

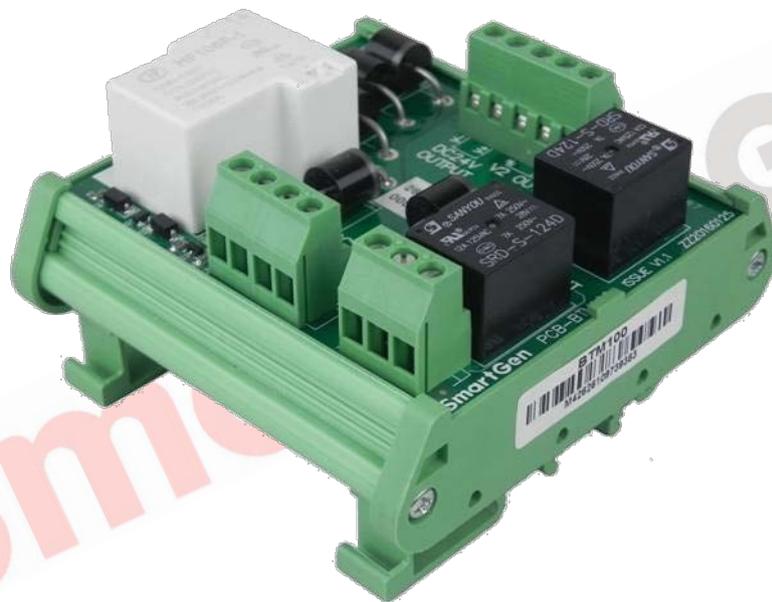


SmartGen
ideas for power

BTM100

DUAL-POWER TRANSFER MODULE

USER MANUAL



SMARTGEN (ZHENGZHOU) TECHNOLOGY CO., LTD.

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SmartGen



Chinese trademark

SmartGen English trademark

SmartGen — make your generator *smart*

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Table 1 Software Version

Date	Version	Note
2016-09-08	1.0	Original release.

1 OVERVIEW

BTM100 Dual-power Transfer Module is especially designed for genset uninterruptible power supply with double power sources input and one power output. It is automatically choose output power source based on the voltage situation.

BTM100 is widely used in Marine and stationary generation units with compact structure and easy installation.

2 PERFORMANCE AND CHARACTERISTICS

- 1) Suit for dual-power supply system: DC24V, 10A.
- 2) Automatically select power source.
- 3) According to the voltage situation select power supply. Choose V2 if both are available; and choose V1 if V2 is unavailable.
- 4) Corresponding LED indicators will display the situation of V1 and V2; meanwhile, relevant relays start output.
- 5) It is suit for different voltage environment of starter battery with wide power supply voltage and current range (voltage range: DC (18~35) V; current range: (0~10) A).
- 6) 35mm guide rail installation.
- 7) Modular design and pluggable connection terminals; compact structure with easy mounting.

3 SPECIFICATION OPERATION

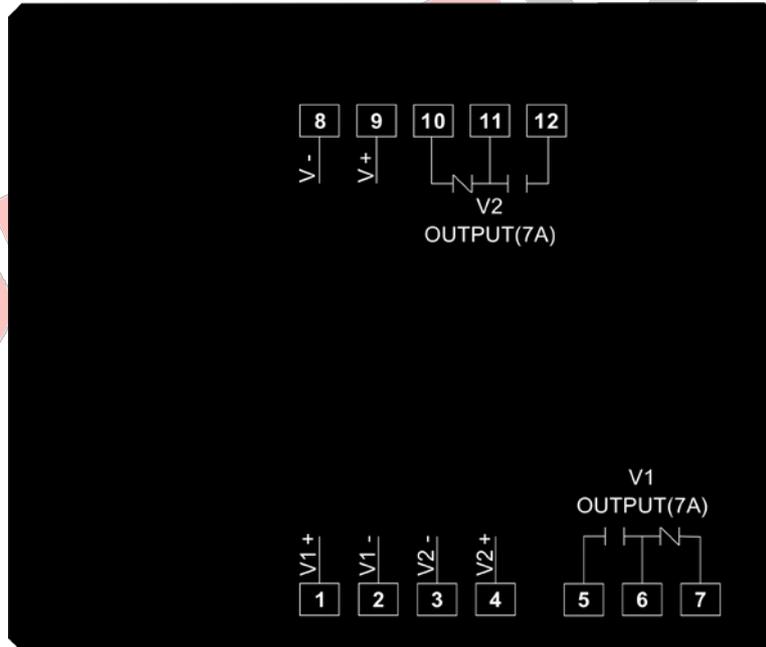
Items	Contents
Operating Voltage	DC8.0V to DC35.0V, Continuous Power Supply.
Power Consumption	<7W (standby ≤0.5W)
Power Supply With Load	DC 18V~ DC35V DC 0A~ DC10A, Instantly reachable 20A
Relay Output	7A AC250V Volt free
Case Dimension	91mm x 89.6mm x 54mm
Working Conditions	Temperature: (-25~+70)°C; Humidity: (20~95)%
Storage Condition	Temperature: (-25~+70)°C
Insulating Intensity	Apply AC2.2kV voltage between high voltage terminal and low voltage terminal; The leakage current is not more than 3mA within 1min.
Net Weight	0.35kg

4 INDICATORS AND TERMINALS FUNCTIONS DESCRIPTION

BTM100 front terminal drawing is shown as follow,



BTM100 front terminal schematic diagram is shown as follow,



LED indicators functions description is shown as follow,

Indicators	Colour	Function Description	Remark
V1 Power	Red	V1 power supply indicator; light is on when power is available.	
V2 Power	Red	V2 power supply indicator; light is on when power is available.	

Terminals connection description is shown as follow,

No.	Function	Cable Size	Remark		
1	DC V1 Input+	2.5mm ²	Connect to battery positive electrode. V1 is backup power.		
2	DC V1 Input-	2.5mm ²	Connect to battery negative electrode.		
3	DC V2 Input-	2.5mm ²	Connect to battery negative electrode. V2 is backup power.		
4	DC V2 Input+	2.5mm ²	Connect to battery positive electrode.		
5	V1 Output	2.5mm ²	Output when V1 is available; switch off when V1 is unavailable.	Relay normally open/closed contacts with rated current 7A, volt free contact output.	
6					Normally Open
7					COM
8	V2 Output	2.5mm ²	Output when V2 is available; switch off when V2 is unavailable.	Relay normally open/closed contacts with rated current 7A, volt free contact output.	
9					Normally Open
10					COM
11	DC V output +	2.5mm ²	Connect to positive electrode of powered device.		
12	DC V output -	2.5mm ²	Connect to negative electrode of powered device.		

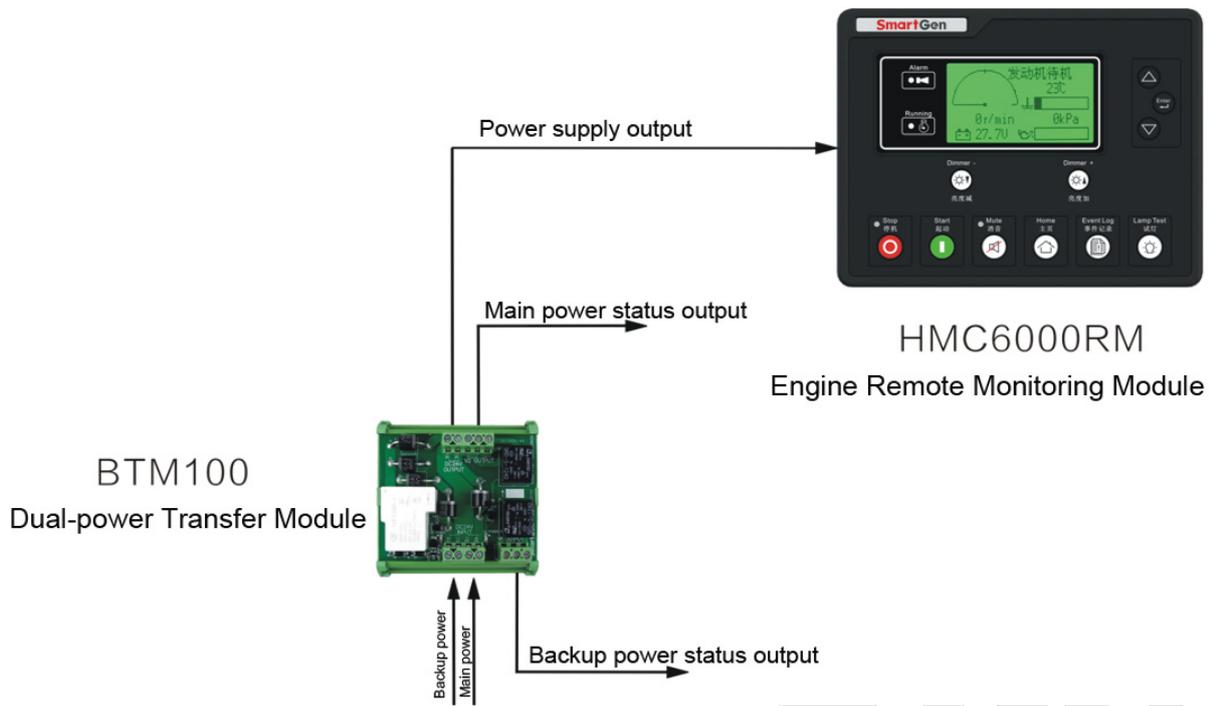
5 FUNCTION DESCRIPTION

BTM100 Dual-power Transfer Module is aiming at to provide uninterrupted power supply to realize dual-power seamless switching.

The mainly function of BTM100 is to select power source according to the voltage situation of double power supply. V2 is main power source, thus module will select V2 when both power are available, which means output voltage V is supplied by V2; When V1 is available, LED besides V1 POWER lights up and V1 relay OUTPUT action initiate; When V2 is available, LED besides V2 POWER lights up and V2 relay OUTPUT action initiate. It is widely used in Marine and stationary generation units with compact structure and easy installation.

V1+, V1- and V2+, and V2- are separately connected to double power supply. V+ and V- are connect to the being powered device.

6 TYPICAL APPLICATION



7 OVERALL DIMENSION

