# Specifications

# CE-6000 Specification

## 1、Model

| 1. Material code | **CE-6004n-500V300A-IG** |
|---|---|

## 2、Channels information

| 1. Channels quantity | Channels quantity in one unit | 4 |
|---|---|---|
| 2. Main channel | Channel feature | Constant current source and constant voltage source dual closed loop control |
| | Channel control mode | Independent control |
| | Channel parallel connection | Support max 4 channels parallel mode. Pulse and SIM tests will be disabled in channels parallel mode. |

## 3、Power grid side parameters

| 1.Input power | | AC380V±10%　50/60±5Hz |
|---|---|---|
| 2.Power factor | | ≥99%(Full load) |
| 3.THDi | | ≤5%(Full load) |
| 4.Input resistance | | ≥1MΩ |
| 5.Input power | | 666.7KW |
| 6.Input current | | 1012.9 A/single |
| 7.Overall system efficiency(Max) | | 94% |
| 8.Noise | | ≤75dB |
| 9.Voltage and current sampling | | Four-wire connection(same port for charging and discharging) |
| 10.Power control module type | | IGBT |
| 11.Input power wiring method | | Three-phase-four wire system |
| 12.Power input protection | | Anti-surge, anti-silos, anti over or under frequency, anti over or under voltage, anti phase absence, etc. |

## 4、Functions and performances

| 1. Voltage | Output range | Charge:0V～500V |
|---|---|---|
| | | Discharge:10V～500V |
| | Min discharge voltage | 10V |

# NEWARE
# **Specifications**

|  |  |  |
|---|---|---|
|  | Accuracy | ±0.02% of FS |
|  | Resolution | 24bit |
| 2. Current | Output range | 1.5A～300A |
|  | Accuracy(independent range) | ±0.05% of FS |
|  | CV cut-off current | 300mA |
|  | Resolution | 24bit |
| 3. Power | Single channel output power | 150KW |
|  | Whole machine output power | 600KW |
| 4. Time | Current response time | ≤5ms |
|  | Current conversion time | ≤10ms |
|  | Min. step time | 0.1s |
| 5. Charge/Discharge modes | Charge/Discharge modes | CCC, CVC, CC-CVC, CPC |
|  |  | CCD, CVD, CPD, CRD |
|  | Cut-off condition | Voltage, Current, ΔTime, Capacity, -ΔV |
| 6. Simulation | Charge | Current, Power |
|  | Discharge | Current, Power |
|  | Switch | Support continuous switching between charge and discharge |
|  | Cut-off condition | Time, step line |
|  | Steps file lines | 1,000,000 |
| 7. Pulse Mode | Charge | Current ,power |
|  | Discharge | Current, Power |
|  | Min pulse | 100ms |
|  | Pulse counts | Up to 32 |
|  | Charge and discharge switch | supported |
|  | Cut-off condition | Voltage, ΔTime |
| 8. DCIR |  | DCIR by calculation |
| 9. Safely protection | Software protection | Power off data protection |
|  |  | Offline mode function |
|  |  | Safety protection conditions can be set, including:voltage lower limit ,voltage upper limit ,current lower limit ,current upper limit ,delay time, etc. |
|  | Hardware protection | Anti-reverse connection, over-voltage, over-current, over-temperature, etc. |

## 5、 **Data management and analysis**

| | |
|---|---|
| 1. Step setting method | Form editing |

# Specifications

| | | |
|---|---|---|
| 2. Data report | Recording conditions | Minimum time interval: 10ms(connected with AUX channel:100ms） |
| | | Minimum voltage interval: 1V |
| | | Minimum current interval: 0.6A |
| | Recording frequency | 100Hz(connected with AUX channel:10Hz) |
| 3. Database | | MySQL database |
| 4. Data output | | Excel, Txt |
| 5. Curve type | | Templates available, customization supported |
| 6. Bar code scanning | | Support bar-code scanning function |
| | | Management and traceability of historical data |

## 6、Communication

| | | |
|---|---|---|
| 1. Host computer communication | | TCP/IP protocol |
| 2. Communication port | | Ethernet |
| 3. Communication baud rate of the testers | | 1M |
| 4. Host computer communication baud rate | | 10M~100M adaptive |
| 5. Communication setup | | Set up a LAN(local area network) through switches and routers |
| 6. Communication expansion(optional) | | Support CAN, RS485 communication and BMS communication, with DBC configuration function |

## 7、Environmental requirements, dimension and weight

| | | |
|---|---|---|
| 1. Operation environment temperature | | -10°C~40°C(When the temperature is 25±10°C, the accuracy error caused by temperature change is less than 0.005% of FS per degree) |
| 2. Storage environment temperature | | -20°C~50°C |
| 3. Operation environment humidity | | ≤70% RH(no moisture condensation) |
| 4. Storage environment humidity | | ≤80% RH(no moisture condensation) |
| 5. Dimension W*D*H | | / |
| 6. Weight | | / |
| 7. Tester Picture(Pictures just for reference) | | |

## 8、 Auxiliary test system(optional)

| | | |
|---|---|---|
| 1. Temperature aux channels | Temperature range | Thermistor：-30°C~120°C |
| | | Thermocouple：-200°C~260°C |
| | Temperature accuracy | ±1°C（Length within 2m） |
| | Temperature resolution | 0.1°C |
| 2. Voltage aux channels | Voltage range | 0V~5V |
| | Voltage accuracy | ±0.1% of FS |
| | Voltage resolution | 0.1mV |
| 3. Aux Introduction | It is used to monitor the temperature of the battery surface or the tabs during the test. The aux test data can be bound with the main voltage and current data. At the same time, the measured temperature can be used as the control condition and protection condition of the test profiles. | |