# PROTURF

Technical specifications - Brushless motor

| # | Parameter | Specification / Details |
|---|---|---|
| 1 | Input voltage | DC 13.5~23 V Rated voltage: 21 V. |
| 2 | Rated current | 60 A Maximum average operating current. |
| 3 | Operating temperature | 0 °C~+40 °C |
| 4 | Storage temperature | -25 °C~+80 °C |
| 5 | BLDC motor | Brushless sensorless motor with 2 pole pairs. |
| 6 | Speed | 17500 |
| 7 | Switch | Speed control switch. Original detail: none. |
| 8 | Static leakage current | ≤30 μA With the controller in standby after protection has been triggered. |
| 9 | Temperature protection | 100 ± 5 °C |
| 10 | Temperature recovery | 80 ± 5 °C |
| 11 | Overvoltage protection | ≤23 ± 1 V At startup, operation is permitted when battery voltage is below 24 ± 1 V; otherwise the motor does not run. |
| 12 | Startup undervoltage protection | ≥13.6 ± 1 V At startup, operation is permitted when battery voltage is above 14 ± 1 V; otherwise the motor does not run. |
| 13 | Running undervoltage protection | ≤13.6 ± 1 V When battery voltage is below 14 ± 1 V, protective shutdown occurs after 500 ± 50 ms. |
| 14 | Short circuit protection | 120 ± 5 A Time below 50 μs. |
| 15 | Overload constant-current limiting | 58 ± 5 A |
| 16 | Second-level protection | 70 ± 5 A 500 ± 50 ms |
| 17 | Third-level protection | 80 ± 5 A 20 ± 50 ms |
| 18 | Protection lock | Function provided. After protection has been triggered, the switch must be released. Restart is permitted after release if the protection condition has cleared. |
| 19 | Startup time | <0.2 s Time from switch actuation to motor start: <90 ms. |
| 20 | LED off | The LED turns off 5 seconds after the machine is switched off. |
| 21 | Standby entry | Standby is entered after 15 seconds of inactivity. |

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