

# ESS connector C type

## technical specifications sheet



### Product Introduction

This feedthrough terminal is a critical power distribution component engineered specifically for high-capacity energy storage systems. Designed for chassis-mounting, it facilitates safe, reliable power transfer and busbar interconnection through device enclosures. The terminal features a robust, square-profile design with a high-conductivity nickel-plated brass core, ensuring exceptional electrical stability and long-term durability under high-current loads.

Safety is prioritized through the use of high-grade, V-0 flame-retardant nylon for the housing, complemented by included waterproof gaskets and insulating terminal caps to maintain performance in demanding industrial environments. Available in a versatile range of current ratings—**100A, 120A, 150A, and 200A**—this connector is the ideal solution for lithium battery packs, modular energy storage systems, and heavy-duty industrial power equipment.



### Product Details

|                                         |                       |                         |                      |
|-----------------------------------------|-----------------------|-------------------------|----------------------|
| Product Name                            | ESS connector         | Housing Materials       | V0-Nylon             |
| Product Type                            | C type Terminal       | Terminal materials      | Nickel-plated brass  |
| Model//Screw<br>//Continuous<br>Current | C-100//M5+M5//100amp  | Screw material          | M4-iron(Optional SS) |
|                                         | C-120//M6+M6//120amp  | Sealing Gasket Material | Silicone             |
|                                         | C-150//M 8+M6//150amp | Withstand Voltage       | 2200Volt AC          |
|                                         | C-200//M8+M6//200amp  | Plastic FR Grade        | Flame retardant (V0) |

### Electrical parameter testing

| S.N. | MODEL | CURRENT TEST | UNIT | HOUSINGH APPEARANCE        | RESULT |
|------|-------|--------------|------|----------------------------|--------|
| 1    | C-100 | 100          | AMP  | No deformation, no melting | PASS ✓ |
| 2    | C-120 | 120          | AMP  | No deformation, no melting | PASS ✓ |
| 3    | C-150 | 150          | AMP  | No deformation, no melting | PASS ✓ |
| 4    | C-200 | 200          | AMP  | No deformation, no melting | PASS ✓ |

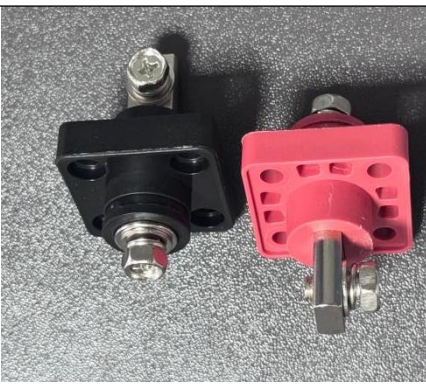
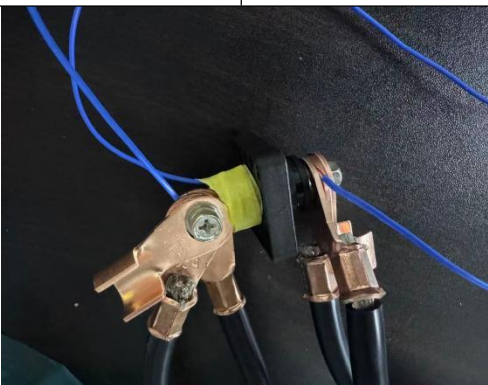
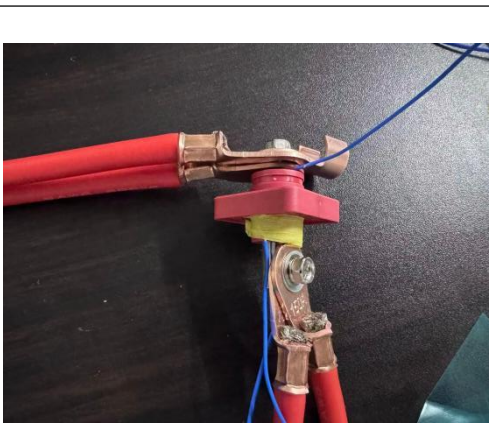
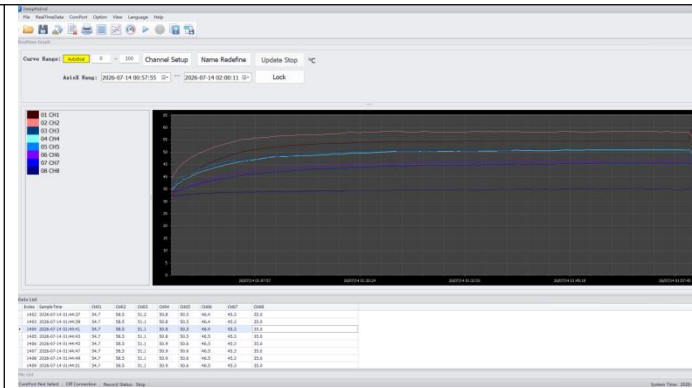
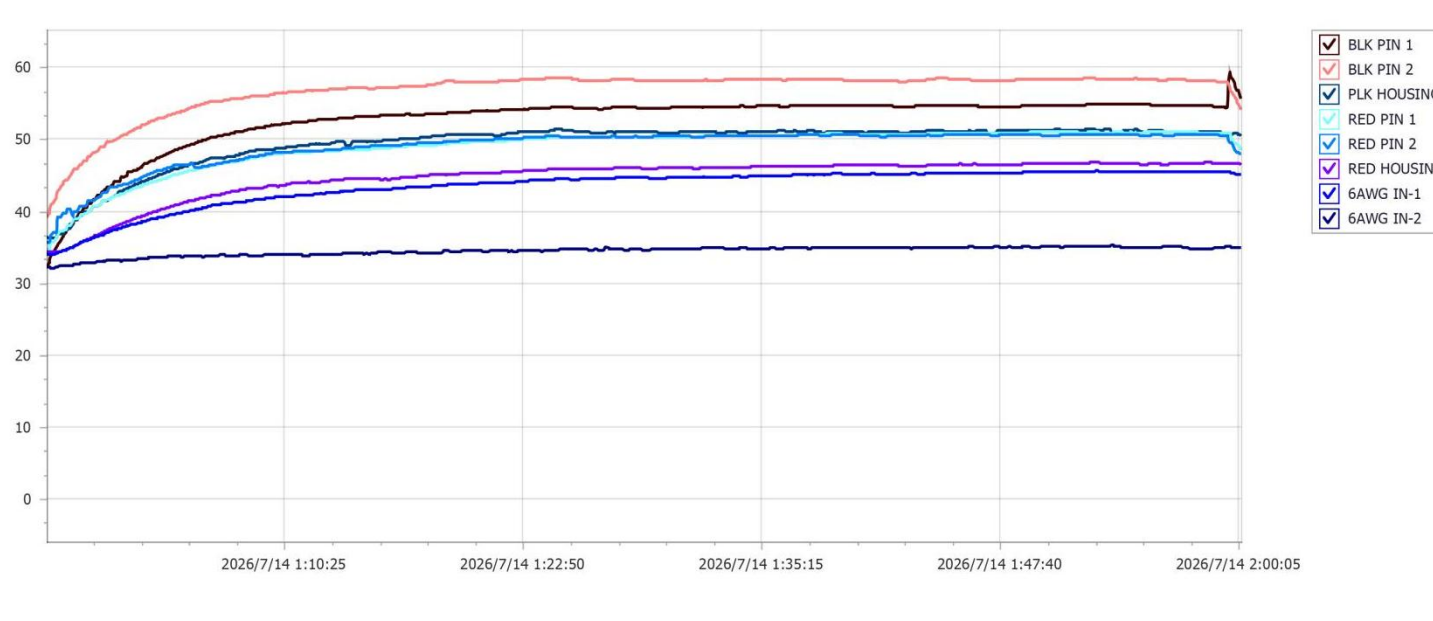
### Current temperature test

| CAT. NO.     | TEST SAMPLE NO. | CONNECT WIRE (AWG) | TEST CURRENT,( AMPERES) |
|--------------|-----------------|--------------------|-------------------------|
| GBTC100      | C-100-RED       | 6&6                | 100                     |
|              | C-100-BLK       | 6&6                | 100                     |
| Test methods |                 |                    |                         |

The input and output terminals of the C-100 red and black connector are connected to a 12.8V 100A stabilized DC power supply and an Evtop 8000W load device, respectively, while a high-precision real-time temperature monitoring system is integrated into the connector housing and the 6 AWG silicone wire, The test is considered passed if the temperature rise, calculated as the difference between the maximum steady-state temperature (attained after one hour of continuous operation at 12.78 V and 100 A under stable ambient conditions) and the ambient temperature, does not exceed 45 K (45 °C). The housing shall maintain its structural integrity and show no signs of melting or deformation.

Test Results

- 1: Ambient temperature:32.5°C
- 2: highest temperature:58.6°C
- 3: Temperature rise:26.1°C
- 4:The housing structure remains intact, showing no signs of deformation or melting.



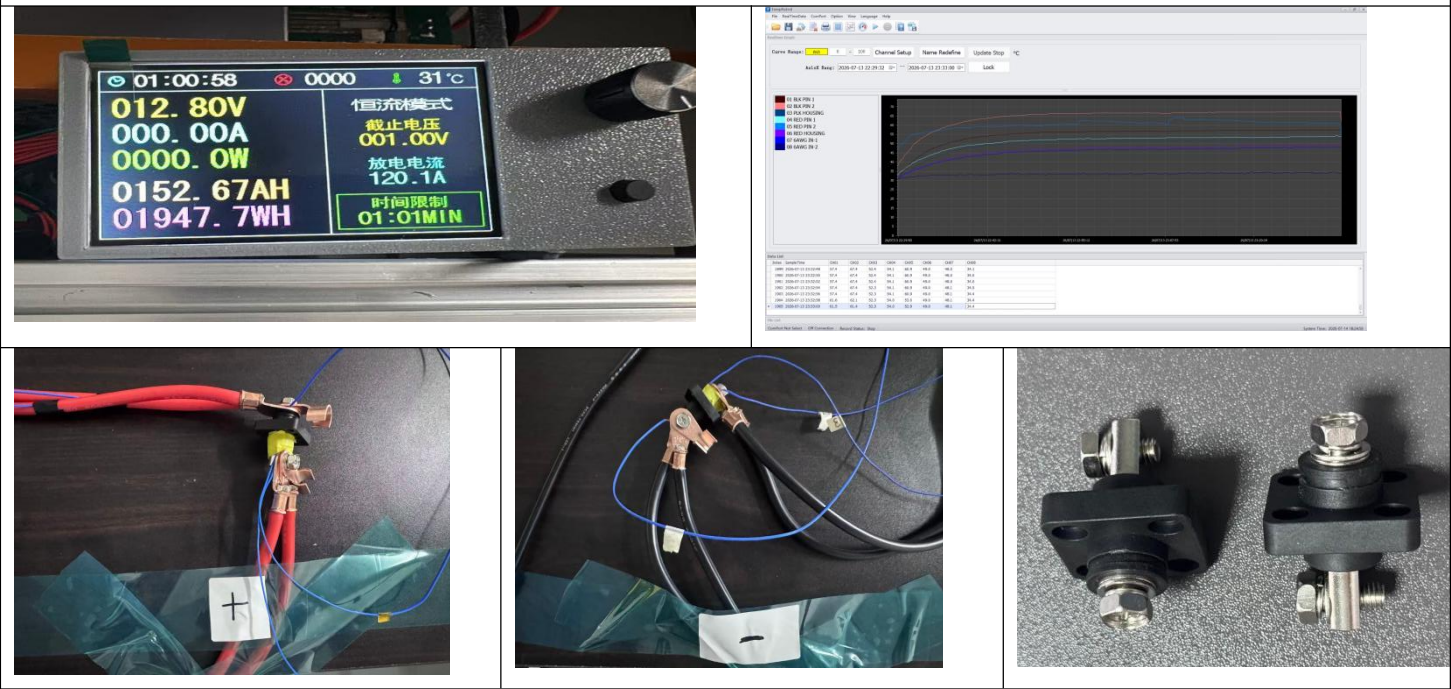
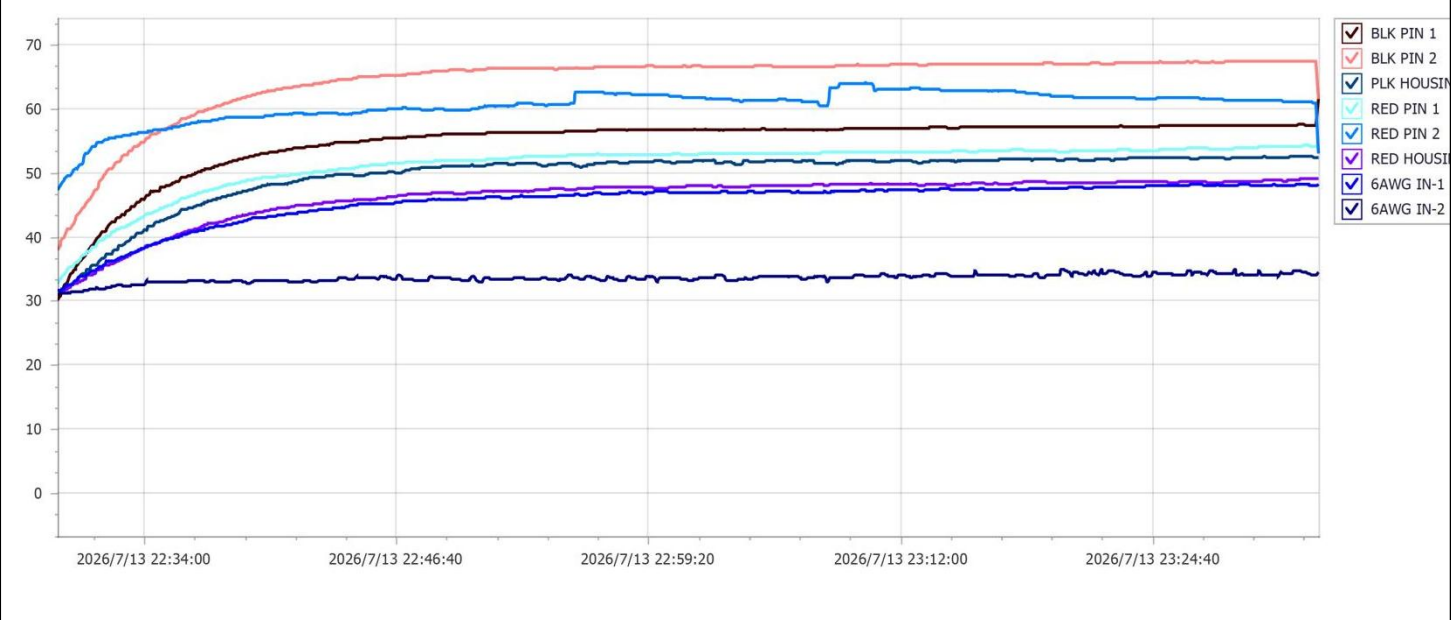
| CAT. NO. | TEST SAMPLE NO. | CONNECT WIRE (AWG) | TEST CURRENT,( AMPERES) |
|----------|-----------------|--------------------|-------------------------|
| GBTC120  | C-120-RED       | 6&6                | 120                     |
|          | C-120-BLK       | 6&6                | 120                     |

Test methods

The input and output terminals of the C-120 red and black connector are connected to a 12.8V 120A stabilized DC power supply and an Evtop 8000W load device, respectively, while a high-precision real-time temperature monitoring system is integrated into the connector housing and the 6 AWG silicone wire,The test is considered passed if the temperature rise, calculated as the difference between the maximum steady-state temperature (attained after one hour of continuous operation at 12.78 V and 120 A under stable ambient conditions) and the ambient temperature, does not exceed 45 K (45 °C).The housing shall maintain its structural integrity and show no signs of melting or deformation.

Test Results

- 1: Ambient temperature:32℃
- 2: highest temperature:67.4℃
- 3: Temperature rise:35.4℃
- 4:The housing structure remains intact, showing no signs of deformation or melting.



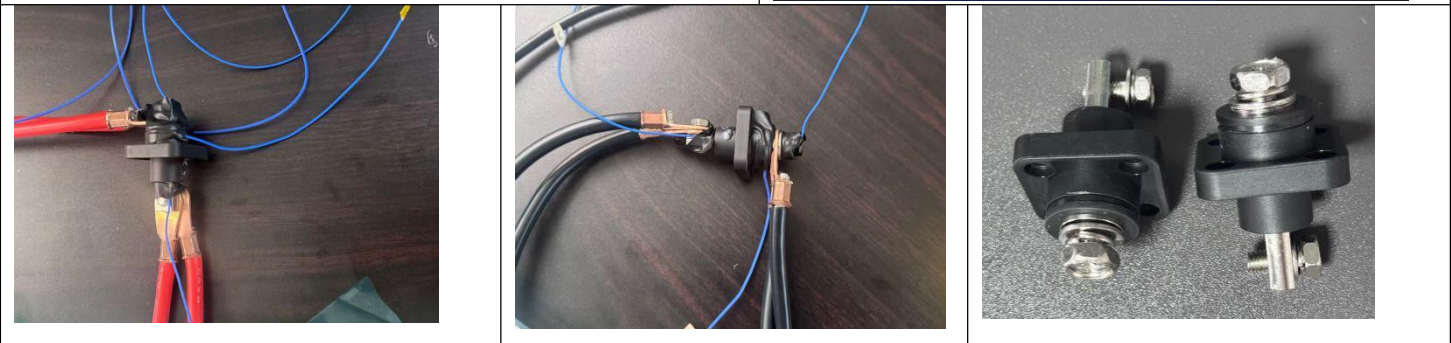
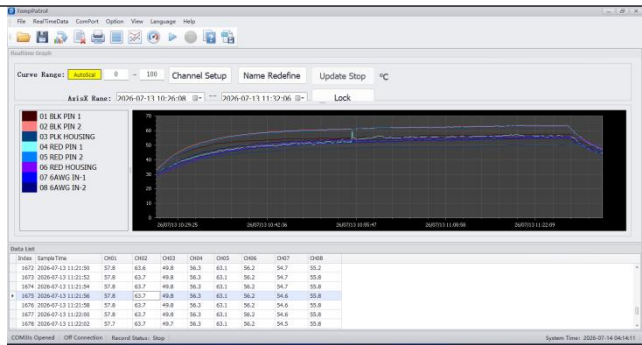
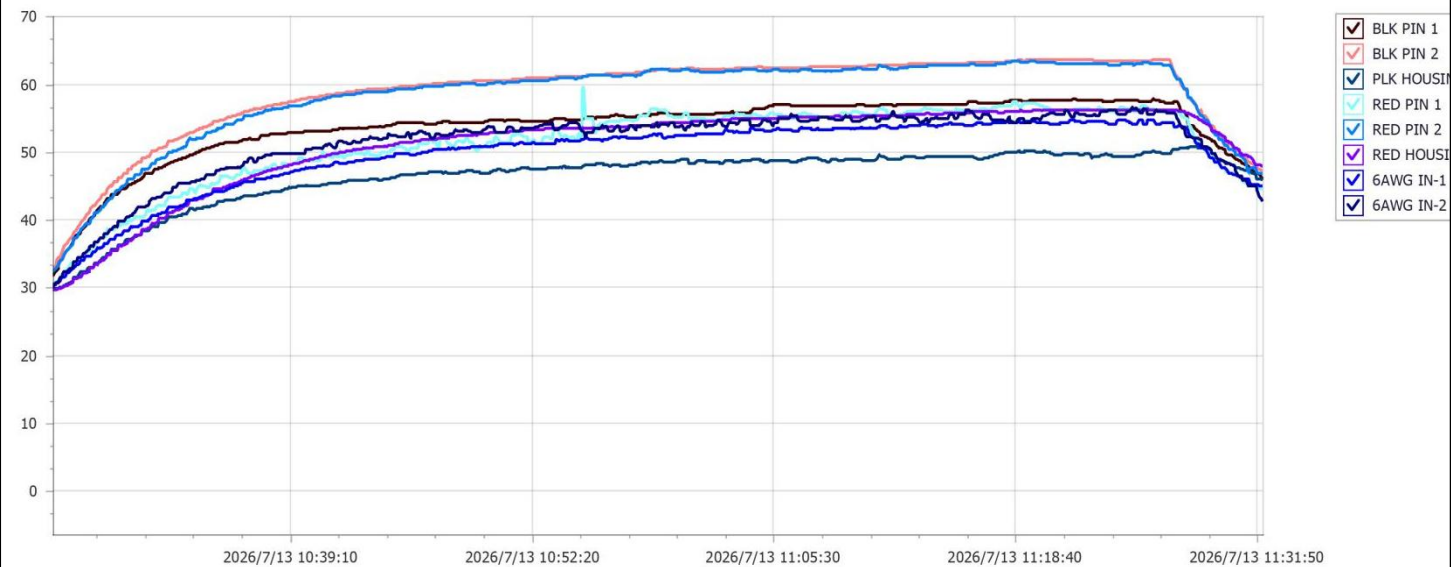
| CAT. NO. | TEST SAMPLE NO. | CONNECT WIRE (AWG) | TEST CURRENT,( AMPERES) |
|----------|-----------------|--------------------|-------------------------|
| GBTC150  | C-150-RED       | 6&6                | 150                     |
|          | C-150-BLK       | 6&6                | 150                     |

Test methods

The input and output terminals of the C-150 red and black connector are connected to a 12.8V 150A stabilized DC power supply and an Evtop 8000W load device, respectively, while a high-precision real-time temperature monitoring system is integrated into the connector housing and the 6 AWG silicone wire,The test is considered passed if the temperature rise, calculated as the difference between the maximum steady-state temperature (attained after one hour of continuous operation at 12.78 V and 150 A under stable ambient conditions) and the ambient temperature, does not exceed 45 K (45 °C).The housing shall maintain its structural integrity and show no signs of melting or deformation.

Test Results

- 1: Ambient temperature:32.5℃
- 2: highest temperature:63.7℃
- 3: Temperature rise:31.2℃
- 4:The housing structure remains intact, showing no signs of deformation or melting.



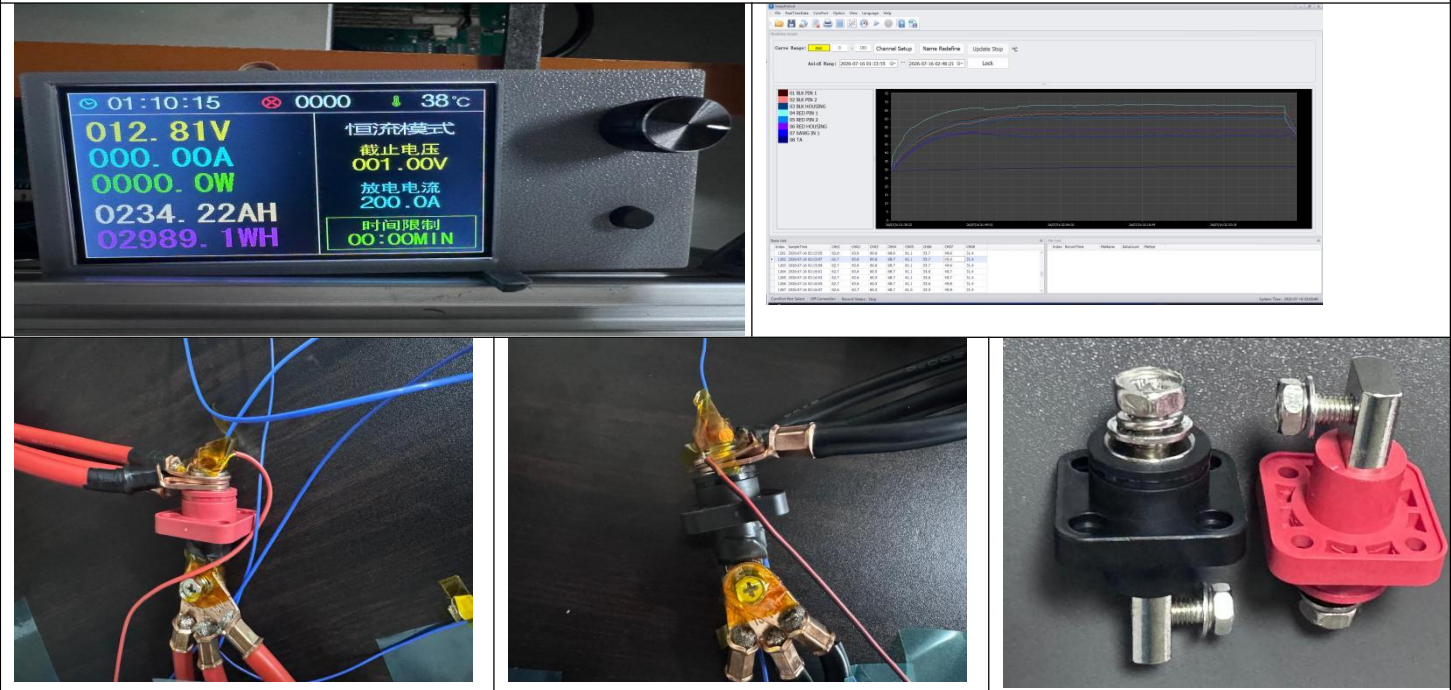
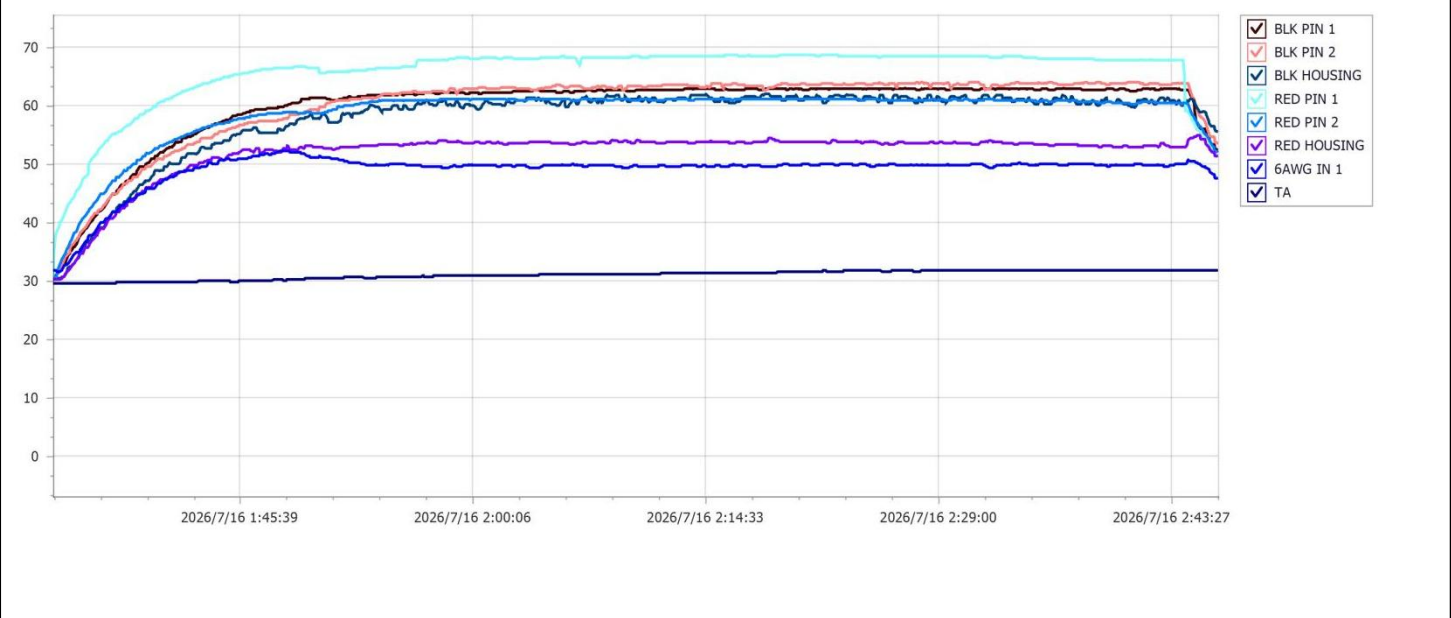
| CAT. NO. | TEST SAMPLE NO. | CONNECT WIRE (AWG) | TEST CURRENT,( AMPERES) |
|----------|-----------------|--------------------|-------------------------|
| GBTC200  | C-200-RED       | 6&6&6              | 200                     |
|          | C-200-BLK       | 6&6&6              | 200                     |

Test methods

The input and output terminals of the C-200 red and black connector are connected to a 12.78V 200A stabilized DC power supply and an Evtop 8000W load device, respectively, while a high-precision real-time temperature monitoring system is integrated into the connector housing and the 6 AWG silicone wire,The test is considered passed if the temperature rise, calculated as the difference between the maximum steady-state temperature (attained after one hour of continuous operation at 12.78 V and 200 A under stable ambient conditions) and the ambient temperature, does not exceed 45 K (45 °C).The housing shall maintain its structural integrity and show no signs of melting or deformation.

Test Results

- 1: Ambient temperature:29.5℃
- 2: highest temperature:68.7℃
- 3: Temperature rise:39.2℃
- 4:The housing structure remains intact, showing no signs of deformation or melting.



Flame retardant test

| CAT. NO. | TEST SAMPLE NO.     | FLAME BURNING TIME<br>(first time) | LAME BURNING TIME<br>(second time) |
|----------|---------------------|------------------------------------|------------------------------------|
| GBTC150  | C-150 BLACK housing | 10 Seconds                         | 10 Seconds                         |

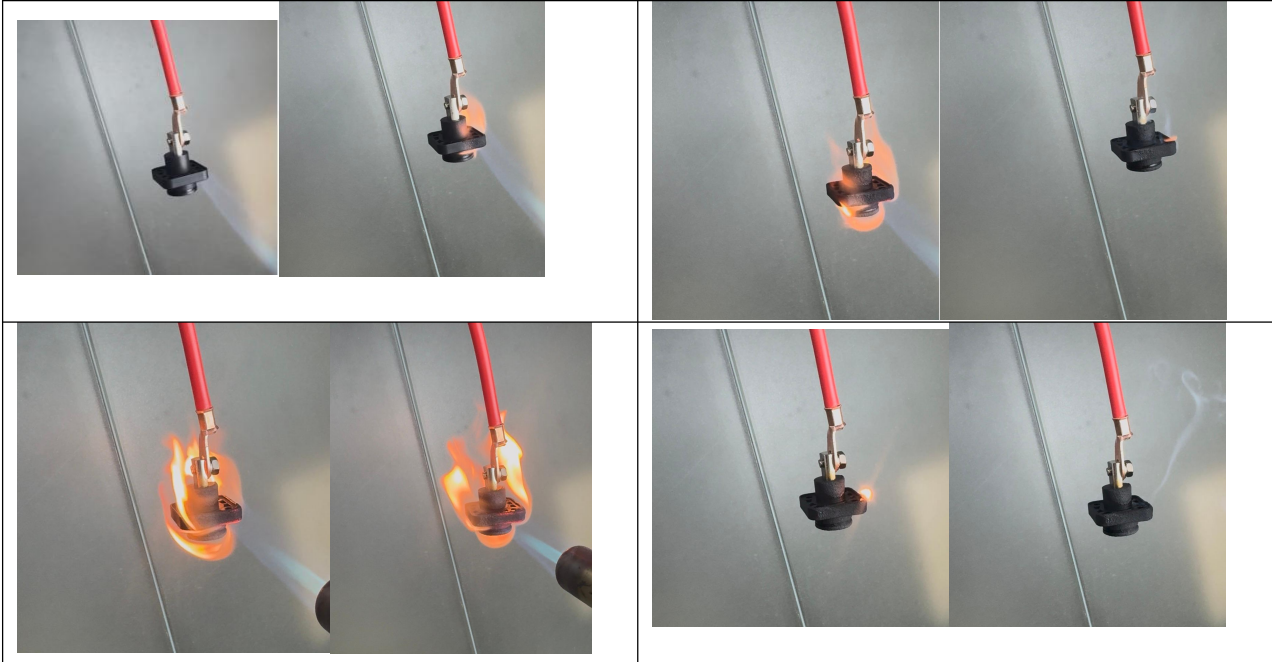
Test methods

First ignition for 10 seconds, Distance≤70MM,then remove the heat source: flame self-extinguishes within T1 ≤10 Seconds

Second ignition for 10 seconds,Distance≤70MM, then remove the heat source: flame self-extinguishes within T2 ≤10 Seconds

After the second flame extinguishes, the total duration of red glowing combustion (afterglow) must satisfy T2+T3 ≤30 Seconds

urthermore, burning droplets or debris must not ignite the surgical cotton placed underneath.

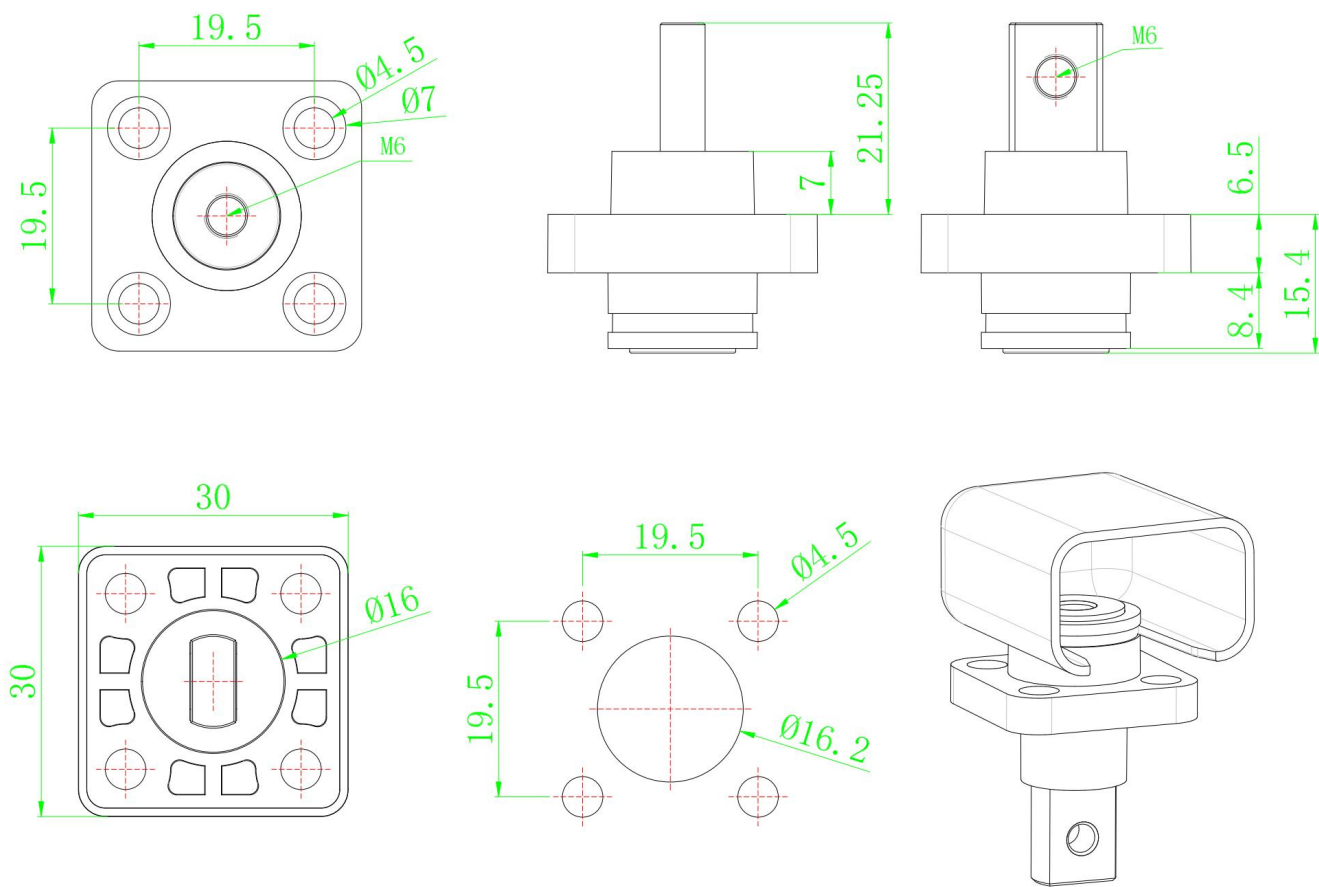


Test Results

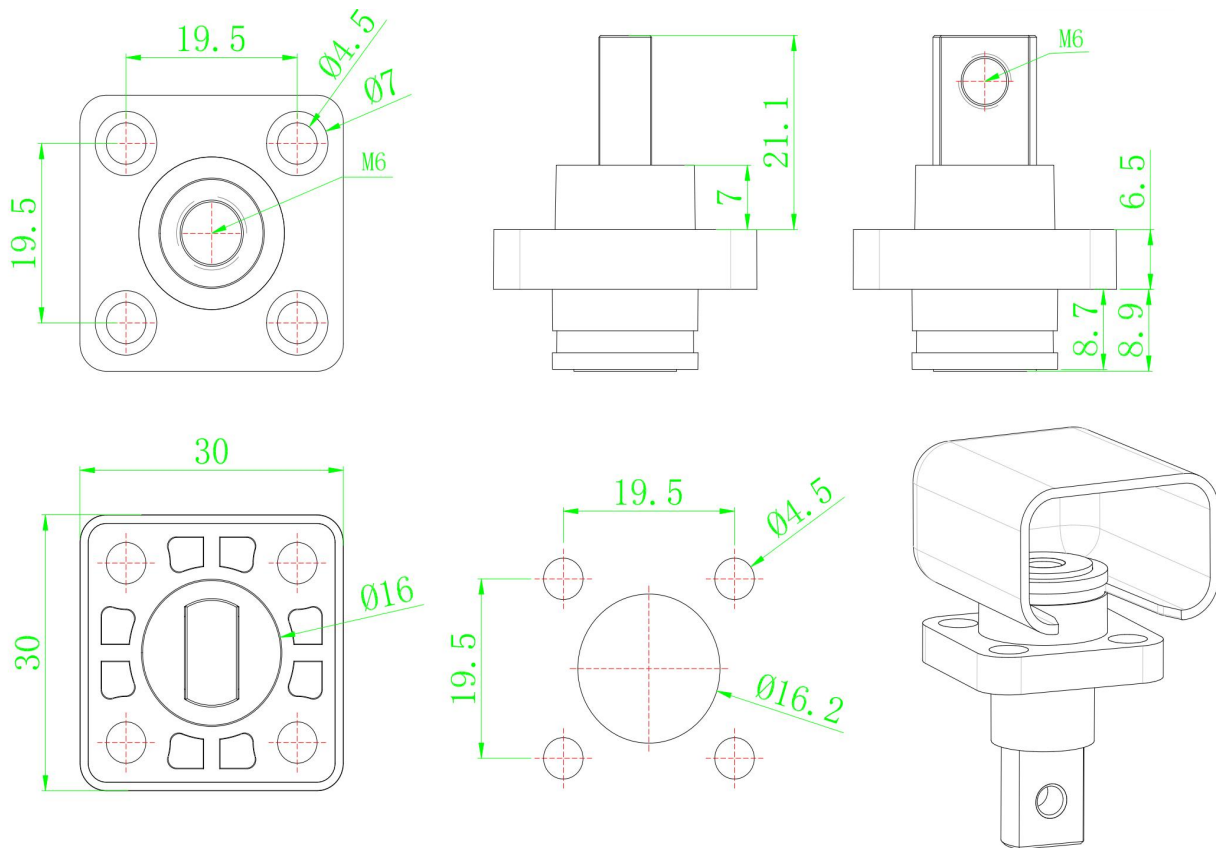
- 1. Flame self-extinguishes within 10s after flame-off, no flame reaching fixture, no flaming drips, V-0 passed
  - 2. No burning droplets or debris ignites the cotton below.
  - 3. After the second ignition, turns red and smoldering ≤ 30 seconds.
- Result: The material for connector housing complies with all requirements of UL94V-0 and passes the flame-retardant test.PASS

Drawing

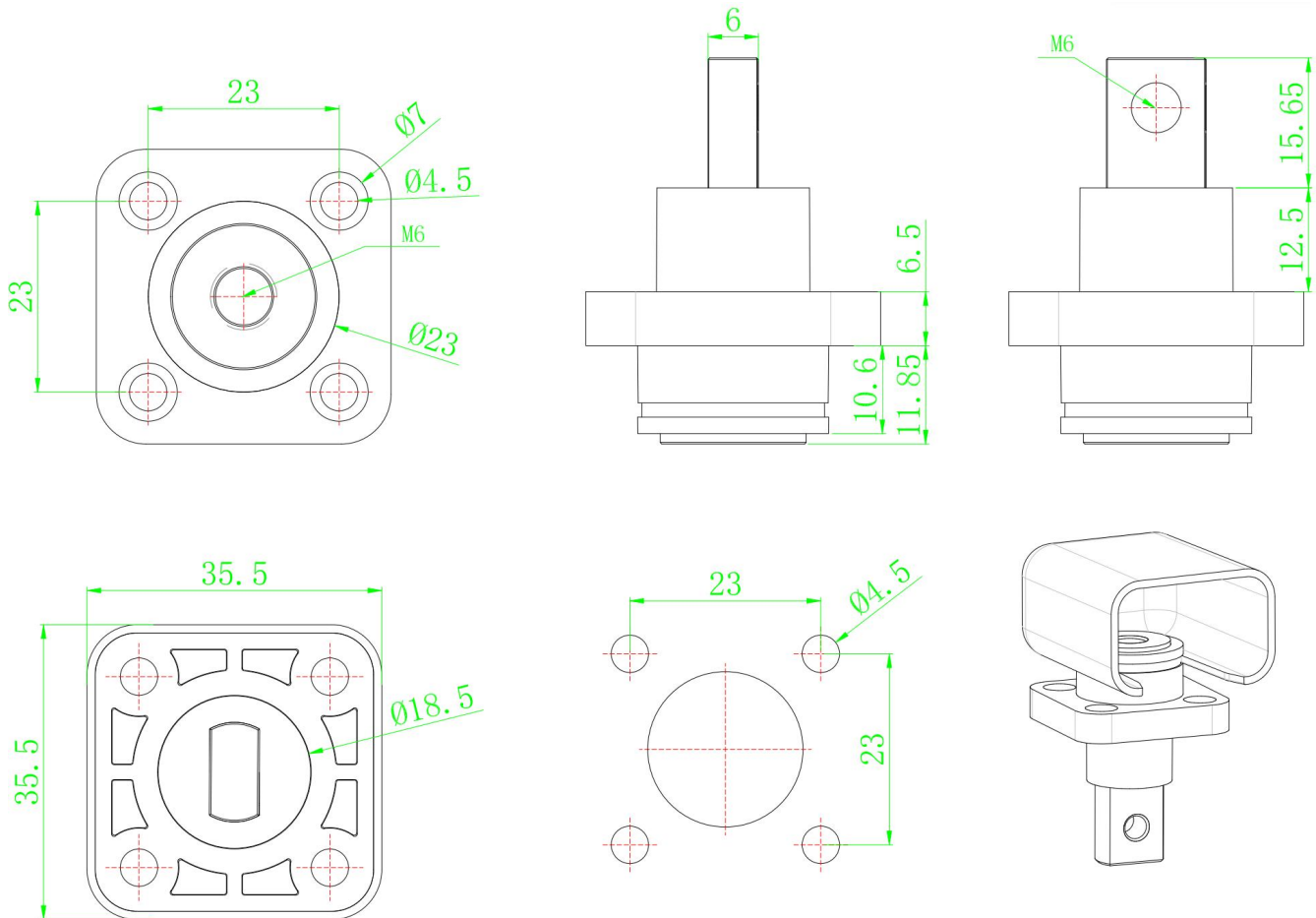
C100 DRAWING DIMENSIONS



C120 DRAWING DIMENSIONS



## • C150 DRAWING DIMENSIONS



## • C200 DRAWING DIMENSIONS

