

# HES-800



## 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

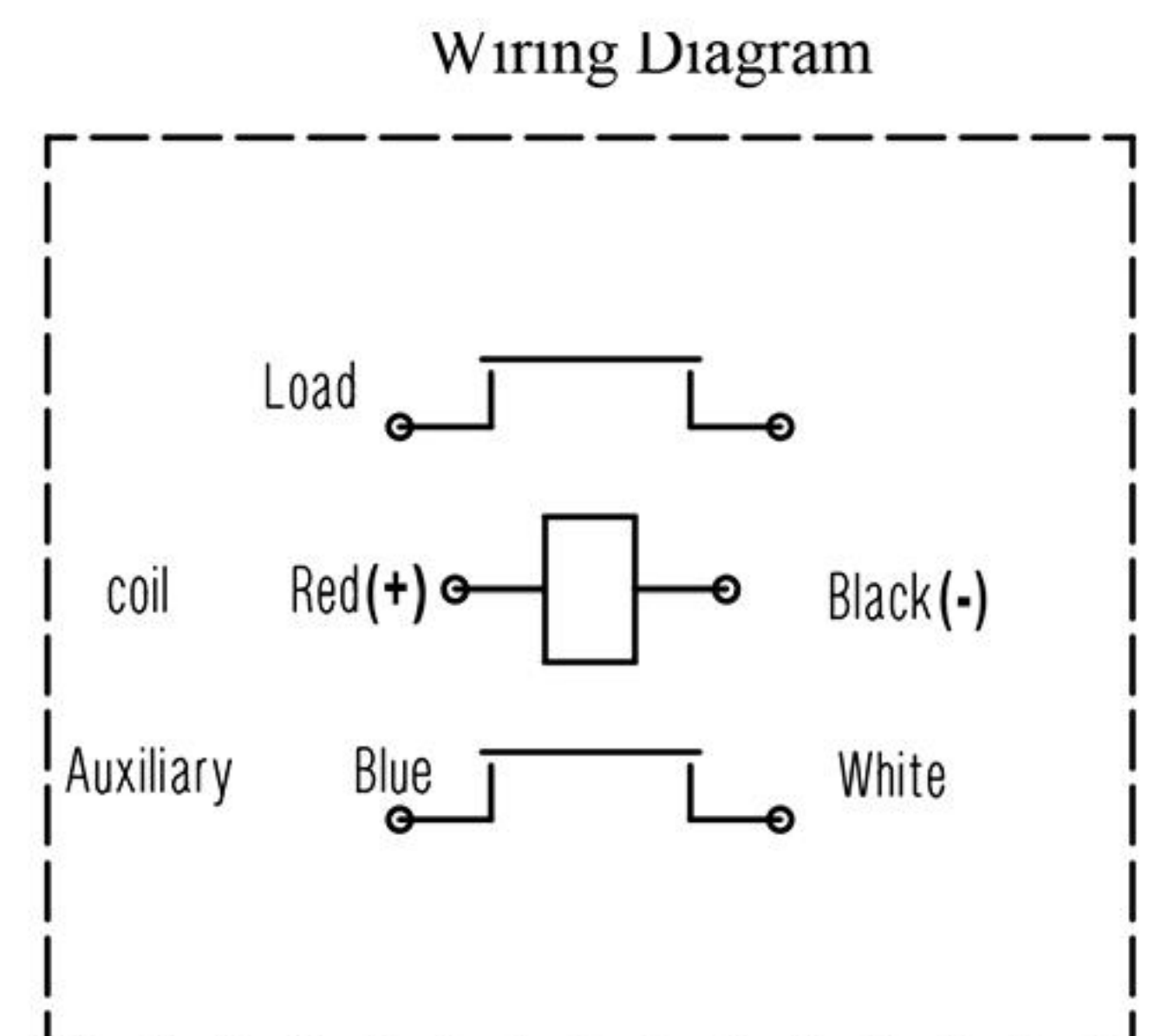
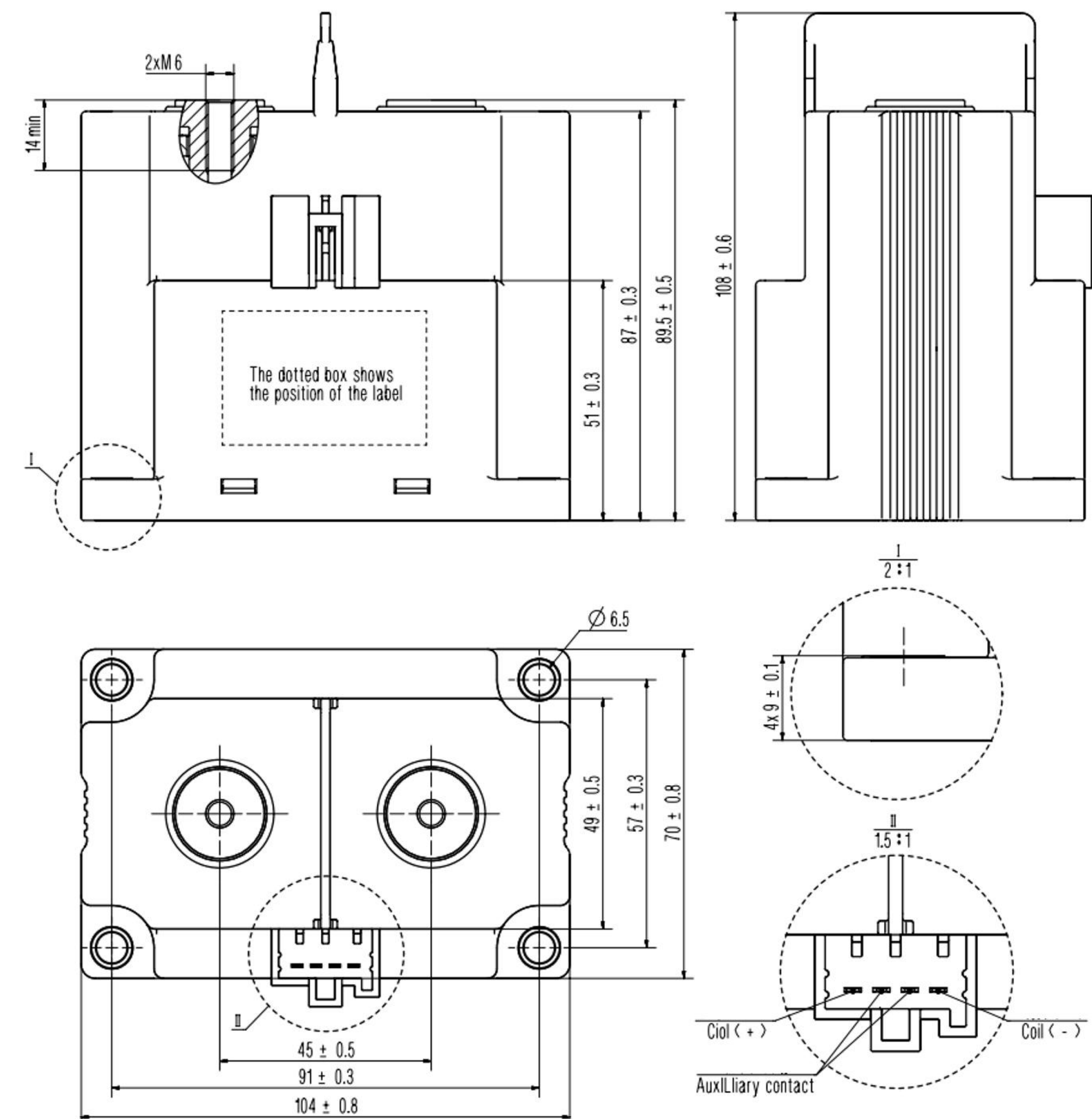
|                     |                                               |
|---------------------|-----------------------------------------------|
| Design Code         | HE S 800 /1500 -12D -H C 5 W XXX              |
| Application         | S:PV and energy storage                       |
| Load current        | 800:800A                                      |
| 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.

## Outline, coil wiring , installation hole

Unit: mm

HES-800/1500/xxx-xxD-HAC5



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

## Contact parameter

|                           |                                 |
|---------------------------|---------------------------------|
| Contact type              | 1H                              |
| Contact resistance        | ≤0.3mΩ(at 800A 23°C)            |
| Contact rated current     | 800A                            |
| Max. switching voltage    | 1500VDC                         |
| Max. breaking current     | 2000A 1000DC (1 op)             |
| Max. switching power      | 1000VDC 800KW<br>1500VDC 1200KW |
| Current carrying capacity | 800A: keeping                   |
|                           | 1000A: 8min                     |
|                           | 1500A: 75s<br>2000A: 45s        |

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

## Coil parameter

| Rated voltage VDC | Operational voltage VDC | Release voltage VDC | Coil power W |
|-------------------|-------------------------|---------------------|--------------|
| 12                | ≤ 9.6                   | ≥ 1                 | 5            |
| 24                | ≤ 19.2                  | ≥ 2                 | 5            |
| 48                | ≤ 38.4                  | ≥ 4                 | 5            |

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

## 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 ) |                     |

## 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 |
|                                   | 600A 1500Vdc. 100 ops               |
|                                   | 800A 1500Vdc. 10 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.

## 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.

## Other

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