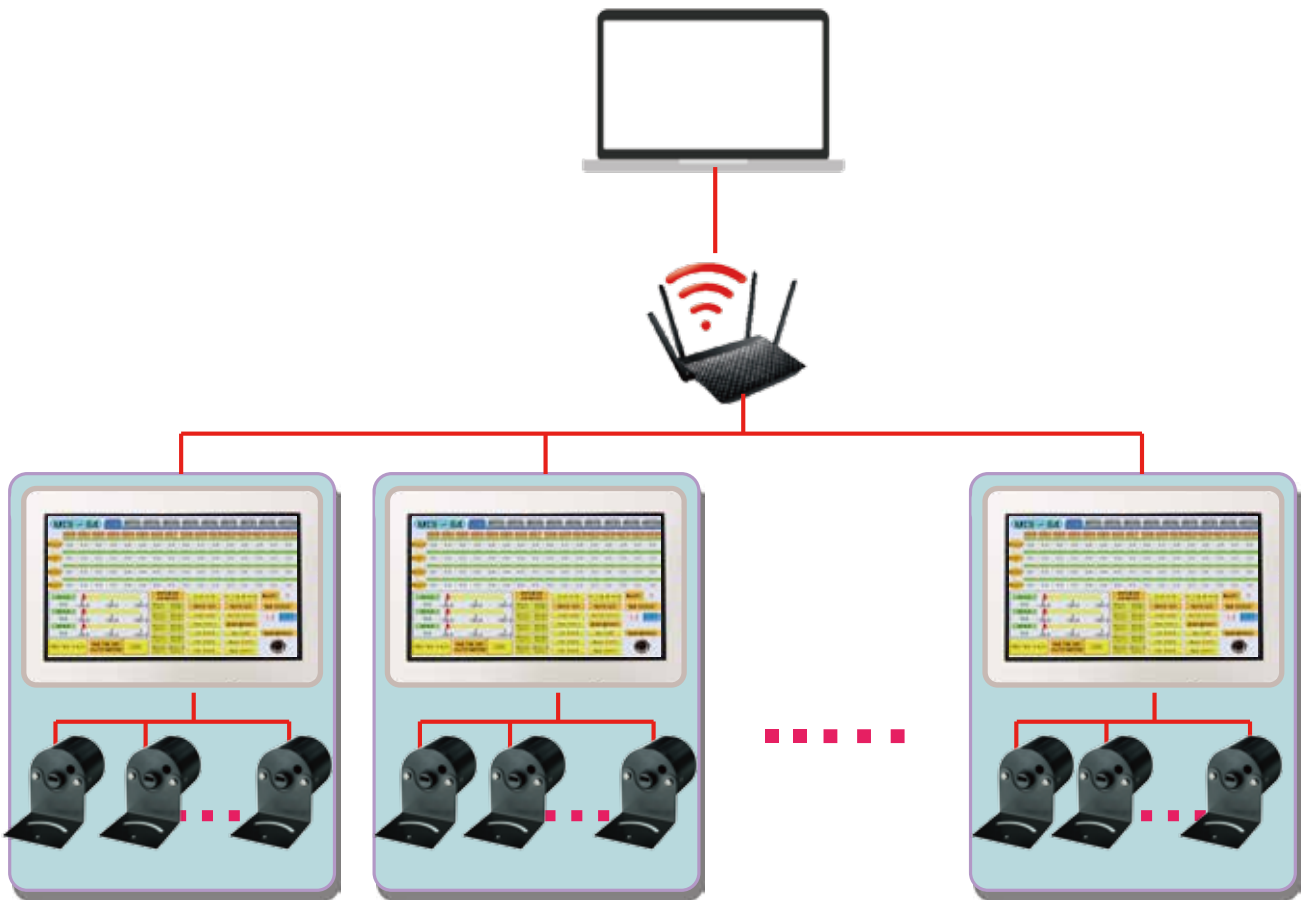
- RS 485-communication

MIR-64 product can be configured with 485-communication and can be connected with up to 10 devices. However, communication ID of No. 1 to 10 can be used and will not be recognized if there is any duplicate.

- Ethernet communication

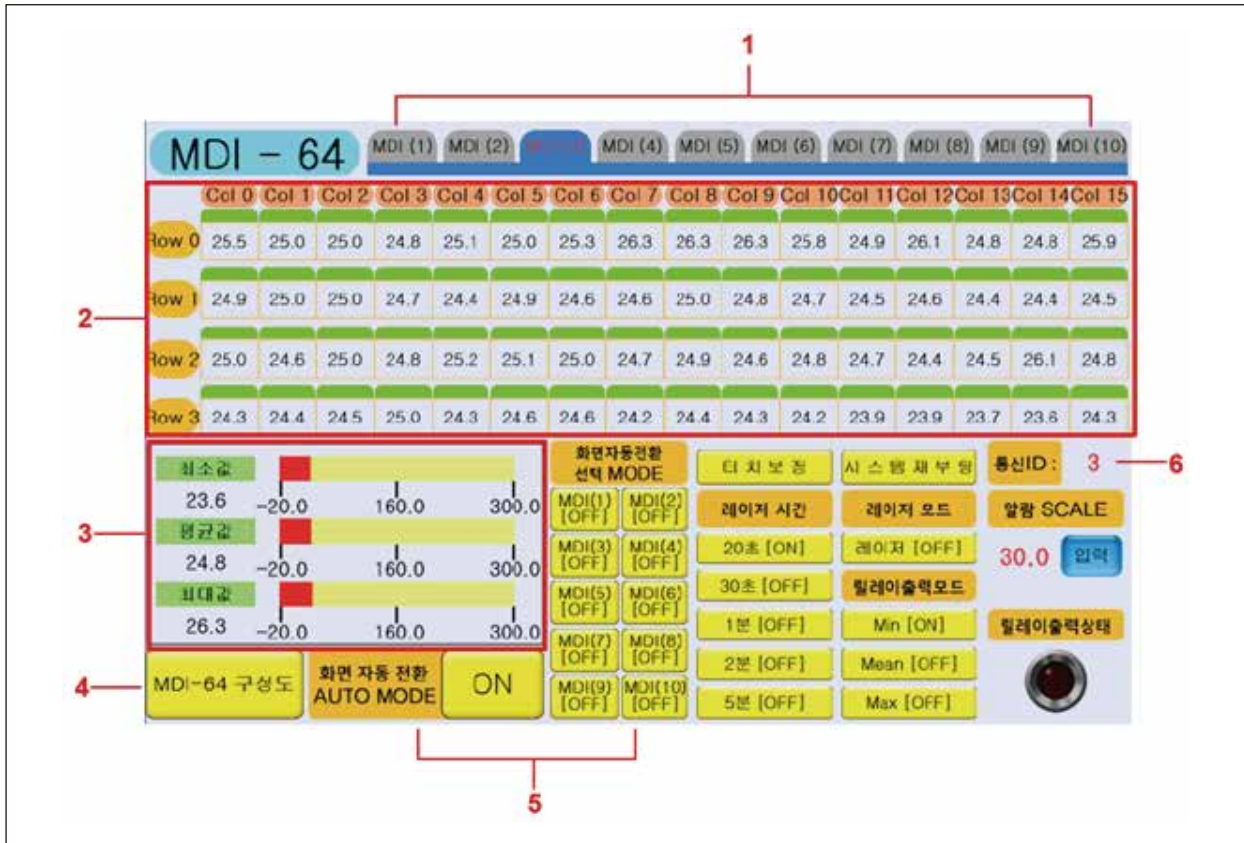
Remote control is possible using an Ethernet communication network.

There is no limit to the number of additions you can make, however you cannot connect to the same server at the same time unless the existing connection is cut off.



## 4. Descriptions of Monitoring Configuration Plan

- MDI-64 Basic Screen



1. Displays the quantity of MIR-64.

Up to 10 MIR-64s can be accommodated in one MDI-64 and can be used as many as desired.

2. 64 temperature values appear as shown in the configuration diagram of MIR-64.

3. The minimum, average, and maximum values among the 64 temperature values are shown.

4. Detailed thermometer configuration of MIR-64 can be checked on the screen.

5. Auto screen changeover (AUTO MODE)

It is a setting to change over the screen every 4 seconds from MDI screen 1 to MDI screen 10.

ON/OFF button (ON - screen change enabled / OFF - screen change disabled)

Automatic screen changeover (selection mode)

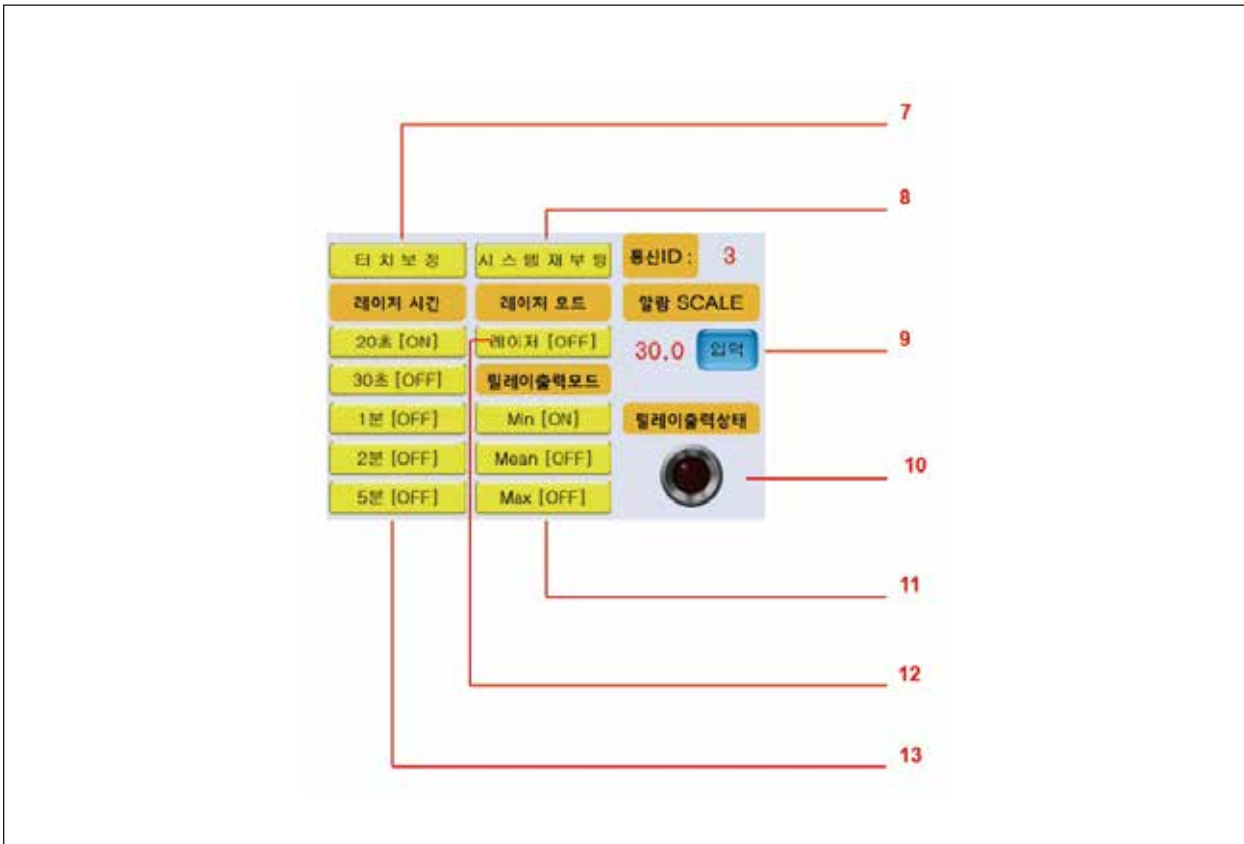
You can select the thermometer for which you want to change over the screen.

It is possible to set the auto screen changeover from MDI screen 1 to MDI screen desired.

6. Displays the communication slave ID of MIR-64.

The communication ID assigned to MIR-64 shall not be duplicated

- Descriptions of Detailed Functions



7. The reset function for resetting the touch screen when the touch is unstable.
8. Reboots the system in case the communication with MIR-64 is unstable.
9. Sets the HIGH value.  
An alarm is generated when an error in the set value occurs.
10. In case an alarm is generated, check whether the relay of MIR-64 functions.
11. You can select the minimum, average and maximum values for the relay operating conditions.
12. Laser operation button.
13. It is possible to set the laser ON time at 20 seconds/30 seconds/1 minute/2 minutes/ 5 minutes.  
When the set time is exceeded, the laser is turned off automatically.

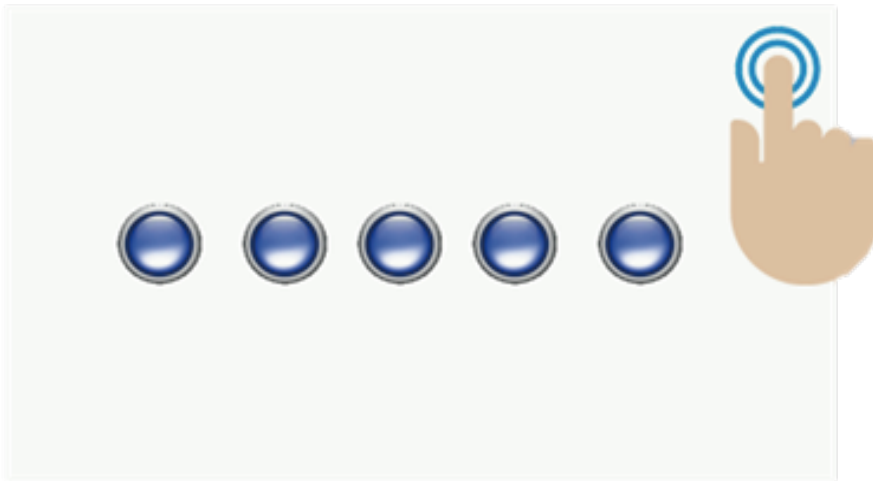
## 5. Remote Screen Configuration

### 1) SCADA SYSTEM

Real-time on-line monitoring and controlling system using MDI-PC mutual communication through Ethernet communication

### 2) Entry to Setup Screen

To set up the remote system, you need to change the settings on the touch screen.

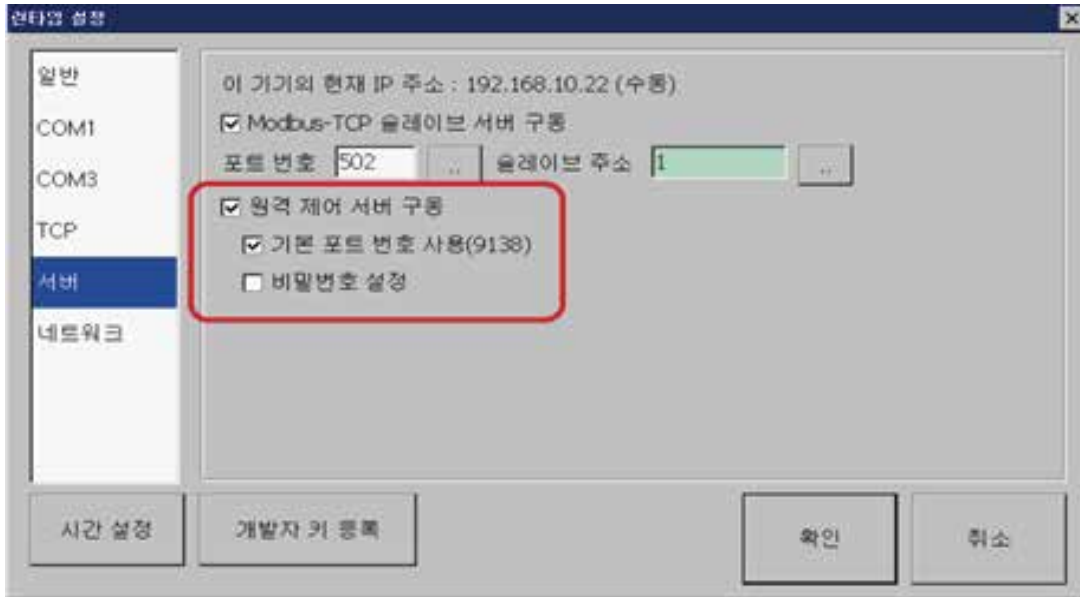


If you touch the top right end of the screen five times in a row, it will connect to <System Screen>. After the system screen appears, you can enter the setting screen.



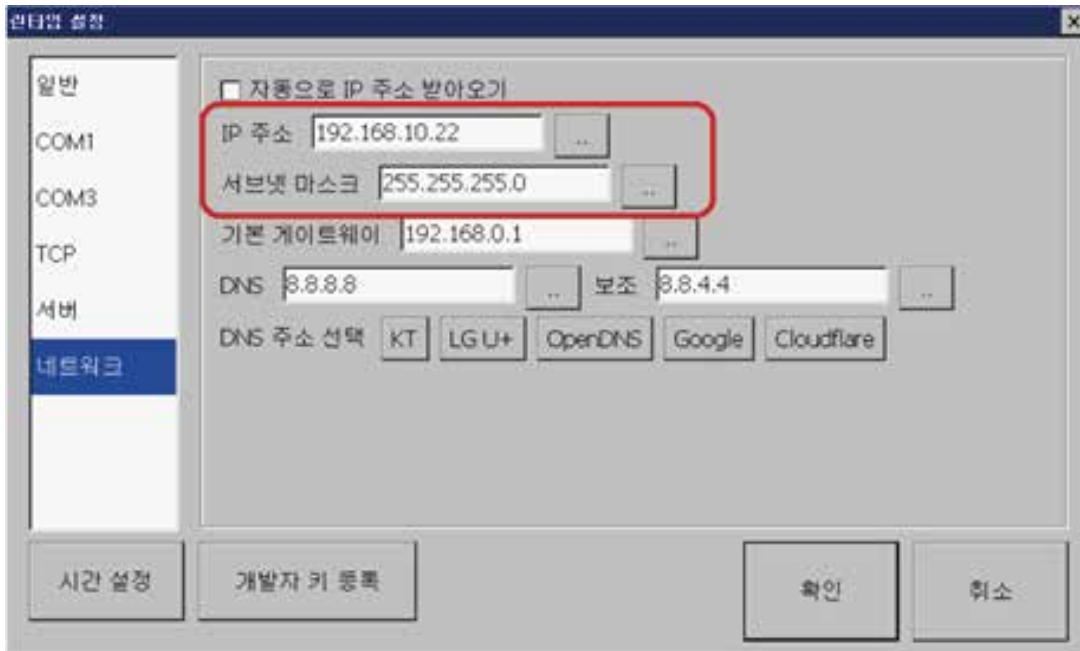


### 3) HMI Server Setup



After entering the setup screen, click Server.  
 Check 'Enable Remote Control Server' on the server to activate.  
 Unless in a special situation, check 'Use default port number'.

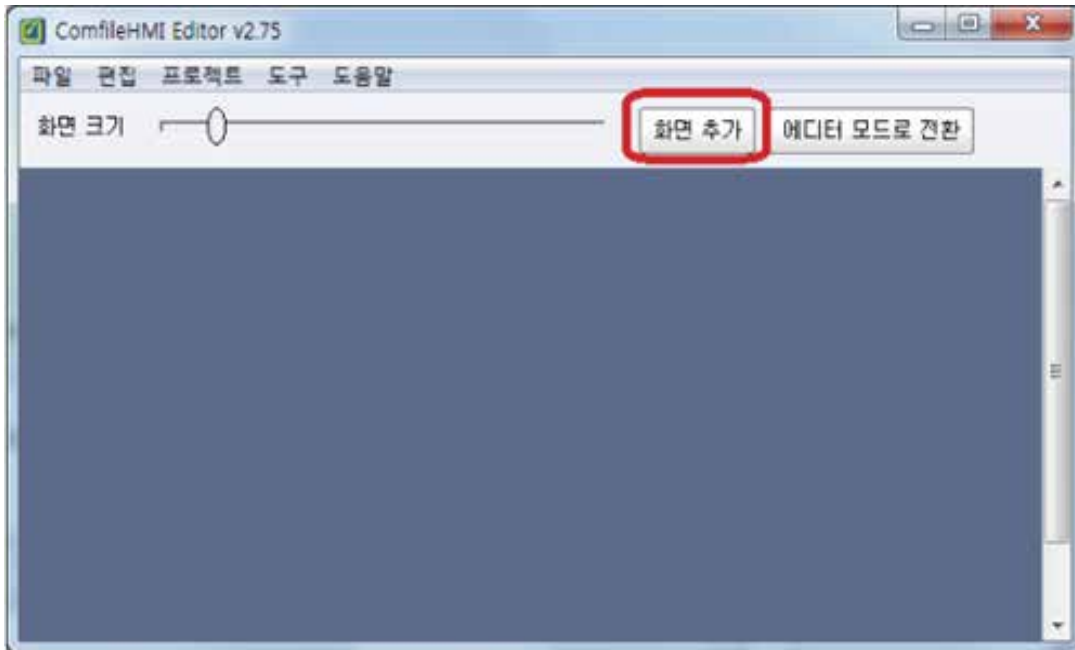
### 4) HMI Network Setup



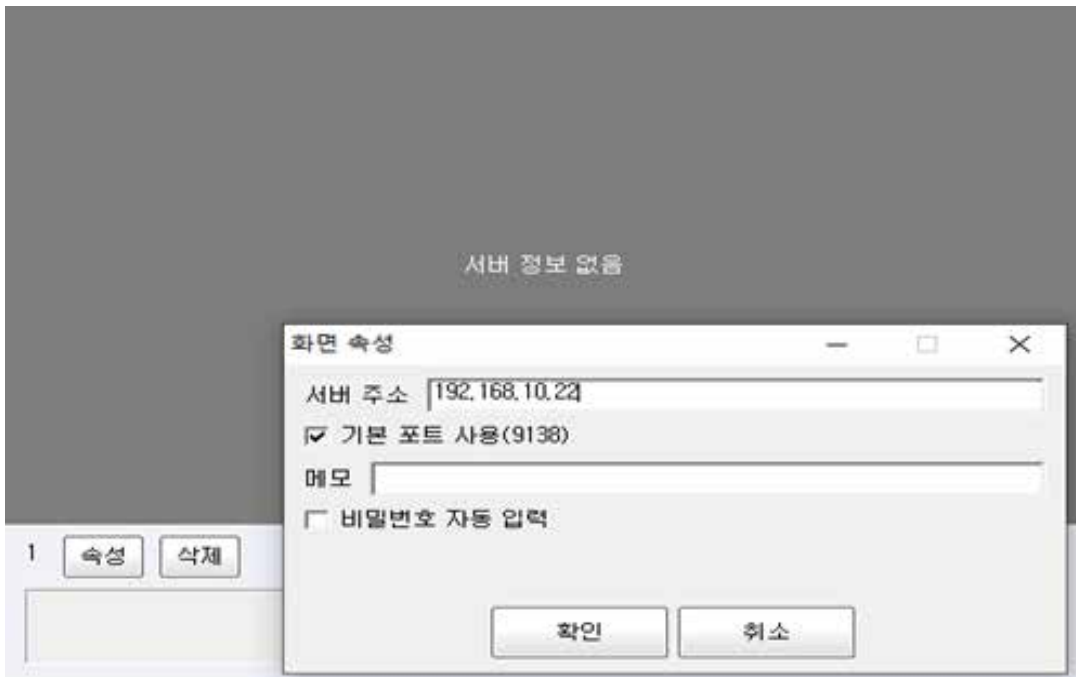
When entering the network window, the 'Get IP address automatically' is checked by default. Uncheck this.  
 Check 192.168.10.22 for the IP address.  
 (It is not a fixed address, so you can change it to another address.)  
 In addition, an IP address must be separately assigned to the PC that communicates with the touch screen.  
 The IP address of the PC should not overlap. Ex) 192.168.10.21

## 5) ComfileHMI Editor Setup

The setup has been made on the HMI touch screen, and the PC setup for intercommunication remains.



First of all, HMI's ComfileHMI Editor program is required to operate with HMI in the remote control mode. (Refer to Comfile Technology homepage)  
 After running the program, enter Tools> Remote Control Mode.  
 When entering, the mode is changed to the remote control like the picture above.  
 Click the 'Add Screen' button here to add the first screen.



A server screen configuration has been added to communicate with the HMI. Click the Attributes button and enter the IP address of the remote server that had been set up in the HMI device setup window.

If you set up the attribute, the following window is activated.  
 Descriptions of Detailed Functions



- Descriptions of Detailed Functions

- ① Resize screen  
-Use the slider bar to resize each screen.
- ② Add screen  
-There is no limit to the number of additions, and the same server cannot be connected at the same time
- ③ Switch to editor mode  
-Exit remote control and return to editor mode.
- ④ View Only  
-Try to connect in a state where you can't touch remotely but can only view.
- ⑤ Controls  
- Attempt to connect in a state that can be touched remotely.
- ⑥ Attributes  
- Set detailed attributes such as IP address and port number of the remote server to connect to.

When all settings are complete, click the desired button of the following two buttons.



\*'View only' can be viewed without sending a touch input, and 'control' can be used for all controls including touch input.

## 6) Remote Connection Screen



Once connected, you can see the remote screen as follows.  
 If you want to disconnect the connection, press the 'Disconnect' button on the bottom left.  
 The attribute is saved so that you can reconnect at any time.