

# KNC-SRV-SMC60S-0060-30MxK-5DSU KNC-SRV-SMC60S-0060-30AxK-5DSH Servo Motors



## FEATURES

- 24-70VDC
- 600W Power Rating
- Rated Torque of 270 oz-in
- Maximum Speed of 4200 RPM
- Magnetolectric Encoder (DSU) or 2500 PPR Incremental Encoder (DSH)
- IP65 for Body, IP54 Shaft Seal
- Insulation Class F

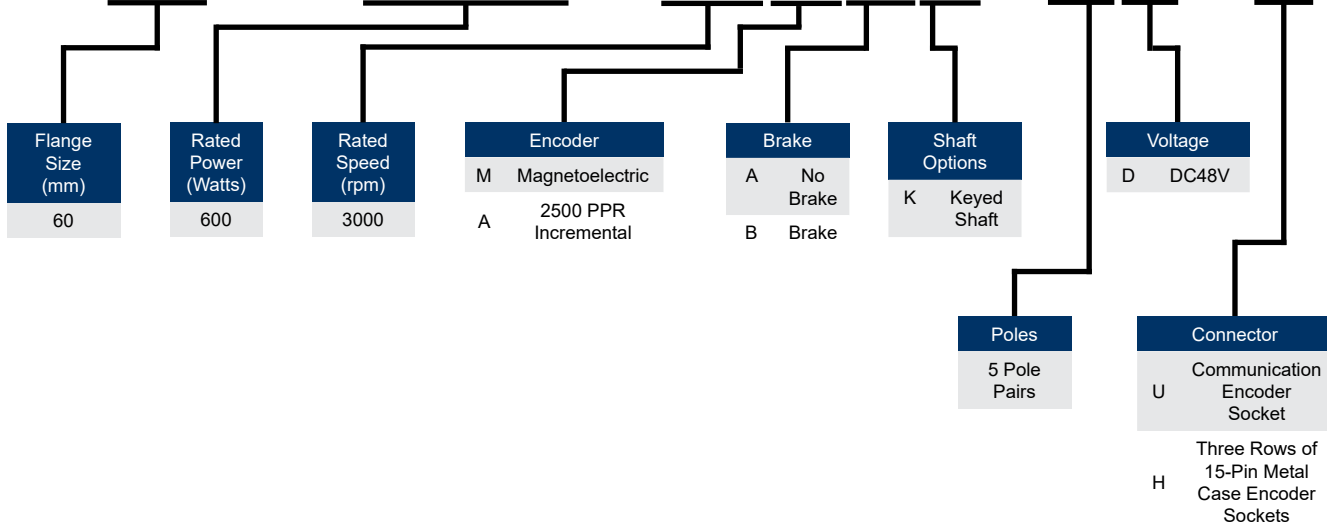


## DESCRIPTION

The KNC-SRV-SMC60S-0060-30 Series Servo Motor offers a low-cost solution for motion control applications requiring position and speed control. With the Magnetolectric Encoder or 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 811 oz-in, provide excellent dynamic response, allow for 3 times the overload capacity, and has a rated torque of 270 oz-in. It is available in a 60mm square flange size, with a brake option.

## ORDERING INFORMATION

# SMC60S - 0060 - 30MAK - 5DSU

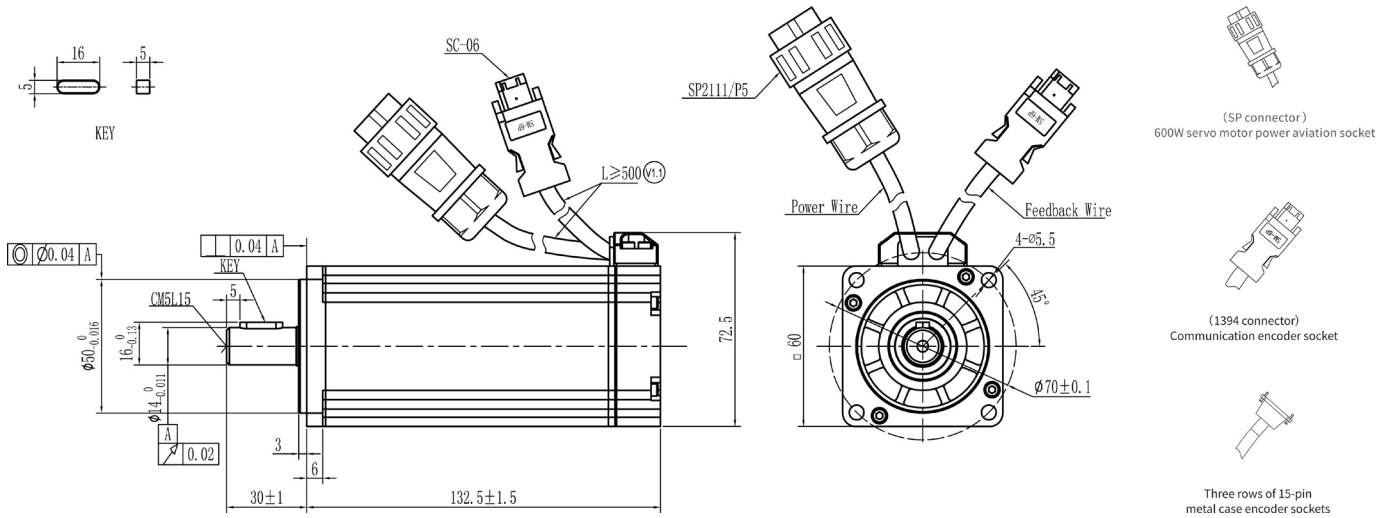


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Model	KNC-SRV-SMC60S-0060-30MAK-5DSU KNC-SRV-SMC60S-0060-30MBK-5DSU KNC-SRV-SMC60S-0060-30AAK-5DSH KNC-SRV-SMC60S-0060-30ABK-5DSH
Compatible Driver	KNC-SRV-FD134S-LA-000 KNC-SRV-FD134S-LB-000
DC Link Voltage (VDC)	48
Rated Power (W)	600
Rated Torque (oz-in)	270
Rated Speed (RPM)	3000
Max Speed (RPM)	4200
Rated Current (A)	16.5
Maximum Torque (oz-in)	811
Maximum Current (A)	53
Rated Standstill Torque (oz-in)	297.4
Rated Standstill Current (A)	18.2
Resistance Line-Line ( $\Omega$ )	0.12
Inductance Line-Line (mH)	0.38
Electrical Time Constant (ms)	3.17
Mechanical Time Constant (ms)	0.54
Torque Constant Kt (oz-in/A)	17.5
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.00570 0.00576 (with brake)
Pole Pair Number	5
Voltage Constant Ke (V/Krpm)	7.5
Insulation Class	F
Maximum Radial Force F (N)	180
Maximum Axial Force F (N)	90
Weight (lbs)	4.18 5.07 (with brake)
Length of Motor (mm)	132.5 $\pm$ 1.5 167.5 $\pm$ 1.5 (with brake)

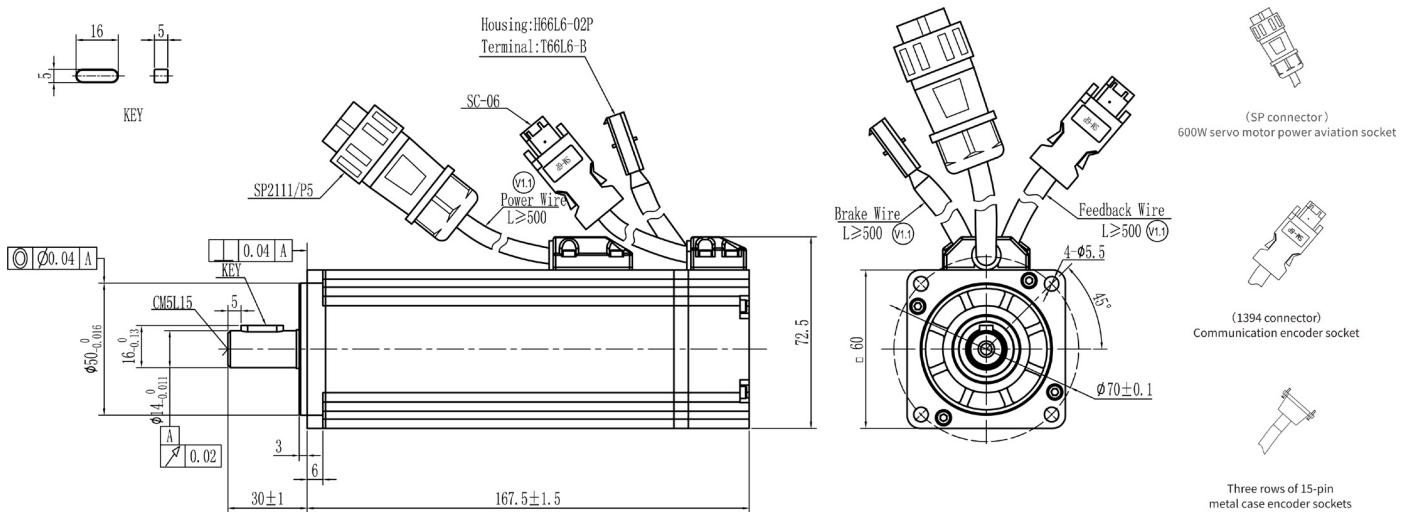
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## KNC-SRV-SMC60S-0060-30MAK-5DSU



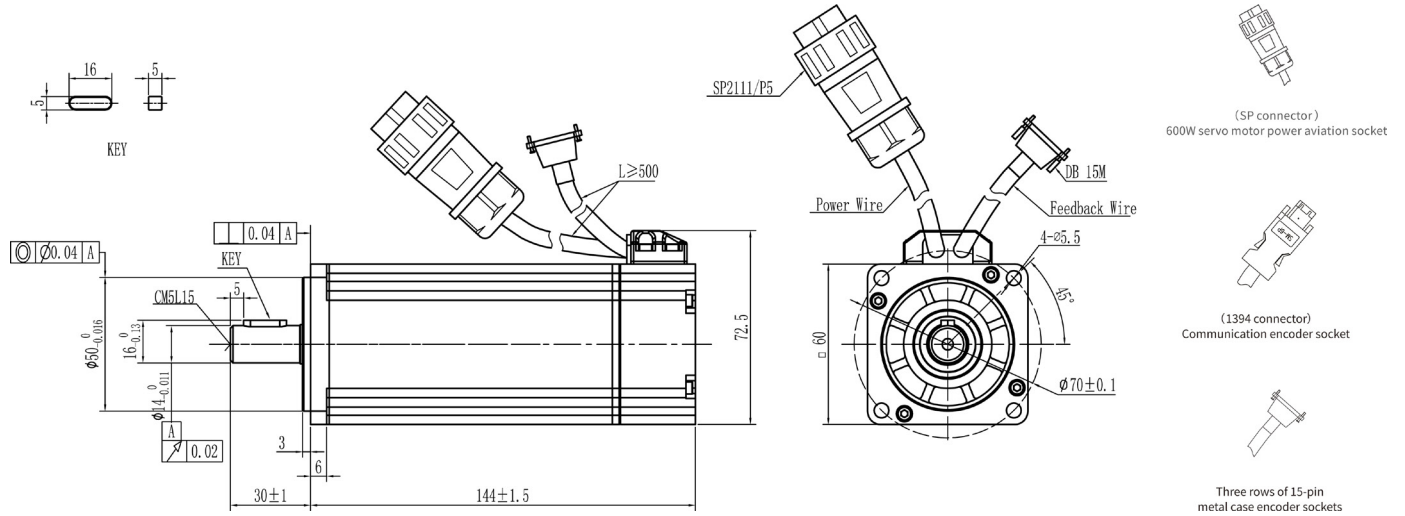
Dimensions are in mm

## KNC-SRV-SMC60S-0060-30MBK-5DSU (Brake Option)



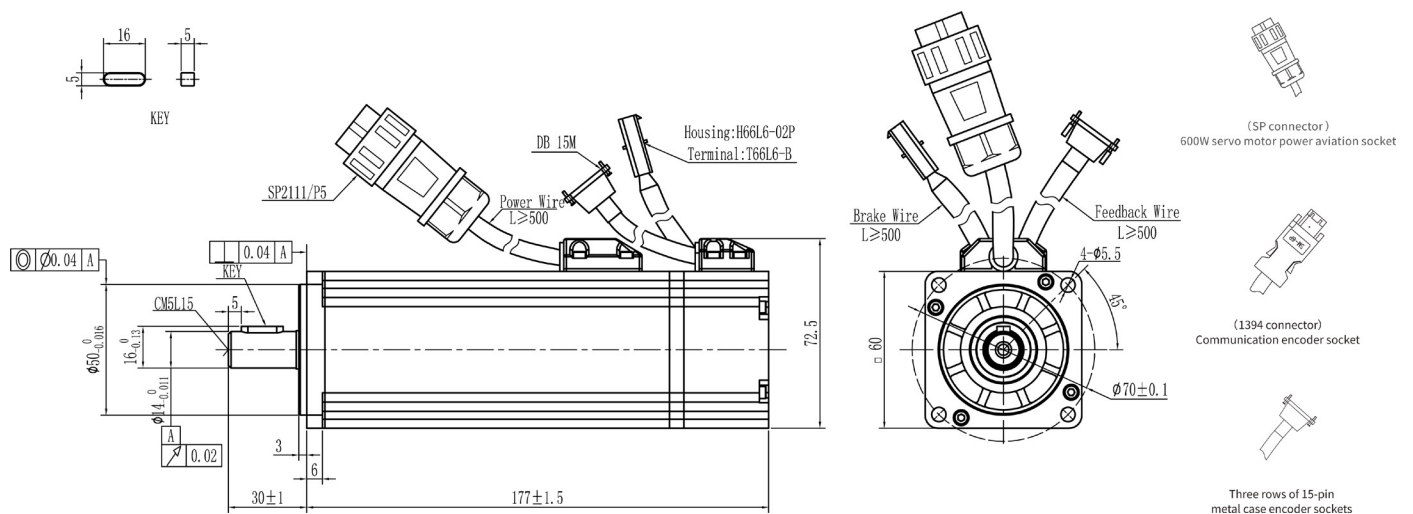
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## KNC-SRV-SMC60S-0060-30AAK-5DSH



Dimensions are in mm

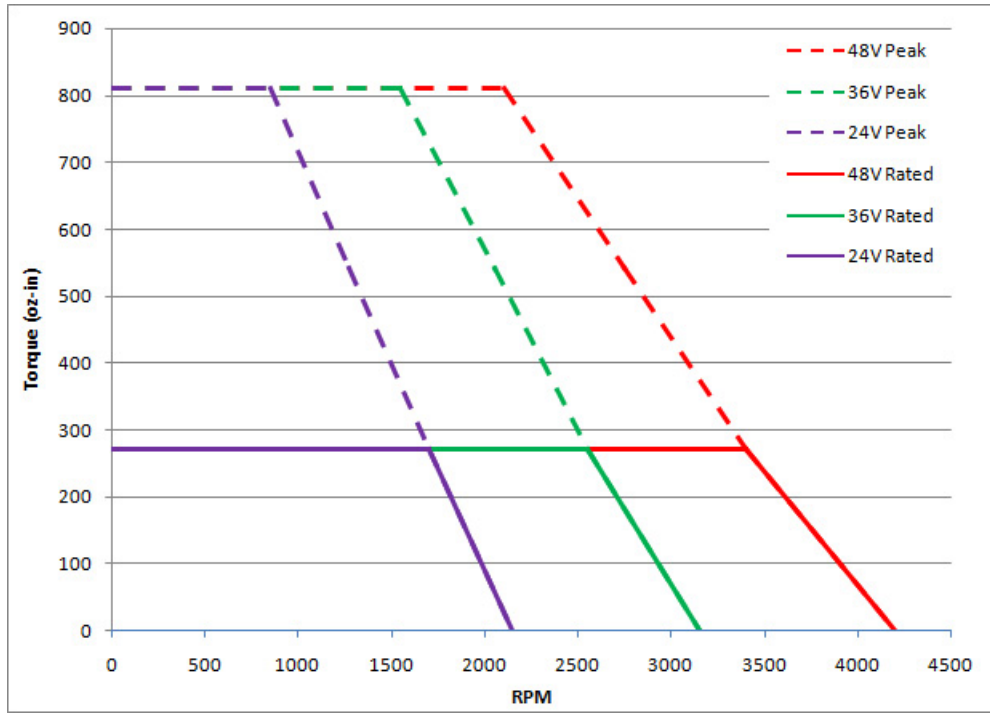
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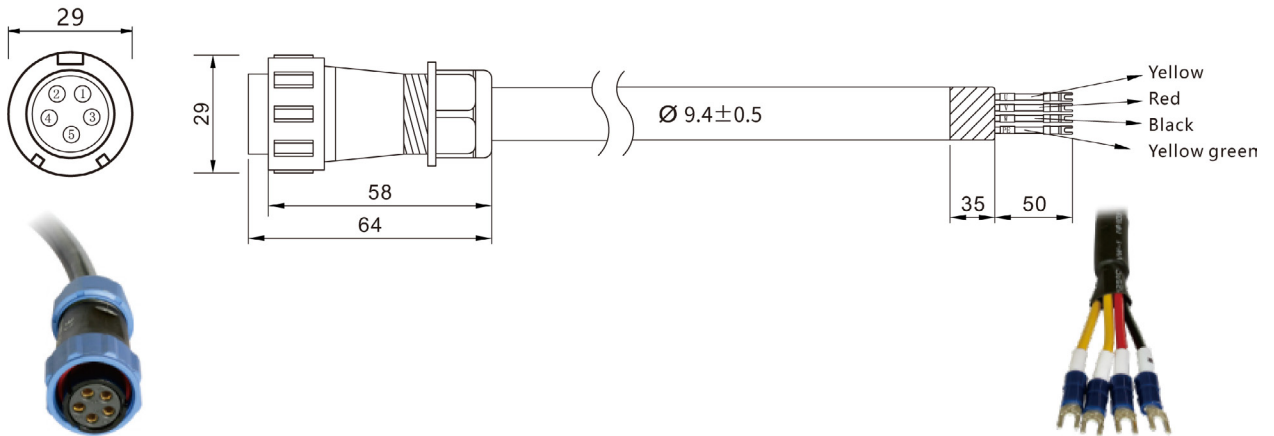
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TORQUE CURVE

KNC-SRV-SMC60S-0060-30MAK-5DSU, KNC-SRV-SMC60S-0060-30AAK-5DSH,  
KNC-SRV-SMC60S-0060-30MBK-5DSU, & KNC-SRV-SMC60S-0060-30ABK-5DSH



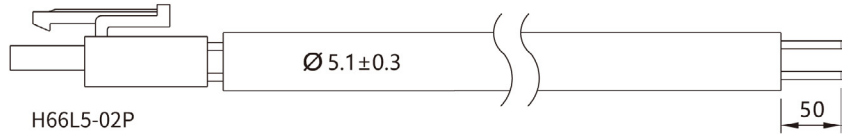
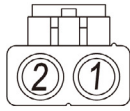
WIRING PINOUTS



KNC-SRV-MOT-015-05-KL-SP		
Color	Signal	5PIN Air Insertion
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow Green	PE+Shielding	PIN4
NC	NC	PIN5

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**Brake Cable: KNC-SRV-BRA-05-KL for KNC-SRV-SMC60S-0060-30MBK-5DSU & KNC-SRV-SMC60S-0060-30ABK-5DSH**

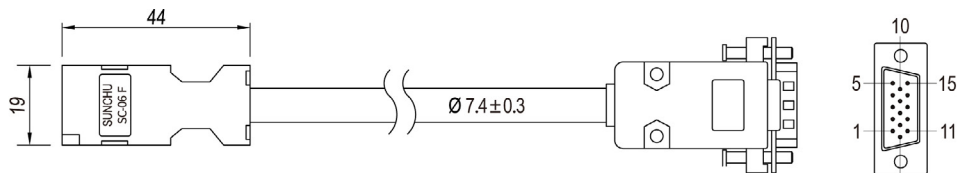
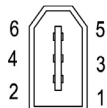


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KNC-SRV-BRA-05-KL		
Cable Color	Signal	2PIN terminal
Red	Brake +	PIN 1
Blue	Brake -	PIN 2

**Encoder Cable: KNC-SRV-ENCHG-05-GU for KNC-SRV-SMC60S-0060-30MAK-5DSU & KNC-SRV-SMC60S-0060-30MBK-5DSU**



SC-06 Male  
Motor side

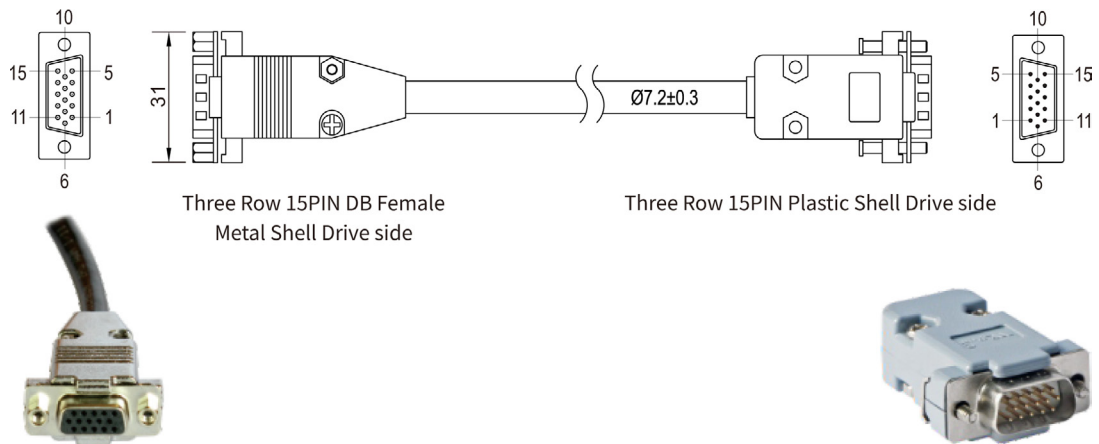
Three row 15PIN DB Female  
Driver side



KNC-SRV-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	Shielded Wire	Shielding	Shielding	SHELL

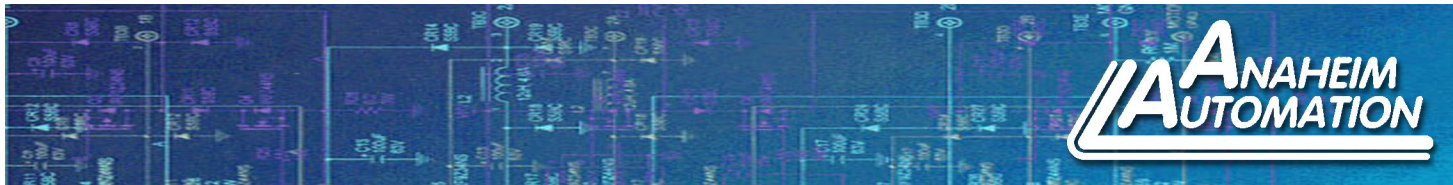
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Encoder Cable: KNC-SRV-ENCHA-05-KH for KNC-SRV-SMC60S-0060-30AAK-5DSH & KNC-SRV-SMC60S-0060-30ABK-5DSH



KNC-SRV-ENCHA-05-KH			
Three Rows of 15PIN DB Female	Three Rows of 15PIN DB Male	Signal	Color
PIN1	PIN1	+5V	Red (Thick)
PIN8	PIN8	A	Orange
PIN7	PIN7	B	Yellow
PIN6	PIN6	Z	Green
PIN4	PIN4	U	Brown
PIN10	PIN10	V	Purple
PIN9	PIN9	W	Blue
PIN2	PIN2	GND	Black (Thick)
PIN13	PIN13	/A	Orange White
PIN12	PIN12	/B	Yellow White
PIN11	PIN11	/Z	Green White
PIN5	PIN5	/U	Brown White
PIN15	PIN15	/V	Purple White
PIN14	PIN14	/W	Blue White
Shell	Shell	Shielded	Shielded Wire

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SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SMC60S-0060-30MAK-5DSU		KNC-SRV-ENCHG-05-GU	-
KNC-SRV-SMC60S-0060-30MBK-5DSU	KNC-SRV-MOT-015-05-KL-SP		KNC-SRV-BRA-05-KL
KNC-SRV-SMC60S-0060-30AAK-5DSH			-
KNC-SRV-SMC60S-0060-30ABK-5DSH		KNC-SRV-ENCHA-05-KH	KNC-SRV-BRA-05-KL

Model	KNC-SRV-SMC60S-0060-30MAK-5DSU KNC-SRV-SMC60S-0060-30MBK-5DSU KNC-SRV-SMC60S-0060-30AAK-5DSH KNC-SRV-SMC60S-0060-30ABK-5DSH
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Length of Motor	L(mm)	132.5 ± 1.5 167.5 ± 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

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