Smartgen Technology Co., Ltd.
No. 28 Jinsuo Road
Zhengzhou City
Henan Province
P. R. China
Tel: +86-371-67988888
    +86-371-67981888
    +86-371-67991553
    +86-371-67992951
    +86-371-67981000 (overseas)
Fax: 0086-371-67992952
Web: http://www.smartgen.com.cn/
     http://www.smartgen.cn/
Email: sales@smartgen.cn

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means or other) without the written permission of the copyright holder.

Smartgen Technology reserves the right to change the contents of this document without prior notice.

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>
</tr>
</thead>
<tbody>
<tr>
<td>2014-10-12</td>
<td>1.0</td>
<td>Original release</td>
</tr>
</tbody>
</table>
Contents

1. OVERVIEW .................................................................................................................. 4
2. 3-CHANNEL RELAY OUTPUT EXPANSION ............................................................ 5
3. SCHEMATIC DIAGRAM ............................................................................................. 6
4. TYPICAL WIRING DIAGRAM .................................................................................... 7
5. CASE DIMENSION ..................................................................................................... 8
1. OVERVIEW

HRE300A relay expansion module features modular design, large contact capacity, compact structure, small volume and easy installation. It is ready for getting stuck in variety guide rail and the voltage polarity can be reversed.
2.3-CHANNEL RELAY OUTPUT EXPANSION

1. Relay K1: active contact output, 30A, DC28V, coil power≤0.9W;
2. Relay K2: active contact output, 30A, DC28V, coil power≤0.9W;
3. Relay K3: passive contact output, 16A, AC250V, coil power≤0.4W;
3. SCHEMATIC DIAGRAM

Note: In the above drawing, K1-K3 stand for relay coil while Bridge1-Bridge3 are 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>K1 CTRL</td>
<td>K1 coil input</td>
<td>Active when input polarity opposite to IN COM</td>
</tr>
<tr>
<td>2</td>
<td>K2 CTRL</td>
<td>K2 coil input</td>
<td>Active when input polarity opposite to INCOM</td>
</tr>
<tr>
<td>3</td>
<td>K3 CTRL</td>
<td>K3 coil input</td>
<td>Active when input polarity opposite to INCOM</td>
</tr>
<tr>
<td>4</td>
<td>IN COM</td>
<td>K1, K2 common input</td>
<td>Battery positive/negative</td>
</tr>
<tr>
<td>5</td>
<td>OUT COM</td>
<td>K1, K2, K3 common output</td>
<td>Battery positive</td>
</tr>
<tr>
<td>6</td>
<td>K1 OUT</td>
<td>K1 normally open contact output</td>
<td>Active contact output, contact capacity 30A/DC28V</td>
</tr>
<tr>
<td>7</td>
<td>K2 OUT</td>
<td>K2 normally open contact output</td>
<td>Active contact output, contact capacity 30A/DC28V</td>
</tr>
<tr>
<td>8</td>
<td>K3 COM</td>
<td>K3 common port</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>K3 NO</td>
<td>K3 normally open contact output</td>
<td>Passive contact output, contact capacity 16A/AC250V</td>
</tr>
<tr>
<td>10</td>
<td>K3 NC</td>
<td>K3 normally close contact output</td>
<td></td>
</tr>
</tbody>
</table>
4. TYPICAL WIRING DIAGRAM

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

![Diagram of relay expansion module with battery connections to B+ and B- ports.]

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

![Diagram of relay expansion module with battery connections reversed from the previous diagram.]  

⚠️ Note: In the above drawings, B+ stand for battery positive, B- stand for battery negative, K1-K3 means relay module with bridge rectifier. When the control signals of input port 1,2,3 are active, the corresponding output ports 6,7,9 will close. In addition, port 10 will open when port 9 is closed.
5. CASE DIMENSION

⚠ Note: The corresponding red indicator will illuminate when K1, K2, K3 control coil is powered on.
Please specify 12V or 24V when ordering.