COIL LIFT SYSTEM

User's Manual

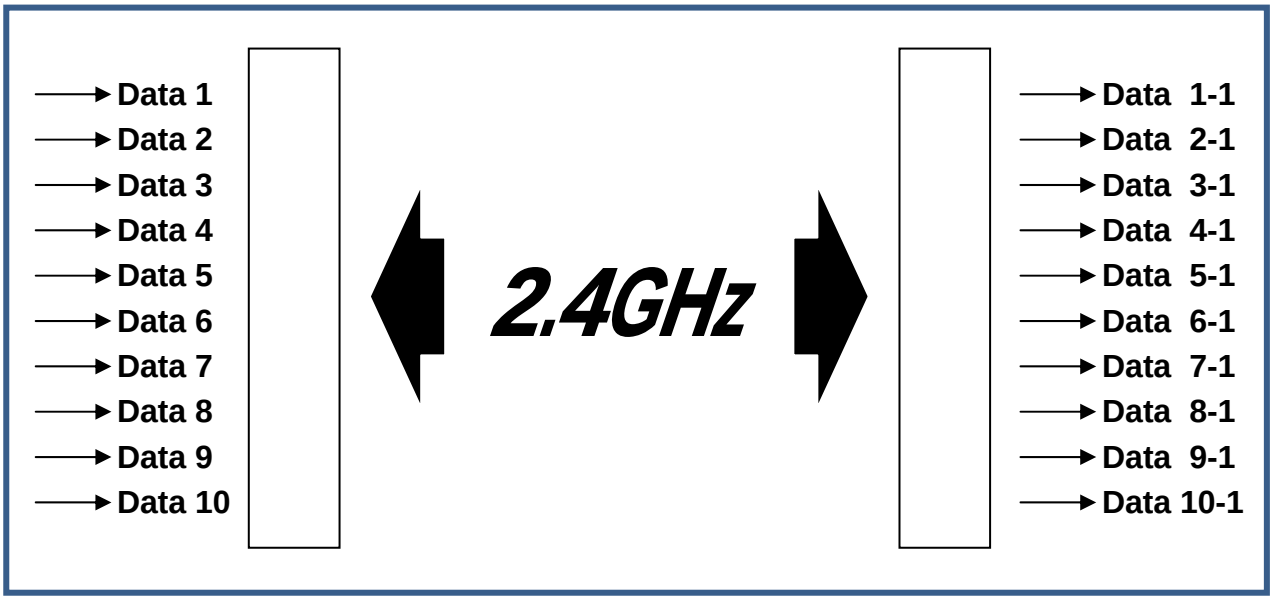
[HN-WC4P]

2.4GHz Wireless Relay Data
Transmitter/Receiver System

동영기업
Dongyoung Enterprise Co., LTD

1. Introduction

It is a system that outputs through wireless communication after receiving inputs of relay contact points of an electronic panel or an external device. It can be used by composing input/output the way operator wants in a form of both direction control as it is designed for both input and output and it can be substituted for D/I. and D/O cards of PLC.
A system can be composed by using various product lines (4Port, 8Port, 10Port) according to the numbers of control signal and it can be used by extending up to numbers of contact points that are demanded through the equipped serial port.



2. Cautions before using

1) Be cautious with shock while transporting the product and check for any damages.
(Especially be careful with damage in antenna of transmitter and receiver)

2) Make sure to check if specifications of this product and usage purpose correspond.

3) Perform a communication test in advance and install because the distance of communication can shorten if there are obstacles like concrete structure between the transmitter and the receiver.
(If a communication test is needed, please contact our company beforehand.)

4) Direction for attaching the product must be horizontal or vertical, and install it by avoiding a location with high surrounding temperature and selecting a place with less electric noise.

5) It requires attention that when input power supply of this product is repetitively ON/OFF , it can cause disoperation of the inner circuit and the operation power must be connected to the front part of an emergency switch in a condition that power is being put always.

3. Features of the Product

- Product Name : 4-Port Coil Lift System
- Model Name : HN-WC4P
- Communication Method : Electronic (J-1) 2.4GHz Wireless
  (Specific small output wireless device for wireless data communication system)
- Input Power Supply: AC 85V ~ 265V
- Frequency Band: 2.405GHz ~ 2.470GHz (Total 14 Channels)
- Communication Range: Within 100m(open space) / Max. 1Km
- Indication Method: Input LED 4ea / Output LED 4ea indication method
- Operative Temperature: For indoor use, -20℃ ~ +60℃ / ~ 95%
- Input/output Method : Input Relay 4Port / Output Relay 4Port
- Network Composition : Channel selecting method
- Relay Output Format : Alarm 1A1B
- External Output : USB(For setup), RS-485(For extension)
- Size : 120 x 194 x 43.8
- Usage:
  - ✓ A device that wirelessly transmits data to be transmitted and received and relay contact points of electronic panel and external devices
  - ✓ It is suitable for a place that has difficulty in installing and managing the wire cable due to a limited space and length of wire line way.

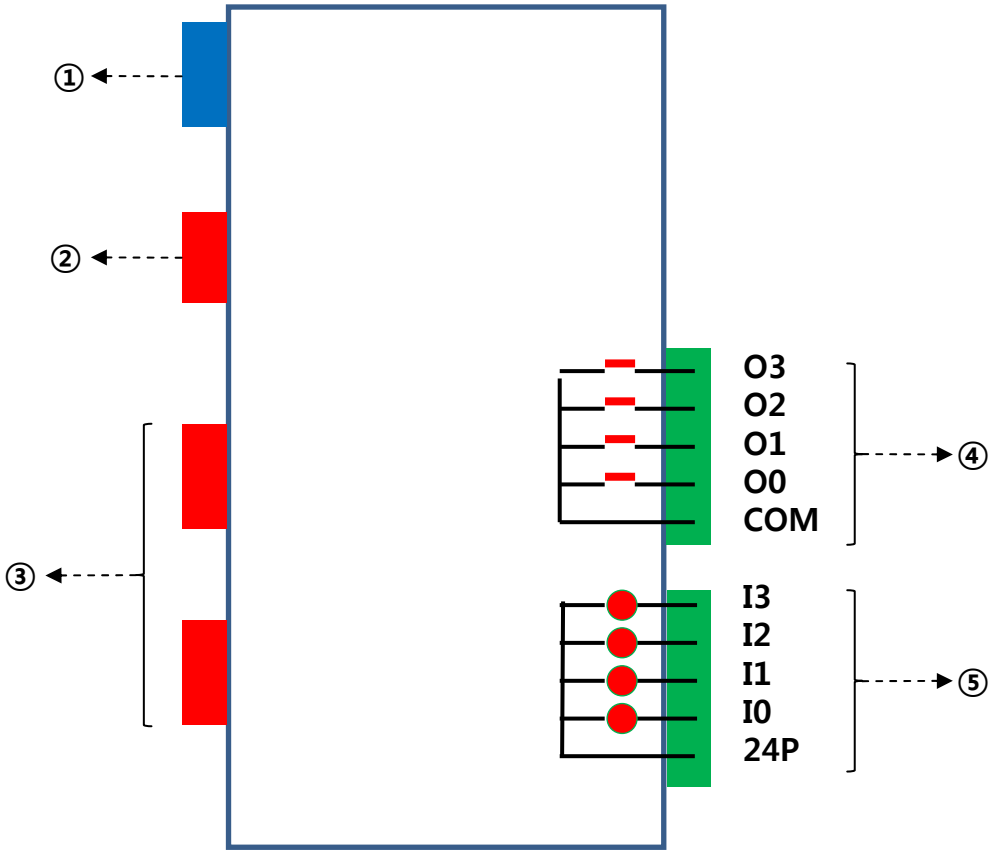
4. Wireless Standards of the Product

Item	Spec	Remarks
RF Frequency Range	2405 ~ 2470 MHz	
Tx. Power (Max.)	10mW/MHz	Ext. Power Amp
Channel Bandwidth	2MHz	
Frequency Offset	< ±30ppm	
Transmit Data Rate	250Kbps, 500Kbps, 1Mbps	
Spurious Emission	< -30ppm	
2nd, 3rd Harmonics	< -30ppm	
RF IN/OUT Impedance	50Ω	TxRF, RxRF
Rx. Sensitivity	-98dBm	PER < 1%
Adjacent Channel Rejection	32dB	
Manufacturing Date	2010. . .	
Modulation method	O-QPSK	
Number of Channels	147개	
Communication Method	Repetitive Method	
Manufacturer / Manufacturing Country	Dongyoung Enterprise Co., LTD / Republic of Korea	
Supply Voltage	AC85V ~ AC265V	
Operating Temperature	-20℃ ~ +60℃ / ~ 95%	

5. Product explanation

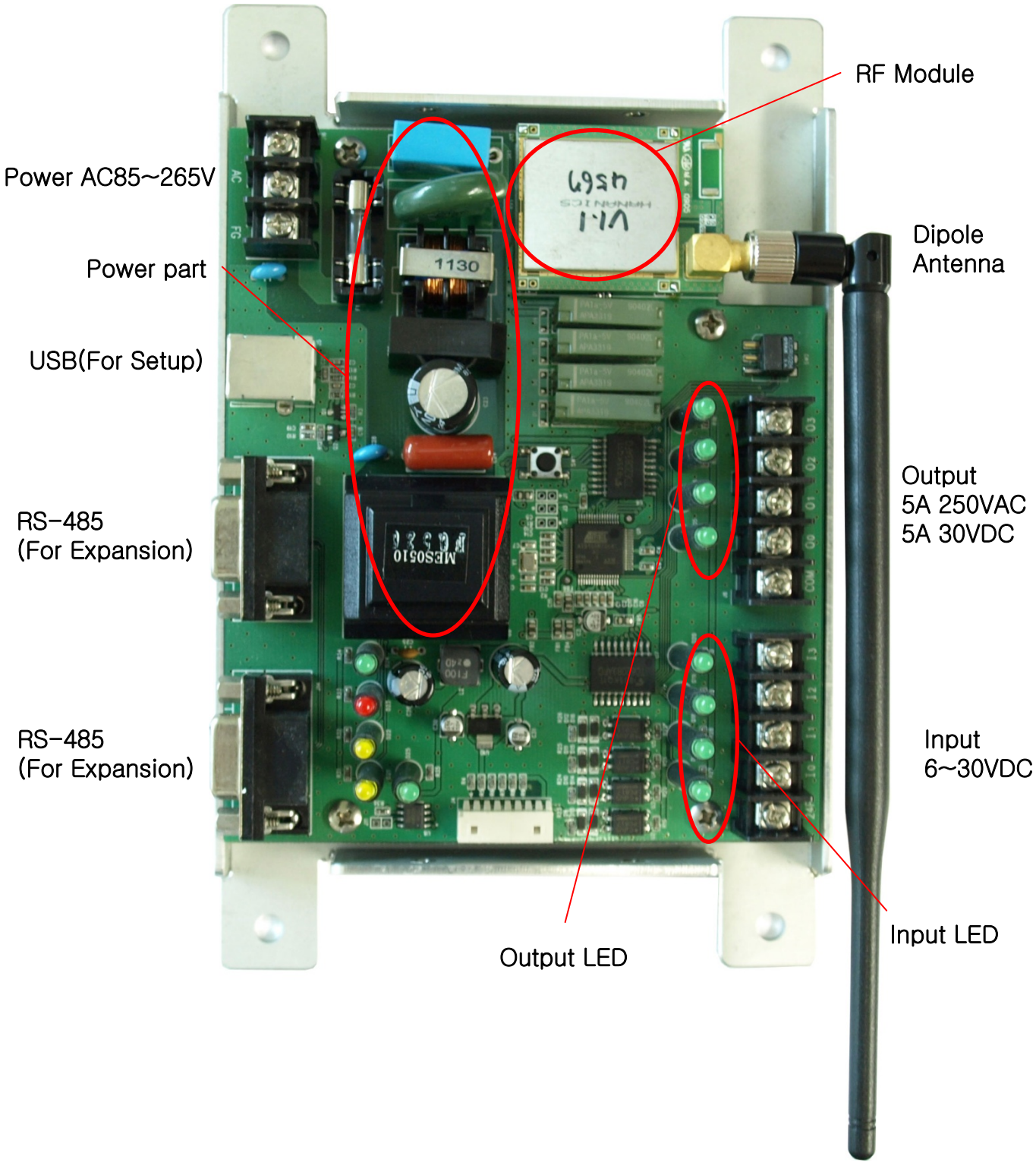
This product transmits contact point for long distance or wirelessly connects parts that are difficult to wire. Signal of 8 contact points (input 4 contact points, output 4 contact points) in both direction for a set can be transmitted. If additional contact points are needed then device can be extended in units of 8 contact points in both direction by using an extensional port and there is no need to connect antenna for the extended device. Number of contact points can be extended to the maximum 80 in both direction (input 40 contact points, output 40 contact points). Response speed can vary from the minimum 32ms to the maximum 64ms.

5-1. Connective Diagram of Inside



① Power part (AC 85V ~ AC 265V, 50/60Hz)
② Terminal for setup (RS-232)
③ Terminal for extension (RS-485)
④ Output part (5A 250VAC or 5A 30VDC)
⑤ Input part (6~30VDC)

5-2. Inner Structure



5-3. Operation Summary

- Both contact points are connected wirelessly.
- The maximum connection up to 1Km is possible if 2.4GHz of frequency band is used.
- Basic 2 sets are 1 group and it can be extended to the maximum 16 sets.

5-4. Operation Status LED

- POWER : Power input status
- HDLED : Normal operation of CPU when switching on and off
- ALARM : Communication error when switching and off
- Link 1 : RF communication condition
- Link 2 : RS-485 communication condition

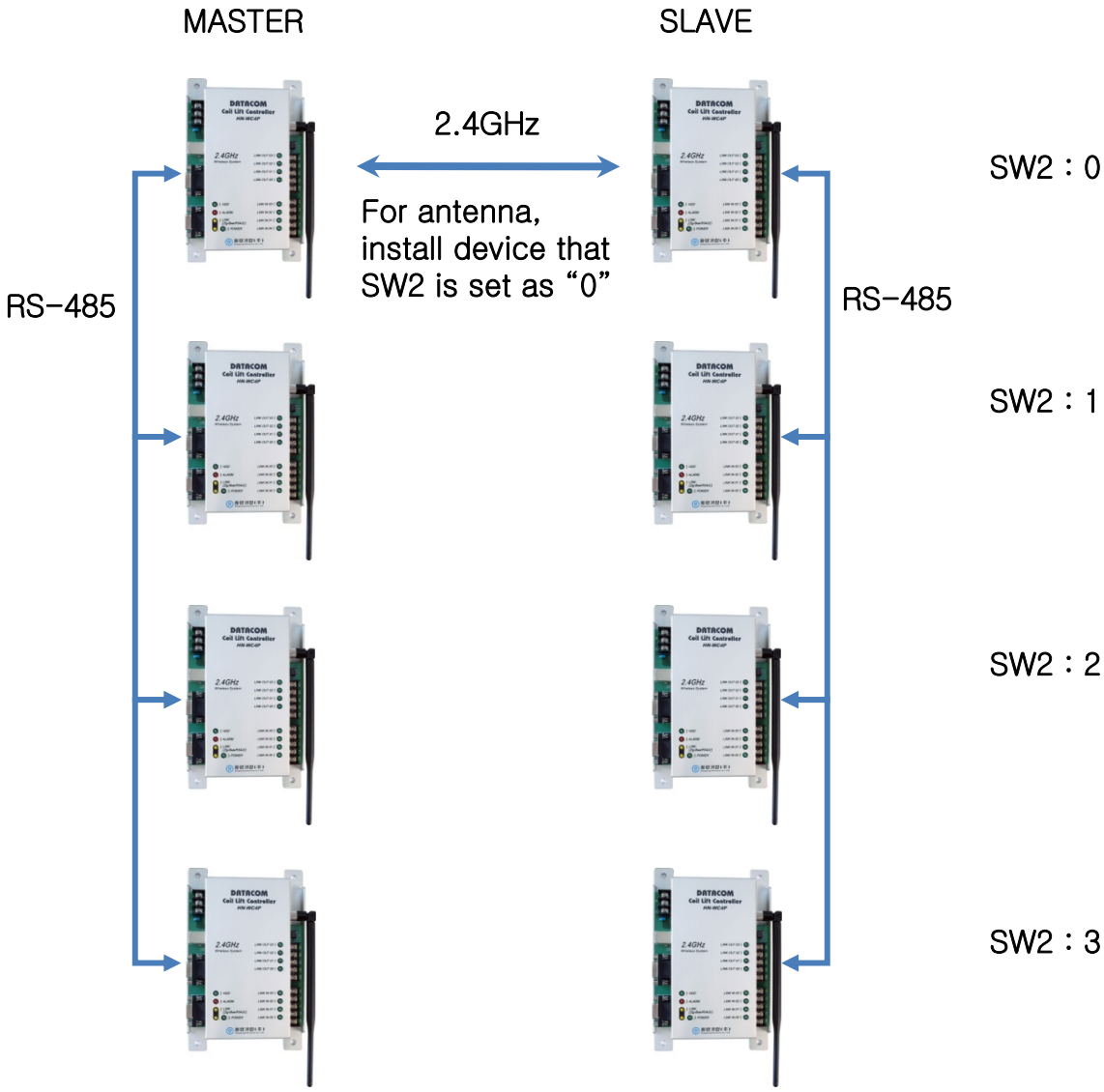
5-5. I/O Connection Between Devices

Master (IN)		Slave (OUT)
I0	☞	O0
I1	☞	O1
I2	☞	O2
I3	☞	O3

Master (OUT)		Slave (IN)
O0	☞	I0
O1	☞	I1
O2	☞	I2
O3	☞	I3

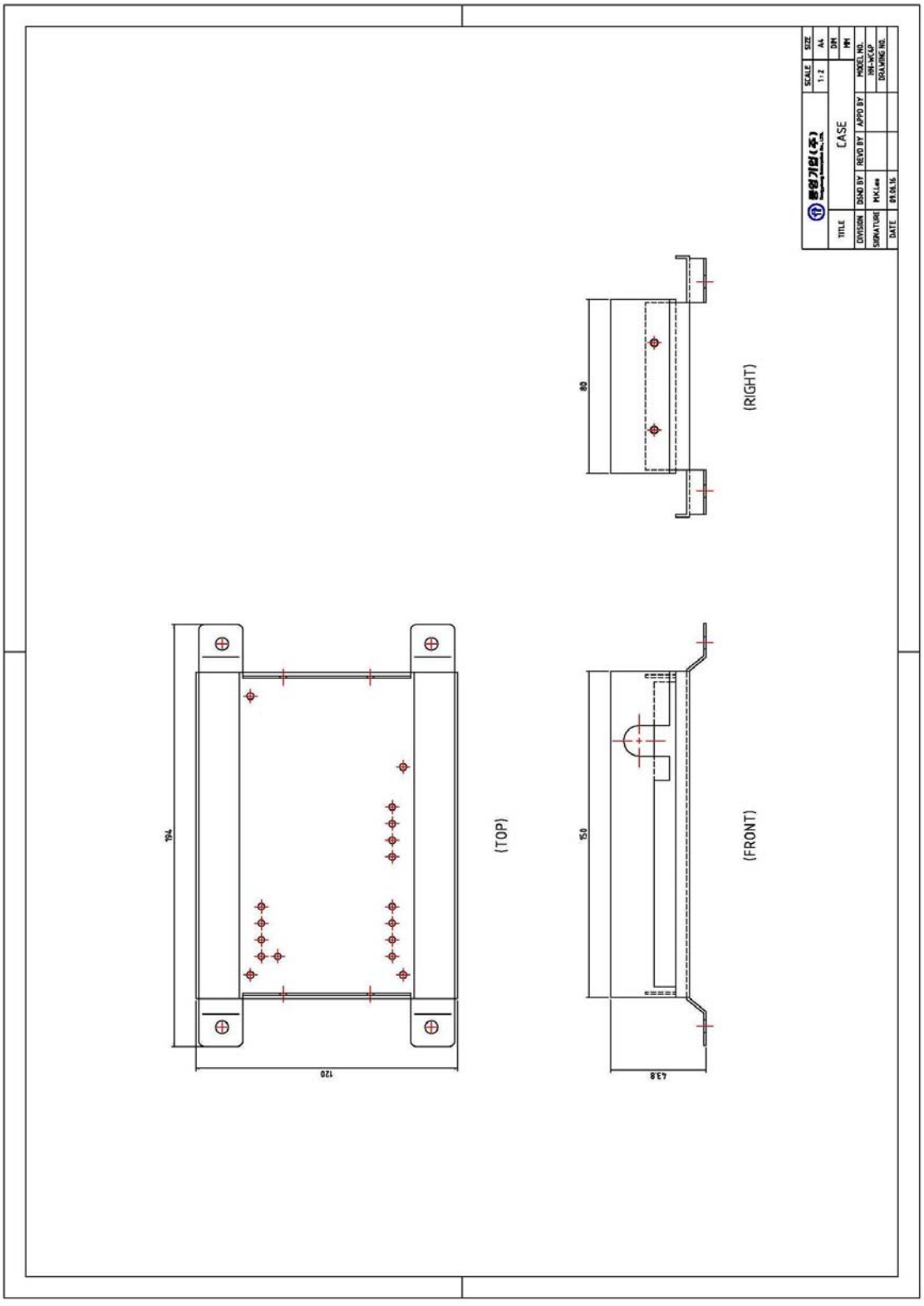
5-6. Example of Extension of contact point

- In case of extending to 16 input contact point and output 16 contact point
- SW2 : Appoint each MASTER and SLAVE ID in RS485 communication



6. Applicable Fields of the Product

7. External Diagram of the Product



8. Warranty

1. Warranty Period

Warranty is provided for 1 year from the first purchase date.

2. Warranty Contents

The product is guaranteed to operate normally only if it is used under the provided conditions like installation, checking, and repair in the instruction manual provided by Dongyoung Enterprise Co., Ltd.

3. Warranty Range

Dongyoung Enterprise Co., Ltd guarantees problems that occur on parts or performances of this product.

4. Conditions that are not covered under warranty

1) When the specified voltage is not used

2) When the product is not used in a normal condition

3) When the product is arbitrarily disassembled, assembled, modified, or altered structurally

4) Failure that occurs after using the product in a condition with high temperature and humidity or in a place with corrosive gas

5) Damage or failure due to abnormal voltage, external factors, or negligent handling

6) Damage or failure due to natural disasters such as fire, earthquake, flood, and lightening

If there is any further questions other than the above problems, please contact to below number.

5. FCC Compliance Information

This equipment has been tested and found to comply with the limits
for a Class A digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of FCC Rules. Operation is subject to the following twoconditions:
(1) the device may not cause interference, and
(2) the device must accept anyinterference, including interference that may cause undesired operation of this device.
THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

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