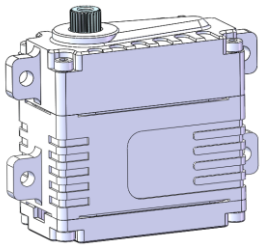
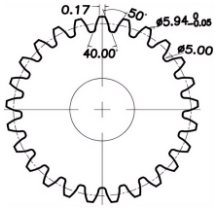
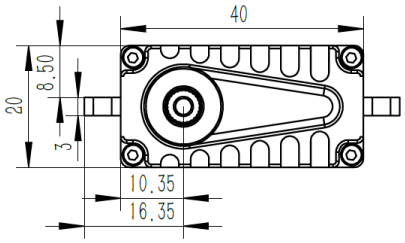
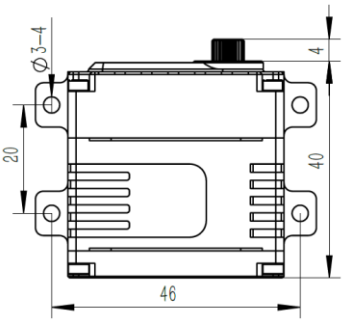
HS20-12-M-5518-x Technical Specification







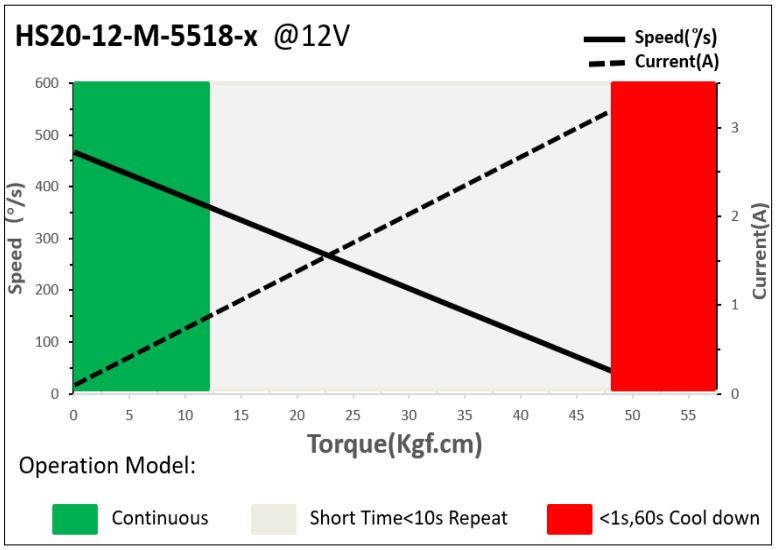


25T 6mm Output Shaft Spline

1. Operating Data

Rated Voltage	DC12.0V
Voltage Range	DC9.0V-13V
Stalling Torque	48Kgf.cm@12V
Rated Torque	12Kgf.cm@12V
Stalling Current	3.25A
Rated Current	0.85A
No-load Speed	0.14sec/60°@12V
Rated Speed	0.25sec/60°@12V
Working Frequency	1520us/333Hz
Default Travel Angle	± 100°=200°Total
Temperature Range	-30℃……+65℃
Case Material	Aluminum Alloy
Motor Type	Brushless DC Motor
Gear Set Material	Hardened Steel
Position Sensor	Contactless
Ball Bearing	6 BB
Case Dimensions	40*20*40mm±0.2mm
Weight	80g±10%

2. Performance



3. Command signal

3.1. PWM Command Interface

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

3.2. RS485 Command Interface

Baud-Rate	115200 ±1.5% bits/s
Protocol (Documentation available)	10 Byte (incl. 1 byte Check Sum)

3.2.1. RS485 Protocol Specifications

Number of Data Bits	8
Number of Stop Bits	1
Parity	None

3.2.2. 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

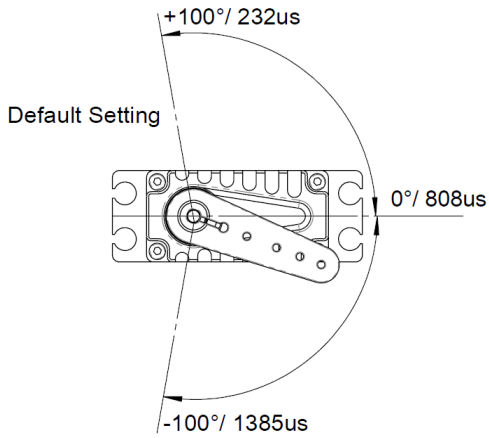
3.3. CAN Bus Command Interface

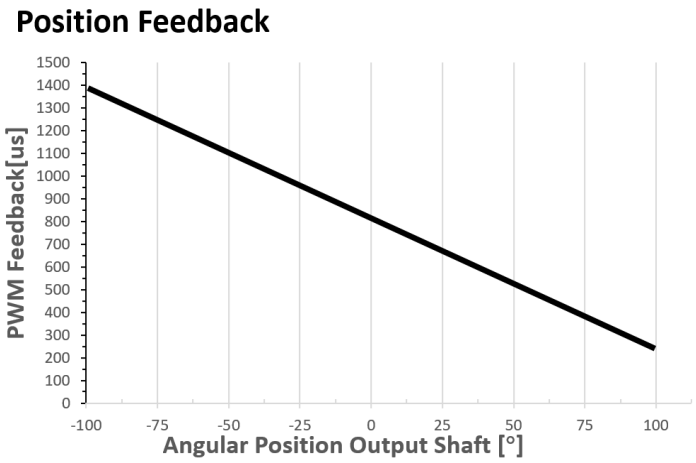
Baud-Rate	500Kbps
Node number	0 x25 (range 1 ~ 127, 0 is radio)
Communication	3.1: CAN Open standard frame format 3.2: CAN Open Extended frame

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.



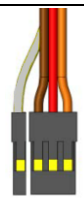
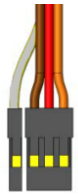
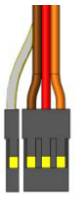


* Tolerance ±1%

3.4.2 Feedback Value (Bus Versions)

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 Options

 4 3 2 1	**Pin Assignment (PWM)**			
	1	Yellow	SIG	Command Signal
	2	Red	DC+	Supply Voltage
	3	Brown	DC-(GND)	Supply Ground, Signal Ground
	4	White(Options)	Feedback	Position Feedback
 4 3 2 1	**Pin Assignment (RS485)**			
	1	Yellow	RS485A	Non-Inverted Input / Output line
	2	Red	DC+	Supply Voltage
	3	Brown	DC-(GND)	Supply Ground, Signal Ground
	4	white	RS485B	Inverted Input / Output line
 4 3 2 1	**Pin Assignment (CAN_BUS)**			
	1	Yellow	CAN_H	CAN high
	2	Red	DC+	Supply Voltage
	3	Brown	DC-(GND)	Supply Ground, Signal Ground
	4	white	CAN_L	CAN low

5. Accessories（Options）

Item	**Item-No.**
Aluminum Servo Arm (Single side)	**0625.11**
Aluminum Servo Arm (Single side)	**0625.23**
Aluminum Servo Arm (Single side)	**0625.40**
Aluminum Servo Arm (Double side)	**0625.60**

6. Item Number System

HS 20 - 12 - M - 5518 - x

- Servo Class: 20mm Class
- Supply Voltage: 12: DC12V
- Sensor: M: Contactless
- Servo Type: 5518
- Command: 1: PWM; 2: RS485; 3.1: CAN Open Stardard Frame; 3.2: CAN Open Extended Frame