

# KNC-SRV-SMC130D-0120 Servo Motor



## FEATURES

- 24-70VDC
- 1200W Power Rating
- Rated Torque of 538 oz-in
- Maximum Speed of 4000 RPM
- 2500 PPR Incremental Encoder
- IP65 for Body, IP54 Shaft Seal
- Insulation Class F
- Brake Option Available
- CE Certified

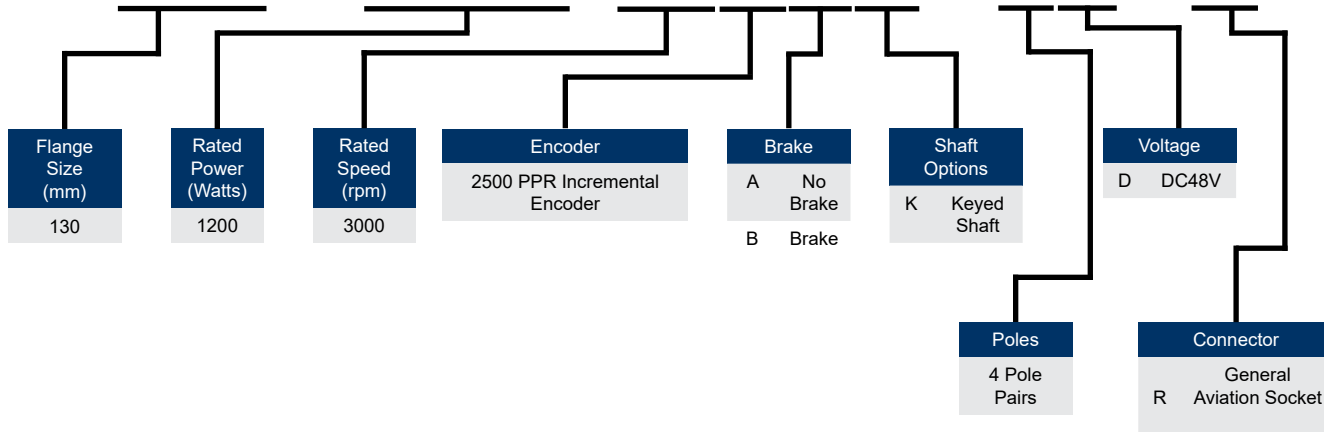


## DESCRIPTION

The SMC130D-0120 Series Servo Motor offers a low-cost solution for motion control applications requiring position and speed control. With the 2500 PPR Incremental 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 1,345 oz-in, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 538 oz-in. It is available in a 130mm square flange size, with a brake option.

## ORDERING INFORMATION

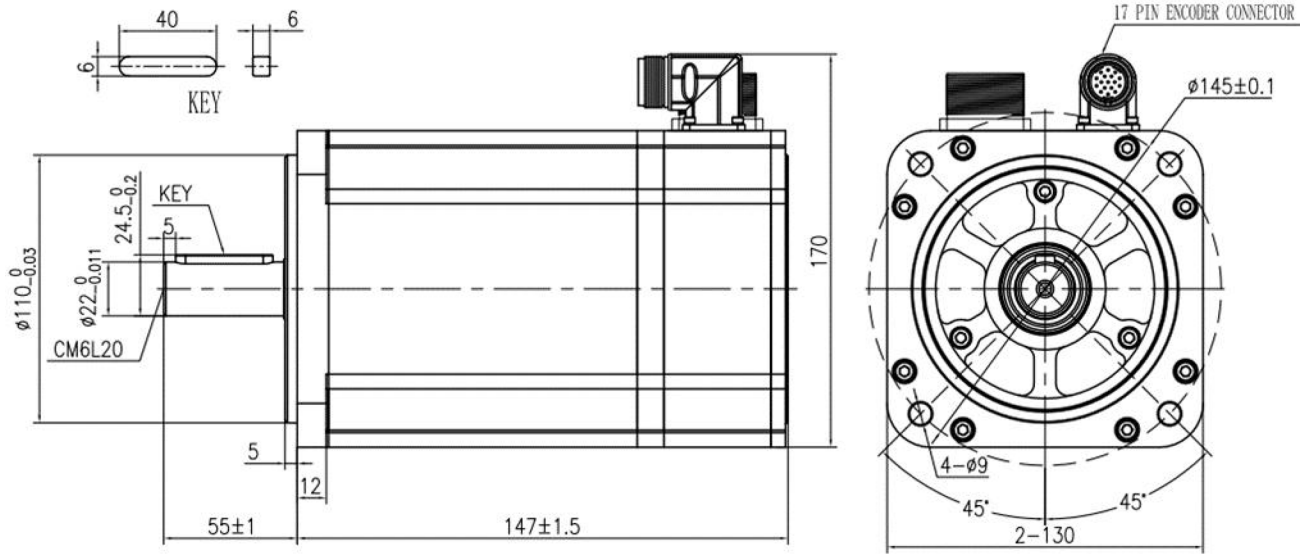
# SMC130D-0120-30AAK - 4DKR



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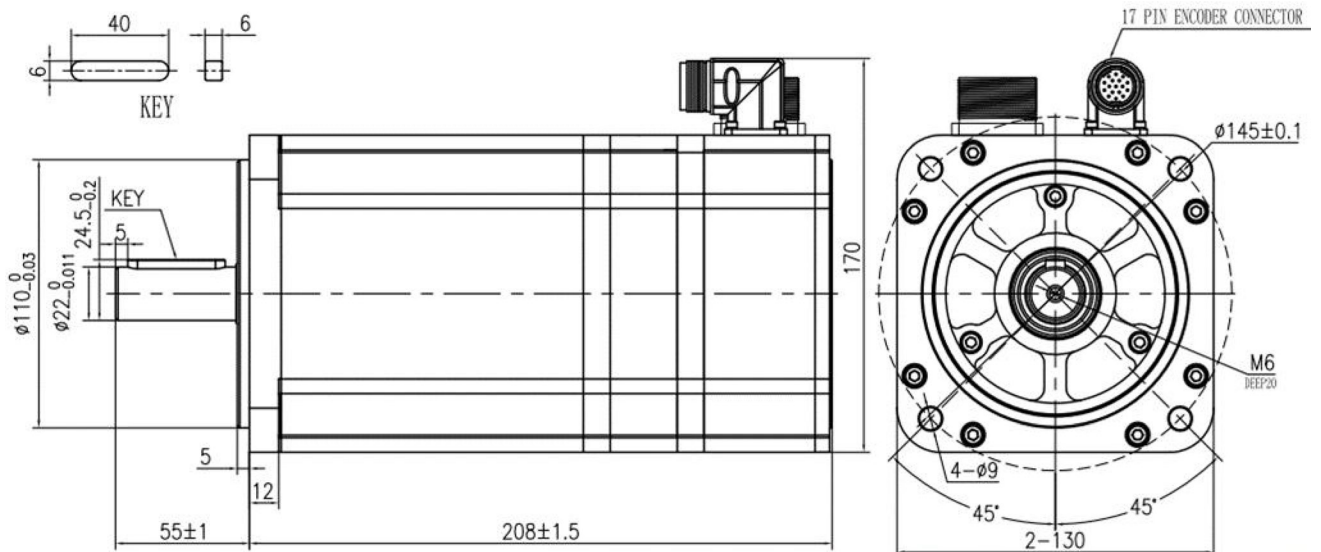
Model	KNC-SRV-SMC130D-0120-30AAK-4DKR KNC-SRV-SMC130D-0120-30ABK-4DKR
Compatible Driver	KNC-SRV-FD144S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	1200
Rated Torque (oz-in)	538
Rated Speed (RPM)	3000
Max Speed (RPM)	4000
Rated Current (A)	31.6
Maximum Torque (oz-in)	1345
Maximum Current (A)	79
Rated Standstill Torque (oz-in)	592
Rated Standstill Current (A)	34.76
Resistance Line-Line ( $\Omega$ )	0.041
Inductance Line-Line (mH)	0.279
Electrical Time Constant (ms)	0.68
Mechanical Time Constant (ms)	3
Torque Constant Kt (oz-in/A)	18.7
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.10479 0.10621 (with brake)
Pole Pair Number	4
Maximum Voltage Rising du/dt (KV/ $\mu$ s)	8
Insulation Class	F
Maximum Radial Force F (N)	900
Maximum Axial Force F (N)	450
Weight (lbs)	13.67 18.74 (with brake)
Length of Motor (mm)	147 $\pm$ 1.5 208 $\pm$ 1.5 (with brake)

KNC-SRV-SMC130D-0120-30AAK-4DKR

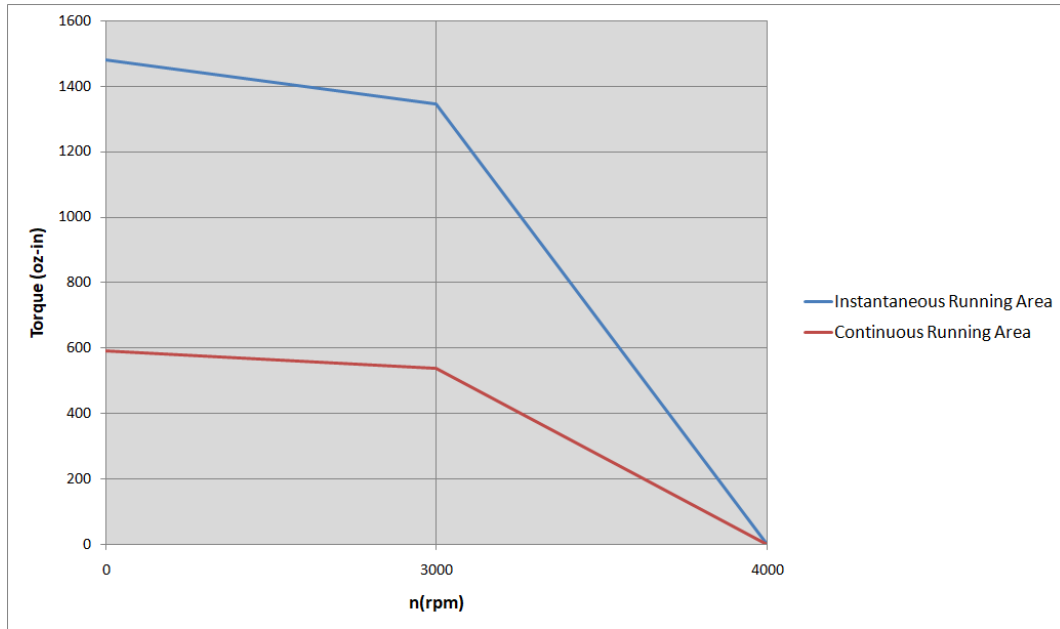


Dimensions are in mm

KNC-SRV-SMC130D-0120-30ABK-4DKR

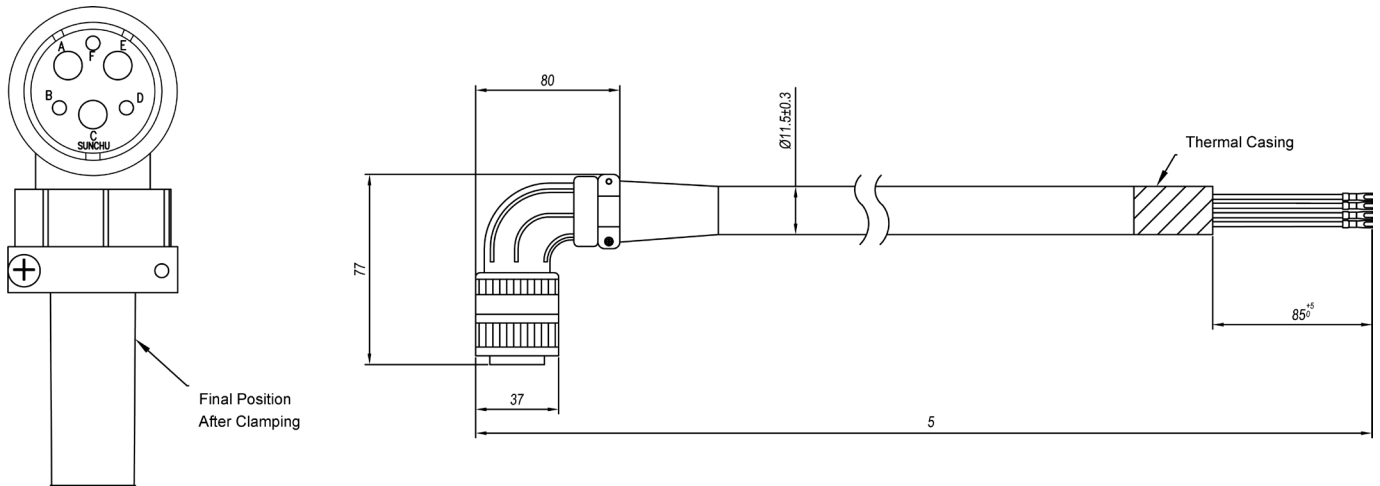


TORQUE CURVE



WIRING PINOUTS

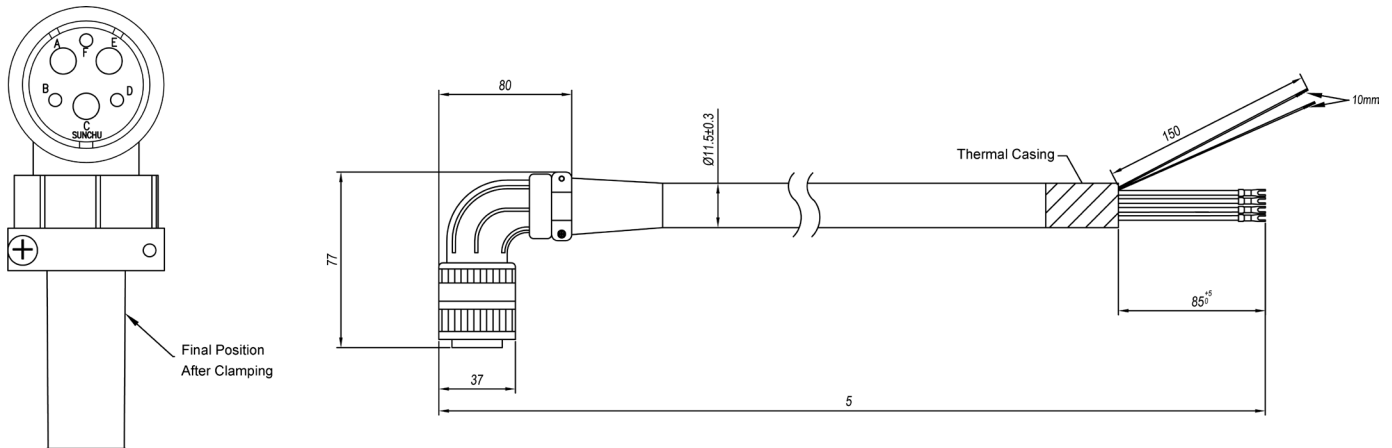
Motor Cable: KNC-SRV-MOT-040-05-KC5 for KNC-SRV-SMC130D-0120-30AAK-4DKR



Final Position After Clamping

KNC-SRV-MOT-040-05-KC5		
Cable Color	Signal	PIN #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow-green	PE	PINF
Shield	Shield	Metal Ring

Motor Cable with Brake Cable: KNC-SRV-MOT-040-05-KC5-B for KNC-SRV-SMC130D-0120-30ABK-4DKR

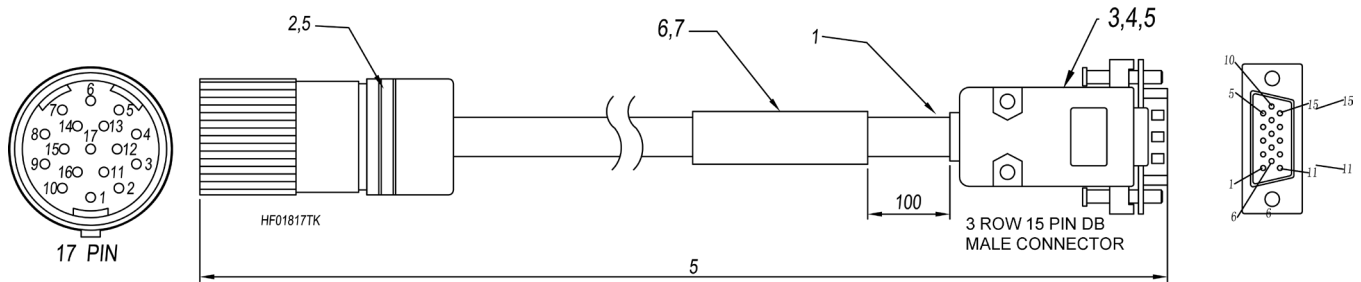


Final Position After Clamping

KNC-SRV-MOT-040-05-KC5-B		
Cable Color	Signal	Pin #
Yellow	U	PINA
Red	V	PINE
Green	W	PINC
Yellow/Green	PE	PINF
Red	Brake+	PINB
Blue	Brake-	PIND
Shield	Shield	Shield



Encoder Cable: KNC-SRV-ENCHA-05-KC0 for KNC-SRV-SMC130D-0120-30AAK-4DKR and KNC-SRV-SMC130D-0120-30ABK-4DKR



WIRING PINOUTS

KNC-SRV-ENCHA-05-KC0			
17 PIN Connector	3 Row 15 PIN DB	Signal	Color
PIN1	PIN1	+5V	Red
PIN3	PIN8	A	Orange
PIN5	PIN7	B	Yellow
PIN14	PIN6	Z	Green
PIN9	PIN4	U	Brown
PIN11	PIN10	V	Purple
PIN16	PIN9	W	Blue
PIN2	PIN2	GND	Black
PIN4	PIN13	/A	Orange/White
PIN6	PIN12	/B	Yellow/White
PIN15	PIN11	/Z	Green/White
PIN10	PIN5	/U	Brown/White
PIN12	PIN15	/V	Purple/White
PIN17	PIN14	/W	Blue/White
PIN7	PIN3	PTC/KTY+	Red
PIN8	PIN2	PTC/KTY-	Red/White
Shield			Shield

SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMC130D-0120-30AAK-4DKR	KNC-SRV-MOT-040-05-KC5	KNC-SRV-ENCHA-05-KC0	N/A
KNC-SRV-SMC130D-0120-30ABK-4DKR	KNC-SRV-MOT-040-05-KC5-B		In Motor Cable

Model	KNC-SRV-SMC130D-0120-30AAK-4DKR KNC-SRV-SMC130D-0120-30ABK-4DKR	
Length of Motor L(mm)	147 ± 1.5 208 ± 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