

# KNC-SRV-SMC40S-0010 Servo Motor



## FEATURES

- 24-70VDC
- 100W Power Rating
- Rated Torque of 45 oz-in
- Maximum Speed of 3942 RPM
- 16 Bit Single-Turn Magnetic Encoder
- IP65 for Body, IP54 Shaft Seal
- Insulation Class F
- Brake Option Available

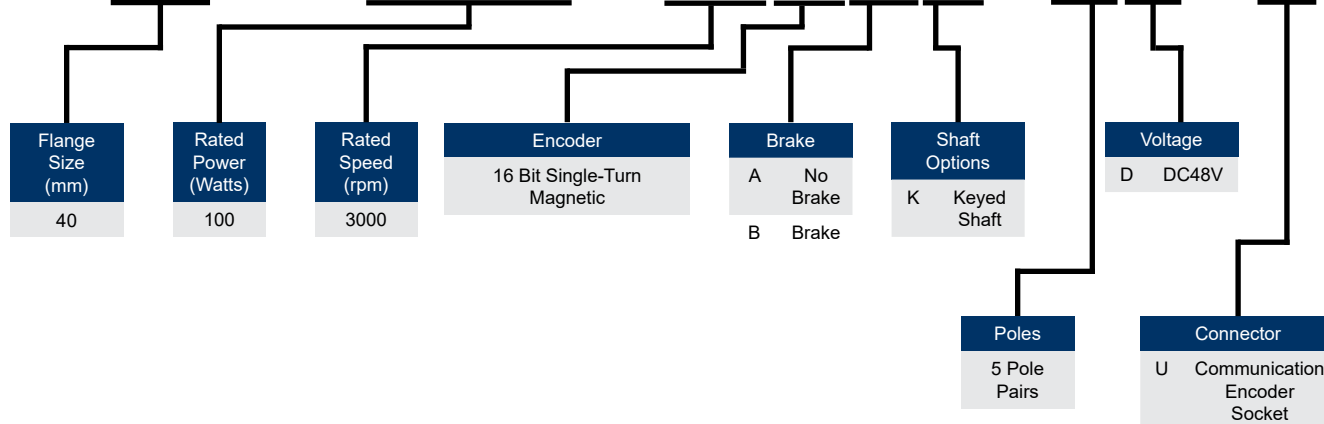


## DESCRIPTION

The SMC40S-0010 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 135 oz-in, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 45 oz-in. It is available in a 40mm square flange size, with a brake option.

## ORDERING INFORMATION

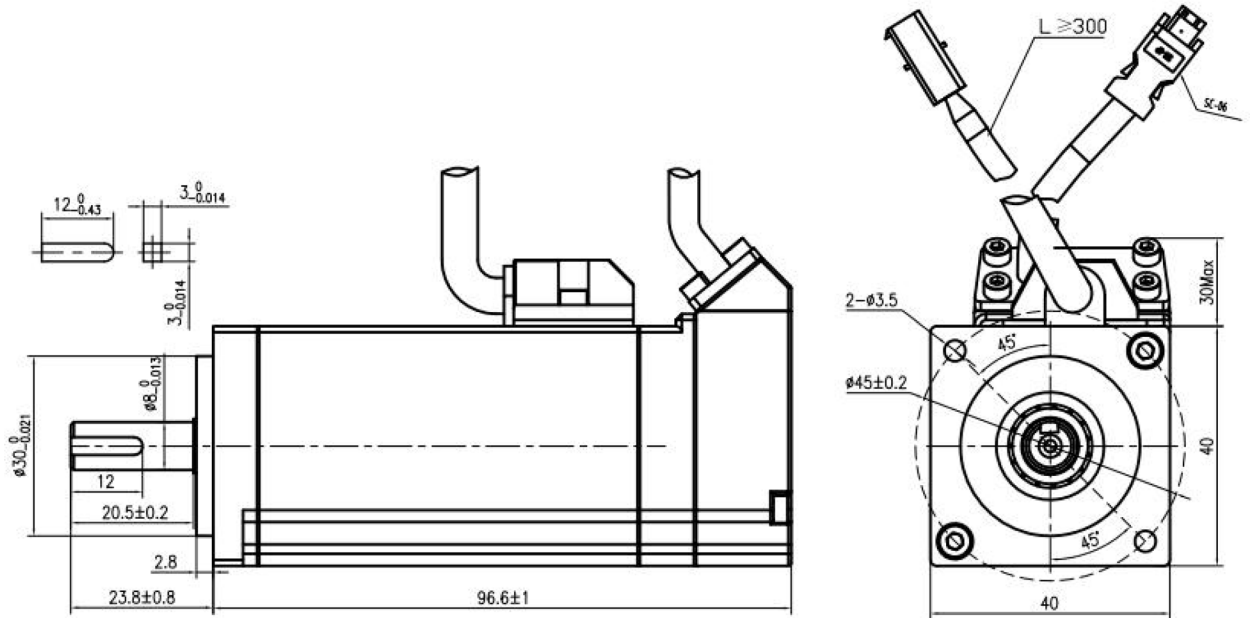
# SMC40S - 0010 - 30MAK - 5DSU



L011809

Model	KNC-SRV-SMC40S-0010-30MAK-5DSU KNC-SRV-SMC40S-0010-30MBK-5DSU
Compatible Driver	KNC-SRV-FD114S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	100
Rated Torque (oz-in)	45
Rated Speed (RPM)	3000
Max Speed (RPM)	3942
Rated Current (A)	3.2
Maximum Torque (oz-in)	135
Maximum Current (A)	9.6
Rated Standstill Torque (oz-in)	50
Rated Standstill Current (A)	3.52
Resistance Line-Line ( $\Omega$ )	1.5
Inductance Line-Line (mH)	1.9
Electrical Time Constant (ms)	1.27
Mechanical Time Constant (ms)	0.67 0.94 (with brake)
Torque Constant Kt (oz-in/A)	15.6
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.00047 0.00065 (with brake)
Brake Holding Torque (oz-in)	45.3
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 (lbs)	1.27 1.70 (with brake)
Length of Motor (mm)	96.6 $\pm$ 1 126.6 $\pm$ 1.5 (with brake)

KNC-SRV-SMC40S-0010-30MAK-5DSU

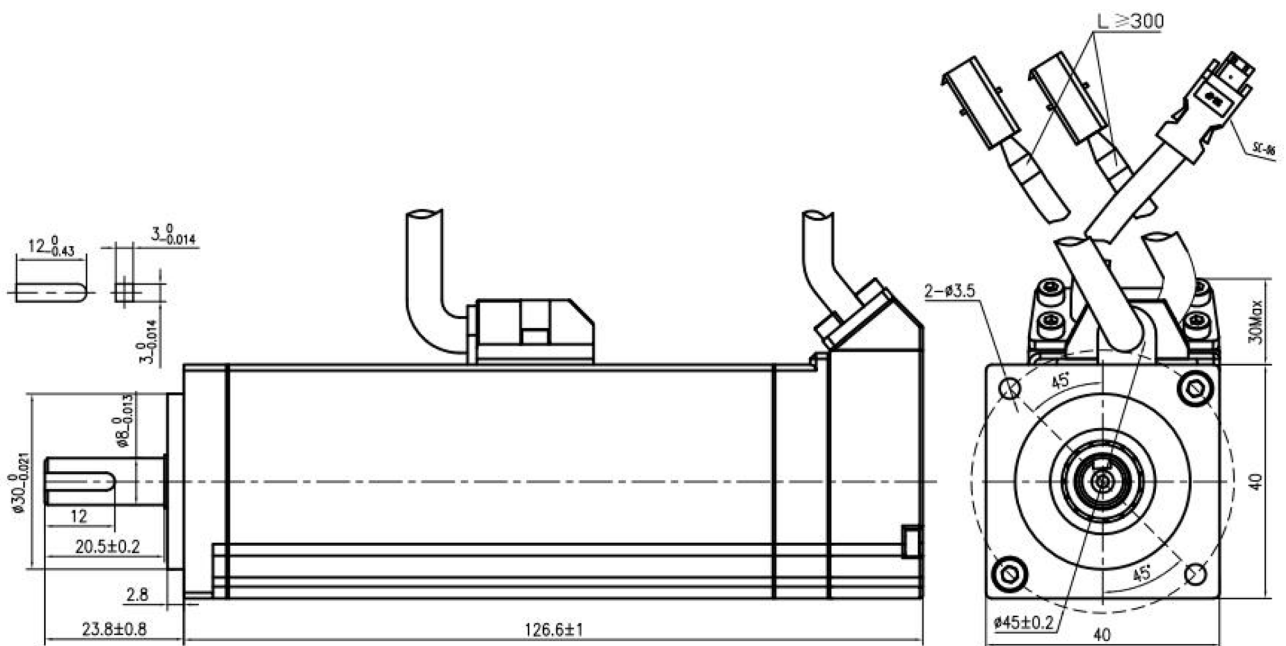


Model	KNC-SRV-SMC40S-0010-30MAK-5DSU KNC-SRV-SMC40S-0010-30MBK-5DSU
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Length of Motor L (mm)                       $96.6 \pm 1$   
 $126.6 \pm 1$  (with brake)

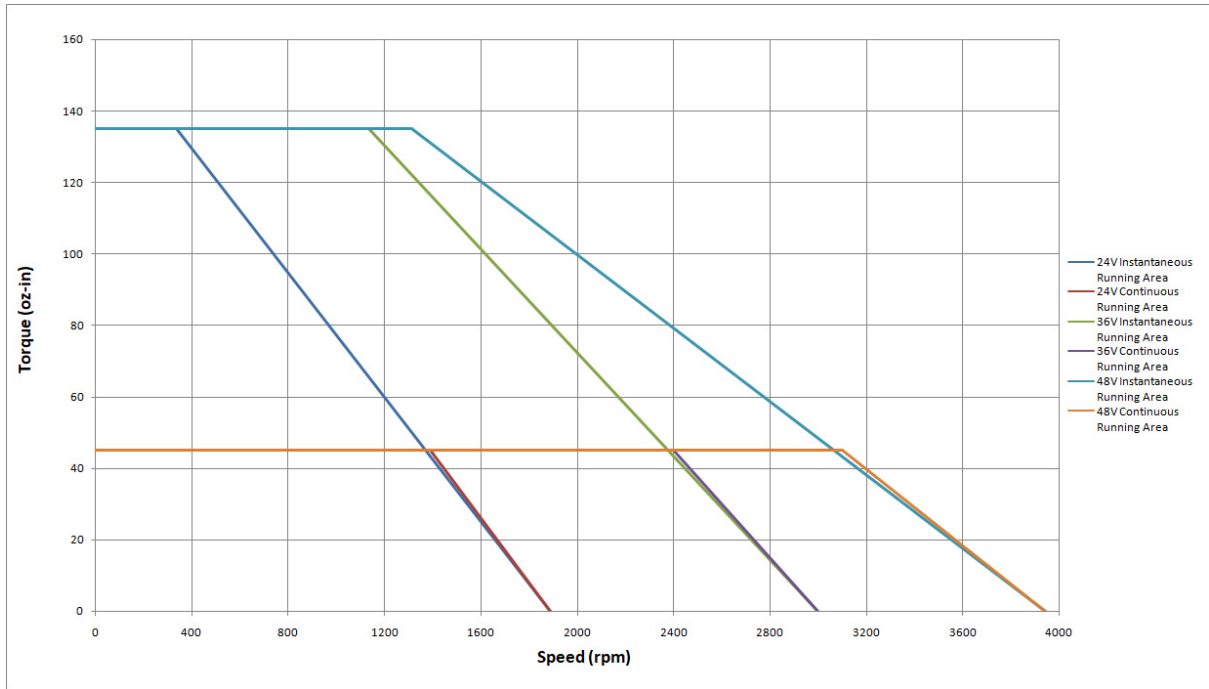
Dimensions are in mm

KNC-SRV-SMC40S-0010-30MBK-5DSU



DIMENSIONS

TORQUE CURVE

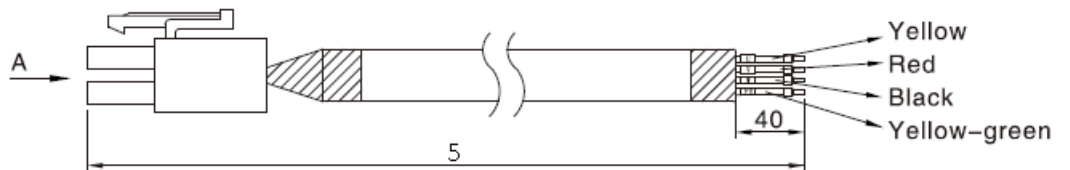


Motor Cable: KNC-SRV-MOT-005-05-KL-D for KNC-SRV-SMC40S-0010-30MAK-5DSU & KNC-SRV-SMC40S-0010-30MBK-5DSU

WIRING PINOUTS

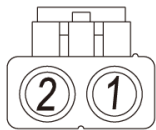


A  
4PIN

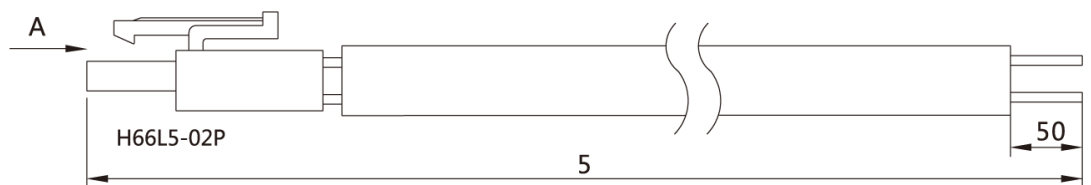


KNC-SRV-MOT-005-05-KL-D		
Cable Color	Signal	PIN #
Yellow	U	PIN 1
Red	V	PIN 2
Black	W	PIN 3
Yellow-green	PE	PIN 4

Brake Cable: KNC-SRV-BRA-05-KL for KNC-SRV-SMC40S-0010-30MBK-5DSU

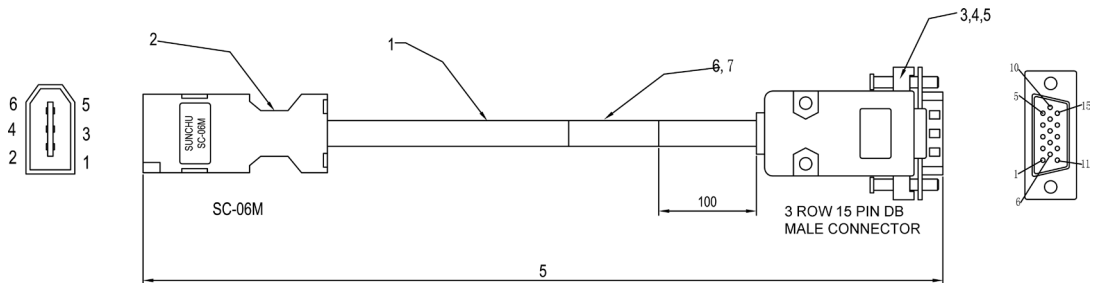


A  
2PIN



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

Encoder Cable: KNC-SRV-ENCHG-05-GU for KNC-SRV-SMC40S-0010-30MAK-5DSU  
and KNC-SRV-SMC40S-0010-30MBK-5DSU



KNC-SRV-ENCHG-05-GU				
Wiring Cable	Color	Signal 1	Signal 2	DB 15
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



SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMC40S-0010-30MAK-5DSU			-
KNC-SRV-SMC40S-0010-30MBK-5DSU	KNC-SRV-MOT-005-05-KL-D	KNC-SRV-ENCHG-05-GU	KNC-SRV-BRA-05-KL

Model	KNC-SRV-SMC40S-0010-30MAK-5DSU KNC-SRV-SMC40S-0010-30MBK-5DSU	
Length of Motor L(mm)	96.6 ± 1 126.6 ± 1 (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