

# KNC-SRV-SME60S Servo Motor



## FEATURES

- **60mm Frame Size**
- **70 VDC or 220 VAC**
- **Power Rating up to 200 Watts**
- **Rated Torque up to 91 oz-in**
- **Rated Speed of 3000 RPM**
- **2500PPR Incremental Encoder Included**
- **Totally Enclosed, Non-Ventilated**
- **IP65 Protection for Body, IP54 Shaft Sealing**
- **CE Certified**



## DESCRIPTION

The KNC-SRV-SME60S Series Servo Motor offers a solution to servo applications requiring position and speed control. This servo motor series comes standard with a 2,500 Pulses per Revolution (PPR) Incremental 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 up to 91 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.

## SPECIFICATIONS

Model	KNC-SRV-SME60S-0020-30AAK-3DKH	KNC-SRV-SME60S-0020-30ABK-3LKH KNC-SRV-SME60S-0020-30AAK-3LKH
Compatible Driver	KCO-FD122-CA-000	KNC-SRV-FD412-(CA/AA/LA)
DC Link Voltage	70 VDC	220 VAC
Rated Power (W)	200	200
Rated Torque (oz-in)	91	91
Rated Speed (RPM)	3000	3000
Max Speed (RPM)	3000	3000
Rated Current (A)	1.6	1.6
Maximum Torque (oz-in)	271.9	271.9
Maximum Current (A)	13.8	4.8
Standstill Torque (oz-in)	25	99
Standstill Current (A)	5.06	1.76
Resistance Line-Line (Ω)	0.7	10.4
Inductance Line-Line (mH)	1.55	25.4
Electrical Time Constant (ms)	2.21	2.44
Mechanical Time Constant (ms)	2.05	2.93
Reverse Voltage Constant Ke (V/krpm)	9	29
Torque Constant Kt (oz-in/A)	21	68
Rotor Moment of Inertia Jm (oz-in-s <sup>2</sup> )	0.0053	0.0053 0.0054 (with brake)
Pole Pair Number	3	3
Maximum Voltage Rising du/dt (KV/μs)	8	8
Insulation Class	F	F
Maximum Radical Force F (N)	180	180
Maximum Axial Force F (N)	90	90
Weight (lbs)	2.9	2.9 3.9 (with brake)

L011258 \*Note: Part Numbers with -30ABK are equipped with a brake

# KNC-SRV-SME60S Servo Motor



- **60mm Frame Size**
- **220 VAC**
- **Power Rating up to 400 Watts**
- **Rated Torque up to 180 oz-in**
- **Rated Speed of 3000 RPM**
- **2500PPR Incremental Encoder Included**
- **Totally Enclosed, Non-Ventilated**
- **IP65 Protection for Body, IP54 Shaft Sealing**
- **CE Certified**



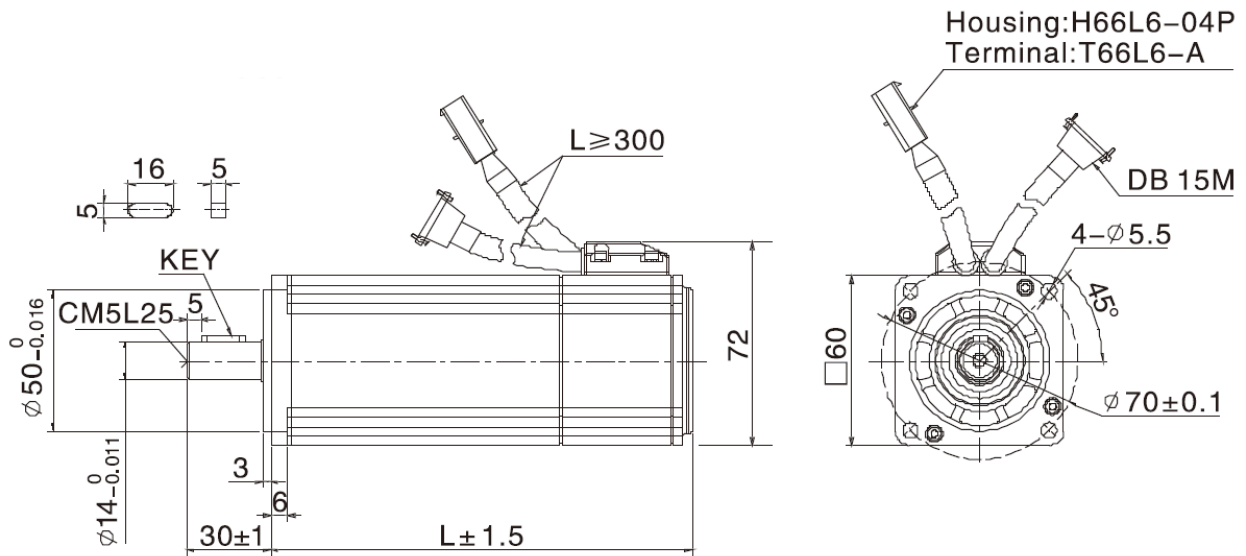
SPECIFICATIONS (CONTINUED)

Model	KNC-SRV-SME60S-0040-30AAK-3LKH KNC-SRV-SME60S-0040-30ABK-3LKH
Compatible Driver	KNC-SRV-FD412-(CA/AA/LA)-000
DC Link Voltage (VAC)	220
Rated Power (W)	400
Rated Torque (oz-in)	180
Rated Speed (RPM)	3000
Max Speed (RPM)	6200
Rated Current (A)	3.1
Maximum Torque (oz-in)	540
Maximum Current (A)	9.3
Standstill Torque (oz-in)	198
Standstill Current (A)	3.41
Resistance Line-Line ( $\Omega$ )	5.8
Inductance Line-Line (mH)	15
Electrical Time Constant (ms)	2.59
Mechanical Time Constant (ms)	1.93
Reverse Voltage Constant $K_e$ (V/krpm)	29
Torque Constant $K_t$ (oz-in/A)	68
Rotor Moment of Inertia $J_m$ (oz-in-s <sup>2</sup> )	0.0063 0.0064 (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)	3.5 4.6 (with brake)

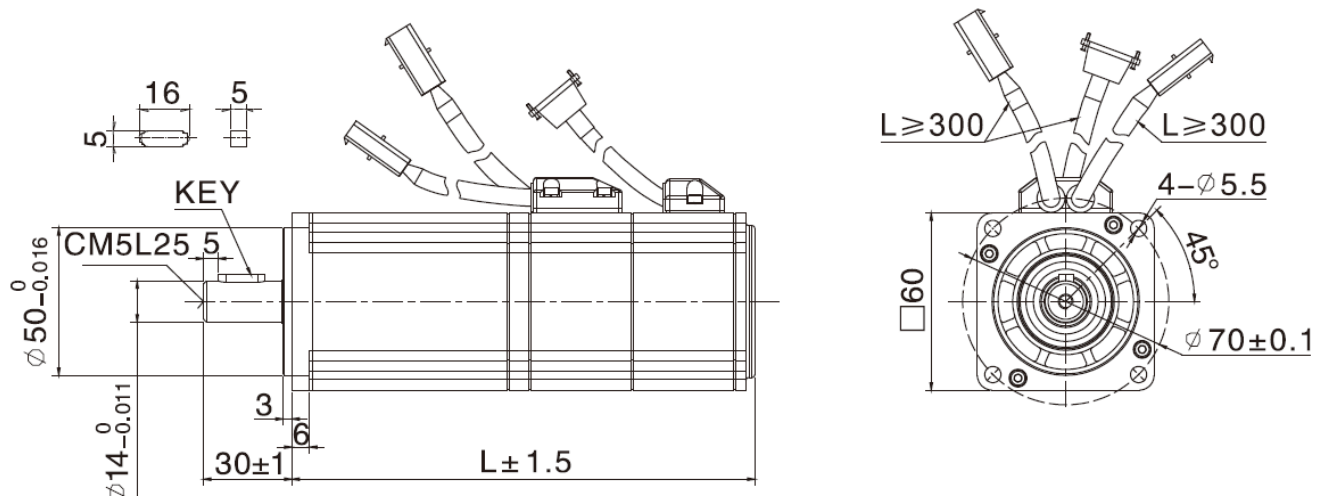
\*Note: Part Numbers with -30ABK are equipped with a brake

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KNC-SRV-SME60S-0020-30AAK-3LKH, KNC-SRV-SME60S-0020-30AAK-3DKH, and  
KNC-SRV-SME60S-0040-30AAK-3LKH



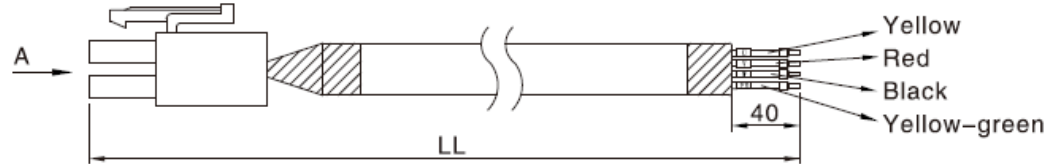
KNC-SRV-SME60S-0020-30ABK-3LKH and KNC-SRV-SME60S-0040-30ABK-3LKH



Model	KNC-SRV-SME60S-0020-30AAK-3LKH KNC-SRV-SME60S-0020-30ABK-3LKH KNC-SRV-SME60S-0020-30AAK-3DKH	KNC-SRV-SME60S-0040-30AAK-3LKH KNC-SRV-SME60S-0040-30ABK-3LKH
Length of Motor L (mm)	120±1 159±1.5 (with brake)	135±1 174±1.5 (with brake)

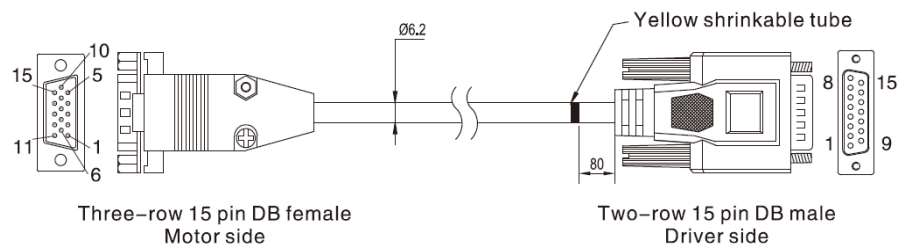
Dimensions are in mm

Motor Cable: KNC-SRV-MOT-005-05-KL-D for KNC-SRV-SME60S-0020-30AAK-3DKH



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

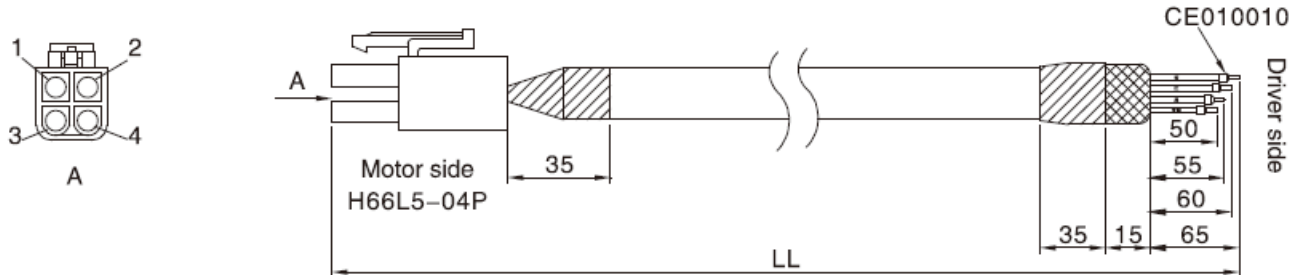
Encoder Cable: ENCCF-05-FH for K KNC-SRV-SME60S-0020-30AAK-3DKH, KNC-SRV-SME60S-0020-30AAK-3LKH, KNC-SRV-SME60S-0020-30ABK-3LKH, KNC-SRV-SME60S-0040-30AAK-3LKH, and KNC-SRV-SME60S-0040-30ABK-3LKH



KNC-SRV-ENCCF-05-FH				
Three-row 15 Pin DB	Two-row 15 pin DB	Signal	External Wire Color	Motor Wire Color
PIN 1	PIN 1	+5V	Red (thick)	Red
PIN 8	PIN 2	A	Brown	Blue-black
PIN 7	PIN 3	B	Yellow	Green
PIN 6	PIN 4	Z	Green	Yellow
PIN 2	PIN 9	GND	Black (thick)	Black
PIN 13	PIN 10	/A	Brown-white	Blue
PIN 12	PIN 11	/B	Yellow-white	Green-black
PIN 11	PIN 12	/Z	Green-white	Yellow-black
Other pins empty	Other pins empty	--	--	--
Shell	Shell	Shield	Shield	Shield

Motor Cable: KNC-SRV-MOT-005-05-KL for KNC-SRV-SME60S-0020-30AAK-3LKH, KNC-SRV-SME60S-0020-30ABK-3LKH, KNC-SRV-SME60S-0040-30AAK-3LKH, and KNC-SRV-SME60S-0040-30ABK-3LKH

Wire spec. UI20328 4C x 18AWG(41/0.16T) black



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

Model	Motor Cable	Encoder Cable	Brake Cable
KNC-SRV-SME60S-0020-30AAK-3LKH KNC-SRV-SME60S-0020-30ABK-3LKH	KNC-SRV-MOT-005-05-KL	KNC-SRV-ENCCF-05-FH	KNC-SRV-BRA-05-KL
KNC-SRV-SME60S-0020-30AAK-3DKH	KNC-SRV-MOT-005-05-KL-D	KNC-SRV-ENCCF-05-FH	--
KNC-SRV-SME60S-0040-30AAK-3LKH KNC-SRV-SME60S-0040-30ABK-3LKH	KNC-SRV-MOT-005-05-KL	KNC-SRV-ENCCF-05-FH	KNC-SRV-BRA-05-KL

Model	KNC-SRV-SME60S-0020-30AAK-3LKH KNC-SRV-SME60S-0020-30ABK-3LKH KNC-SRV-SME60S-0020-30AAK-3DKH	KNC-SRV-SME60S-0040-30AAK-3LKH KNC-SRV-SME60S-0040-30ABK-3LKH
Length of Motor L (mm)	120±1 159±1.5 (with brake)	135.8±1 174±1.5 (with brake)
Position Feedback Device	Incremental Encoder 2500PPR	
Cooling Method	Totally Enclosed, Non-Ventilated	
Protection Level	IP65 for Body, Shaft Sealing IP54	
Temperature	-20°C~40°C	
Humidity	Below 90% RH (No Condensing)	
Environmental Conditions of Operation	Ambient Environment	Away from active gas, combustible gas, oil drops and dust
	Altitude	Maximum Altitude 4000m, Rated Power at 100m or Below, Above 1000m: Decreasing 1.5% per 100m Rise