

HES-400



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

Application	S:PV and energy storage
Load current	400:400A
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.

HE S 400 /1500 -12D -H C 5 W XXX

Contact parameter

Contact type	1H
Contact resistance	≤0.3mΩ(at 400A 23°C)
Contact rated current	400A
Max. switching voltage	1500VDC
Max. breaking current	2000A (1 op)
Max. switching power	1000VDC 400KW 1500VDC 600KW
Current carrying capacity	400A: keeping
	600A: 10min
	1500A: 10s 2000A: 1s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥50mm², more detail, please see curve.

Life

Mechanical endurance	2×10 ⁵ ops
Electrical Endurance (Breaking)	100A 1500Vdc. 5×10 ³ ops
	150A 1500Vdc. 3×10 ³ ops
	350A 1500Vdc. 1.5×10 ³ ops
	400A 1000Vdc. 1×10 ³ 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 ²
	Strength	490m/s ²
Vibration	10Hz ~ 55Hz	49m/s ²
Humidity	5% ~ 85%RH	
Ambient temperature	-40°C ~ +85°C	
IP grade	IP67 (contact)	

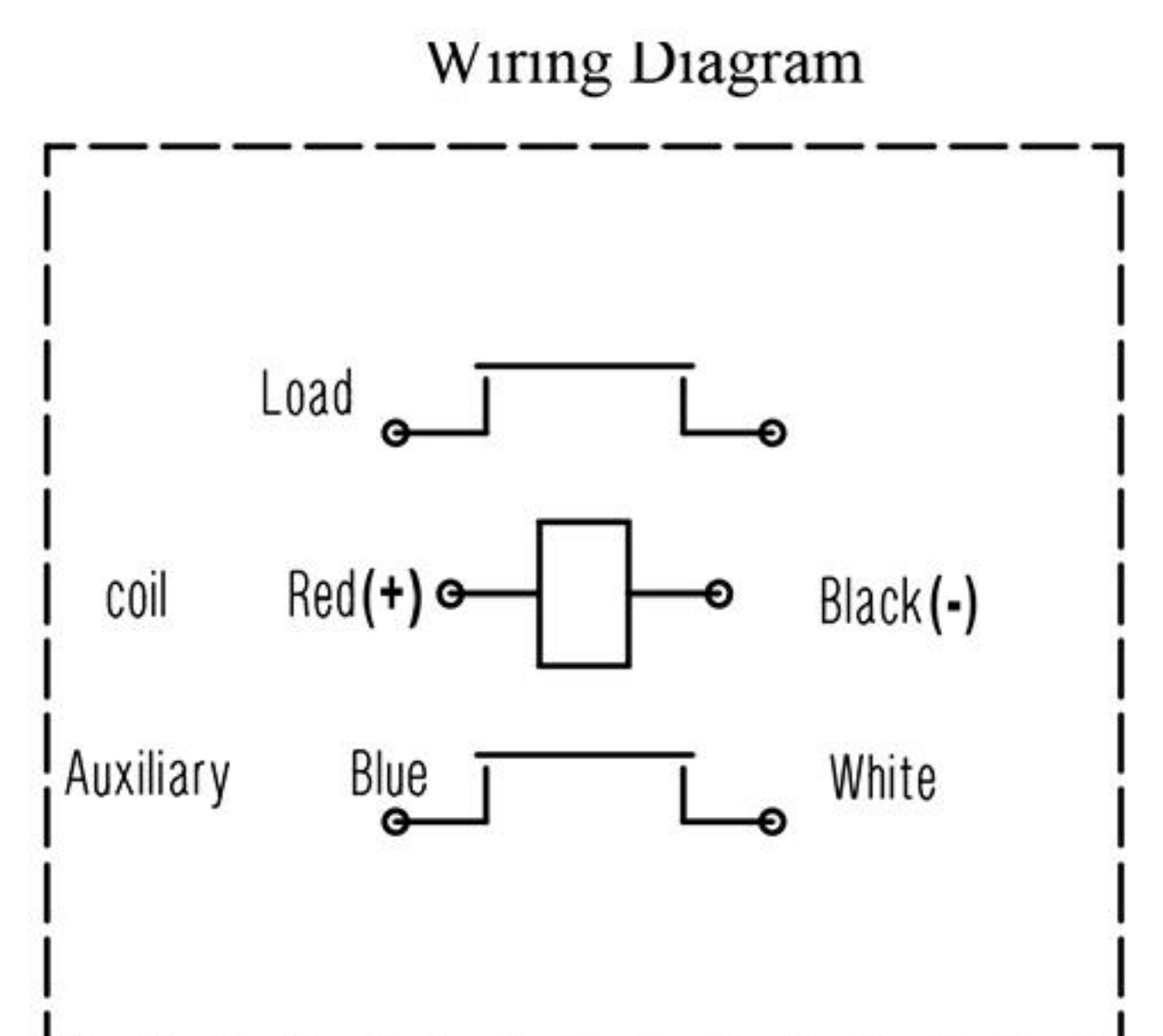
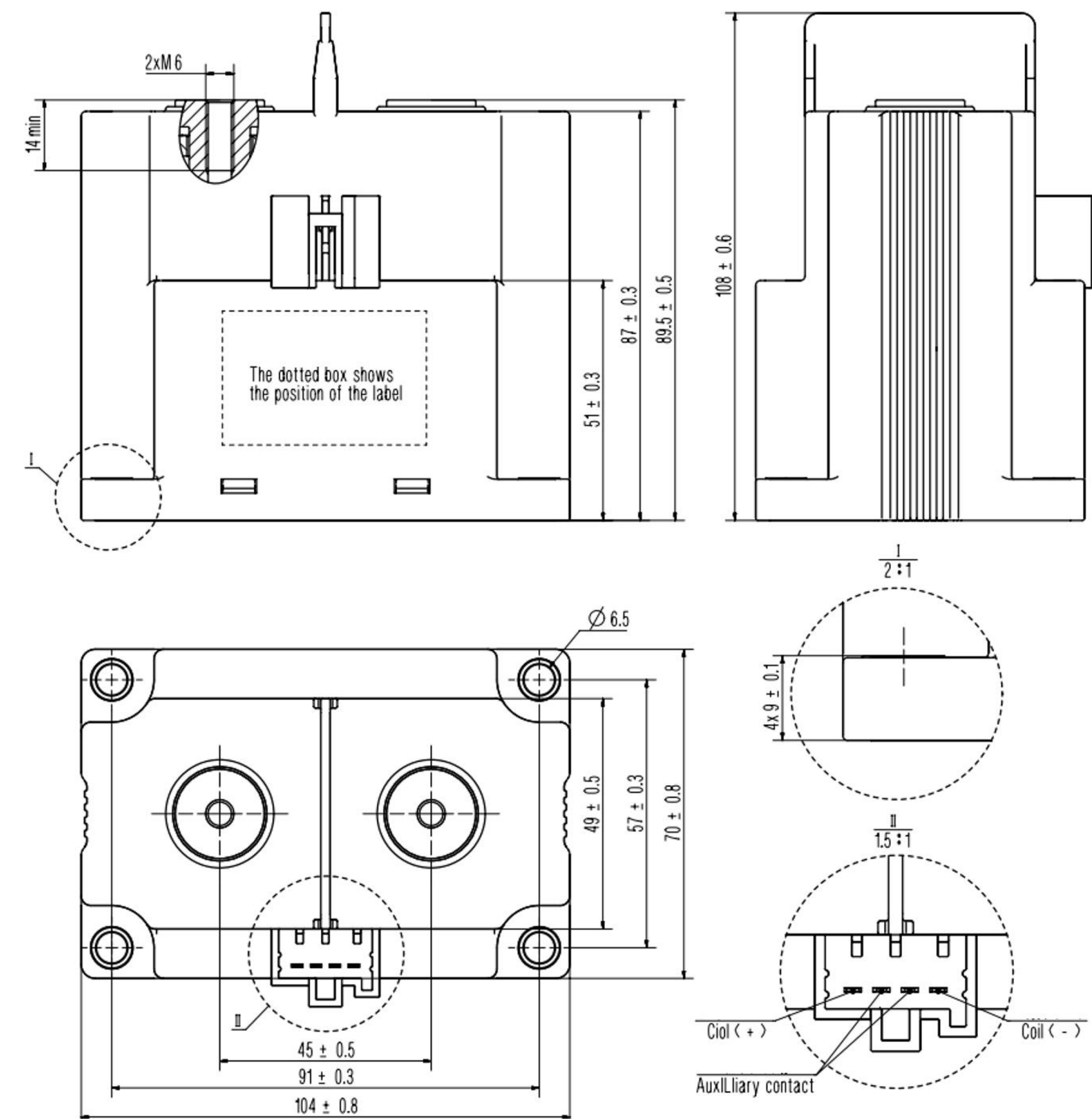
Other

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

Outline, coil wiring , installation hole

Unit: mm

HES-400/1500/xxx-xxD-HAC5



No polarity on load
Auxiliary contacts are non-polar
Polarity on the coil