6.2 KRP4A

Outline / Features

This adaptor is an interface required to connect the indoor unit with the central monitoring panel. And by installing this adaptor in the indoor unit, it enables you to have various remote controls (ON/OFF, temperature setting, operation status display and malfunction display). One adaptor can control simultaneously the group of units (Max. 16 units) connected to the remote control wiring line (P1, P2).

Note:
1. This adaptor cannot be used together with central control equipment and data station.
2. The model of adaptor differs according to the type of indoor unit to be installed.

System Configuration

Note:
1. Marked shows wiring adaptor for electrical appendices.
2. Marked indicates the same control range.
3. The wiring adaptor for electrical appendices (2) can control simultaneously the group of the units (Max. 16 units) connected to the remote control wiring line (P1, P2). In another words, all the units connected between P1 and P2 terminal have the same control.

Point of wiring
Names and Functions of Operating Part

1. To indoor unit terminal X18A(Note 2)
2. To remote control terminal (P1, P2) of indoor unit

Voltage/non voltage input changeover switch

Temperature setting On/Off switch

Temperature setting input terminal by a resistance

Control mode selector switch

Power supply

- AC/DC 5~24V : (Ok)~3 A
- AC 100~240V : (Ok)~3 A

Note:
1. This is valid only for the indoor unit, which has a temperature setting function.
2. Terminal No. X18A is for the indoor unit of VRV system. For SkyAir series and other air-conditioner, connect to the relevant terminal for each units.

Input/Output for External Control

1. Depending on whether [voltage input] or [non voltage input], connect the wiring as shown below.
   - Input with Voltage.
     Set the Voltage/Non voltage changeover switch (SS1) to VOLT.

     ![Diagram](image)

     Use a micro current contact for Input A and B. (DC12V, 1mA or less)

   - Input with No Voltage.
     Set the Voltage/Non voltage changeover switch (SS1) to NON VOLT.

     ![Diagram](image)

     Use sheathed vinyl cable of 0.18mm² or more and the total length should be 150m or less.

2. Display Signal Retrieval (Output)

   The normal operation output terminals (W1, W2) and error output terminals (W3, W4) are non-voltage output contacts. (Permissive current is 10mA~3A per contact.)

   ![Diagram](image)

   Cautions: If using 100VAC or 200~240VAC, the power wiring should be separated from the input wiring.

Output is as given below.

<table>
<thead>
<tr>
<th>Output System</th>
<th>Both RY1 and RY2 is OFF.</th>
<th>Only RY1 is ON.</th>
<th>Only RY2 is ON.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group control</td>
<td>OFF</td>
<td>All normal operation</td>
<td>At least one unit is stopped due to error or transmission error between the adaptor and the indoor unit.</td>
</tr>
</tbody>
</table>
3. Temperature Setting Input

To enable temperature setting from both the optional controller and remote controller, set S32 to "POSSIBLE". (Factory setting: POSSIBLE)

POSSIBLE: Enables temperature setting by both the optional controller and remote controller. (Engages individual control)
IMPOSSIBLE: Enables temperature setting from the optional controller only. (The remote controller cannot be used to set temperature.)

Never apply voltage to terminals A* or A'' for any reason whatsoever.

Adapter:
KRP4AA51 * 52 * 53 * 54
KRP4AA51 * 52 * 53

Temperature setting corresponds to resistance values in the range of 0 to 135Ω.
Their relationship is as shown below.

Relation between the setting temperature and the resistance are as follows.

<table>
<thead>
<tr>
<th>Setting Temperature (°C)</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
<th>31</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance (Ω)</td>
<td>0.0</td>
<td>5.0</td>
<td>13.8</td>
<td>22.4</td>
<td>31.0</td>
<td>39.4</td>
<td>49.2</td>
<td>58.6</td>
<td>68.2</td>
<td>73.8</td>
<td>82.4</td>
<td>91.0</td>
<td>99.4</td>
<td>108.0</td>
<td>117.2</td>
<td>125.9</td>
<td>134.2</td>
</tr>
</tbody>
</table>

Note:
- The value of resistance includes the resistance of wiring.
- The setting temperature is limited within the setting range of indoor unit. If you set the temperature outside of the range by the adaptor, it controls at the nearest setting range.

Setting of Control Mode Selector Switch (RS1)

<table>
<thead>
<tr>
<th>Position</th>
<th>Functions</th>
<th>Description of Operation by Input Mode A and B</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Input Ignored</td>
<td>Input A (Between B1-Bc)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Input B (Between B2-Bc)</td>
</tr>
<tr>
<td>1</td>
<td>Remote Control Rejection</td>
<td>Start at ON, and stop at OFF</td>
</tr>
<tr>
<td>2</td>
<td>Control Priority</td>
<td>Start at ON (remote control acceptance), stop at OFF (remote control rejection)</td>
</tr>
<tr>
<td>3</td>
<td>Remote Control Acceptance/Rejection</td>
<td>The same as position 1 (Only stop is accepted by remote controller)</td>
</tr>
<tr>
<td>4</td>
<td>Remote Control Acceptance/Rejection, Off</td>
<td>Start at ON (remote control acceptance), stop at OFF (remote control rejection)</td>
</tr>
<tr>
<td>5</td>
<td>Remote Control Rejection</td>
<td>Start/Stop (Repeats)</td>
</tr>
<tr>
<td>6</td>
<td>Last Command Priority</td>
<td>The same as position 5 (remote control acceptance all the time)</td>
</tr>
<tr>
<td></td>
<td>Remote Control Rejection</td>
<td>Stop at ON remote control acceptance, start at OFF (remote control rejection)</td>
</tr>
<tr>
<td>7</td>
<td>Last Command Priority</td>
<td>Start at ON</td>
</tr>
<tr>
<td></td>
<td>Remote Control Rejection</td>
<td>Stop at ON</td>
</tr>
<tr>
<td>8</td>
<td>Last Command Priority</td>
<td>Start at ON</td>
</tr>
<tr>
<td></td>
<td>Remote Control OFF Acceptance</td>
<td>The same as position 7 (Only stop is accepted by remote controller)</td>
</tr>
<tr>
<td>9</td>
<td>Remote Control OFF Acceptance</td>
<td>The same as position 7</td>
</tr>
<tr>
<td>A</td>
<td>Remote Control Acceptance/Rejection, OFF</td>
<td>Start at ON (remote control acceptance)</td>
</tr>
<tr>
<td></td>
<td>Remote Control Rejection</td>
<td>Stop at ON (remote control rejection)</td>
</tr>
<tr>
<td>B</td>
<td>Last Command Priority</td>
<td>The same as position 7 (remote control acceptance all the time)</td>
</tr>
<tr>
<td></td>
<td>Remote Control Rejection</td>
<td>The same as position 7</td>
</tr>
<tr>
<td>C</td>
<td>Position 5 + Energy Saving Control</td>
<td>Forced thermostat OFF at ON</td>
</tr>
<tr>
<td></td>
<td>Position 5 + Temperature Set-Back</td>
<td>Setting temperature shift command at ON</td>
</tr>
<tr>
<td>D</td>
<td>Position 6 + Energy Saving Control</td>
<td>Forced thermostat OFF at ON</td>
</tr>
<tr>
<td></td>
<td>Position 6 + Temperature Set-Back</td>
<td>Setting temperature shift command at ON</td>
</tr>
</tbody>
</table>

Note:
1. When constant input is used for input B at position 7-A, the system is shut-down forcibly (Ignored input A). Constant input cannot be used for input B at position B.
2. Refer to the followings for the outline of above functions.
Description of Functions (Outline)

1. Remote Control Rejection
   For when you want to turn ON/OFF only by central remote controller. (ON/OFF cannot be controlled by remote controller for indoor unit.)

2. Remote controller OFF Only Accepted
   For when you want to turn ON only by the central remote controller, and turn OFF only by remote controller for indoor unit.

3. Central Priority
   For when you want to turn ON only by the central remote controller, and during the set time, turn ON/OFF freely by remote controller for indoor unit.

4. Individual Priority (Last command priority)
   For when you want to turn ON/OFF by both central remote controller and remote controller for indoor unit.

5. Remote Controller Permission Timer
   For when you want to turn ON/OFF by remote controller for indoor unit during set time, and you want to start the operation by remote controller for indoor unit at the programmed time of system start.

Example when the control mode selector switch is set at position 6:
The following is the time chart for the command by remote controller and the indoor unit against input signal.

[Diagram showing the timing chart for ON/OFF commands and the operation of the indoor unit for different inputs and commands.]