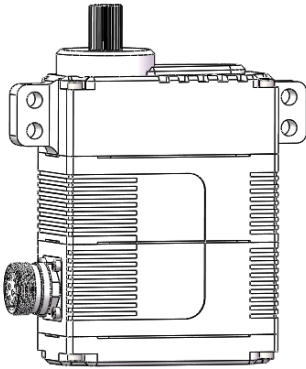
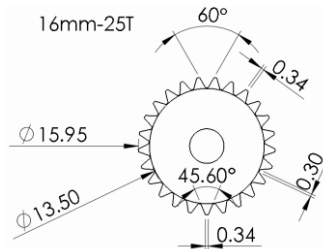
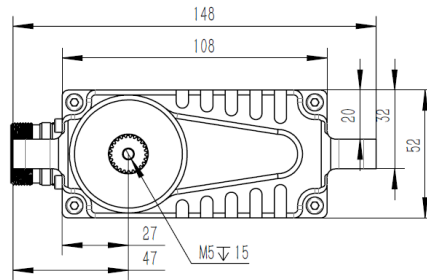


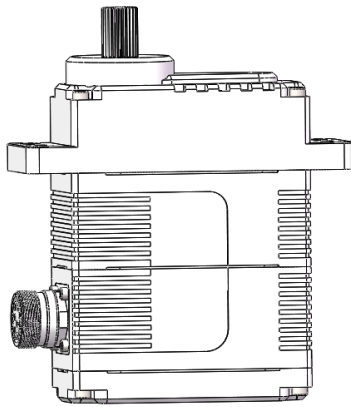
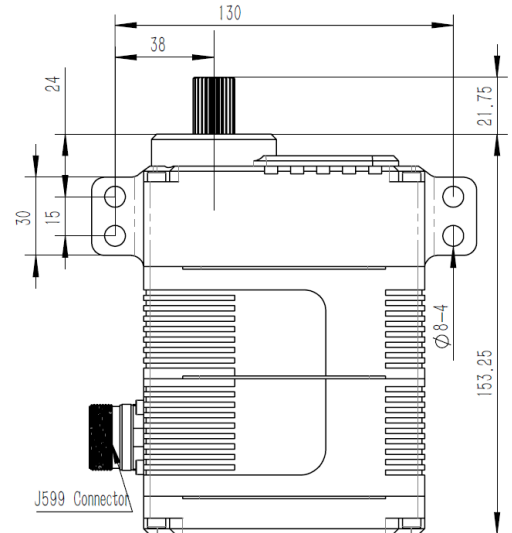
### HS50-30-M-8090-x Technical Specification



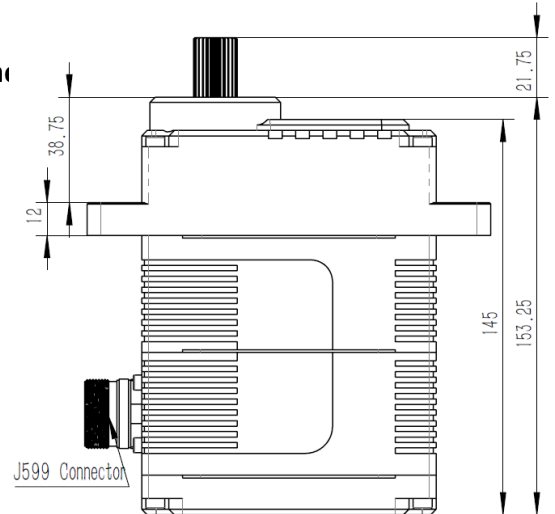
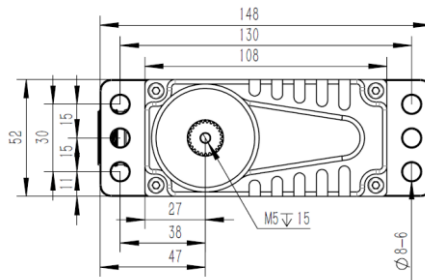
**Version A**



**16mm 25T Output Shaft Spline**



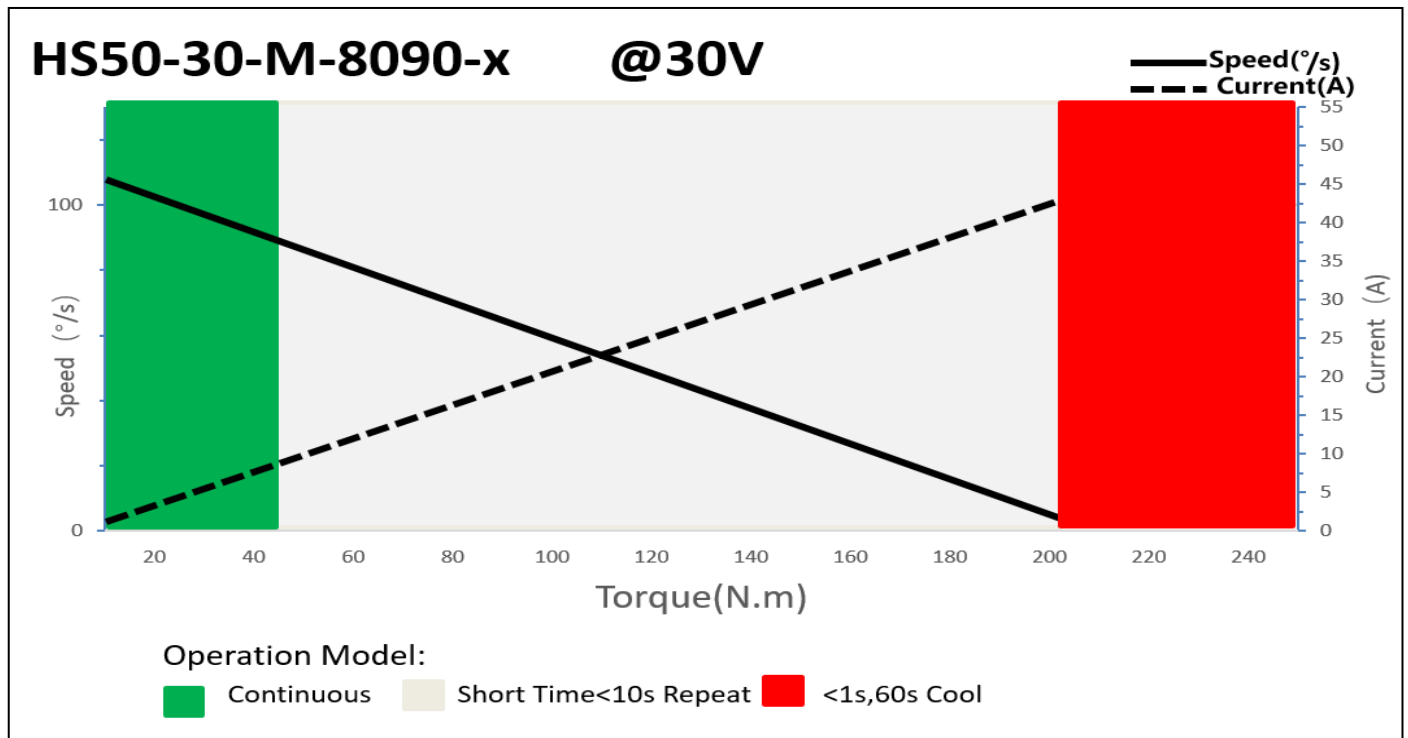
**Version B**



### 1. Servo Data

Rated Voltage	DC30V	Default Travel Angle	±100° = 200° total travel
Voltage Range	DC24V-32V	Operating Temperature Range	-30°C.....+65°C
Stalling Torque	200N.m@30V	Case Material	Aluminum Alloy 7075
Rated Torque	40N.m@30V	Motor Type	Brushless DC Motor
No-load Speed	112°/Sec @/30V	Gear Set Material	Hardened Steel
Rated Speed	95°/Sec @/30V	Position Sensor	Contactless
Stalling Current	45.0A	Connecting Cable	J599 Connector
Rated Current	11.25A	Ball Bearing	6BB
Case Dimensions	108*52*153.25mm±0.2mm	Weight	2080g (±10%)

## 2. Performance



## 3. Command Signal

### 3.1. PWM Command Interface

Signal Voltage	HIGH:min.3.3V,max.5.0V Low:min.0.0V,max.1.5V
Pulse Lengths	500us-2500us
Pulse Lengths for Position (-100°/0°/+100°)	500us/1500us/2500us

### 3.2 RS485 / RS422 Command Interface

Baud-Rate	115200 ±1.5% bits/s
Protocol (Documentation available)	10 Byte (incl. 1 byte Check Sum)
Number of Data Bits	8
Number of Stop Bits	1
Parity	None

#### Command / Response Frame

Byte #	Description	Byte #	Description
1	Frame Head(0xFE)	6	Data
2	Version(0xCA)	7	Data
3	Address	8	Data
4	Command code	9	Check Sum
5	Data	10	(0A)Frame End

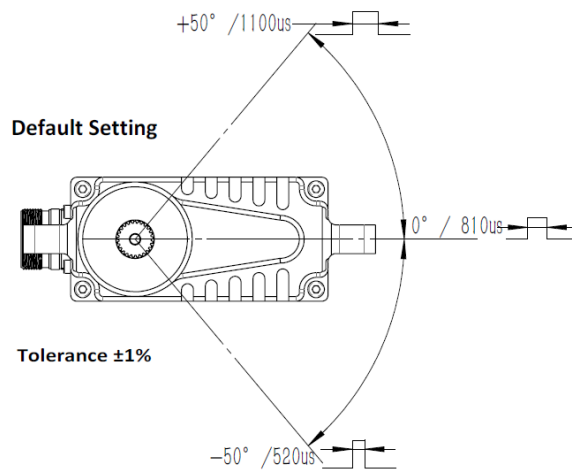
### 3.3 CAN Bus Command Interface

Baud-Rate	500Kbps	Communication	3.1: CAN Open standard frame
Node number	0 x25 (range 1 ~ 127, 0 is radio)		3.2: CAN Extended frame

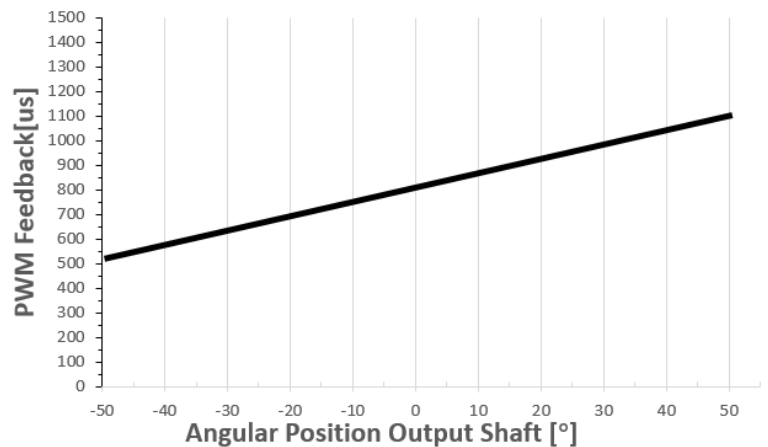
### 3.4. Feedback Signal

#### 3.4.1 Position Feedback Signal (PWM Versions)

The Position Feedback signal is an output signal with a square wave which is directly related to the output shaft's angular position. Reference is Supply Ground.



**Position Feedback**

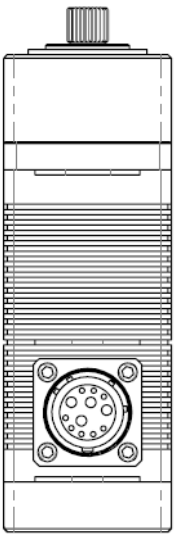


#### 3.4.2 Feedback Value (Bus Version)

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 connections

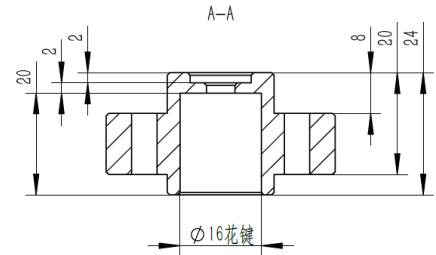
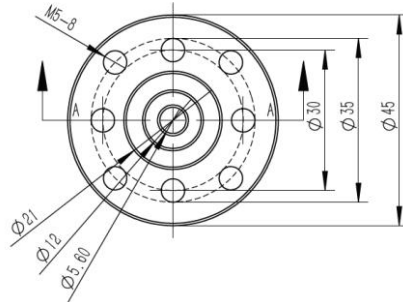
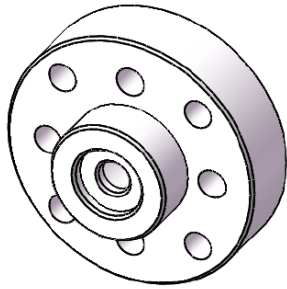
### Industrial Standard J599 electrical Connector Pin Assignment

	PWM Pin Assignment		RS485 Pin Assignment		CAN Pin Assignment		RS422Pin Assignment	
	C	DC + Supply Voltage	C	DC + Supply Voltage	C	DC + Supply Voltage	C	DC + Supply Voltage
	G		G		G		G	
	L	DC- Supply Ground	L	DC- Supply Ground	L	DC- Supply Ground	L	DC- Supply Ground
	M		M		M		M	
	A	PWM Command Signal	A	RS485A	A	CAN_H	A	TX+ (A)
	B		B		B		B	
	D	Feedback - Signal ground	D	RS485B	D	CAN_L	D	TX- (B)
	E		E		E		E	
	F	Voltage Feedback +	F	NC Do not connect	F	NC Do not connect	F	RX+ (Y)
	K		K		K		K	
	H	PWM Feedback +	H	NC Do not connect	H	NC Do not connect	H	RX- (Z)
	J		J		J		J	

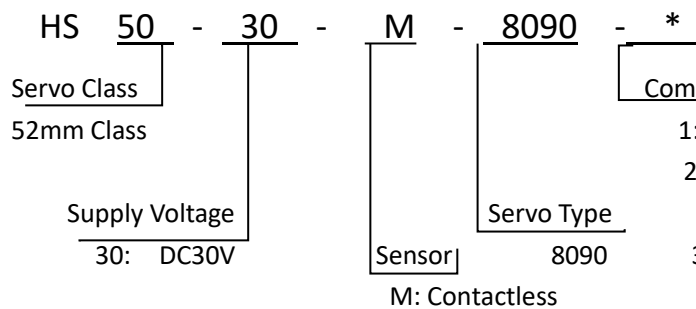
### 5. Accessories List

Model	Output Shaft Spline	Item	Item No.
HS50-30-M-8090-*	25T 16mm	Aluminum Servo Disc	1625.17.5

Item No.: 1625.17.5



### 6. Item Number System



- 1: PWM Command
- 2: RS485 Bus
- 3.1: CAN Open Standard Frame
- 3.2: CAN Open Extended Frame
- 3.3: Drone CAN (UAVCAN)
- 3.5: Isolated CAN Bus
- 3.51: CAN Open Standard Frame
- 3.52: CAN Open Extended Frame
- 4: RS422 Bus