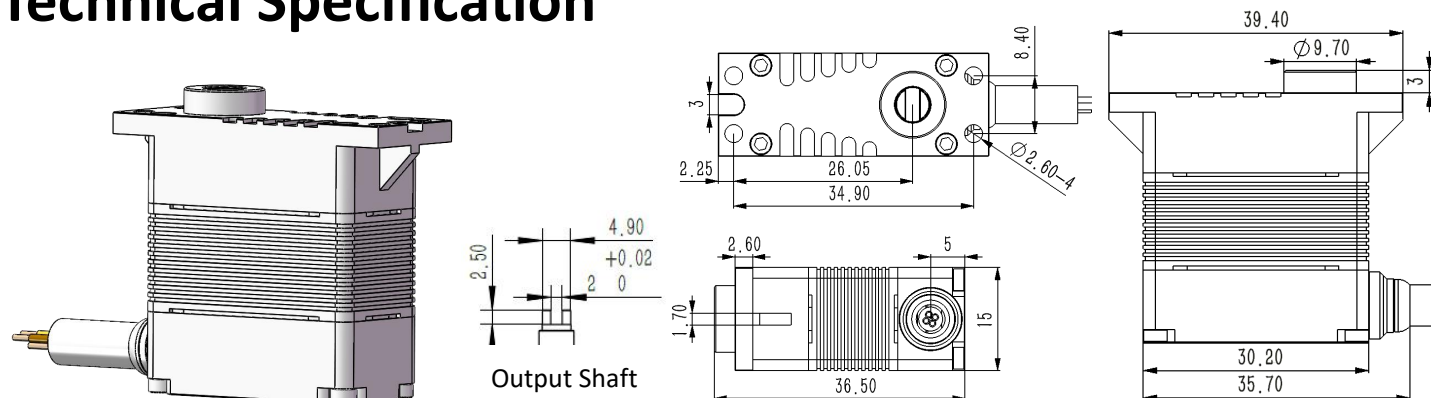


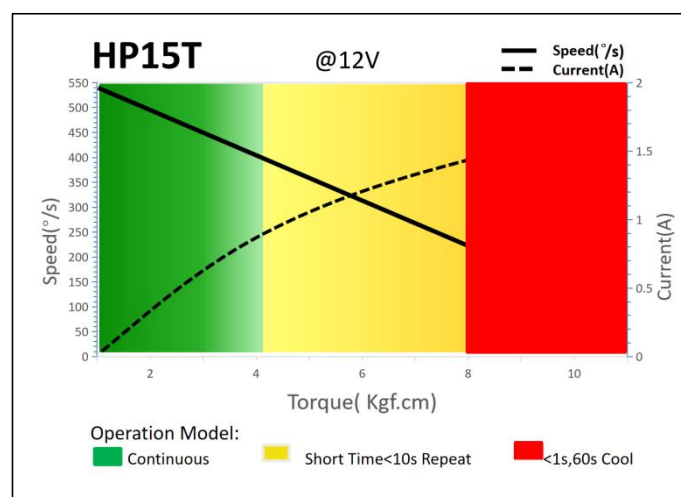
# Technical Specification



## 1. Operating Data

|                      |                        |
|----------------------|------------------------|
| Rated Voltage        | DC12V                  |
| Voltage Range        | DC9V-15V               |
| No-load current      | 50mA                   |
| Stalling Torque      | 8.0Kgf.cm              |
| No load speed        | 550°/sec               |
| Rated Speed          | 380°/sec               |
| Stalling Current     | 1.5A                   |
| Rated Torque         | 4.0Kgf.cm              |
| Rated Current        | 0.8A                   |
| Working Frequency    | 1520us/333Hz           |
| Pulse Width          | 1000us-2000us          |
| Temperature Range    | -30°C.....+65°C        |
| Default Travel Angle | ±50°=100° Total angle  |
| Dead Band            | 2us                    |
| Gear Backlash        | ≤0.5°                  |
| Command Signal       | PWM or CANOPEN 2.0B    |
| Dimensions           | 30.2*15*36.5mm(±0.2mm) |
| Weight               | 45g±10%                |
| Case Material        | Aluminum Alloy         |
| Motor Type           | Brushless DC Motor     |
| Gear Set Material    | Hardened Steel         |
| Position Sensor:     | Contactless            |
| Ball Bearing:        | 2BB                    |

## 2. Performance



## 3. Command Signal

### PWM or CANOPEN 2.0B

#### 3.1 .1 PWM Command Interface

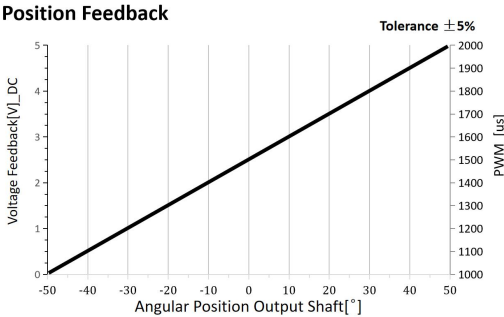
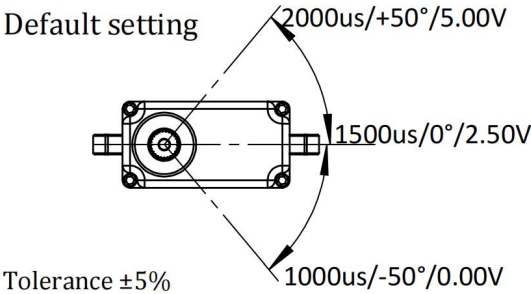
|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Signal Voltage           | HIGH: min.3.3V, max.5.0V<br>Low: min.0.0V, max.1.5V |
| Pulse Width              | 500us-2500us                                        |
| Pulse Width for Position | 1000us/1500us/2000us<br>-50°/ 0°/+50°               |

#### 3.1 .2 CAN Bus Command Interface

|               |                                   |
|---------------|-----------------------------------|
| Baud-Rate     | 500Kbps                           |
| Node number   | 0 x25 (range 1 ~ 127, 0 is radio) |
| Communication | CAN Open                          |

3.2 .1 PWM Position Feedback Signal

The Position Feedback signal (Pos FB) is an analog output signal with a voltage value which is directly related to the output shaft’s angular position. Reference is **GND** .



3.2.2 CANBUS Feedback

Integrated in the Bus protocol a Feedback Value, including the Angle position, Temperature, current value. Value read by sending request command. Provide the details of the bus in the document.

4. Electrical Connection

| PWM Connection    | Pin Assignment |       |            |                             |
|-------------------|----------------|-------|------------|-----------------------------|
|                   | 1              | Red   | DC+        | Supply Voltage              |
|                   | 2              | Black | DC - (GND) | Supply Ground,Signal Ground |
|                   | 3              | White | SIG        | Command Signal              |
|                   | 4              | Blue  | FB +       | Feedback Signal             |
| CANBUS Connection | Pin Assignment |       |            |                             |
|                   | 1              | Red   | DC+        | Supply Voltage              |
|                   | 2              | Black | DC -       | Supply Ground               |
|                   | 3              | White | CAN_H      |                             |
|                   | 4              | Blue  | CAN_L      |                             |

5. Item Number System

