

SMH80S Servo Motor

Kinco

FEATURES

- 80mm Frame Size
- Power Rating up to 1000 Watts
- Rated Torque up to 3.18 Nm
- Rated Speed of 3000 RPM
- Brake Option Available
- 2500PPR Incremental Encoder
- Totally Enclosed, Non-Ventilated
- IP65 Protection for Body, IP54 Shaft Sealing
- CE Certified



DESCRIPTION

The SMH80S 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 3.18 Nm with a 750-1000 Watt power rating. This servo motor series enables industrial motion control applications to attain a great combination of position and speed functionality.

CUSTOM ORDER LAYOUT

Model	SMH80S-0075-30AAK-3LKH SMH80S-0075-30ABK-3LKH SMH80S-0075-30AAK-3LKN	SMH80S-0100-30AAK-3LKH SMH80S-0100-30ABK-3LKH
Compatible Driver	FD422	FD432
DC Link Voltage (VDC)	300	300
Rated Power (W)	750	1000
Rated Torque (Nm)	2.39	3.18
Rated Speed (RPM)	3000	3000
Max Speed (RPM)	3000	3000
Rated Current (A)	3.90	6.30
Maximum Torque (Nm)	7.17	9.48
Maximum Current (A)	11.7	18.9
Standstill Torque (Nm)	2.63	3.30
Standstill Current (A)	4.40	6.93
Resistance Line-Line (Ω)	1.40	0.86
Inductance Line-Line (mH)	7.50	4.50
Electrical Time Constant (ms)	5.35	5.23
Mechanical Time Constant (ms)	0.75	0.89
Reverse Voltage Constant K_e (V/krpm)	40	34
Torque Constant K_t (Nm/A)	0.662	0.562
Rotor Moment of Inertia J_m (Kg-cm ²)	1.360 1.385 (with brake)	1.900 1.925 (with brake)
Pole Pair Number	3	3
Maximum Voltage Rising du/dt (KV/ μ s)	8	8
Insulation Class	F	F
Maximum Radical Force F (N)	335	335
Maximum Axial Force F (N)	167.5	167.5
Weight (lbs)	3.3 4.0 (with brake)	3.9 4.6 (with brake)

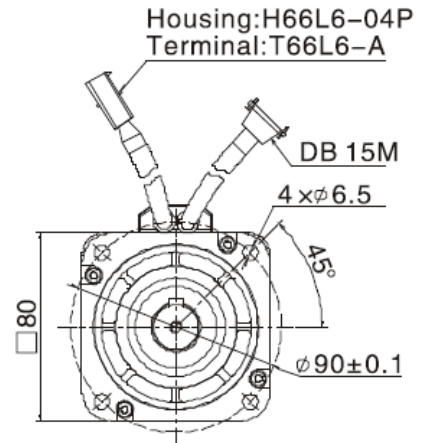
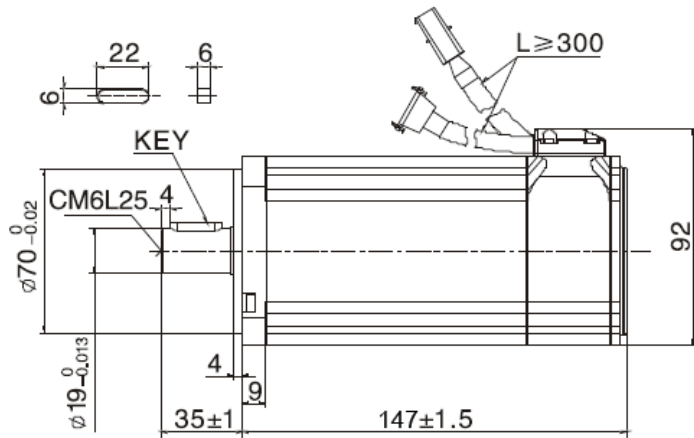
L011357 *Note: Part Nubers with -30ABK are equipped with a brake.

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DIMENSIONS

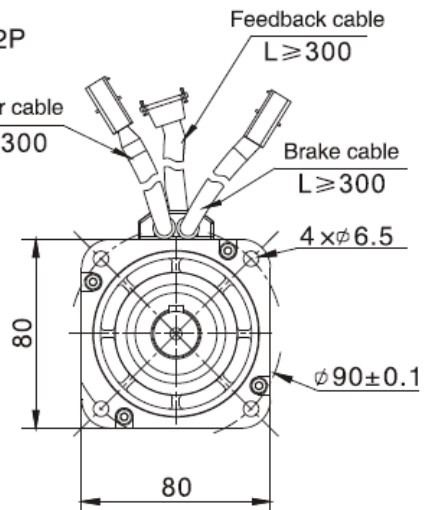
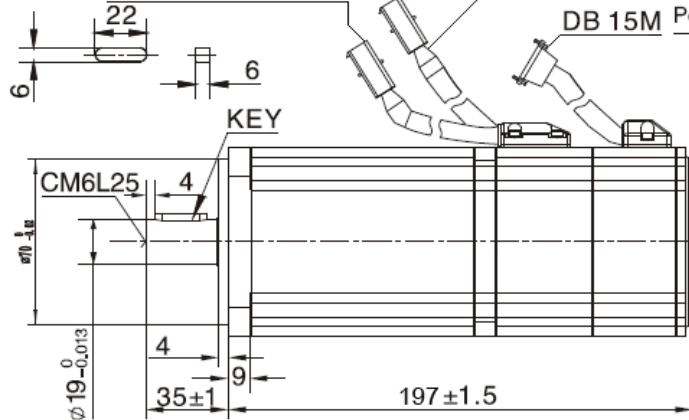
SMH80S-0075-30AAK-3LKH



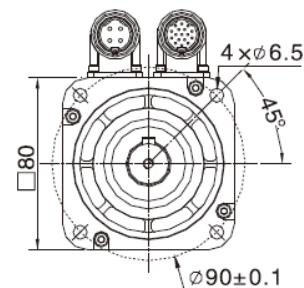
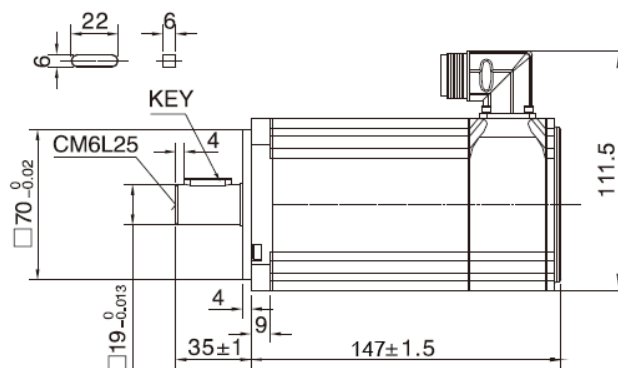
SMH80S-0075-30ABK-3LKH

Housing:H66L6-02P
Terminal:T66L6-A

Housing:H66L6-02P
Terminal:T66L6-A



SMH80S-0075-30AAK-3LKN



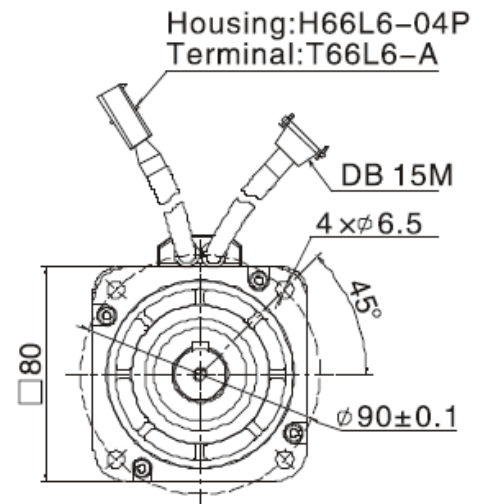
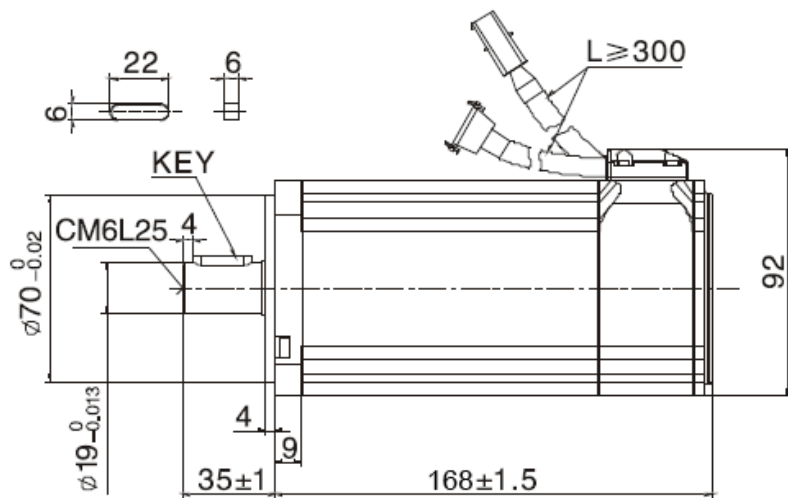
. All units are in mm

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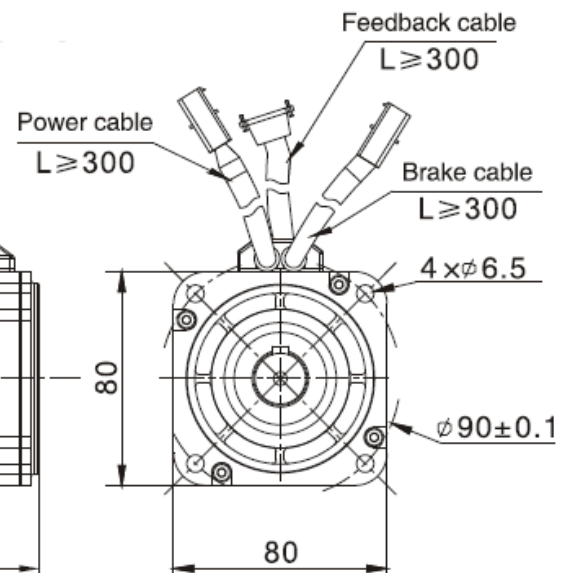
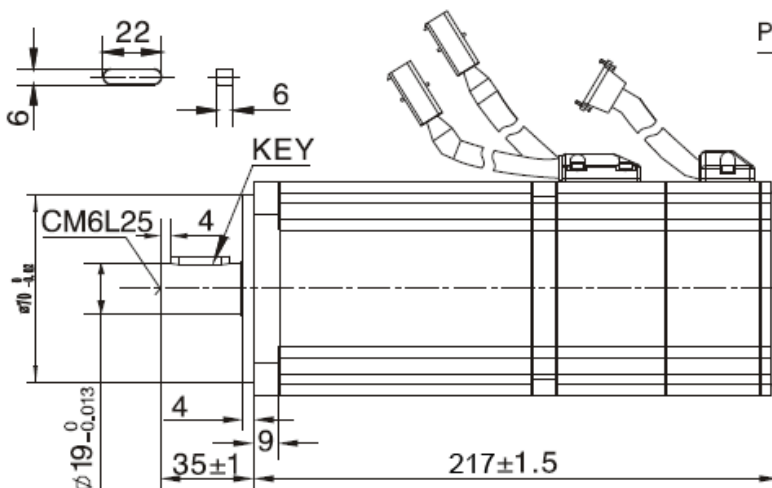
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DIMENSIONS

SMH80S-0100-30AAK-3LKH



SMH-80S-0100-30ABK-3LKH



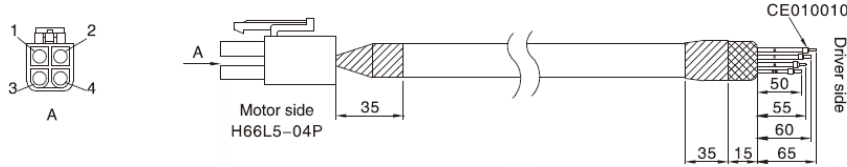
All units are in mm

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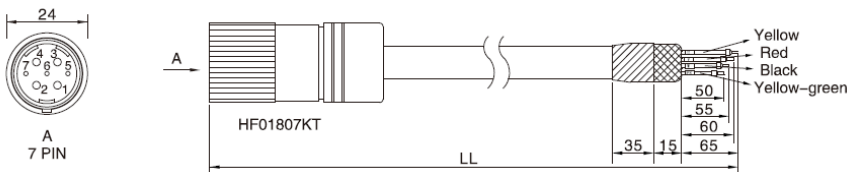
MOTOR CABLE: MOT-005-05-KL for SMH80S-0075-30AAK-3LKH, SMH80S-0075-30ABK-3LKH

MOT-005-LL-KL Wire spec. UI20328 4C × 18AWG(41/0.16T) black



MOT-005-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
YELLOW	U	1
RED	V	2
BLACK	W	3
YELLOW-GREEN	PE	4

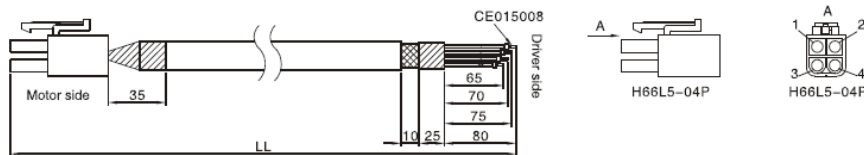
MOTOR CABLE: MOT-005-05 for SMH80S-0075-30AAK-3LKN



MOT-005-05-KC0		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
YELLOW	U	1
RED	V	2
BLACK	W	3
YELLOW-GREEN	PE	4
METAL-RING	SHIELD	SHIELD CABLE

MOTOR CABLE: MOT-008-05-KL for SMH80S-0100-30AAK-3LKH, SMH80S-0100-30ABK-3LKH

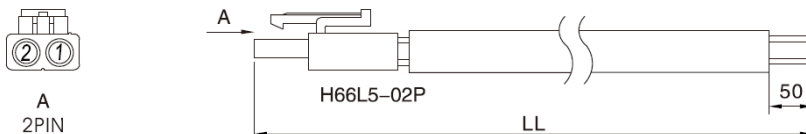
MOT-008-LL-KL
Wire spec. cable 4C × 1.5mm²



MOT-008-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
1	U	1
2	V	2
3	W	3
YELLOW-GREEN	PE	4

BRAKE CABLE: BRA-05-KL for SMH80S-0075-30ABK-3LKH, SMH80S-0100-30ABK-3LKH

BRA-LL-KL Wire spec. 2 × 20AWG



BRA-05-KL		
CABLE COLOR	SIGNAL	PIN ASSIGNMENT
RED	BRAKE+	1
BLUE	BRAKE-	2

Note: The 'LL' in the cable drawing signifies the cable length. Standard length will be 5m. Other lengths are available upon request.

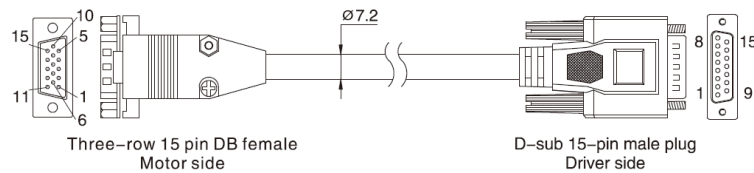
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ENCODER CABLE: ENCCA-05-KH for SMH80S-0075-30AAK-3LKH, SMH80S-0075-30ABK-3LKH,
SMH80S-0100-30AAK-3LKH, SMH80S-0100-30ABK-3LKH

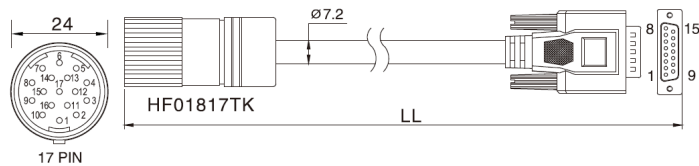
ENCCA-LL-KH

Wire spec. 1P x 24AWG(7/0.20T)+7P x 28AWG(7/0.127T)



ENCCA-LL-KH				
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	Orange	Blue-Black
PIN 7	PIN 3	B	Yellow	Green
PIN 6	PIN 4	Z	Green	Yellow
PIN 4	PIN 5	U	Brown	Brown-Black
PIN 10	PIN 6	V	Purple	White-Black
PIN 9	PIN 7	W	Blue	Gray-Black
PIN 2	PIN 9	GND	Black (thick)	Black
PIN 13	PIN 10	/A	Orange-White	Blue
PIN 12	PIN 11	/B	Yellow-White	Green-Black
PIN 11	PIN 12	/Z	Green-White	Yellow-Black
PIN 5	PIN 13	/U	Brown-White	Brown
PIN 15	PIN 14	/V	Purple-White	White
PIN 14	PIN 15	/W	Blue-White	Gray
PIN 3 empty	PIN 8 empty			
Metal Shell	DB Metal Shell	Shield	Shield	Metal Shell

ENCODER CABLE: ENCCA-05 for SMH80S-0075-30AAK-3LKN



ENCCA-LL				
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 3	PIN 2	A	Orange	Blue
PIN 5	PIN 3	B	Yellow	Green
PIN 14	PIN 4	Z	Green	Yellow
PIN 9	PIN 5	U	Brown	Brown
PIN 11	PIN 6	V	Purple	Gray
PIN 16	PIN 7	W	Blue	White
PIN 2	PIN 9	GND	Black (thick)	Black
PIN 4	PIN 10	/A	Orange-White	Blue-Black
PIN 6	PIN 11	/B	Yellow-White	Green-Black
PIN 15	PIN 12	/Z	Green-White	Yellow-Black
PIN 10	PIN 13	/U	Brown-White	Brown-Black
PIN 12	PIN 14	/V	Purple-White	Gray-Black
PIN 17	PIN 15	/W	Blue-White	White-Black
Internal Metal Ring	DB Metal Shell	Shield	Shield	Shield

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SPECIFICATIONS

Model	Motor Cable	Encoder Cable	Brake Cable
SMH80S-0075-30AAK-3LKH	MOT-005-05-KL	ENCCA-05-KH	--
SMH80S-0075-30ABK-3LKH			BRA-05-KL
SMH80S-0075-30AAK-3LKN	MOT-005-05	ENCCA-05	--
SMH80S-0100-30AAK-3LKH	MOT-008-05-KL	ENCCA-05-KH	--
SMH80S-0100-30ABK-3LKH			BRA-05-KL

Model	SMH80S-0075-30AAK-3LKH SMH80S-0075-30ABK-3LKH SMH80S-0075-30AAK-3LKN	SMH80S-0100-30AAK-3LKH SMH80S-0100-30ABK-3LKH
Length of Motor L (mm)	147 197±1.5 (with brake)	167 217±1.5 (with brake)
Position Feedback Device	Incremental Encoder 2500PPR	
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 (No 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