INTRODUCTION

Switch module A is a one -in -four -out switch module, consisting of DC contactors, switch controller and other parts.It communicates with DC charging controller power to control module ,and controls the output switching , thereby achieving the output power dynamic distribution function.

FEATURES

1.High integration, friendly connection

Switch module B is combined from 8pcs 100A DC contactors, wiring row and control boards and other devices. Panel setting dial switch. Load and communication connection standard plug at back end to connect with charging station devices.Quick and easy for use .Significantly improve efficiency and electrical connection reliability.

2.Compact structure,neat appearance

Switch module B is well designed and layout with compact structure, reasonable and orderly device ranking .Small in size and neat appearance .

3.High electrical safety

The load wiring of switch module B guarantees sufficient electrical gap and climbing distance to avoid polar electrical breakdown faults.

4.Flexible installation

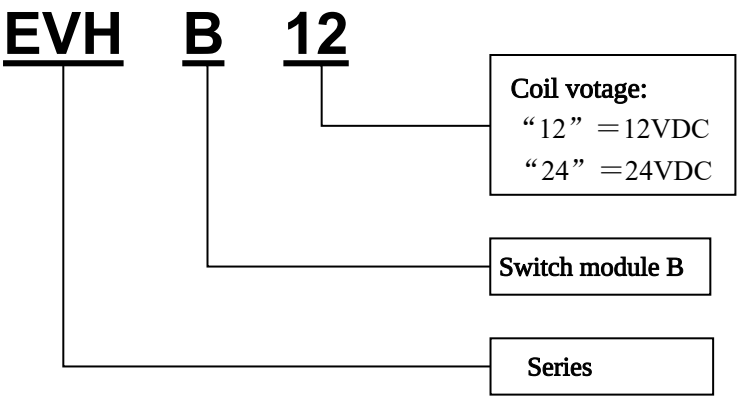
Load and communication connection standard plug at back end to connect with charging station devices.Quick and easy for use .

2pcs M4 screws on module board for easily fasten and disassemble operating .

5.Comply with GB/T14048.1、GB/T14048.4、&《Standardization Design Solution for Electric Vehicle of State Grid Corporation of China》

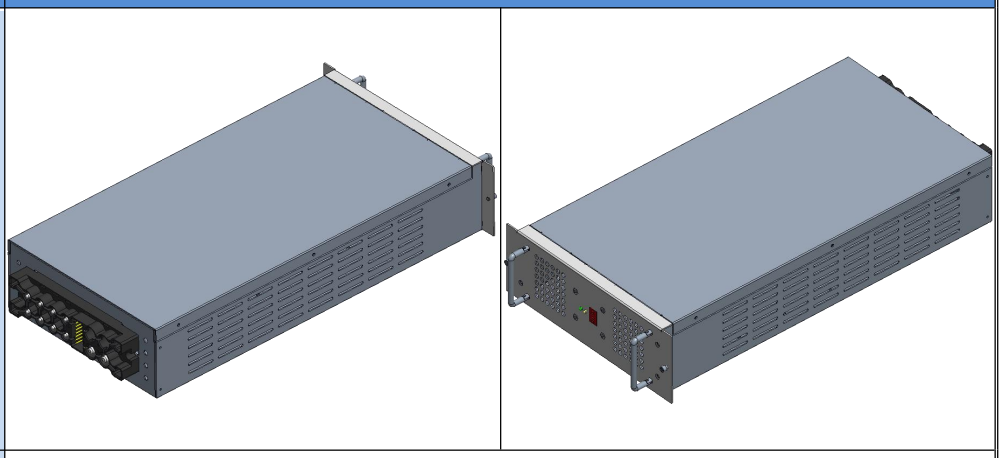
6.Accordance with RoHs(2022/95/EC)

PART NUMBER



PARAMETER

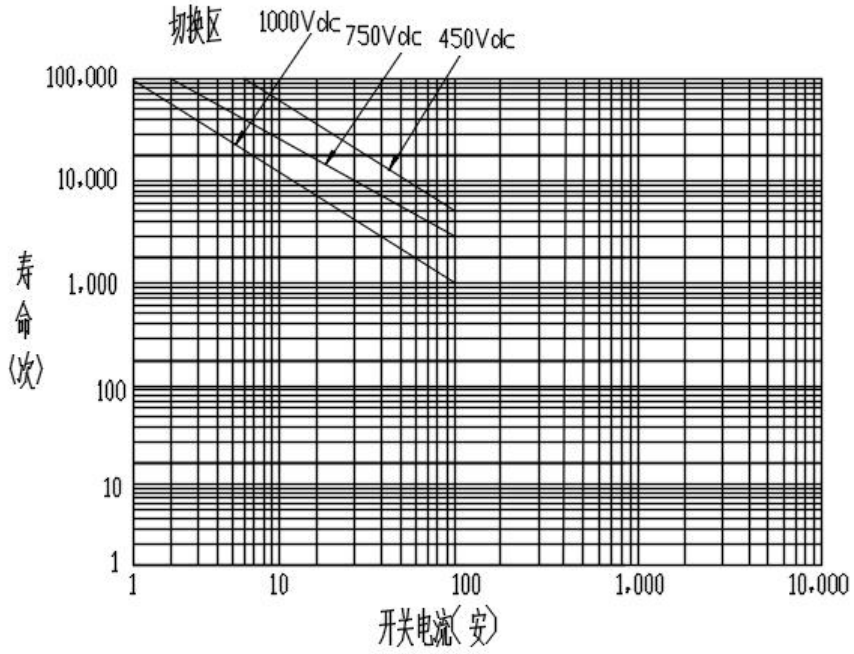
1. PERFORMANCE

SERIES		Switch module B
Appearance		
Operating Condition	Temperature	-25℃～60℃
	Humidity	5%～95%
	Altitude	≤2000m
Input	Volatge rating	DC1000V
	Voltage range	DC200V～DC1000V
	Current rating	DC75A
Output	Voltage rating	DC1000V
	Voltage range	DC200V～DC1000V
	Current rating	DC75A
Insulation performance	Insulation resistance	Input-outer casing,output-outer casing,input-output,input-communication,output-communication:1000V，＞100MΩ；Communication-outer casing：500V，＞100MΩ
	Medium strength	Input-outer casing,output-outer casing,input-output,input-communication, output-communication:DC3500V,1min:Communication-outer casing：DC1400V,1min.
	Impact	Input-outer casing,output-outer casing,input-output：±6kV
Other	Protection level	IP20
	Electromagnetic Compatibility	Electrostatic discharge immunity：GB/T17626.2-2018，Level 3；
		Radiated, radio-frequency, electromagnetic field immunity ：GB/T17626.3-2006，Level 3
		Electrical fast transient/burst immunity：GB/T17626.4-2018，Level 3；
		Surge immunity：GB/T17626.5-2008，Level 3；
		Conducted disturbances,induced by radio-frequency field immunity：GB/T17626.6-2017，Level 3
		Power frequency magnetic field immunity：GB/T17626.8-2006，Level 4
		Voltage temporary decrease, short -term interruption resistance：GB/T17626.11-2012
		Transmission limit :GB4824-2013table 2 requirements
		Radiation emission limit:GB4824-2013 table 4 requirements
	Communication	1 channel，CAN2.0B，125kbps，to communicate with the charging controller.

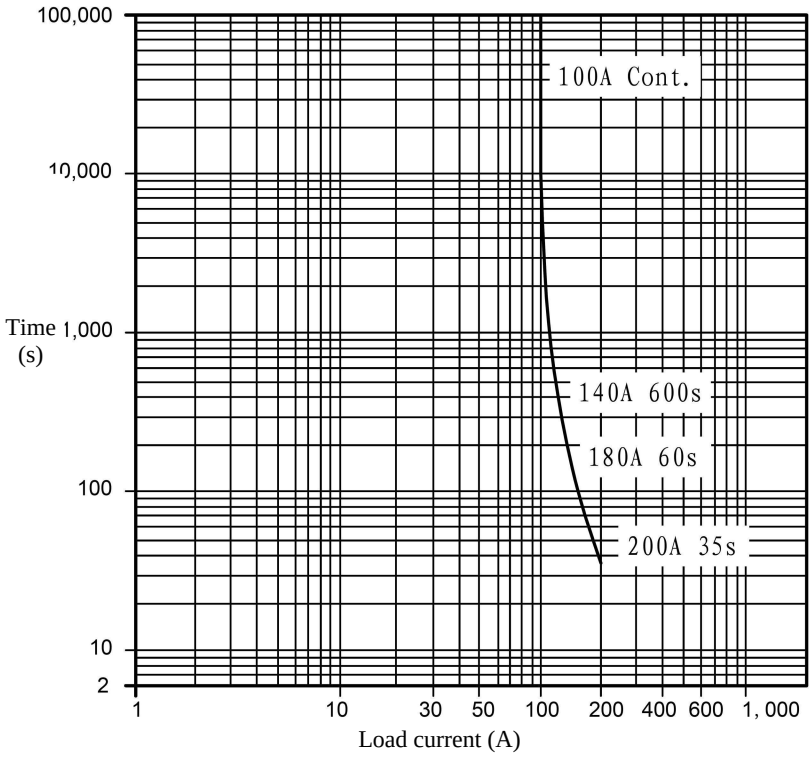
2.DATA REFERENCE

(1) Load switch life curve

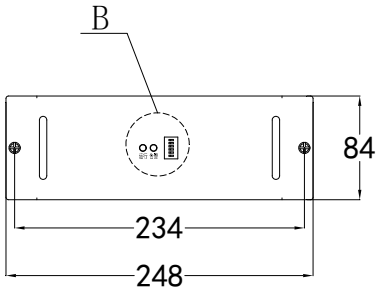
Make&Break Switching Rating（Resistive Load L/R≤1ms, ON：OFF=1Sec：9Sec）



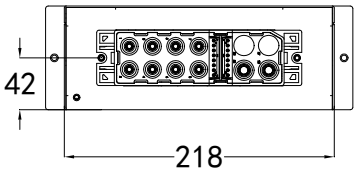
(2) Load capacity curve



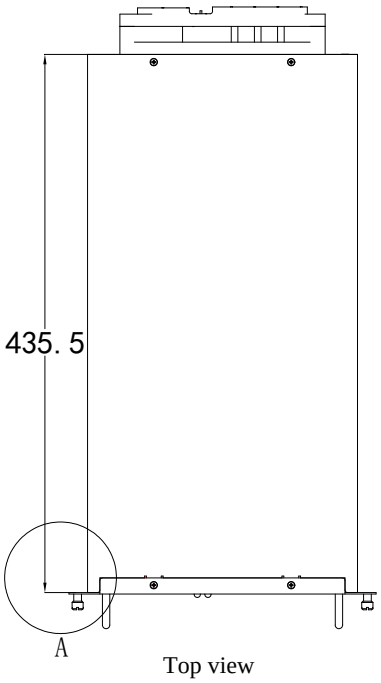
3.DIMENSIONS



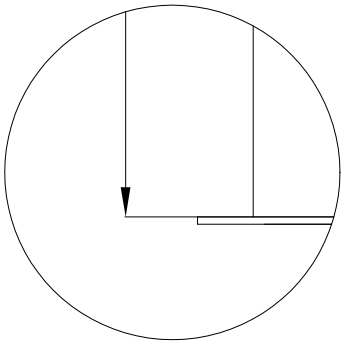
Front view



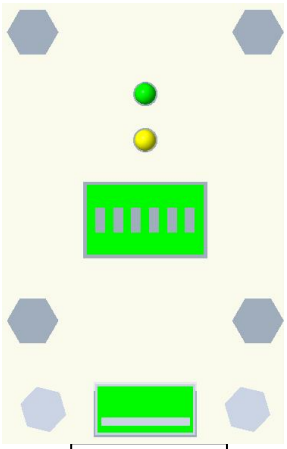
Rear view



Top view



A
5:1

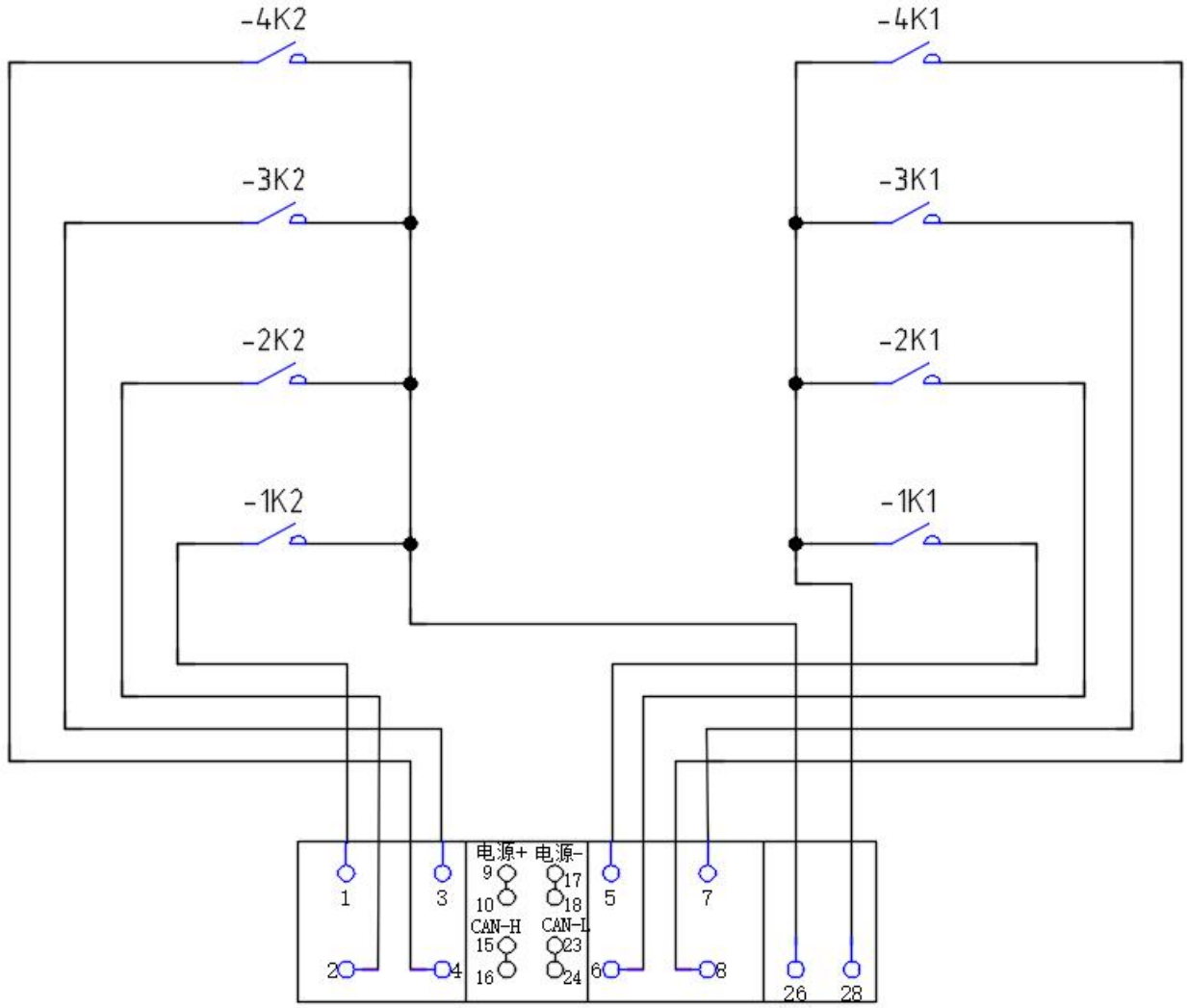


B
5:1

Remark：
1、size unit：mm，View：⌖ ；

Unmarked size tolerance：nominal value＜10mm,±0.3，nominal value10～50mm,±0.6，nominal value＞50mm,±1.0.

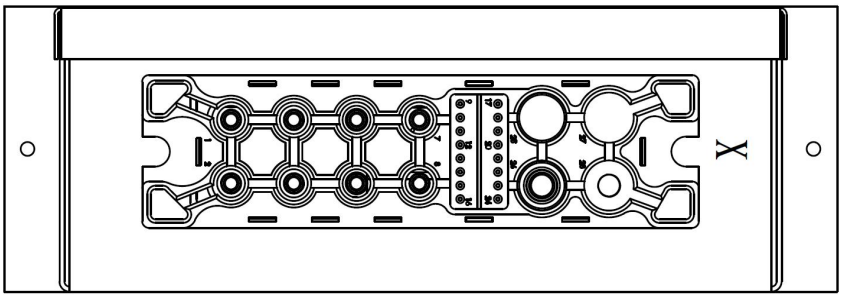
4.Schematic diagram



B型开关模块原理图

5.Definition of switch module B interfaces & terminals

Interface panel illustration：



Definition	Terminal definition			
	NO.	Function	NO.	Function
X terminal	1	DC output 1DC-	2	DC output 2DC-
	3	DC output 3DC-	4	DC output 4DC-
	5	DC output 1DC+	6	DC output 2DC+
	7	DC output 3DC+	8	DC output 4DC+
	9、10	Power 12V+(power voltage 12V±3V	15、16	CAN communication H

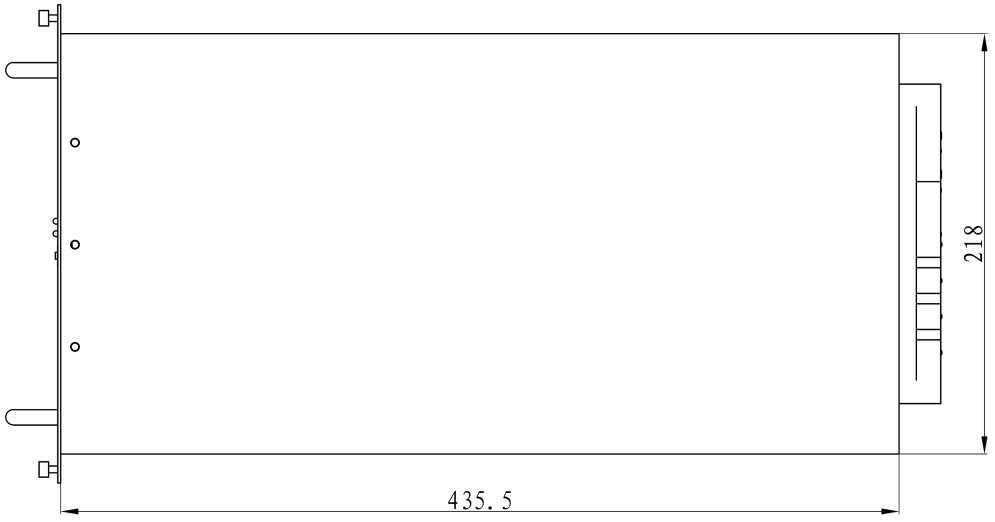
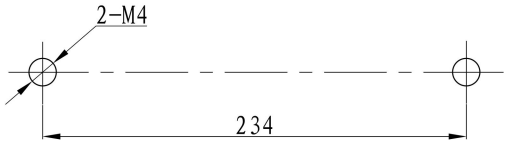
	17、18	Power GND	23、24	CAN communication L
	26	DC input DC-	28	DC input DC+

6.Coil data

Coil votage rating	Votage range （at 20℃）	Pickup voltage （at 20℃） （▲1）	Holding voltage （at 20℃）	Release voltage （at 20℃） （▲1）	Rated operating current [Rated voltage] （at 20℃）	Rated coil resistance [±5%] （at 20℃） （▲1）	Coil power （at 20℃）
12Vdc （Us）	Us85% | Us110%	Us75% Min.	Us85% Min.	Us75% | Us10%	461.5mA	26Ω	5.54W

▲1：Products without energy -saving circuit boards, its pickup voltage, dropout volatge and coil resistance may be changed by temperature and conditions.Therefore, please note that according to the copper resistance temperature coefficient, the following theoretical calculation formula can be obtained, and the calculation value may be slightly different from the actual value.Rising temperature: actual value = u × (1 + 0.004 × k), temperature decrease: actual value = u × (1-0.004 × k), of which the rated value of U = 20 ° C, K = | Current environmental temperature -20 |

7.Installation

Series		EVH-Switch module B
Dimensions（bottom）		
Substrate processing diagram		
Installation screw	Specification	M4 screw
	Provided	Module equipped with screw insde

CAUTIONS

1. Please match the charging pile connection socket and DC charging controller power control module according to the wiring diagram and communication protocol. When the wiring error is wrong, it will cause disorders such as accidental movements, unable to work, please pay attention.

2. Do not use the products that have fallen.

3. Avoid installing the product in a strong magnetic field (close to a transformer or magnet office), or an object close to thermal radiation.

4. Electrical life

The contactor element in the switch module is a high -voltage DC switch. In its final breakthrough mode, it may lose its deserved cutting function, so it should not be used in the state that exceeds its switching ability and life parameters (please please The contactor is treated as a product with a prescribed life span, and it must be replaced if necessary). Once the contactor loses the disconnection capacity, it may cause burning parts around it. Therefore, the protection line should be designed to ensure that the power supply can be cut off in 1 second.

5. The diffusion life of internal gas

The contactor element in the switch module adopts a sealing warehouse contact, the warehouse is filled with gas, and the diffusion life of the gas is determined by the temperature in the contact warehouse (that is, the temperature rise generated by the environmental temperature + the contact of the contact). The temperature is -40 ° C to+85 ° C.

6. If the coils and contacts of the contactor component in the switch module are continuously passed by the rated voltage (or current), the power supply is cut and then connected. The increase in the inhalation voltage of the product may cause the rated inhalation voltage and the release voltage. In this case, the following measures should be taken: if the load current is reduced, the continuous power -on time is limited, or the coil voltage with a high -fixed -battering voltage is used.

7. The rated parameter of the main contact of the contactor component in the switch module is applicable to the resistance load. If the emotional load (L load) is used at the same time, L/R> 1ms should be connected to the perceptual load in parallel. If measures are not taken, the contactor's electrical life may be shortened and poorly cut off.

8. Be careful not to let the miscellaneous and oil stain on the main end of the main. And the external wiring terminals should be reliable with the product of the product, otherwise it may cause abnormal fever.

9. When there is a capacitor load (C load) during use, please take pre -charging and other measures for the capacitor load to control the impact current below the rated current of the contactor. If measures are not taken, it may cause contact adhesion.

10. The control motherboard of the switch module is not configured on the CAN line of the 120Ω terminal to match the resistance. It is recommended to add the terminal matching resistance of the terminal to the external signal rotation board when used.

Statement:

The selection manual of this product is for customers for reference only when the customer is selected. If there are changes, not to be notified separately.All the product parameters are subject to the "Product Specification Book". The switch module is dedicated to the charging pile equipment. If you have any questions, please contact Shenzhen Dongke R & D Co., Ltd. to get more technical support.