

SMH180D Servo Motor

Kinco

FEATURES

- **180mm Frame Size**
- **Power Rating up to 4400 Watts**
- **Rated Torque up to 28 Nm**
- **Rated Speed of 1500 RPM**
- **Maximum Speed 2800 RPM**
- **Brake Option Available**
- **2500PPR Incremental Encoder**
- **Totally Enclosed, Non-Ventilated**
- **IP65 Protection for Body, IP54 Shaft Sealing**



DESCRIPTION

The SMH180D 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 1500 RPM, provides peak values up to 300% of the rated torque and current values, and has a rated torque of 22 to 28 Nm with a 3500-4400 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	SMH180D-0350-15AAK-4HKC SMH180D-0350-15AAK-4HKD SMH180D-0350-15ABK-4HKC SMH180D-0350-15ABK-4HKD	SMH180D-0440-15AAK-4HKC SMH180D-0440-15AAK-4HKD SMH180D-0440-15ABK-4HKC SMH180D-0440-15ABK-4HKD
Compatible Driver	JD630-AA/LA	JD640-AA/LA
DC Link Voltage (VDC)	560	560
Rated Power (W)	3500	4400
Rated Torque (Nm)	22	28
Rated Speed (RPM)	1500	1500
Max Speed (RPM)	2800	2500
Rated Current (A)	10.3	11.9
Maximum Torque (Nm)	55	70
Maximum Current (A)	25.75	29.75
Standstill Torque (Nm)	24.2	30.8
Standstill Current (A)	11.33	13.09
Resistance Line-Line (Ω)	1.2	0.65
Inductance Line-Line (mH)	12.7	8.5
Electrical Time Constant (ms)	10.58	13.08
Mechanical Time Constant (ms)	3.42	2.16
Reverse Voltage Constant K_e (V/krpm)	135	150
Torque Constant K_t (Nm/A)	2.23	2.48
Rotor Moment of Inertia J_m (Kg.cm ²)	82 82.2 (with brake)	118 118.2 (with brake)
Brake Holding Torque (Nm)	30	30
Pole Pair Number	4	4
Maximum Voltage Rising du/dt (KV/ μ s)	8	8
Insulation Class	F	F
Maximum Radical Force F (N)	1600	1600
Maximum Axial Force F (N)	800	800
Weight (lbs)	22.7 27.9 (with brake)	28.6 33.8 (with brake)

L011539

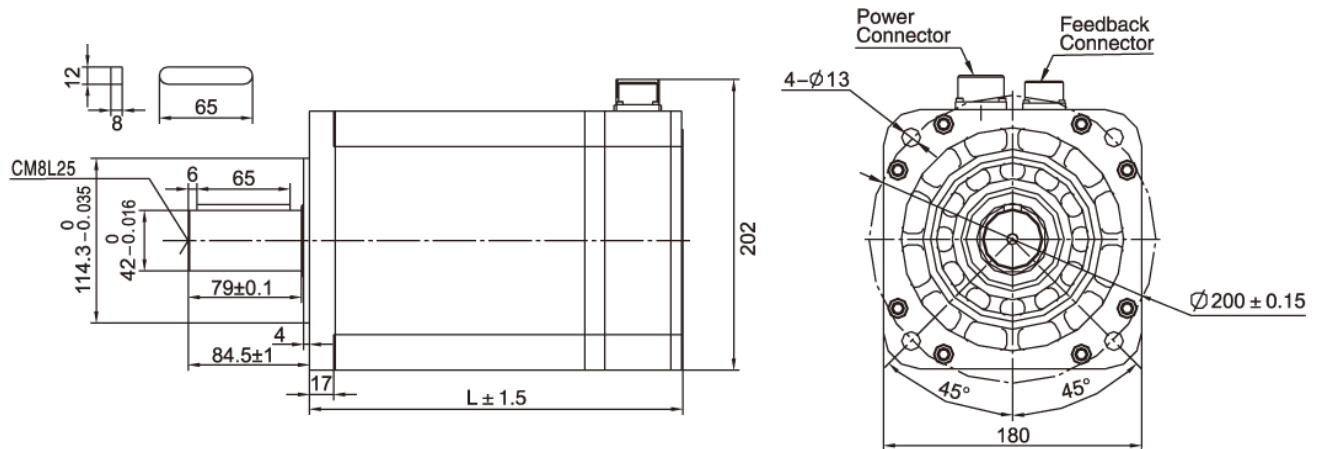
*Note: Part Numbers with -15ABK are equipped with a brake.

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SMH180D Dimension Drawing

Units are in mm.

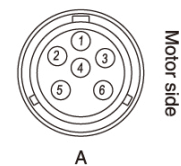
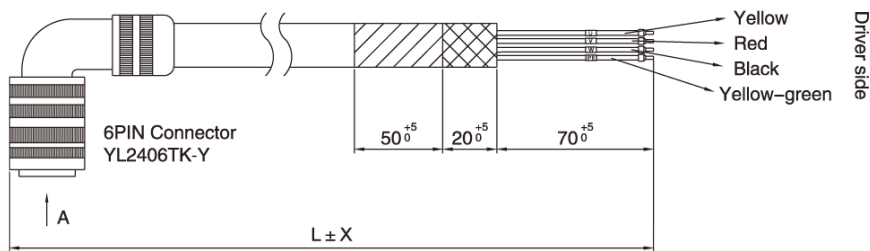


Model	SMH180D-0350-15AAK-4HKC SMH180D-0350-15AAK-4HKD SMH180D-0350-15ABK-4HKC SMH180D-0350-15ABK-4HKD	SMH180D-0440-15AAK-4HKC SMH180D-0440-15AAK-4HKD SMH180D-0440-15ABK-4HKC SMH180D-0440-15ABK-4HKD
Length of Motor "L"(mm)	260 ± 1.5 332 ± 1.5 (with brake)	298 ± 1.5 370 ± 1.5 (with brake)

Motor Cable: MOT-015-05-KC2 for SMH180D-0350/0440

MOT-015-05-KC2

Power cable Cableplus UL2856 4 × 14AWG(50/0.25T)

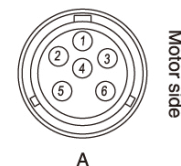
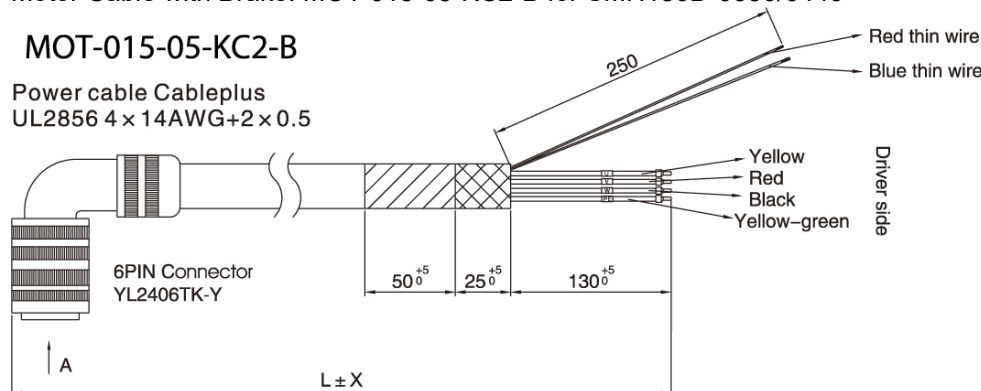


MOT-015-05-KC2		
Cable Color	Signal	PIN #
Yellow	U	PIN 1
Red	V	PIN 2
Black	W	PIN 3
Yellow-Green	PE	PIN 4
Shield	Shield	Metal Ring

Motor Cable with Brake: MOT-015-05-KC2-B for SMH180D-0350/0440

MOT-015-05-KC2-B

Power cable Cableplus UL2856 4 × 14AWG+2 × 0.5



MOT-015-05-KC2-B		
Cable Color	Signal	PIN #
Yellow	U	PIN 1
Red	V	PIN 2
Black	W	PIN 3
Yellow-Green	PE	PIN 4
Red(thin)	brake+	PIN 5
Blue(thin)	Brake-	PIN 6
Shield Terminal	Shield	Metal Ring

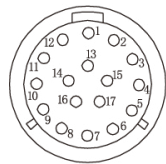
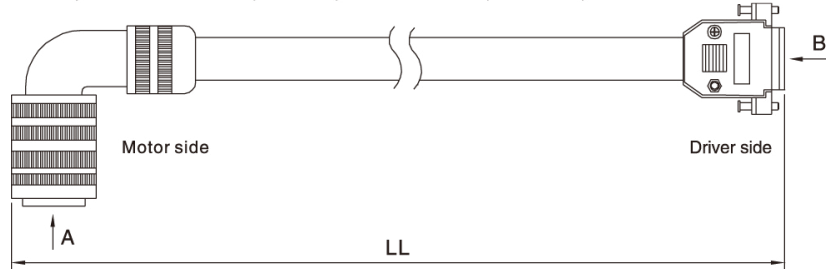
SMH180D Servo Motor

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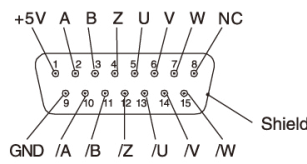
Encoder Cable: ENCCA-05-KC1 for SMH180D-0230/0300/0380

ENCCA-05-KC1

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



A
YL 2217TK



B
D-sub 15-pin male plug

ENCCA-05-KC1				
17 PIN	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

Model	Motor Cable	Motor Cable with Brake	Encoder Cable
SMH180D-0350-15AAK-4HKC SMH180D-0350-15AAK-4HKD SMH180D-0440-15AAK-4HKC SMH180D-0440-15AAK-4HKD	MOT-015-05-KC2	--	ENCCA-05-KC1
SMH180D-0350-15ABK-4HKC SMH180D-0350-15ABK-4HKD SMH180D-0440-15ABK-4HKC SMH180D-0440-15ABK-4HKD	--	MOT-015-05-KC2-B	ENCCA-05-KC1

Model	SMH180D-0350-15AAK-4HKC SMH180D-0350-15AAK-4HKD SMH180D-0350-15ABK-4HKC SMH180D-0350-15ABK-4HKD	SMH180D-0440-15AAK-4HKC SMH180D-0440-15AAK-4HKD SMH180D-0440-15ABK-4HKC SMH180D-0440-15ABK-4HKD
Length of Motor L (mm)	260 ± 1.5 332 ± 1.5 (with brake)	298 ± 1.5 370 ± 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 (Non-Freezing)	
Humidity	Below 90% RH (Non-Condensing)	
Environmental Conditions of Operation	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	