Smartgen®

Smartgen — make your generator smart

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If colors of actual products are different from those mentioned within this manual, please take the actual product as the standard.

Software Version

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Content</th>
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<td>2009-12-19</td>
<td>1.0</td>
<td>Original release</td>
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<tr>
<td>2012-11-27</td>
<td>1.1</td>
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1. OVERVIEW
HRE400 relay expansion module has the features of modular design, large contact capacity, compact structure, small volume and easy installation. It is ready for getting stuck in variety guide rail with the help of polarity reversal of the voltage supply.

2. 4-CHANNEL RELAY OUTPUT EXPANSION
1. Relay K1: active contact output, 30A, 28VDC, coil power≤0.9W;
2. Relay K2: active contact output, 30A, 28VDC, coil power≤0.9W;
3. Relay K3: active contact output, 16A, 28VDC, coil power≤0.4W;
4. Relay K4: passive contact output, 16A, 250VAC, coil power≤0.4W.

3. SCHEMATIC DIAGRAM

Note: In the above drawing, K1-K4 stand for relay coil while Bridge1-Bridge4 means bridge rectifier circuit.

**Terminal Description**

<table>
<thead>
<tr>
<th>NO.</th>
<th>SIGN</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IN COM</td>
<td>K1-K4 COMMON INPUT</td>
<td>Battery positive/negative</td>
</tr>
<tr>
<td>2</td>
<td>OUT COM</td>
<td>K1-K3 common output</td>
<td>Battery positive</td>
</tr>
<tr>
<td>3</td>
<td>K1 CTRL</td>
<td>K1 coil input</td>
<td>Active when input opposite polarity to IN COM</td>
</tr>
<tr>
<td>4</td>
<td>K1 OUT</td>
<td>K1 normally open contact output</td>
<td>active contact output, contact capacity 30A/28VDC</td>
</tr>
<tr>
<td>5</td>
<td>K2 CTRL</td>
<td>K2 coil input</td>
<td>Active when input opposite polarity to IN COM</td>
</tr>
<tr>
<td>6</td>
<td>K2 OUT</td>
<td>K2 normally open contact output</td>
<td>active contact output, contact capacity 30A/28VDC</td>
</tr>
<tr>
<td>7</td>
<td>K3 CTRL</td>
<td>K3 coil input</td>
<td>Active when input opposite polarity to IN COM</td>
</tr>
<tr>
<td>8</td>
<td>K3 OUT</td>
<td>K3 normally open contact</td>
<td>active contact output, contact</td>
</tr>
</tbody>
</table>
4. TYPICAL WIRING DIAGRAM

I. The common port of relay’s control coil connect to battery positive.

II. The common port of relay’s control coil connect to battery negative.

Note: In the above drawings, B+ stand for battery positive, B- stand for battery negative, K1-K4 means relay module with bridge rectifier. When the control signals of input ports 3, 5, 7, 9 are active, the corresponding output ports 4, 6, 8, 12 will close. In addition, port 10 will open when port 12 is closed.
5. CASE DIMENSION

Note: The corresponding red indicator is luminous when K1-K4 is powered on. Please specify 12V or 24V when ordering.