

# HES-500



## Characteristic

- Ceramic sealing structure using magnetic blowing out technology and filled with hydrogen gas mixture, achieving anti contact oxidation, zero arc, low contact resistance. A new safe, stable, and reliable solution.
- Built in a set of normally open auxiliary contacts.
- No polarity requirement during loading.
- Environmental protection: All parts comply with the latest EU ROHS environmental protection requirements.
- Approval: UL, CE, TÜV

## Ordering

Design Code	HE S 500 /1500 -12D -H C 5 W XXX
Application	S:PV and energy storage
Load current	500:500A
Load voltage	1000:1000VDC 1500:1500VDC
Coil voltage	12D: 12VDC Double Coil 24D: 24VDC Double Coil
Contact type	H: With normally open
Coil input terminal	C: Connector
Load terminal	5:Bolt terminal female
Mounting type	Nil: Vertical mounting W: Horizontal mounting
Customer No.	XXX: Customer requirement Nil: Standard

Note: The customer special requirement express as customer No. after evaluating between each party.

## Contact parameter

Contact type	1H
Contact resistance	≤0.3mΩ(at 500A 23°C)
Contact rated current	500A
Max. switching voltage	1500VDC
Max. breaking current	2000A (1 op)
Max. switching power	1000VDC 500KW 1500VDC 750KW
Current carrying capacity	500A: keeping 600A: 90s 2000A: 1s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥50mm<sup>2</sup>, more detail, please see curve.

## Life

Mechanical endurance	2×10 <sup>5</sup> ops
Electrical Endurance (Breaking)	100A 1500Vdc. 5×10 <sup>3</sup> ops
	150A 1500Vdc. 3×10 <sup>3</sup> ops
	350A 1000Vdc. 1×10 <sup>3</sup> ops
	500A 1000Vdc. 100 ops
	1000A 1500Vdc. 1 ops

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.  
Note 2: When the relay is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the relay closes, which may cause the relay to stick.

## Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9.6	≥1	5
24	≤19.2	≥2	5

Note: The operational voltage and release voltage are conservative values in the full temperature range ( -40°C ~ +85°C ).

## Electrical characteristics

Insulation resistance	≥1000MΩ (1500VDC 1min)	
Dielectric withstand voltage	between contact and coil	4000VAC 1min
	between open contacts	4000VAC 1min
Operate time ( at nomi. volt. )	≤30ms	
Release time ( at nomi. volt. )	≤10ms	

Note: The data shown above are initial values.

## Environmental characteristics

Shock	Stability	98m/s <sup>2</sup>
	Strength	490m/s <sup>2</sup>
Vibration	10Hz ~ 55Hz	49m/s <sup>2</sup>
Humidity	5% ~ 85%RH	
Ambient temperature	-40°C ~ +85°C	
IP grade	IP67 ( contact )	

## Other

Terminal	M8 internal thread
Mounting torque at load end	M8 8~10N.m
Outline dimension	104mm×70mm×89mm
Weight	≈1100g

## Outline, coil wiring , installation hole

Unit: mm

