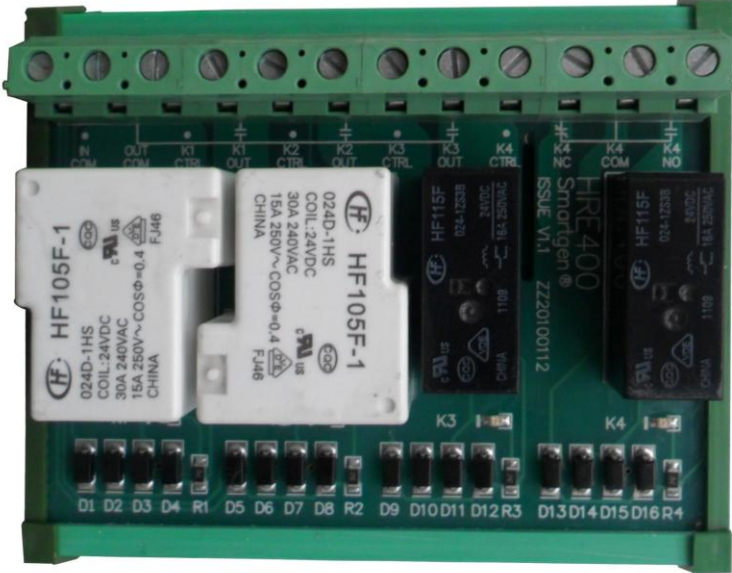


# Smartgen®

## HRE400 RELAY EXPANSION MODULE

### USER MANUAL



Smartgen Technology



众智电子 Chinese trademark

**Smartgen**<sup>®</sup> English trademark

**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

Date	Version	Content
2009-12-19	1.0	Original release
2012-11-27	1.1	Modify some details.

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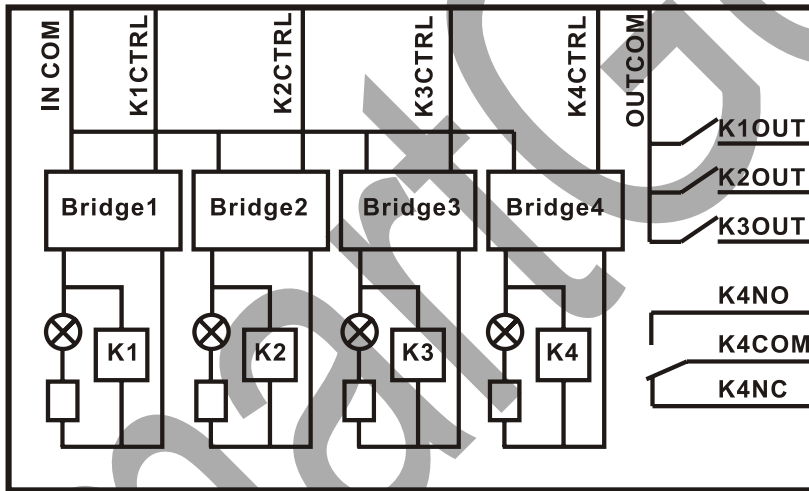
## 1. OVERVIEW

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 $\leq$ 0.9W;
2. Relay K2: active contact output, 30A, 28VDC, coil power $\leq$ 0.9W;
3. Relay K3: active contact output, 16A, 28VDC, coil power $\leq$ 0.4W;
4. Relay K4: passive contact output, 16A, 250VAC, coil power $\leq$ 0.4W.

## 3. SCHEMATIC DIAGRAM



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

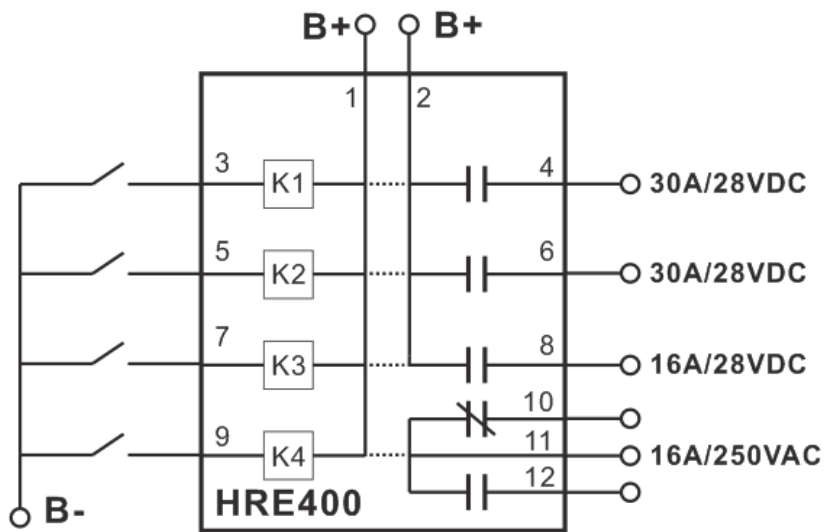
## Terminal Description

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

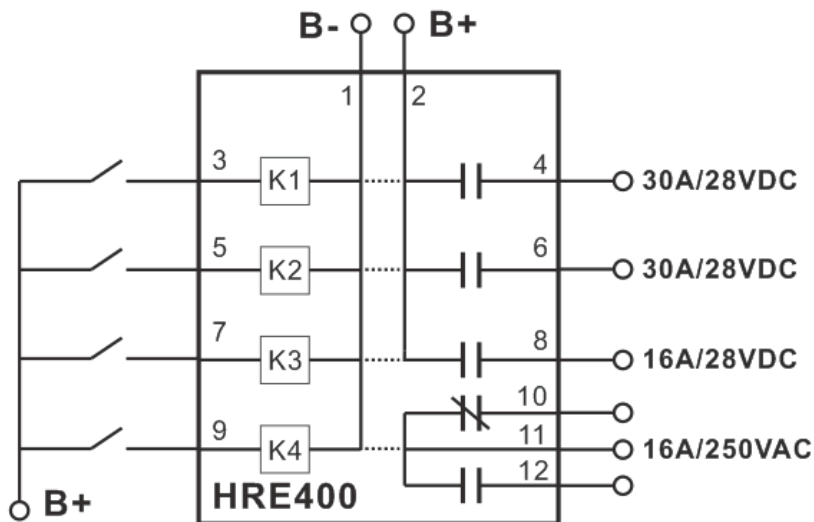
		output	capacity 16A/28VDC
9	K4 CTRL	K4 coil input	Active when input opposite polarity to IN COM
10	K4 NC	K4 normally close contact output	passive contact output, contact capacity 16A/250VAC
11	K4 COM	K4 common port	
12	K4 NO	K4 normally open contact output	

#### 4. TYPICAL WIRING DIAGRAM

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

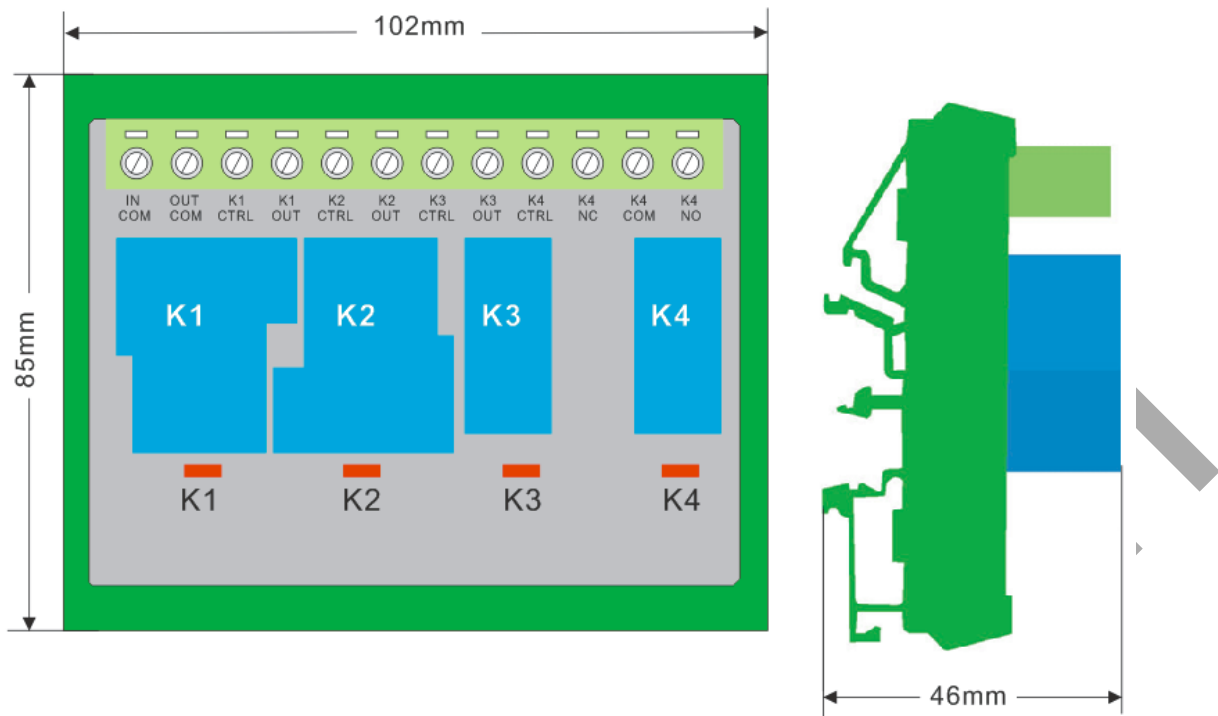


II The common port of relay's control coil connect to battery negative.



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 DEMENSION



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

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