RSC-P11 series

OPERATING INSTRUCTIONS

RSC-P11G -SM,-CS,-KL  Conversion between general RS-485 protocols
RSC-P11A -SM,-CS,-KL  Conversion between Manchester and RS-485
RSC-P11B -SM,-CS,-KL  Conversion between BOSCH and RS-485
RSC-P11D -SM,-CS,-KL  Conversion between DALLES and RS-485
Content

1. Features ......................................................................................................................................................2
   1.1. Applied Project...................................................................................................................................2
   1.2. Technical Parameters.........................................................................................................................3
   1.3. The size of Protocol Converter...........................................................................................................3
2. Protocol convertors series diferencies .......................................................................................................4
   2.1. Input interface differences: ...............................................................................................................4
   2.2. Output interface differences: ............................................................................................................4
3. Application scheme ....................................................................................................................................5
4. Connection scheme ....................................................................................................................................6
5. Diagnostics..................................................................................................................................................6
6. RSC-P11G converter: RS-485 to RS-485......................................................................................................7
7. RSC-P11A converter: Manchester to RS-485 .............................................................................................9
8. RSC-P11B converter: BOSCH to RS-485 ..................................................................................................10
9. RSC-P11D converter: DALLES to RS-485 ............................................................................................11
10. Special function list for using general PTZ, matrix and dome ..............................................................12
   10.1. Matrix VICON-V1422 ....................................................................................................................12
   10.2. MOLYNX DOME ............................................................................................................................12
   10.3. KALATEL Speed dome ....................................................................................................................12
1. Features

- Protocol converter mainly used in the field of convert different protocol and baud rate between Matrix, keyboard controller, DVR or other host machine and PTZ, receiver or other terminal device.
- When DVR and matrix control the terminal device, the protocol converter box can play the function of connection and convert protocol.
- Protocol converter box support multi-protocol and baud rate which it is the necessary equipment in the large system of surveillance project.

1.1. Applied Project

1. Matrix controls the different high speed dome or PTZ with different protocol.
2. Matrix and DVR controls the terminal device, like PTZ or camera.

Note:
- Installation should be carried out only by qualified personnel and in accordance with any wiring regulations in force at the time.
- Do not use any accessory not specifically designed for use with this product.
- When you use it, please do as the manual and keep the correct connection wire. The power supply, corresponding DIP position, communication Protocol, baud rate must be match your control equipment.
- Do not attempt to service or repair the protocol converter as opening or removing covers may expose dangerous voltage or other hazards.
1.2. **Technical Parameters**

<table>
<thead>
<tr>
<th>Adaptor</th>
<th>AC220V or AC110V, 9V DC in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>3W</td>
</tr>
<tr>
<td>In /Communication</td>
<td>RS-485 or Manchester</td>
</tr>
<tr>
<td>Out /Communication</td>
<td>RS-485</td>
</tr>
<tr>
<td>Work Temperature</td>
<td>-40°C ~ +70°C</td>
</tr>
<tr>
<td>Size (mm)</td>
<td>160 x 66 x 27</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>0.69</td>
</tr>
</tbody>
</table>

1.3. **The size of Protocol Converter**
2. Protocol convertors series differences

Protocol converter differs by input and output interface.

- The product item number stands for the output protocols which protocol converter box support; and each product can only choose ONE of number.
- The model RSC-P11 stands for input, the -XX product stand for output.

For Example:
Model No: RSC-P11B-KL
Input Protocol is PHILIPS, BOSCH, UNIVISION
Output Protocol is KALATEL, AD, PELCO-D, PELCO-P

2.1. Input interface differences:

**RSC-P11G-XX**
Input is RS-485. Generally most equipment is using this.
Output is RS-485.

**RSC-P11A-XX**
Input is Manchester Code which support AD, TYCO, AB, WISH and other Matrix Host
Output is RS-485

**RSC-P11B-XX**
Input device is PHILIPS, BOSCH or UNIVISION Matrix
Output device is RS-485.

**RSC-P11D-XX**
Input is DALLES protocol matrix or keyboard;
Output is RS-485

2.2. Output interface differences:

Output protocols available by model annex code -XX:

- **SM**
  PELCO-D, PELCO-P, VICON, PIH1016 2400, MOLYNX 9600, SAMSUNG 9600, SAE 9600, B01/TD 500 9600,

- **CS**
  PELCO-D, PELCO-P, VICON, CS-850/860

- **KL**
  PELCO-D, PELCO-P, AD-DOME, KALATEL
3. Application scheme

- The matrix controls the high speed dome and receiver with different protocol.

- The Matrix and DVR controls the terminal device.
4. Connection scheme

- Input connects with Matrix, keyboard, DVR or other control device; Output connects with high speed dome, receiver and other terminal device.

- Output is RS485 code (A=485+, B=485-)

Note:

a) The output of protocol convert is RS485 port the max communication distance up to 1200M
   Add a 120ohm resistance at the end of RS485 + and RS485-.

b) Using twisted-pair cable for communication.

5. Diagnostics

- POWER LED: when the power on, the LED will be on.

- INPUT LED: when the matrix controls the PTZ, the input LED will be on or wink.(When you control the PTZ left or right, the LED will be ON and be OFF after stop)
6. RSC-P11G converter: RS-485 to RS-485

Support general host with RS485 communication;
For available protocol, please see the following list in details.

**Input DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Output DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Input protocol setting:**
From Switch 3 to Switch 8 is input protocol setting.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Input Protocol</th>
<th>Switch 8</th>
<th>Switch 7</th>
<th>Switch 6</th>
<th>Switch 5</th>
<th>Switch 4</th>
<th>Switch 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>PELCO-D</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>1</td>
<td>VICON Matrix V1422 / 4800</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>2</td>
<td>VICON- surveyor99</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>3</td>
<td>AD (RS422/485)</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>4</td>
<td>DH</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>5</td>
<td>MOLYNX</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>6</td>
<td>PIH1016</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>7</td>
<td>ADT8060 / ADT</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>8</td>
<td>PELCO-P</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>11</td>
<td>KODICOM -RX / KRE-301RX</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>14</td>
<td>V1200 Baud Rate9600 / Address begin with 0</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>15</td>
<td>KTD348-KTD304/4800 KALATEL HOST SANTACHI-450/9600</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>

**Input and Output Baud rate setting:**
Both of Switch 1 and Switch 2 is baud rate setting:

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Baud Rate</th>
<th>Switch 1</th>
<th>Switch 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1200</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>1</td>
<td>2400</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>2</td>
<td>4800</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>3</td>
<td>9600</td>
<td>OFF</td>
<td>OFF</td>
</tr>
</tbody>
</table>
Output protocol setting:
From Switch 3 to Switch 8 is output protocol setting.

<table>
<thead>
<tr>
<th>Input Protocol</th>
<th>Product model</th>
<th>Switch 8</th>
<th>Switch 7</th>
<th>Switch 6</th>
<th>Switch 5</th>
<th>Switch 4</th>
<th>Switch 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 PELCO-D</td>
<td>-SM/-CS/-KL</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>2 VICON</td>
<td>-SM/-CS</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>6 PIH1016</td>
<td>2400 SM</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>7 MOLYnx</td>
<td>9600 SM</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>8 PELCO-P</td>
<td>-SM/-CS/-KL</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>9 SAMSUNG</td>
<td>9600 SM</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>10 SAE</td>
<td>9600 SM</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>11 B01/TD500</td>
<td>9600 SM</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>12 AD-Dome</td>
<td>-KL</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>13 C-850/860</td>
<td>-CS</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>15 KALATEL</td>
<td>-KL</td>
<td>ON</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

For other operation way of PTZ, matrix and dome see attached special function list - chapter 10 on page 12.
7. RSC-P11A converter: Manchester to RS-485

Input Protocol is Manchester Code and which support AD, TYCO, AB, WISH and other Matrix Host; For available protocol, please see the following list in details.

**Input DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Output DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Input protocol setting:**
From Switch 3 to Switch 8 is input protocol setting.
Configuration table is identical as in chapter 6 on page 7

**Input and Output Baud rate setting:**
Both of Switch 1 and Switch 2 is baud rate setting;
Configuration table is identical as in chapter 6 on page 7

**Output protocol setting:**
From Switch 3 to Switch 8 is output protocol setting.
Configuration table is identical as in chapter 6 on page 7

**The using way of AD/AB with compatible matrix:**

<table>
<thead>
<tr>
<th>AUX1</th>
<th>Call preset 68 is MENU ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUX2</td>
<td>Call preset 69 is MENU OFF</td>
</tr>
<tr>
<td>AUX3 is AUTO</td>
<td>Call preset 70 is SCAN START</td>
</tr>
<tr>
<td>Call preset 65 is PATTERN START</td>
<td>Call preset 71 is SCAN STOP</td>
</tr>
<tr>
<td>Call preset 66 is PATTERN STOP</td>
<td>Call preset 72 is ENTER (ACK)</td>
</tr>
<tr>
<td>Call preset 67 is PATTERN PLAY</td>
<td></td>
</tr>
</tbody>
</table>

For other operation way of PTZ, matrix and dome see attached special function list - chapter 10 on page 12.
8. RSC-P11B converter: BOSCH to RS-485

Input device support PHILIPS, BOSCH or UNIVISION Matrix Host. For available protocol, please see the following list in details.

**Input DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Output DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Input protocol setting:**
From Switch 3 to Switch 8 is input protocol setting. Configuration table is identical as in chapter 6 on page 7

**Input and Output Baud rate setting:**
Both of Switch 1 and Switch 2 is baud rate setting; Configuration table is identical as in chapter 6 on page 7

**Output protocol setting:**
From Switch 3 to Switch 8 is output protocol setting. Configuration table is identical as in chapter 6 on page 7

**The using way of PHILIPS MATRIX:**

Connection:
Philips Matrix DB9 - 1 = RS485B; DB9 - 2 = RS485A or WSB terminal

<table>
<thead>
<tr>
<th>AUX3 ON</th>
<th>PATTERN START</th>
<th>AUX6 ON</th>
<th>AUTO ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUX3 OFF</td>
<td>PATTERN STOP</td>
<td>AUX6 OFF</td>
<td>AUTO OFF</td>
</tr>
<tr>
<td>AUX4 ON</td>
<td>PATTERN RUN</td>
<td>AUX1</td>
<td></td>
</tr>
<tr>
<td>AUX5 ON</td>
<td>SCAN START</td>
<td>AUX2</td>
<td></td>
</tr>
<tr>
<td>AUX5 OFF</td>
<td>SCAN STOP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For other operation way of PTZ, matrix and dome see attached special function list - chapter 10 on page 12.
9. RSC-P11D converter: DALLES to RS-485

Support DALLES Matrix host;
For available protocol, please see the following list in details.

**Input DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Output DIP position:** Both of Switch 1 and Switch 2 is baud rate setting; From Switch 3 to Switch 8 is output protocol setting.

**Input protocol setting:**
From Switch 3 to Switch 8 is input protocol setting.
Configuration table is identical as in chapter 6 on page 7

**Input and Output Baud rate setting:**
Both of Switch 1 and Switch 2 is baud rate setting;
Configuration table is identical as in chapter 6 on page 7

**Output protocol setting:**
From Switch 3 to Switch 8 is output protocol setting.
Configuration table is identical as in chapter 6 on page 7

The using way of special function with DS matrix( Control Panasonic CS-850A )

- Call Preset 57 is PATTERN START
- Call preset 58 is PATTERN STOP
- Call preset 59 is PATTERN RUN
- Call preset 60 is MENU ON
- Call preset 61 is MENU OFF

- Call preset 62 is SET1 Main menu confirm
- Call preset 63 is SET2 Sub-Menu confirm
- OPEN navigate menu up
- CLOSE navigate menu right

For other operation way of PTZ, matrix and dome see attached special function list - chapter 10 on page 12.
10. Special function list for using general PTZ, matrix and dome

This chapter describes special controll codes used when recoding is used

### 10.1. Matrix VICON-V1422

- AUX - 1 ----- AUX1 ON / OFF
- AUX - 2 ----- AUX2 OFF / OFF
- AUX - 3 ----- PATTERN STAR
- AUX - 4 ----- PATTERN STOP
- AUX - 5 ----- PATTERN RUN
- AUX - 6 ----- AUTO SCAN ON
- A / I ----- MENU ON
- A / P ----- AUTO PAN
- L - SPD ----- MENU OFF
- HOME ----- ENTER / ACK / HOME

### 10.2. MOLYNX DOME

- CALL PRESET 57----CAMERA REST
- CALL PRESET 58----AUTO FOCUS
- CALL PRESET 59----PRESET TOUR
- CALL PRESET 60----MENU ON
- CALL PRESET 61----MENU UP
- CALL PRESET 62----MENU DOWN
- CALL PRESET 63----MENU LEFT
- CALL PRESET 64----MENU RIGHT

### 10.3. KALATEL Speed dome

The output of protocol converter only supports a type of KALATEL protocol; The baud rate is 4800 and other switch is OFF.

- ;0=preset 60
- ;1=preset 61
- ;2=preset 62
- ;3=preset 63
- ;9=preset 69
- ;seq=preset 80
- ;set=preset 81
- ;alarm=preset 82
• ;4=preset 64
• ;5=preset 65
• ;6=preset 66
• ;7=preset 67
• ;8=preset 68

• ;auto focus =preset 83
• ;1 continue=preset 84
• ;menuon=preset 95
• ;menuoff=preset 94
• ;auto on=preset 99