

## SMC40S-0005 Servo Motor

FEATURES

- 24-70VDC
- 50W Power Rating
- Rated Torque of 0.16 Nm
- Maximum Speed of 3942 RPM
- 16 Bit Single-Turn Magnetic Encoder
- IP65 for Body, IP54 Shaft Seal
- Insulation Class F
- Brake Option Available

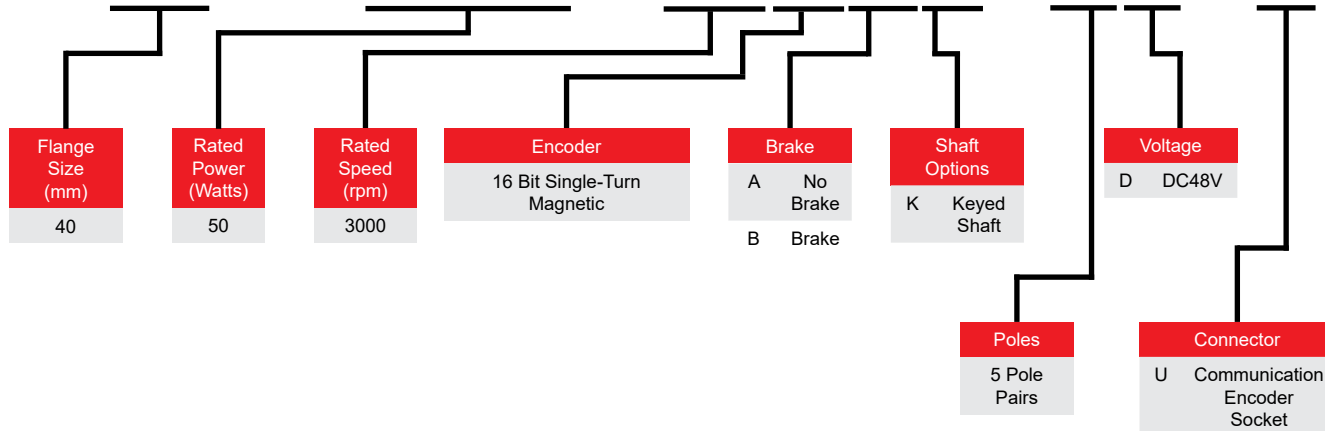


DESCRIPTION

The SMC40S-0005 Series Servo Motor offers a low-cost solution for motion control applications requiring position and speed control. With the new 16 Bit Single-Turn Magnetic Encoder it allows for better cushioning ability and higher cost-performance ratio. These Servo Motors have Insulation Class F which is the best Insulation Class on the market. They are very quiet with high reliability and stability in high temperature environments. These Servo Motors boast peak torque values up to 0.48 Nm, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 0.16 Nm. It is available in a 40mm square flange size, with a brake option.

ORDERING INFORMATION

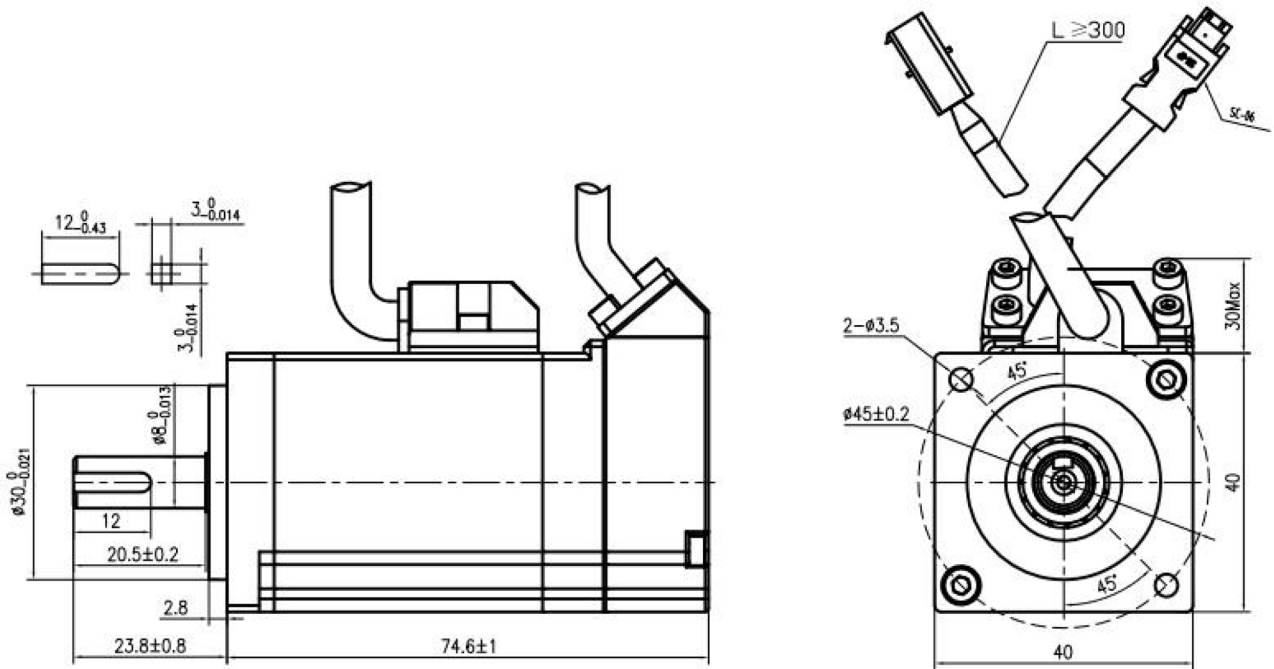
# SMC40S - 0005 - 30MAK - 5DSU



L011816

Model	SMC40S-0005-30MAK-5DSU SMC40S-0005-30MBK-5DSU
Compatible Driver	FD114S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	50
Rated Torque (Nm)	0.16
Rated Speed (RPM)	3000
Max Speed (RPM)	3942
Rated Current (A)	1.5
Maximum Torque (Nm)	0.48
Maximum Current (A)	4.5
Rated Standstill Torque (Nm)	0.176
Rated Standstill Current (A)	1.65
Resistance Line-Line ( $\Omega$ )	4.1
Inductance Line-Line (mH)	4.5
Electrical Time Constant (ms)	1.1
Mechanical Time Constant (ms)	1.0 1.17 (with brake)
Torque Constant Kt (Nm/A)	0.11
Rotor Moment of Inertia Jm (Kg-cm <sup>2</sup> )	0.018 0.021 (with brake)
Brake Holding Torque (Nm)	0.32
Pole Pair Number	5
Maximum Voltage Rising du/dt (KV/ $\mu$ s)	8
Insulation Class	F
Maximum Radial Force F (N)	120
Maximum Axial Force F (N)	60
Weight (Kg)	0.4 0.6 (with brake)
Length of Motor (mm)	74.6 $\pm$ 1 104.6 $\pm$ 1.5 (with brake)

## SMC40S-0005-30MAK-5DSU

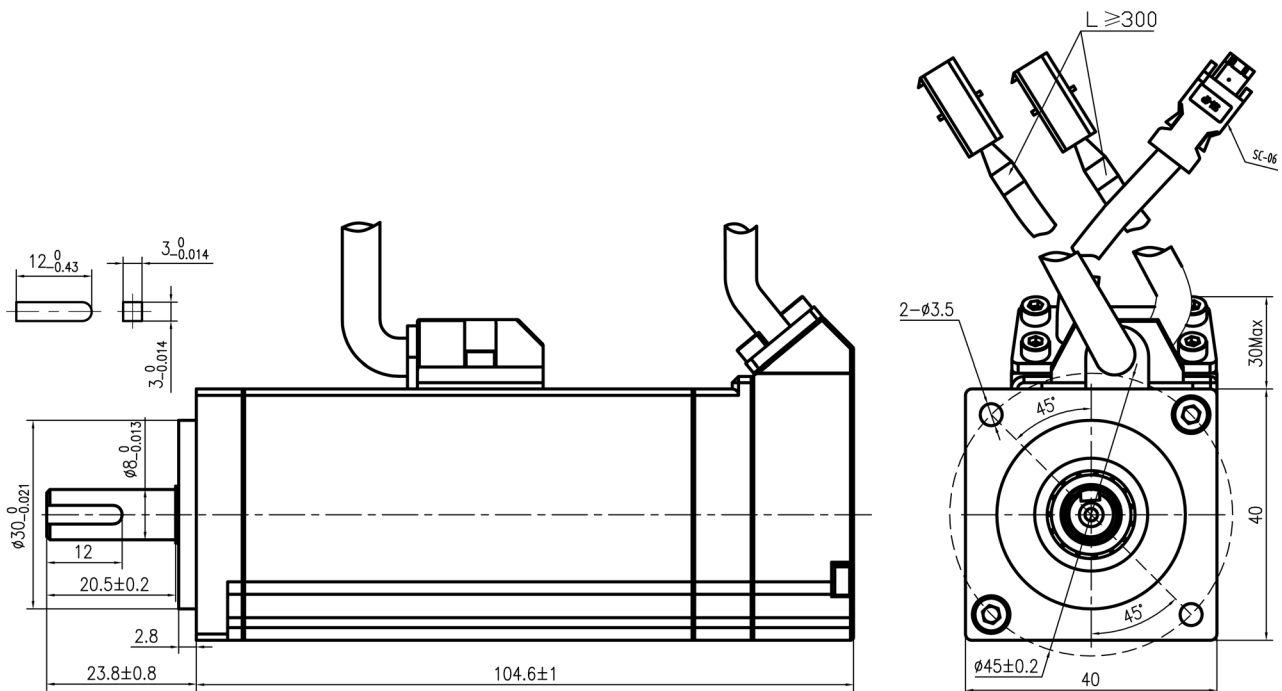


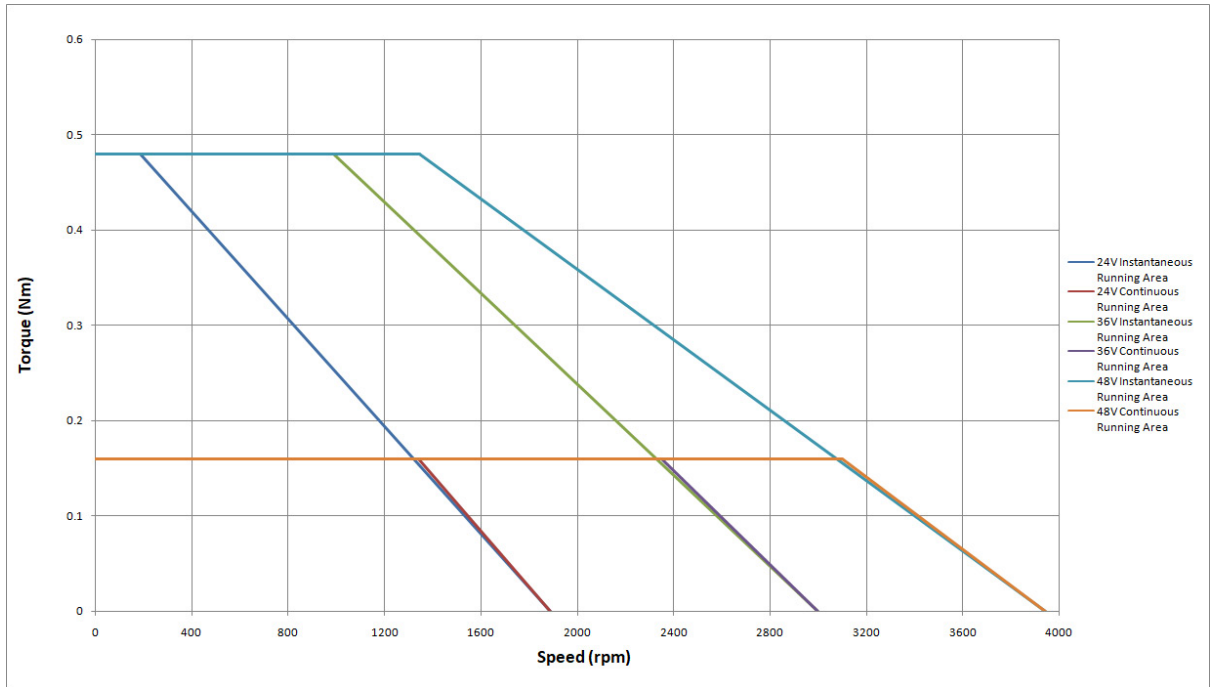
Model	SMC40S-0005-30MAK-5DSU SMC40S-0005-30MBK-5DSU
Length of Motor L (mm)	74.6 ± 1 104.6 ± 1.5 (with brake)

Dimensions are in mm

DIMENSIONS

## SMC40S-0005-30MBK-5DSU

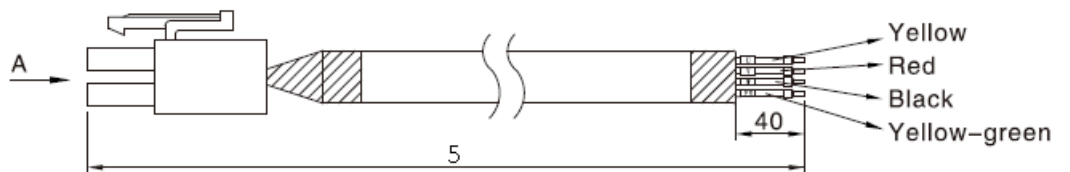




Motor Cable: MOT-005-05-KL-D for SMC40S-0005-30MAK-5DSU and SMC40S-0005-30MBK-5DSU

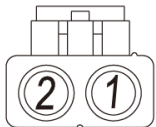


A  
4PIN

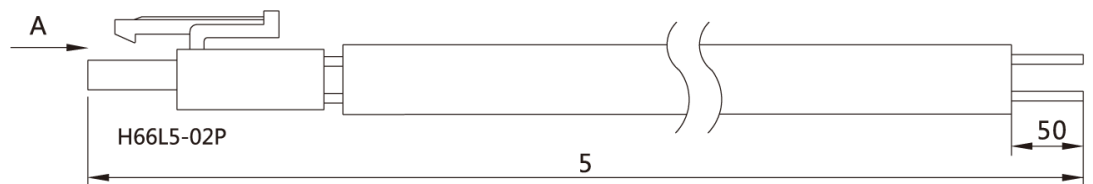


MOT-005-05-KL-D		
Cable Color	Signal	PIN #
Yellow	U	PIN 1
Red	V	PIN 2
Black	W	PIN 3
Yellow-green	PE	PIN 4

Brake Cable: BRA-05-KL for SMC40S-0005-30MBK-5DSU

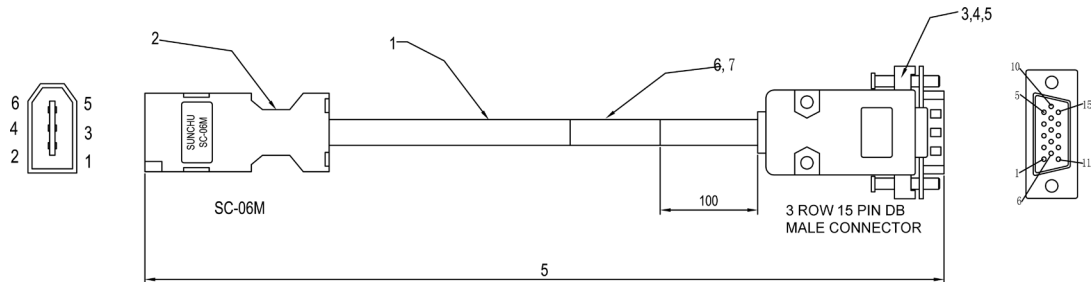


A  
2PIN



BRA-05-KL		
Cable Color	Signal	PIN #
Red	Brake +	PIN 1
Blue	Brake -	PIN 2

Encoder Cable: ENCHG-05-GU for SMC40S-0005-30MAK-5DSU and SMC40S-0005-30MBK-5DSU



ENCHG-05-GU				
Wiring Cable	Color	Signal 1	Signal 2	DB15
PIN 1	Red	VDD	VDD	PIN1
PIN 2	Black	GND	GND	PIN2
PIN 3	Brown	MA_P+	\	PIN10
PIN 4	Blue	MA_N-	\	PIN15
PIN 5	Yellow	SLO_P+	SD	PIN9
PIN 6	Green	SLO_N-	/SD	PIN14
SHELL	SHIELD	SHIELD	SHIELD	SHELL

Model	Motor Cable	Encoder Cable	Brake Cable
SMC40S-0005-30MAK-5DSU			-
SMC40S-0005-30MBK-5DSU	MOT-005-05-KL-D	ENCHG-05-GU	BRA-05-KL

Model	SMC40S-0005-30MAK-5DSU SMC40S-0005-30MBK-5DSU	
Length of Motor L(mm)	74.6 ± 1 104.6 ± 1.5 (with brake)	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C~40°C (Non-freezing)
	Humidity	Below 90% RH (Non-condensing)
	Ambient Environment	Away from active gas, combustible gas, oil drops and dust
	Altitude	Maximum Altitude 4000m, Rated Power at 1000m or Below, Above 1000m: Decreasing 1.5% per 100m Rise