

## CE-4000 Specification

### 1. Model

|               |                   |
|---------------|-------------------|
| Material code | CE-4008Q-5V30A-SR |
|---------------|-------------------|

### 2. General

|                           |                                                      |
|---------------------------|------------------------------------------------------|
| Input voltage             | AC 220V $\pm$ 10% / 50Hz                             |
| Input power               | 1800W                                                |
| Resolution                | AD: 24bit, DA: 16bit                                 |
| Input impedance           | $\geq 100M\Omega$                                    |
| Return-to-grid efficiency | $\leq 70\%$                                          |
| Noise                     | $\leq 75dB$                                          |
| Parallel ability          | No                                                   |
| IP Level                  | IP20                                                 |
| Channels feature          | CC and CV sources adopt a dual closed-loop structure |
| Channels control mode     | Independent control                                  |
| Cell connection           | 4 terminal                                           |

### 3. Voltage

|                           |                    |
|---------------------------|--------------------|
| Range                     | 25mV~5V            |
| Minimum discharge voltage | 2V                 |
| Accuracy                  | $\pm 0.02\%$ of FS |
| Stability                 | 0.04% of FS        |

### 4. Current

|                        |                                                  |
|------------------------|--------------------------------------------------|
| Ranges                 | Range1: 1A, Range2: 6A, Range3: 12A, Range4: 30A |
| Accuracy               | $\pm 0.02\%$ of FS                               |
| Stability              | 0.04% of FS                                      |
| Minimum output current | 0.5% of FS                                       |
| CV cut-off current     | 0.2% of FS                                       |

### 5. Power

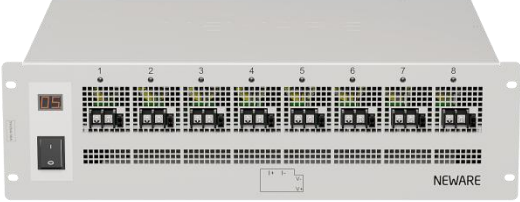
|           |                    |
|-----------|--------------------|
| Range     | 150W               |
| Accuracy  | $\pm 0.04\%$ of FS |
| Stability | 0.08% of FS        |

### 6. Time

|                   |                              |
|-------------------|------------------------------|
| Current rise time | $\leq 1ms$ (10% ~ 90% of FS) |
|-------------------|------------------------------|

|                                                                 |                                                                                                                                             |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Current conversion time                                         | ≤10ms (-90% ~ 90% of FS)                                                                                                                    |
| Working step time                                               | ≤(365*24)h/step, time format-00: 00: 00.000(h: m: s.ms)                                                                                     |
| Data acquisition rate                                           | 10Hz                                                                                                                                        |
| <b>7. Working mode</b>                                          |                                                                                                                                             |
| Charge/Discharge modes                                          | CC, CV, CCCV, CP, Pulse, etc                                                                                                                |
| Cut-off condition                                               | Voltage, current, time, capacity, energy, etc                                                                                               |
| Pulse charge/discharge modes                                    | Current, Power                                                                                                                              |
| Minimum pulse time                                              | 500ms                                                                                                                                       |
| Maximum pulse count                                             | 32                                                                                                                                          |
| Pulse cut-off condition                                         | Voltage, ΔTime                                                                                                                              |
| <b>8. Cycle</b>                                                 |                                                                                                                                             |
| Maximum cycle                                                   | 65535                                                                                                                                       |
| Maximum step                                                    | 255                                                                                                                                         |
| Maximum cycle nest                                              | 10                                                                                                                                          |
| <b>9. Protection mode</b>                                       |                                                                                                                                             |
| Software protection                                             | Safety protection conditions can be set, including: voltage lower limit, voltage upper limit, current lower limit, current upper limit, etc |
| Hardware protection                                             | Over-voltage, over-current, over-temperature, etc                                                                                           |
| <b>10. Communication and computer configuration requirement</b> |                                                                                                                                             |
| CPU                                                             | Recommended Core i3 or above                                                                                                                |
| Memory                                                          | Recommended 16G or above                                                                                                                    |
| Disk                                                            | Recommended 500G or above                                                                                                                   |
| Connection for PC                                               | TCP/IP                                                                                                                                      |
| PC operating system                                             | Windows 11                                                                                                                                  |
| Database                                                        | MySQL                                                                                                                                       |
| Data export format                                              | EXCEL、TXT、GRAPH、PDF、CSV                                                                                                                     |
| <b>11. Operation and storage environment requirement</b>        |                                                                                                                                             |
| Operating temperature                                           | 0°C~40°C (guaranteed accuracy within 25±5°C, accuracy drift: ≤ 0.005% of FS per °C)                                                         |
| Storage temperature                                             | -10°C~50°C                                                                                                                                  |
| Operating humidity                                              | ≤70% RH (no moisture condensation)                                                                                                          |
| Storage humidity                                                | ≤80% RH (no moisture condensation)                                                                                                          |

12. Fixture specification and equipment dimension

|                     |                                                                                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Clamp types         | Optional (to be clearly marked during order confirmation)                           |                                                                                     |
| Clamps pictures     |    |  |
|                     | Polymer                                                                             | Alligator                                                                           |
|                     | For reference only                                                                  |                                                                                     |
| Channels            | 8                                                                                   |                                                                                     |
| Dimension W*D*H(mm) | 3U(19"), 483*438*130                                                                |                                                                                     |
| Tester picture      |  |                                                                                     |
|                     | For reference only                                                                  |                                                                                     |