

Application

With the development of solar industry, the large solar power factory are developed better and faster. People have higher request about the capability of the equipment which is applied for controlling and circuit breaker and isolator switch are necessary, especially for the inverter protection. Then, it is a new requirement for the low voltage components. In this case, Suntime researched and developed a new SM8-250HPV series moulded case circuit breaker which is specializing in photovoltaic solar system.

SM8HPV series specializing in PV solar moulded case circuit

breaker (referred as circuit breaker as following) are using in DC power

grid system, U_e 1000VDC, 1250VDC, 1500VDC, I_n 100A-630A. The circuit breaker are with the protection function of instantaneous short circuit and overload for solar PV system, protecting the system and components from the damage of over load and short circuit, etc.

The circuit breaker are comply a standard as following:

IEC 60947-1 《Low Voltage switch component and Control equipment, the first part: General Rule》 IEC 60947-2 《Low Voltage switch component and Control equipment, the second part: Circuit Breaker》

Accessories code	Appendix name	Type / specification	SM8-250HPV/2	SM8-250HPV	SM8-630HPV
		Pole Number	2	3	4
08	Alarm contact				
10	Shunt release				
20	Auxiliary contact				
40	Shunt release and auxiliary contacts				
60	Two sets of auxiliary contacts				
18	Shunt release and alarm contacts				
28	Auxiliary contacts and alarm contacts				
48	Shunt release, auxiliary contacts and alarm contacts				
68	Two sets of auxiliary contacts and alarm contacts				

Shunt release control voltage : DC24V/AC230V/AC400V

4、Specifications and main technical parameters are shown in table.

Model	SM8-250HPV/2	SM8-250HPV	SM8-630HPV
Rated current I_n (A)	100,125,140 160,180,200 225,250	100,125,140 160,180,200 225,250	350、400 500、630
Pole	2	3	4
Rated insulation voltage U_i (V)	DC1500V		
Rated working voltage U_e (V)	DC1000V	DC1250V;DC1500V	DC1000V ~ DC1500V
Aring distance (mm)	80	80	100
Rated limit short Road breaking capacity I_{cu} kA	DC1000V	20kA ($I_{cs}=75\%I_{cu}$)	20kA($I_{cs}=100\%I_{cu}$)
	DC1250V	-	20kA ($I_{cs}=100\%I_{cu}$)
	DC1500V	-	15kA ($I_{cs}=100\%I_{cu}$)
Short circuit instantaneous tripping Actuator current value	6 I_n (Note : below 160A tripping current is 1000A)		
Service life (Times)	8000	8000	5000