

# V120A-14S Product Specification

## 一、Objective

The specification is for design, production, testing and sales of the subject product.

## 二、Application Scope

For ESC at input voltage of: 18V~60V DC.

## 三、Performance Requirements

| Seq. | Item                               | Requirement                             | Remarks                                               |
|------|------------------------------------|-----------------------------------------|-------------------------------------------------------|
| 1    | Input Voltage (S)                  | 6~14S                                   | Factory inspection item                               |
| 2    | Continuous output current (A)      | 60A (under certain cooling conditions)  | Factory sampling inspection item with DC power supply |
| 3    | Peak current (<10s)                | 130A (under certain cooling conditions) | Factory inspection item with DC power supply          |
| 4    | BEC output voltage                 | No                                      | Factory inspection item                               |
| 5    | Operating ambient temperature (°C) | -20°C~+65°C                             | ±5°C                                                  |
| 6    | Operating humidity (%)             | 15%~85%RH                               | ±5% RH                                                |
| 7    | Storage temperature (°C)           | -40°C~+65°C                             | ±5°C                                                  |
| 8    | Preservation humidity (%)          | 15%~85% RH                              | ±5 RH                                                 |
| 9    | Standby power                      | ≤50mA                                   |                                                       |
| 10   | Throttle range                     | 1040us~1940us                           | Fixed throttle range                                  |
| 11   | Throttle response speed            | 300ms                                   |                                                       |
| 12   | Throttle refresh frequency         | 50~500Hz                                |                                                       |
| 13   | Throttle dead time                 | 1%                                      |                                                       |
| 14   | Data feedback                      | Yes                                     |                                                       |
| 15   | Driving method                     | PWM&CAN                                 |                                                       |

## 四、Main materials/part specifications

| Seq. | Item          | Specs.                                                                                  |           |                                              | Remarks          |
|------|---------------|-----------------------------------------------------------------------------------------|-----------|----------------------------------------------|------------------|
| 1    | Input cables  | Silicone wires-red/black<br>-12AWG-120mm                                                | Connector | No                                           | $\pm 5\text{mm}$ |
| 2    | Output cables | Silicone wires-orange<br>-12AWG-75mm                                                    | Connector | No                                           | $\pm 5\text{mm}$ |
| 3    | Signal wires  | Shielded wires-black<br>-OD4.2-5C-470mm-JP-3P*2<br>-black blank white-green yellow grey | Connector | 2.54 Dupont<br>connector-3P<br>plastic shell | $\pm 5\text{mm}$ |
| 4    | Encoder wires | Shielded wires-black<br>-24AWG-5C-420mm<br>-M6 aviation connector                       | Connector | M6 Aviation<br>connector                     | $\pm 5\text{mm}$ |
| 5    | Shell         | Aluminium-silver                                                                        |           |                                              |                  |

## 五、Dimensions/drawing

| Seq. | Item         | Requirement              | Remarks                                    |
|------|--------------|--------------------------|--------------------------------------------|
| 1    | Length       | 103mm                    | $\pm 1.5\text{mm}$                         |
| 2    | Width        | 50mm                     | $\pm 1.5\text{mm}$                         |
| 3    | Height       | 26mm                     | $\pm 1.5\text{mm}$                         |
| 4    | Weight       | 130g (excl. Cables)/170g | $\pm 5\text{g}$ , ESC weight (incl. shell) |
| 5    | Shell weight | 75g                      | $\pm 5\text{g}$ , weight/shell             |

