

# KNC-SRV-SMS60S-0020 Servo Motor



## FEATURES

- 220 VAC
- 200 Watt Power Rating
- Rated Torque of 90 oz-in
- Maximum Speed of 6000 RPM
- Single Coil 20-Bit Communication Encoder or Multi-Turn 16-Bit Communication Absolute Encoder
- IP65 for Body, IP54 Shaft Seal
- Brake Option Available
- CE Certified

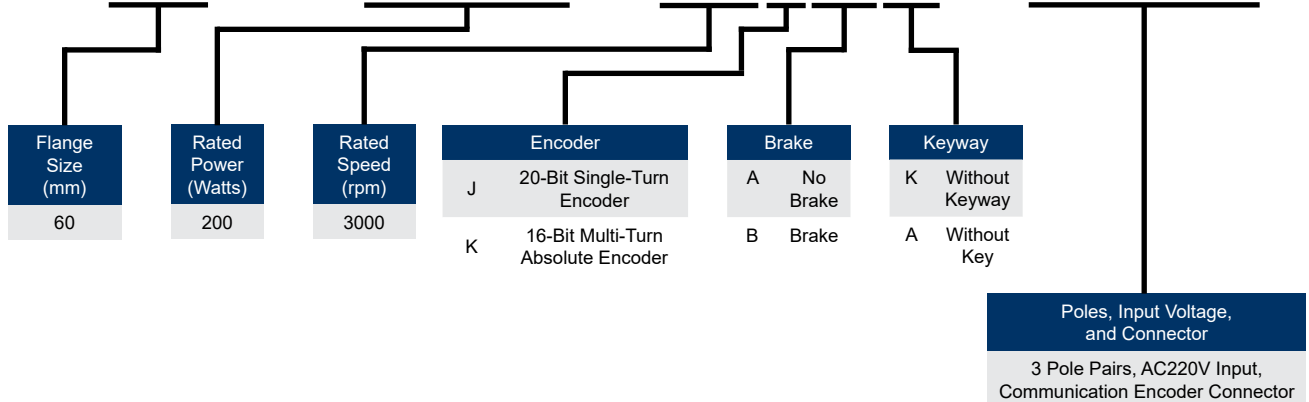


## DESCRIPTION

The KNC-SRV-SMS60S-0020 Series Servo Motor offers a solution to servo applications requiring position and speed control. This servo motor series comes standard with a Single Coil 20-Bit Communication Encoder or a Multi-Turn 16-Bit Communication Absolute Encoder, runs at a rated speed of 3000 RPM, provides peak values up to 300% of the rated torque and current values, and has a rated torque of 90 oz-in with a 200 Watt power rating. This servo motor series enables industrial motion control applications to attain a great combination of position and speed functionality.

## ORDERING INFORMATION

# SMS60S - 0020 - 30JAK - 3LKU

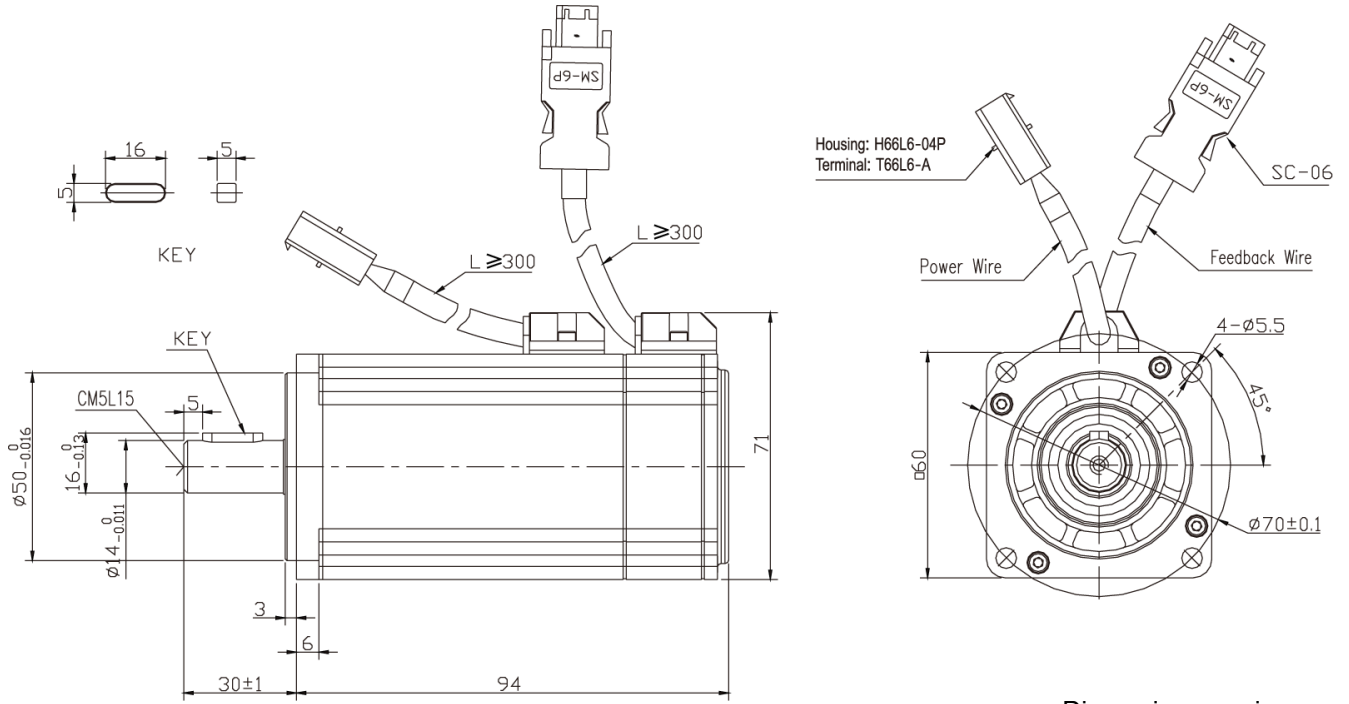


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Model	KNC-SRV-SMS60S-0020-30JAK-3LKU KNC-SRV-SMS60S-0020-30JBK-3LKU KNC-SRV-SMS60S-0020-30KAK-3LKU KNC-SRV-SMS60S-0020-30KBK-3LKU
Compatible Driver	KNC-SRV-FD413-(CA/AA/LA)-000 KNC-SRV-FD422S-(CA/AA/LA)-000
DC Link Voltage (VDC)	300
Rated Power (W)	200
Rated Torque (oz-in)	90
Rated Speed (RPM)	3000
Max Speed (RPM)	6000
Rated Current (A)	1.4
Maximum Torque (oz-in)	271
Maximum Current (A)	4.2
Standstill Torque (oz-in)	99
Standstill Current (A)	1.5
Resistance Line-Line ( $\Omega$ )	11.2
Inductance Line-Line (mH)	20.9
Electrical Time Constant (ms)	1.87
Mechanical Time Constant (ms)	1.8
Reverse Voltage Constant $K_e$ (V/krpm)	29
Torque Constant $K_t$ (oz-in/A)	67
Rotor Moment of Inertia $J_m$ (oz-in-s <sup>2</sup> )	0.00303 (0.00308 with Brake)
Pole Pair Number	3
Maximum Voltage Rising $du/dt$ (KV/ $\mu$ s)	8
Insulation Class	F
Maximum Radical Force F (N)	180
Maximum Axial Force F (N)	90
Weight (lbs)	2.42 (3.52 with Brake)

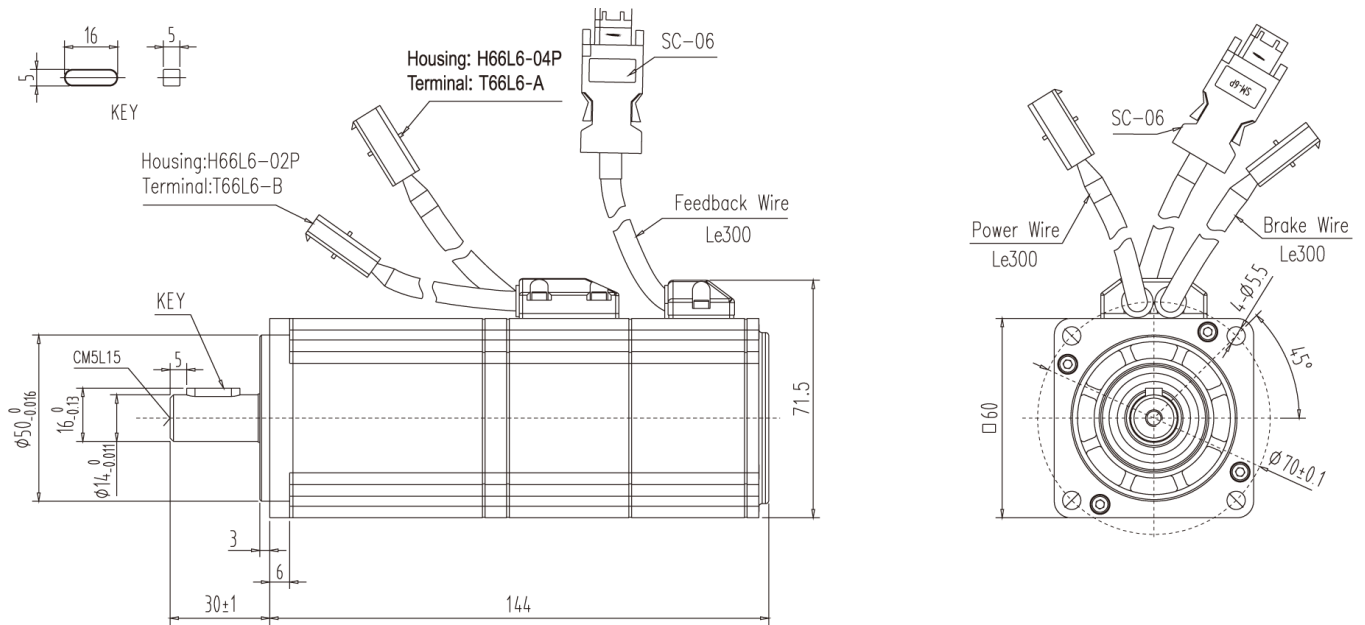
**\*Note: Part Numbers with -30JBK and -30KBK are equipped with a Brake**

KNC-SRV-SMS60S-0020-30JAK-3LKU and KNC-SRV-SMS60S-0020-30KAK-3LKU



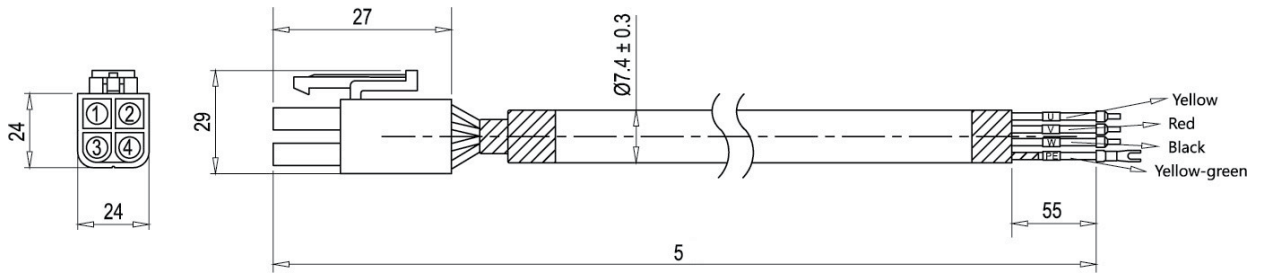
Dimensions are in mm

KNC-SRV-SMS60S-0020-30JBK-3LKU and KNC-SRV-SMS60S-0020-30KBK-3LKU



DIMENSIONS

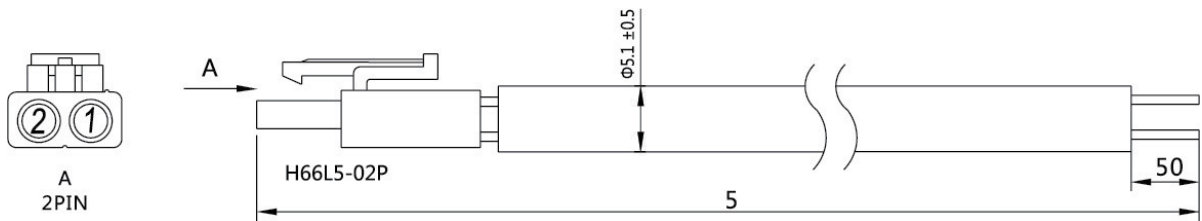
Motor Cable: KNC-SRV-MOT-005-05-KL-Y for KNC-SRV-SMS60S-0020-30JAK-3LKU, KNC-SRV-SMS60S-0020-30JBK-3LKU, KNC-SRV-SMS60S-0020-30KAK-3LKU, and KNC-SRV-SMS60S-0020-30KBK-3LKU



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

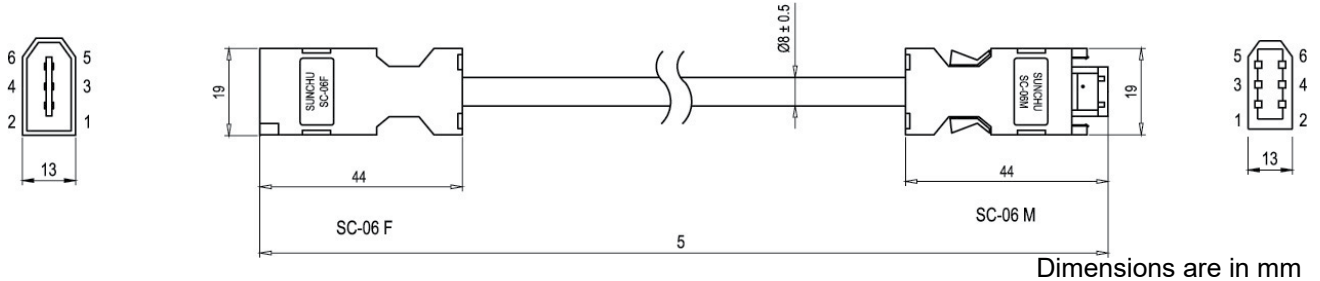
Dimensions are in mm

Brake Cable: KNC-SRV-BRA-05-KL for KNC-SRV-SMS60S-0020-30JBK-3LKU and KNC-SRV-SMS60S-0020-30KBK-3LKU



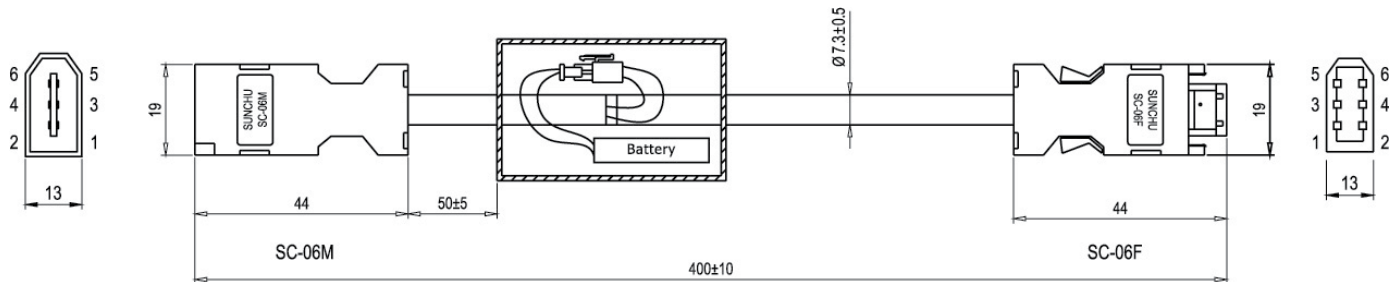
KNC-SRV-BRA-05-KL		
Cable Color	Signal	PIN #
Red	Brake+	PIN 1
Blue	Brake-	PIN 2

Encoder Cable: KNC-SRV-ENCDG-05-GU for KNC-SRV-SMS60S-0020-30JAK-3LKU, KNC-SRV-SMS60S-0020-30JBK-3LKU, KNC-SRV-SMS60S-0020-30KAK-3LKU, and KNC-SRV-SMS60S-0020-30KBK-3LKU

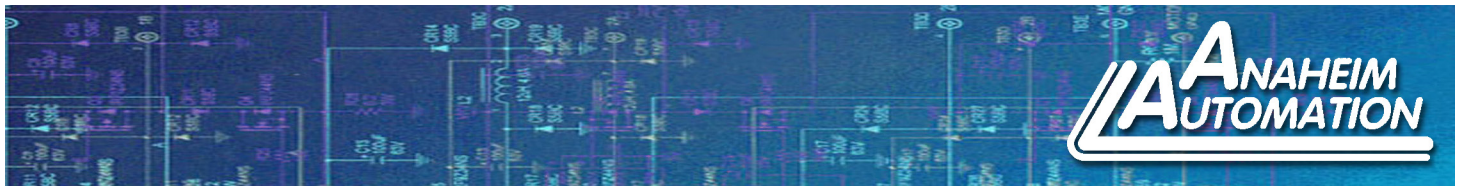


KNC-SRV-ENCDG-05-GU		
Cable Color	Signal	PIN #
Red	+5V	PIN 1
Black	GND	PIN 2
Brown	BAT+	PIN 3
Blue	BAT-	PIN 4
Yellow	SD	PIN 5
Green	/SD	PIN 6
Shield	Shield	Shell

Encoder Cable with Battery: KNC-SRV-ENCDG-(4)-GU-BT for KNC-SRV-SMS60S-0020-30KAK-3LKU and KNC-SRV-SMS60S-0020-30KBK-3LKU



KNC-SRV-ENCDG-(4)-GU-BT		
PIN #	Cable Color	Signal
PIN 1	Red	+5V
PIN 2	Black	GND
PIN 3	Brown	BAT+
PIN 4	Blue	BAT-
PIN 5	Yellow	SD
PIN 6	Green	/SD
Shell	Shield	Shield



SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable	Battery Cable
KNC-SRV-SMS60S-0020-30JAK-3LKU	KNC-SRV-MOT-005-05-KL-Y	KNC-SRV-ENCDG-05-GU	n/a	n/a
KNC-SRV-SMS60S-0020-30JBK-3LKU	KNC-SRV-MOT-005-05-KL-Y	KNC-SRV-ENCDG-05-GU	KNC-SRV-BRA-05-KL	n/a
KNC-SRV-SMS60S-0020-30KAK-3LKU	KNC-SRV-MOT-005-05-KL-Y	KNC-SRV-ENCDG-05-GU	n/a	KNC-SRV-ENCDG-(4)-GU-BT
KNC-SRV-SMS60S-0020-30KBK-3LKU	KNC-SRV-MOT-005-05-KL-Y	KNC-SRV-ENCDG-05-GU	KNC-SRV-BRA-05-KL	KNC-SRV-ENCDG-(4)-GU-BT

Model	KNC-SRV-SMS60S-0020-30JAK-3LKU KNC-SRV-SMS60S-0020-30JBK-3LKU KNC-SRV-SMS60S-0020-30KAK-3LKU KNC-SRV-SMS60S-0020-30KBK-3LKU	
Position Feedback Device	(JAK/JBK) Single Coil 20-Bit Communication Encoder or (KAK/KBK) Multi-Turn 16-Bit Communication Absolute Encoder	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Environmental Conditions of Operation	Temperature	-20°C ~ 40°C
	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