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Kinco

Motion
Control
Servo System

➤ Servo System Catalog

- JD/FD2S/CD2S Series Servo Driver
- Servo Motor



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- Kinco FD2S Series Servo Driver
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(port description , Communication interface description , Technical specifications,wiring diagram,mechanical dimension diagram)
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(port description , Communication interface description , Technical specifications,wiring diagram,mechanical dimension diagram)
- CD2S servo driver
(port description , Communication interface description , Technical specifications,wiring diagram,mechanical dimension diagram)

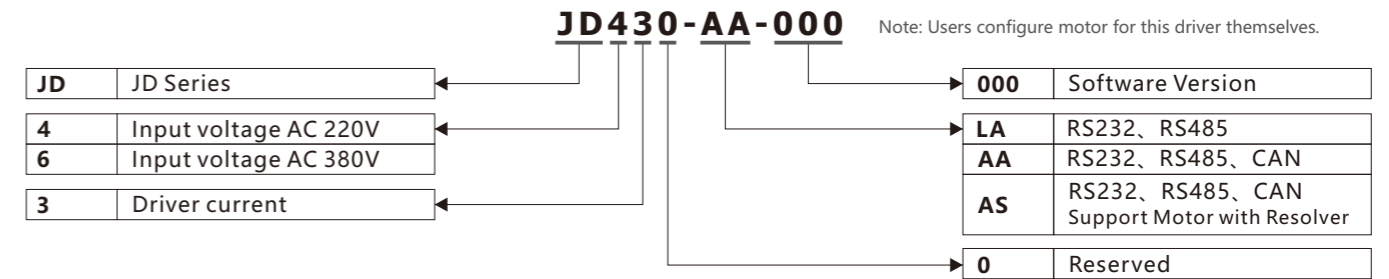
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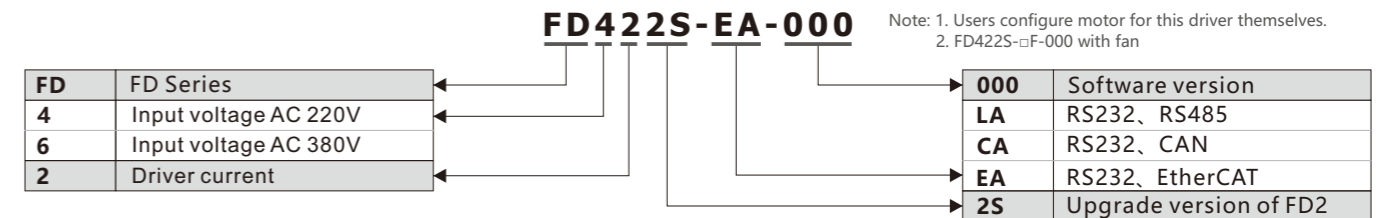
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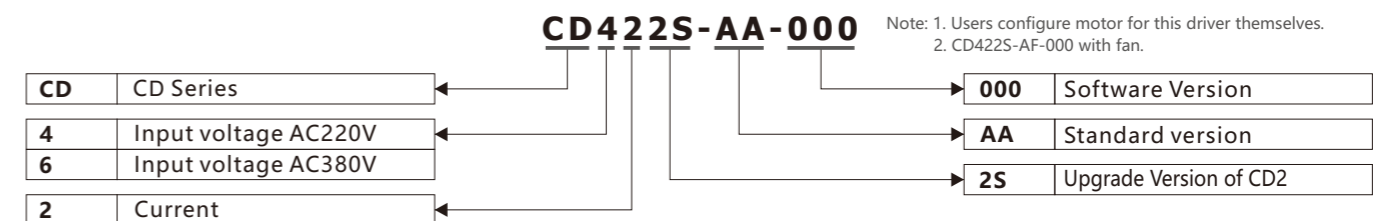
Kinco JD Series Servo Driver



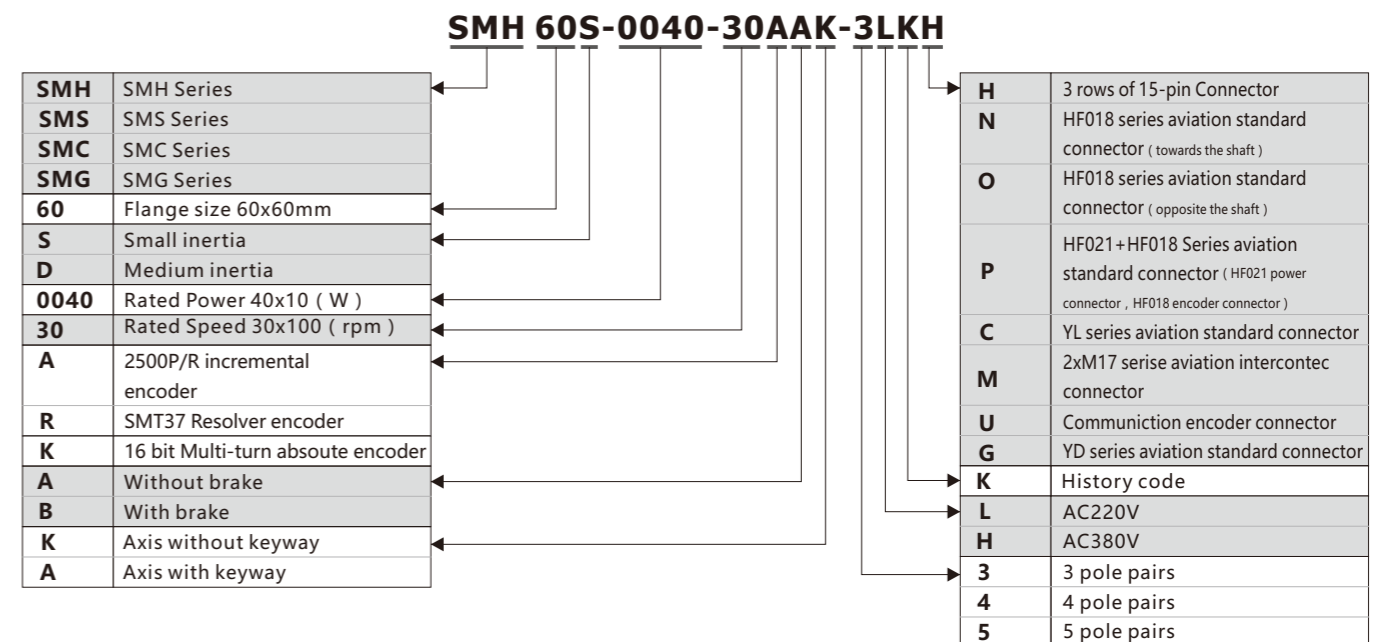
Kinco FD2S Series Servo Driver



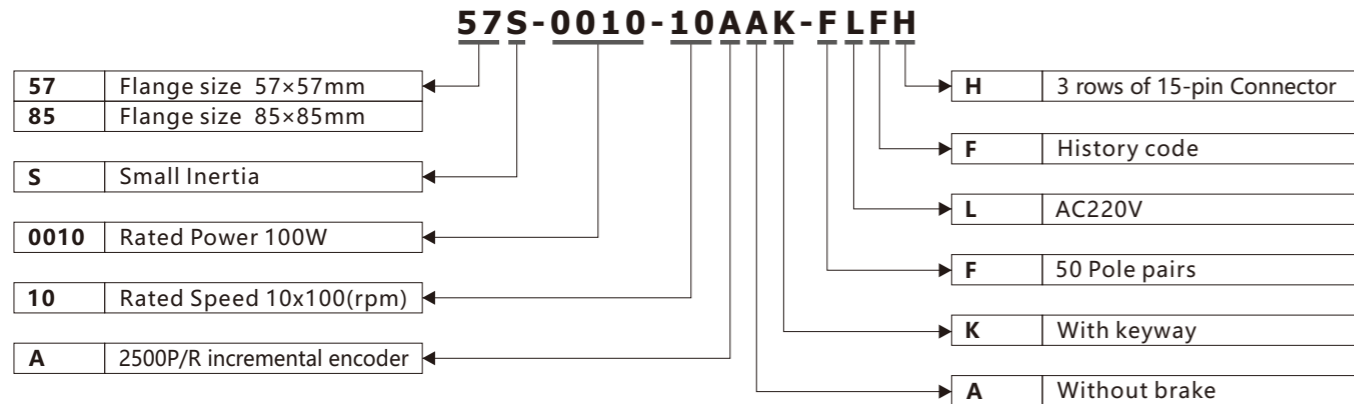
Kinco CD2S Series Servo Driver



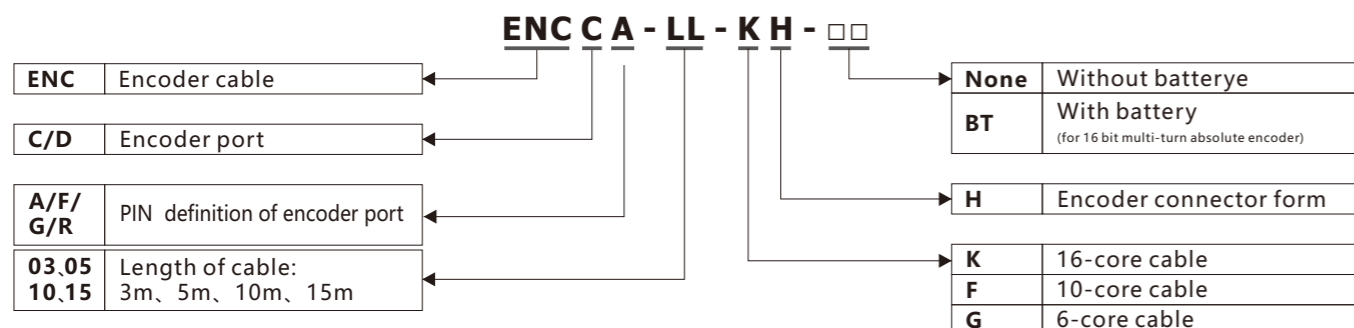
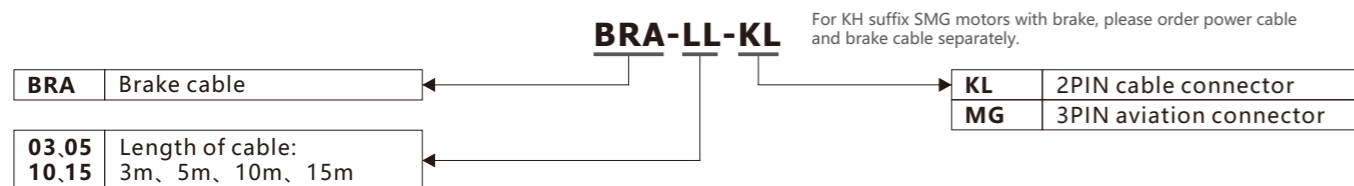
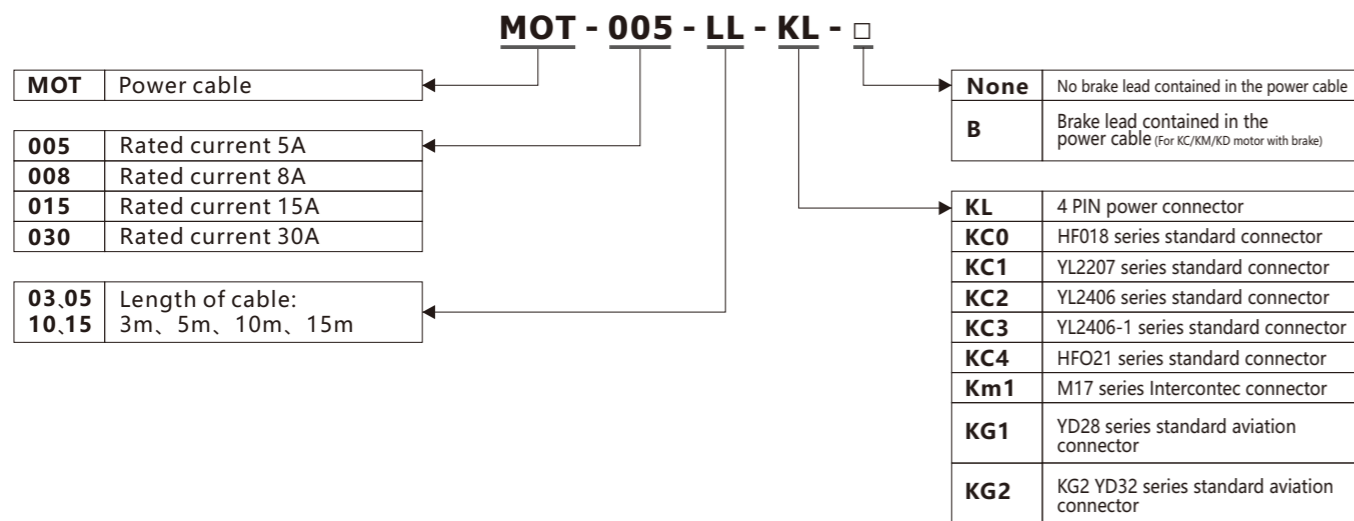
Kinco Servo Motor



Kinco Multi-pole Servo Motor



Power, Brake and Encoder Cable of Motors



JD/FD2S/CD2S Servo Driver and Motor Selection Table (1)

Series	Rated Power/ Rated Speed/ Rated Torque	Servo Motor	Description	Power/ Brake Cable	Encoder Cable	Servo Driver		
Small Inertia 220V	50W 3000rpm/0.16Nm	SMH40S-0005-30AAK-4LKH	2500P/R incremental connector	MOT-005-LL-KL	ENCCA-LL-KH	FD412S-CA-000*1		
		SMH40S-0005-30ABK-4LKH	2500P/R incremental connector with brake	MOT-005-LL-KLBRA-LL-KL		FD412S-LA-000*2		
	SMH40S-0010-30AAK-4LKH	2500P/R incremental connector	MOT-005-LL-KL	FD412S-EA-000*3				
	SMH40S-0010-30ABK-4LKH	2500P/R incremental connector with brake	MOT-005-LL-KLBRA-LL-KL	CD412S-AA-000*4				
	100W 3000rpm/0.32Nm	200W 3000rpm/0.64Nm	SMH60S-0020-30AAK-3LKH	2500P/R incremental connector	MOT-005-LL-KL	ENCCA-LL-KC0		
			SMH60S-0020-30ABK-3LKH	2500P/R incremental connector with brake	MOT-005-LL-KLBRA-LL-KL			
		SMH60S-0020-30AAK-3LKN	2500P/R HFO18 (Towards the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KC0			
		SMH60S-0020-30ABK-3LKN	2500P/R HFO18 (Towards the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH60S-0020-30AAK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1			
		SMH60S-0020-30ABK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH60S-0020-30AAK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1			
		SMH60S-0020-30ABK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B				
	400W 3000rpm/1.27Nm	750W 3000rpm/2.39Nm	SMH60S-0020-30AAK-3LKM	2500P/R 2×M17 series connector	MOT-005-LL-KM1	ENCCA-LL-KM1		
			SMH60S-0020-30ABK-3LKM	2500P/R 2×M17 series connector with brake	MOT-005-LL-KM1-B			
			SMH60S-0040-30AAK-3LKH	2500P/R incremental connector	MOT-005-LL-KL			ENCCA-LL-KH
			SMH60S-0040-30ABK-3LKH	2500P/R incremental connector with brake	MOT-005-LL-KLBRA-LL-KL			
		SMH60S-0040-30AAK-3LKN	2500P/R HFO18 (Towards the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KC0			
		SMH60S-0040-30ABK-3LKN	2500P/R HFO18 (Towards the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH60S-0040-30AAK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1			
		SMH60S-0040-30ABK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH60S-0040-30AAK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1			
		SMH60S-0040-30ABK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH60S-0040-30AAK-3LKM	2500P/R 2×M17 series connector	MOT-005-LL-KM1	ENCCA-LL-KM1			
		SMH60S-0040-30ABK-3LKM	2500P/R 2×M17 series connector with brake	MOT-005-LL-KM1-B				
4.18Nm	85S-0025-05AAK-FLFN-02	2500P/R Multi-pole servo motor	MOTE-005-LL-KC0	ENCCF-LL-FC0	FD422S-CA-000*1			
6Nm	85S-0035-05AAK-FLFN-02	2500P/R Multi-pole servo motor			FD422S-LA-000*2			
7.5Nm	85S-0045-05AAK-FLFN-02	2500P/R Multi-pole servo motor			FD422S-EA-000*3			
1kW 3000rpm/3.18Nm	Medium Inertia 220V	SMH80S-0075-30AAK-3LKH	2500P/R incremental connector	MOT-005-LL-KL	ENCCA-LL-KH			
		SMH80S-0075-30ABK-3LKH	2500P/R incremental connector with brake	MOT-005-LL-KLBRA-LL-KL				
		SMH80S-0075-30AAK-3LKN	2500P/R HFO18 (Towards the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KC0			
		SMH80S-0075-30ABK-3LKN	2500P/R HFO18 (Towards the shaft) series connector with brake	MOT-005-LL-KC4-B				
		SMH80S-0075-30AAK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1			
		SMH80S-0075-30ABK-3LKP	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B				
SMH80S-0075-30AAK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector	MOT-005-LL-KC0	ENCCA-LL-KM1					
SMH80S-0075-30ABK-3LKO	2500P/R HFO18 (Opposite the shaft) series connector with brake	MOT-005-LL-KC4-B						
SMH80S-0075-30AAK-3LKM	2500P/R 2×M17 series connector	MOT-005-LL-KM1	ENCCA-LL-KM1					
SMH80S-0075-30ABK-3LKM	2500P/R 2×M17 series connector with brake	MOT-005-LL-KM1-B						
Medium Inertia 220V	1.05kW 2000rpm/5Nm	SMH110D-0105-20AAK-4LKC	2500P/R YL series connector	MOT-008-LL-KC1	ENCCA-LL-KC1			
		SMH110D-0105-20ABK-4LKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B				
		SMH110D-0126-20AAK-4LKC	2500P/R YL series connector	MOT-008-LL-KC1				
		SMH110D-0126-20ABK-4LKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B				
	1.26kW 2000rpm/6Nm	1.25kW 3000rpm/4Nm	SMH110D-0125-30AAK-4LKC	2500P/R YL series connector	MOT-008-LL-KC1		ENCCA-LL-KC1	
			SMH110D-0125-30ABK-4LKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B			
			SMH110D-0126-30AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC1			
			SMH110D-0126-30ABK-4HKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B			
	1.26kW 3000rpm/4Nm	Medium Inertia 380V	SMH110D-0157-30AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC1		ENCCA-LL-KC1	
			SMH110D-0157-30ABK-4HKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B			
			SMH110D-0188-30AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC1			
			SMH110D-0188-30ABK-4HKC	2500P/R YL series connector with brake	MOT-008-LL-KC2-B			
1.57kW 3000rpm/5Nm								
1.88kW 3000rpm/6Nm								

Servo Driver and Motor Selection Table

Servo Driver and Motor Selection Table

JD/FD2S/CD2S Servo Driver and Motor Selection Table (2)

Series	Rated Power / Rated Speed / Rated Torque	Servo Motor	Description	Power / Brake Cable	Encoder Cable	Servo Driver
Medium inertia 220V or 380V	1.05kW 2000rpm/5Nm	SMH130D-0105-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2	ENCCA-LL-KC1	JD430-AA-000 ^{*1} JD620-AA-000 ^{*1} FD432S-CA-000 ^{*1} FD622S-LA-000 ^{*2} FD432S-LA-000 ^{*2} FD622S-LA-000 ^{*2} FD432S-EA-000 ^{*3} FD622S-EA-000 ^{*3} CD432S-AA-000 ^{*4} CD622S-AA-000 ^{*4}
		SMH130D-0105-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	1.57kW 2000rpm/7.5Nm	SMH130D-0157-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2		
		SMH130D-0157-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	2.1kW 2000rpm/10Nm	SMH130D-0210-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2		
		SMH130D-0210-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	2.3kW 2000rpm/11.1Nm	SMH150D-0230-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2		
		SMH150D-0230-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	3kW 2000rpm/14.3Nm	SMH130D-0300-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2		
		SMH130D-0300-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	3kW 2000rpm/14.3Nm	SMH150D-0300-20AAK-4HKC	2500P/R YL series connector	MOT-008-LL-KC2		
		SMH150D-0300-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-008-LL-KC2-B		
	3.8kW 2000rpm/18Nm	SMH150D-0380-20AAK-4HKC	2500P/R YL series connector	MOT-015-LL-KC2		
		SMH150D-0380-20ABK-4HKC •	2500P/R YL series connector with brake	MOT-015-LL-KC2-B		
	3.5kW 1500rpm/22Nm	SMH180D-0350-15AAK-4HKC	2500P/R YL series connector	MOT-015-LL-KC2		
		SMH180D-0350-15ABK-4HKC •	2500P/R YL series connector with brake	MOT-015-LL-KC2-B		
	4.4kW 1500rpm/28Nm	SMH180D-0440-15AAK-4HKC	2500P/R YL series connector	MOT-015-LL-KC2		
		SMH180D-0440-15ABK-4HKC •	2500P/R YL series connector with brake	MOT-015-LL-KC2-B		
	5.5kW 1500rpm/35Nm	SMH180D-0550-15RAK-4HKC	STM37 resolver YL series connector	MOT-015-LL-KC2		
		SMH180D-0550-15RBK-4HKC •	STM37 resolver YL series connector with brake	MOT-015-LL-KC2-B		
7.5kW 1500rpm/48Nm	SMH180D-0750-15RAK-4HKC	STM37 resolver YL series connector	MOT-030-LL-KC3			
	SMH180D-0750-15RAK-4HKC •	STM37 resolver YL series connector with brake	MOT-030-LL-KC3-B			
1.0kW 1000rpm/10Nm	SMG130D-0100-10AAK-4LKG	2500P/R YD series connector	MOT-005-LL-KG1			
	SMG130D-0100-10ABK-4LKG •	2500P/R YD series connector with brake	MOT-005-LL-KG1/BRA-LL-MG			
1.0kW 2000rpm/5Nm	SMG130D-0100-20AAK-4LKG	2500P/R YD series connector	MOT-005-LL-KG1			
	SMG130D-0100-20ABK-4LKG •	2500P/R YD series connector with brake	MOT-005-LL-KG1/BRA-LL-MG			
1.5kW 2000rpm/7.7Nm	SMG130D-0150-20AAK-4LKG	2500P/R YD series connector	MOT-008-LL-KG1			
	SMG130D-0150-20ABK-4LKG •	2500P/R YD series connector with brake	MOT-008-LL-KG1/BRA-LL-MG			
	SMG130D-0150-20AAK-4HKG	2500P/R YD series connector	MOT-005-LL-KG1			
	SMG130D-0150-20ABK-4HKG •	2500P/R YD series connector with brake	MOT-005-LL-KG1/BRA-LL-MG			
2.0kW 2000rpm/10Nm	SMG130D-0200-20AAK-4LKG	2500P/R YD series connector	MOT-015-LL-KG1			
	SMG130D-0200-20ABK-4LKG •	2500P/R YD series connector with brake	MOT-015-LL-KG1/BRA-LL-MG			
	SMG130D-0200-20AAK-4HKG	2500P/R YD series connector	MOT-008-LL-KG1			
	SMG130D-0200-20ABK-4HKG •	2500P/R YD series connector with brake	MOT-008-LL-KG1/BRA-LL-MG			

Note: 1. This drive requires the user to select the motor by himself.

- *1--Support CANopen bus control mode
 - *2--Support pulse and MODBUS 485 control mode
 - *3--Support EtherCAT control mode
 - *4--Support pulse control mode
3. • When the driver drives the brake holding device, the DC24V / 2A relay shall be externally connected.

JD/FD2S/CD2S Servo Driver and Motor Selection Table (3)

Series	Rated Power / Rated Speed / Rated Torque	Servo Motor	Description	Power / Brake Cable	Encoder Cable	Servo Driver
Medium inertia 380V	3.0kW 2000rpm/15Nm	SMG130D-0300-20AAK-4HKG	2500P/R YD series connector	MOT-008-LL-KG1	ENCCA-LL-KG1	J620-AA-000 ^{*1} FD622S-CA-000 ^{*1} FD622S-LA-000 ^{*2} FD622S-EA-000 ^{*3} CD622S-AA-000 ^{*4}
		SMG130D-0300-20ABK-4HKG •	2500P/R YD series connector with brake	MOT-008-LL-KG1/BRA-LL-MG		
	4.4kW 1500rpm/27Nm	SMG180D-0440-15AAK-4HKG	2500P/R YD series connector	MOT-015-LL-KG2		
		SMG180D-0440-15ABK-4HKG •	2500P/R YD series connector with brake	MOT-015-LL-KG2/BRA-LL-MG		
	5.5kW 1500rpm/35Nm	SMG180D-0550-15AAK-4HKG	2500P/R YD series connector	MOT-015-LL-KG2		
		SMG180D-0550-15ABK-4HKG •	2500P/R YD series connector with brake	MOT-015-LL-KG2/BRA-LL-MG		
	7.5kW 1500rpm/48Nm	SMG180D-0750-15AAK-4HKG	2500P/R YD series connector	MOT-030-LL-KG2		
		SMG180D-0750-15ABK-4HKG •	2500P/R YD series connector with brake	MOT-030-LL-KG2/BRA-LL-MG		
						J620-AA-000 ^{*1} JD640-AA-000 ^{*1} JD640-LA-000 ^{*2} JD650-AA-000 ^{*1}

FD2S/CD2S Servo Driver and Motor Selection Table (1)

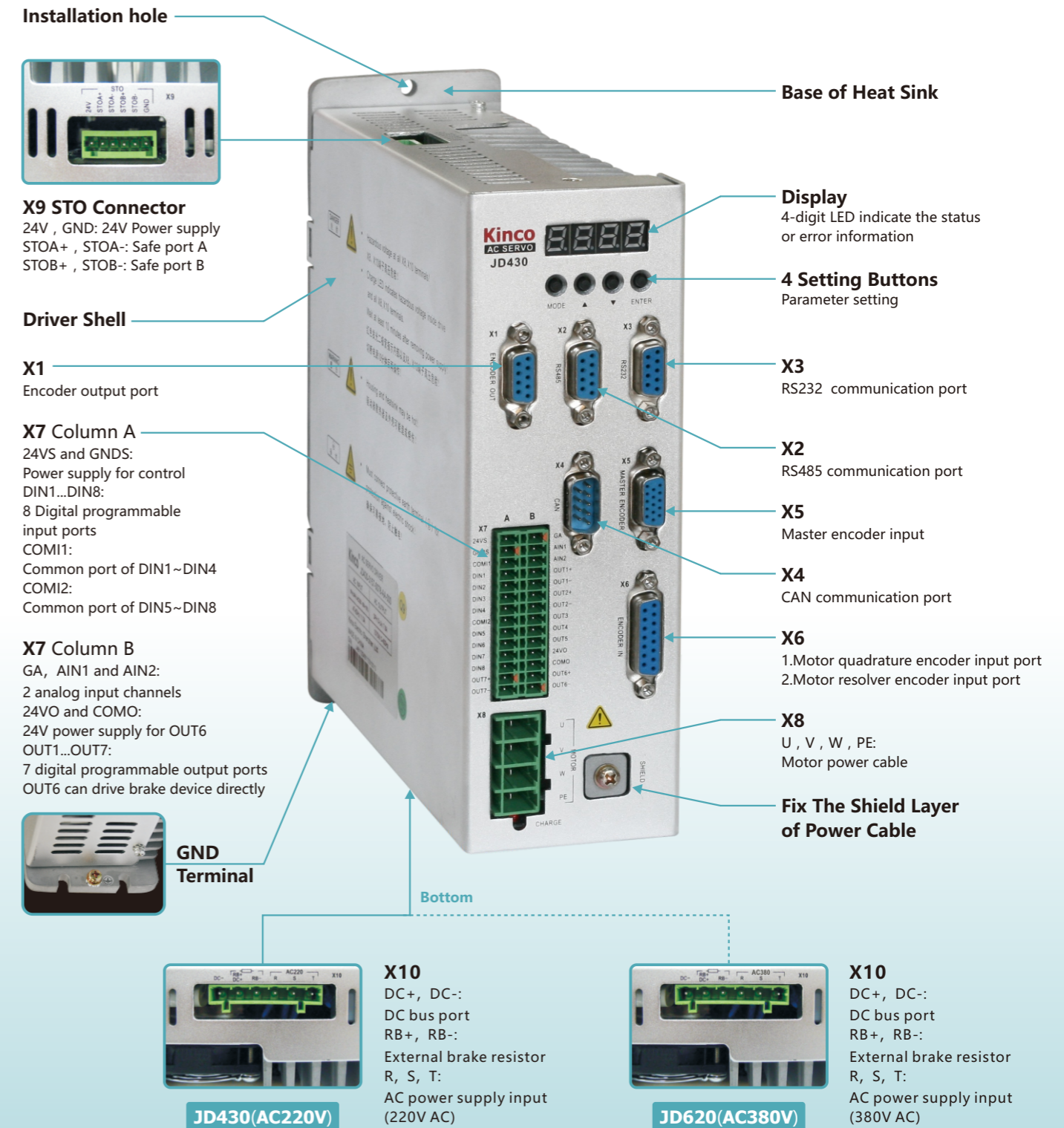
Series	Rated Power / Rated Speed / Rated Torque	Servo Motor	Description	Power / Brake Cable	Encoder Cable	Servo Driver	
Small inertia 220V	200W 3000rpm/0.64Nm	SMC60S-0020-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	FD422S-CA-000 ^{*1} FD422S-LA-000 ^{*2} FD422S-EA-000 ^{*3} CD422S-AA-000 ^{*4}	
		SMC60S-0020-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL			
		SMC60S-0020-30ABK-3LKN	2500P/R HFO18 series connector	MOT-005-LL-KC0			
	400W 3000rpm/1.27Nm	SMC60S-0020-30ABK-3LKP	2500P/R HFO18+HFO21 series connector with brake	MOT-005-LL-KC4-B	ENCCA-LL-KC0		
		SMC60S-0040-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL			
		SMC60S-0040-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL			
	750W 3000rpm/2.39Nm	SMC60S-0040-30ABK-3LKN	2500P/R HFO18 series connector	MOT-005-LL-KC0	ENCCA-LL-KC0		
		SMC60S-0040-30ABK-3LKP	2500P/R HFO18+HFO21 series connector with brake	MOT-005-LL-KC4-B			
		SMC80S-0075-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL			
	Medium inertia 220V or 380V	1kW 2000rpm/4.8Nm	SMC80S-0075-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL		ENCCA-LL-KC0
			SMC80S-0075-30AAK-3LKN	2500P/R HFO18 series connector	MOT-005-LL-KC0		
		1.5kW 2000rpm/7.2Nm	SMC80S-0075-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL		
SMC80S-0075-30ABK-3LKH			2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL			
2kW 2000rpm/10Nm		SMC130D-0100-20AAK-4LKP	2500P/R HFO18+HFO21 series connector	MOT-005-LL-KC4	ENCCA-LL-KC0		
		SMC130D-0100-20ABK-4LKP •	2500P/R HFO18+HFO21 series connector with brake	MOT-005-LL-KC4-B			
1.5kW 2000rpm/7.2Nm		SMC130D-0150-20AAK-4LKP	2500P/R HFO18+HFO21 series connector	MOT-008-LL-KC4	ENCCA-LL-KC0		
		SMC130D-0150-20ABK-4LKP •	2500P/R HFO18+HFO21 series connector with brake	MOT-008-LL-KC4-B			
2kW 2000rpm/10Nm		SMC130D-0200-20AAK-4LKP	2500P/R HFO18+HFO21 series connector	MOT-008-LL-KC4	ENCCA-LL-KC0		
		SMC130D-0200-20ABK-4LKP •	2500P/R HFO18+HFO21 series connector with brake	MOT-008-LL-KC4-B			
1.5kW 2000rpm/7.2Nm		SMC130D-0150-20AAK-4HKG	2500P/R HFO18+HFO21 series connector	MOT-005-LL-KC4	ENCCA-LL-KC0		
		SMC130D-0150-20ABK-4HKG •	2500P/R HFO18+HFO21 series connector with brake	MOT-005-LL-KC4-B			
2kW 2000rpm/10Nm	SMC130D-0200-20AAK-4HKG	2500P/R HFO18+HFO21 series connector	MOT-008-LL-KC4	ENCCA-LL-KC0			
	SMC130D-0200-20ABK-4HKG •	2500P/R HFO18+HFO21 series connector with brake	MOT-008-LL-KC4-B				
3kW 2000rpm/14.3Nm	SMC130D-0300-20AAK-4HKG	2500P/R HFO18+HFO21 series connector	MOT-008-LL-KC4	ENCCA-LL-KC0			
	SMC130D-0300-20ABK-4HKG •	2500P/R HFO18+HFO21 series connector with brake	MOT-008-LL-KC4-B				

Note: 1. This drive requires the user to select the motor by himself.

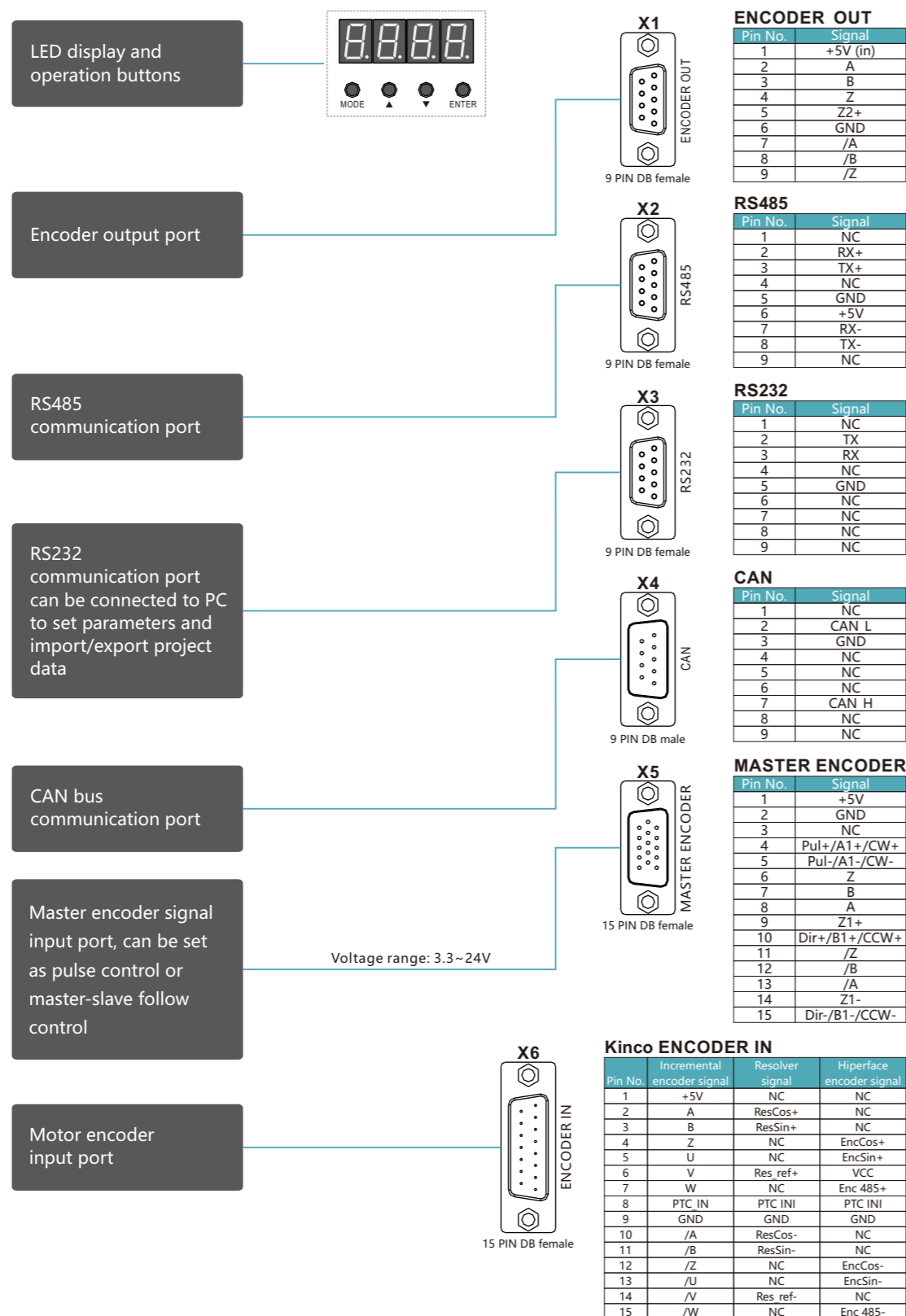
- *1--Support CANopen bus control mode
 - *2--Support pulse MODBUS 485 control mode
 - *3--Support EtherCAT control mode
 - *4--Support pulse control mode
3. • When the driver drives the brake holding device, the DC24V / 2A relay shall be externally connected.

FD2S/CD2S Servo Driver and Motor Selection Table (2)

Series	Rated Power / Rated Speed / Rated Torque	Servo Motor	Description	Power / Brake Cable	Encoder Cable	Servo Driver	
Small inertia 220V	50W 3000rpm/0.16Nm	SMS40S-0005-30KAK-5LSU	16 bit multi-turn absolute encoder	MOT-005-LL-KL	ENCDDG-LL-GU ENCCCG-(4)-GU-BT ¹	FD412S-CA-000 ¹ FD412S-LA-000 ² FD412S-EA-000 ³ CD412S-AA-000 ⁴	
		SMS40S-0005-30KBK-5LSU	16 bit multi-turn absolute encoder with brake	MOT-005-LL-KL/BRA-LL-KL			
	100W 3000rpm/0.32Nm	SMS40S-0010-30KAK-5LSU	16 bit multi-turn absolute encoder	MOT-005-LL-KL			
		SMS40S-0010-30KBK-5LSU	16 bit multi-turn absolute encoder with brake	MOT-005-LL-KL/BRA-LL-KL			
	200W 3000rpm/0.64Nm	SMS60S-0020-30KAK-3LSU	16 bit multi-turn absolute encoder	MOT-005-LL-KL		FD422S-CA-000 ¹ FD422S-LA-000 ² FD422S-EA-000 ³ CD422S-AA-000 ⁴	
		SMS60S-0020-30KBK-3LSU	16 bit multi-turn absolute encoder with brake	MOT-005-LL-KL/BRA-LL-KL			
	400W 3000rpm/1.27Nm	SMS60S-0040-30KAK-3LSU	16 bit multi-turn absolute encoder	MOT-005-LL-KL			
		SMS60S-0040-30KBK-3LSU	16 bit multi-turn absolute encoder with brake	MOT-005-LL-KL/BRA-LL-KL			
	750W 3000rpm/2.39Nm	SMS80S-0075-30KAK-3LSU	16 bit multi-turn absolute encoder	MOT-005-LL-KL		ENCDDG-LL-GU ENCCCG-(4)-GU-BT ¹	FD422S-CF-000 ¹ FD422S-LF-000 ² FD422S-EF-000 ³ CD422S-AF-000 ⁴
		1kW 2000rpm/4.8Nm	SMS130D-0100-20KAK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector			
SMS130D-0100-20KBK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake		MOT-005-LL-KC4-B				
1.5kW 2000rpm/7.2Nm	SMS130D-0150-20KAK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector	MOT-008-LL-KC4	FD432S-CA-000 ¹ FD432S-LA-000 ² FD432S-EA-000 ³ CD432S-AA-000 ⁴			
	SMS130D-0150-20KBK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake	MOT-008-LL-KC4-B				
2kW 2000rpm/10Nm	SMS130D-0200-20KAK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector	MOT-008-LL-KC4		FD612S-CA-000 ¹ FD612S-LA-000 ² FD612S-EA-000 ³ CD612S-AA-000 ⁴		
	SMS130D-0200-20KBK-4LKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake	MOT-008-LL-KC4-B				
1.5kW 2000rpm/7.2Nm	SMS130D-0150-20KAK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector	MOT-005-LL-KC4	FD622S-CA-000 ¹ FD622S-LA-000 ² FD622S-EA-000 ³ CD622S-AA-000 ⁴			
	SMS130D-0150-20KBK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake	MOT-005-LL-KC4-B				
2kW 2000rpm/10Nm	SMS130D-0200-20KAK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector	MOT-008-LL-KC4		FD622S-CA-000 ¹ FD622S-LA-000 ² FD622S-EA-000 ³ CD622S-AA-000 ⁴		
	SMS130D-0200-20KBK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake	MOT-008-LL-KC4-B				
3kW 2000rpm/14.3Nm	SMS130D-0300-20KAK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector	MOT-008-LL-KC4	FD622S-CA-000 ¹ FD622S-LA-000 ² FD622S-EA-000 ³ CD622S-AA-000 ⁴			
	SMS130D-0300-20KBK-4HKP	16 bit multi-turn absolute HFO18+HFO21 connector with brake	MOT-008-LL-KC4-B				



Note: 1. JD430/JD620 drivers share the same interface definition, except for X10 power interfaces.
2. Suggest brake resistor : JD430 39Ω/200W or 75Ω/100W、JD620 75Ω/200W、JD630&JD640 47Ω/500W、JD650 27Ω/1000W,he customer should chose the power brake resistor according to the actual application.

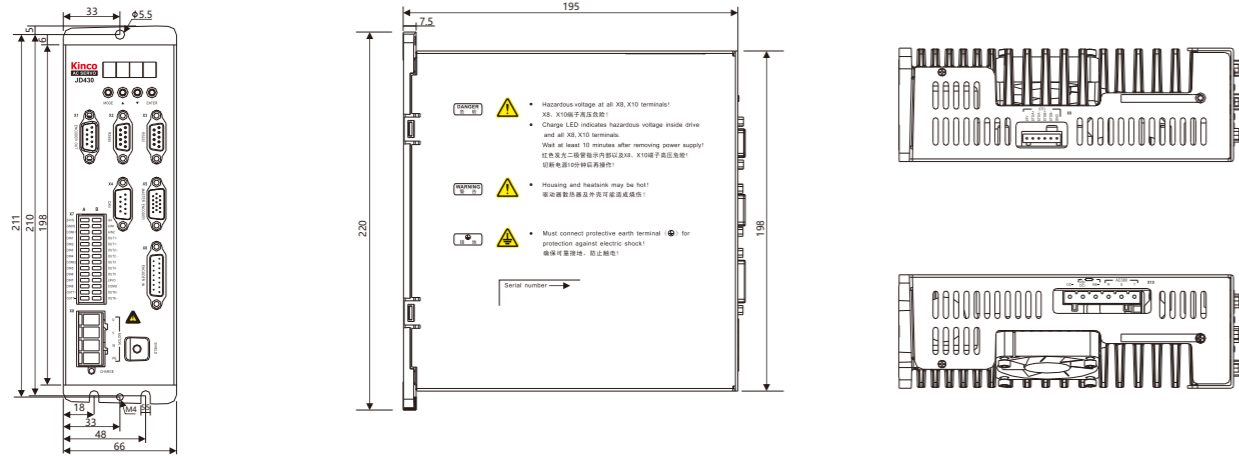


Technical Specifications of JD Servo Driver					
Model Parameter	JD430-AA-000	JD620-AA-000	JD630-□A-000	JD640-□R-000	JD650-AR-000
Power	Main supply voltage	Single-phase or 3-phase AC220V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz
	Control circuit voltage	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A
Current	Rated current (RMS)	10A	7A	10A	18A
	Peak current (PEAK)	27.5A	25A	35A	45A
Brake chopper threshold		DC380V±5V	DC680V±5V	DC680V±5V	DC680V±5V
Over-voltage alarming threshold		DC400V±5V	DC700V±5V	DC700V±5V	DC700V±5V
Under-voltage alarming threshold		DC200V±5V	DC400V±5V	DC400V±5V	DC400V±5V
Cooling method		Forced air cooling		Forced air cooling	
Weight (Kg)		2.51		3.62	
Size(W*H*D, mm)		220×195×66		255×230×77	
General Functions	Digital operation panel	4 buttons and 4 LED display			
	External I/O	7 digital outputs(OUT1, OUT2, OUT7 are 0.1A and OUT3~OUT6 are 0.5A, can define driver ready and other functions freely; 8 digital inputs(12.5~30V), can define driver enables and other functions freely.			
	Analog input	2 analog inputs, can be used to control speed and torque, the input range is -10V~10V			
	Encoder signal output function	Output encoder signal and master encoder signal are optional, can be used in the multiple axes synchronization, the max. output frequency is 2MHz. Do not support this function if driver is matched with resolver motor.			
	Master encoder input function	Can receive 3.3V~24V pulse/direction signal, CW/CCW signal, and the RS422 difference signal, the max. input frequency is 4MHz.			
	Feedback signal	Incremental encoder 2500P/R Resolver, Hiperface/sincos® Encoder 16 bit multi-turn absolute encoder, 20 bit single-turn absolute encoder			
	RS232	The max. baudrate is 115.2KHz, use JD-PC software to communicate with PC, or via free protocol to communicate with controller			
	RS485	The max. baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller			
Operation Environment	CAN BUS	The max. baudrate is 1MHz, use CANopen protocol to communicate with controller			
	STO function	STO port can be connected to safe controller, switch, and sensor to protect the system			
	Operating temperature	0 ~ 40°C			
	Storage temperature	-10 ~ 70°C			
	Humidity (non-condensing)	Below 90% RH			
	Protection class	IP20			
	Installation environment	Installed in a dust-free, dry and lockable environment (such as in a electrical cabinet)			
	Installation mode	Vertical installation			
Height	No power limitation below 1000m				
Atmospheric pressure	86 ~ 106kpa				

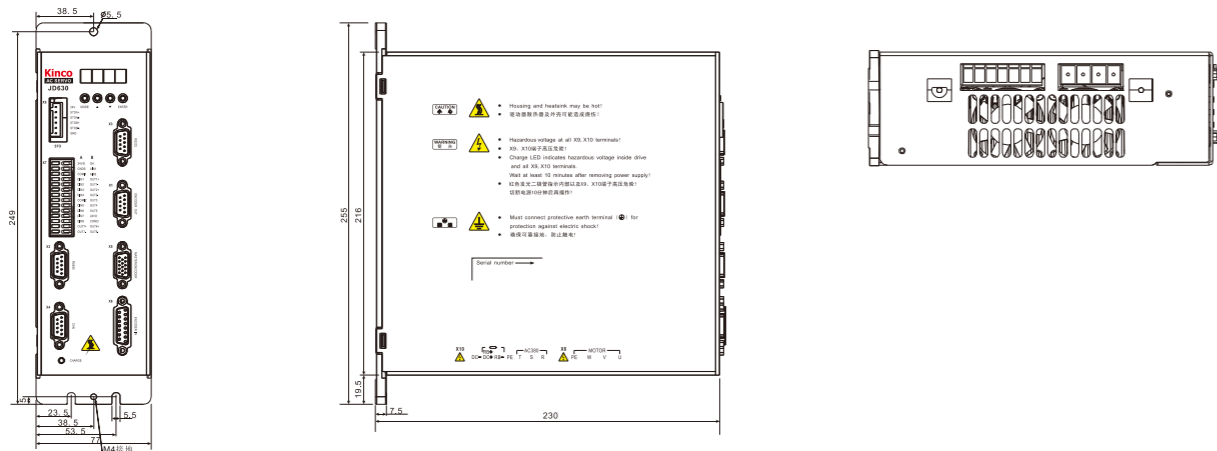
Note① : □=LA : Communication port RS232, RS485
 □=AA: Communication port RS232, RS485, CANopen
 □=AR : Communication port RS232, RS485, CANopen , support motor with Resolver

Note② : AA is a direct driving servo system

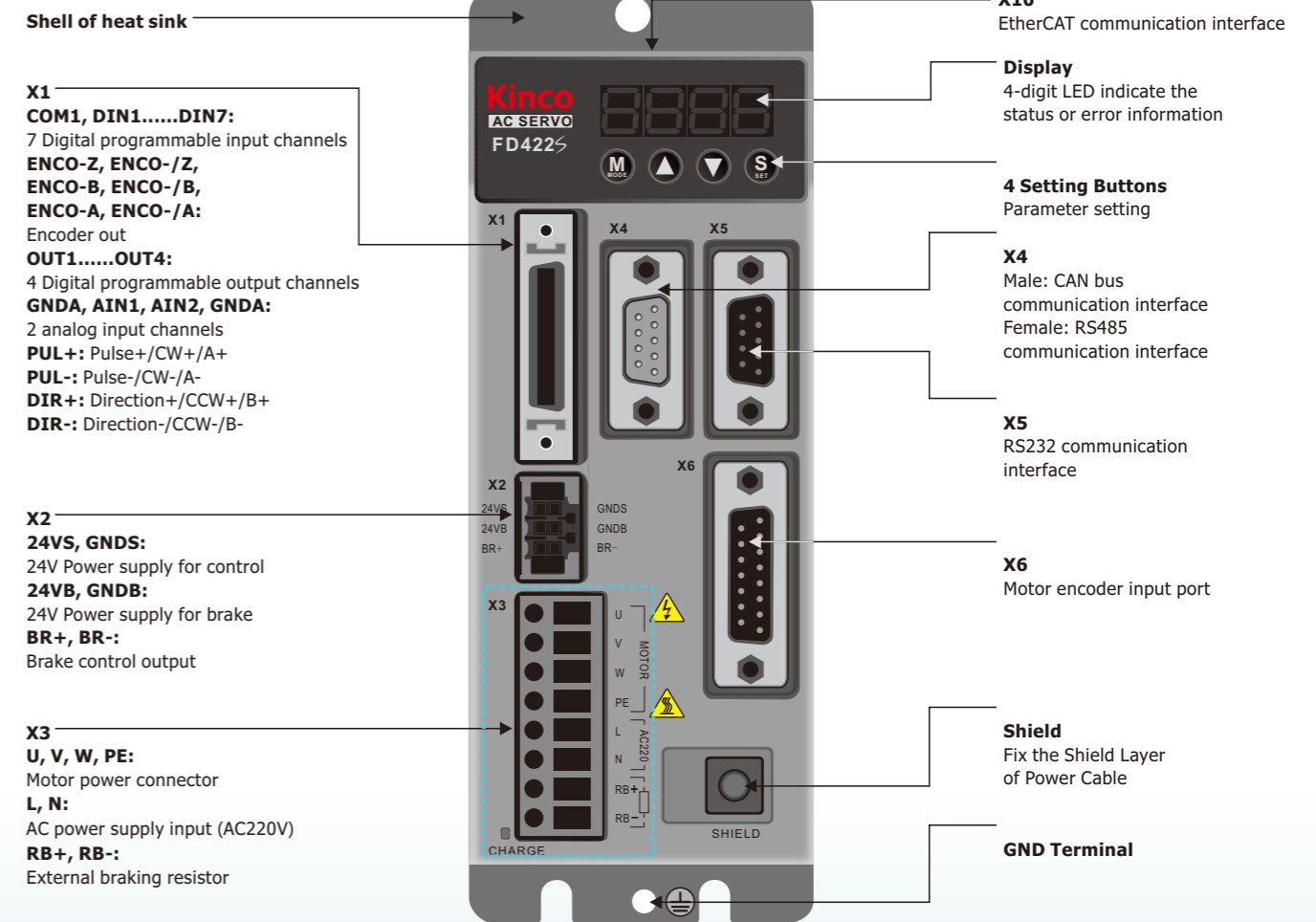
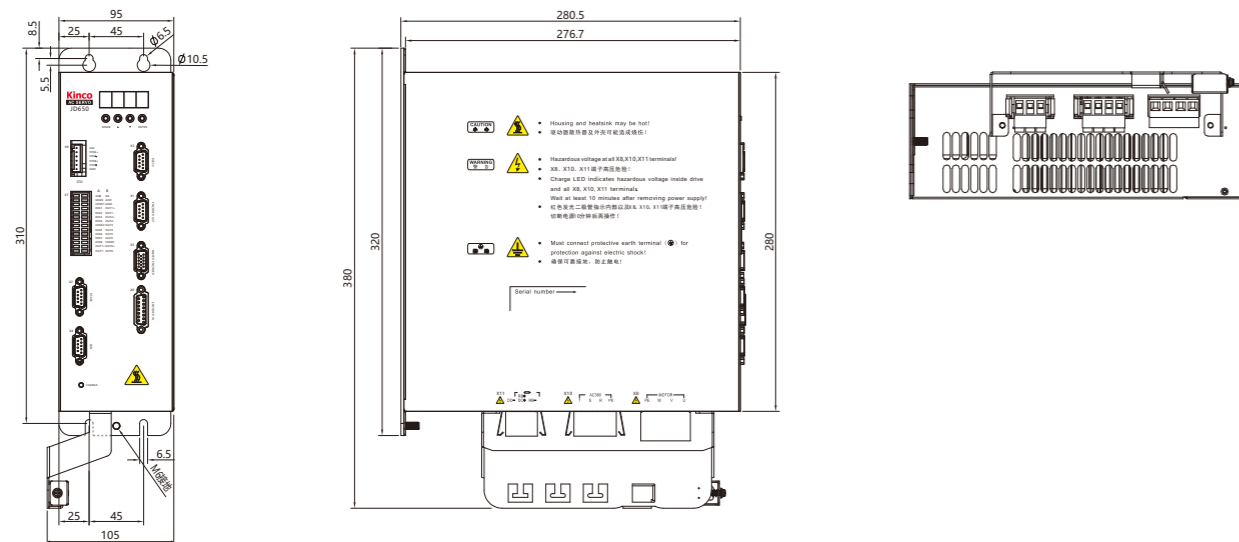
Mechanical Dimension Diagram of JD430/JD620



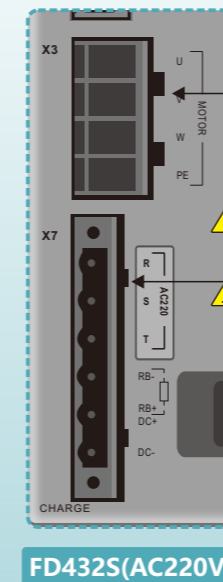
Mechanical Dimension Diagram of JD630/JD640



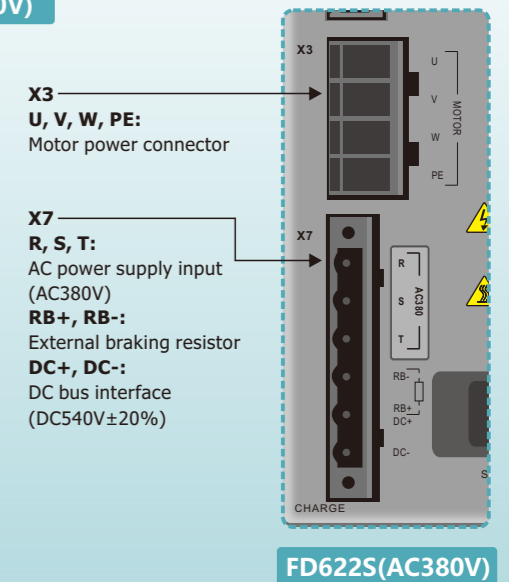
Mechanical Dimension Diagram of JD650



FD412S/FD422S (AC220V)



FD432S(AC220V)



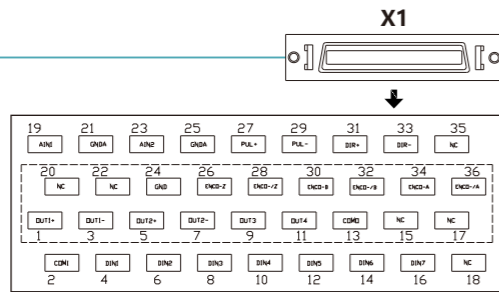
FD622S(AC380V)

Note: 1. FD412S/FD422S/FD432S/FD622S share the same interface definition except the X3 and X7 power interfaces;
2. Suggested brake resistor: FD412S/FD422S 75Ω/100W, FD432S 39Ω/200W, FD622S 75Ω/200W. The customer should choose the power of brake resistor according to the actual application.

LED display and operation buttons



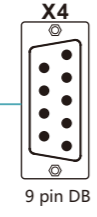
Digital signal input/output port



X1

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
2	COM1	1	OUT1+	20	NC	19	AIN1
4	DIN1	3	OUT1-	22	NC	21	GND
6	DIN2	5	OUT2+	24	GND	23	AIN2
8	DIN3	7	OUT2-	26	ENCO-Z	25	GND
10	DIN4	9	OUT3	28	ENCO-/Z	27	PUL+
12	DIN5	11	OUT4	30	ENCO-B	29	PUL-
14	DIN6	13	COM0	32	ENCO-/B	31	DIR+
16	DIN7	15	NC	34	ENCO-A	33	DIR-
18	NC	17	NC	36	ENCO-/A	35	NC

Male: CAN bus communication port
Female: RS485 communication port



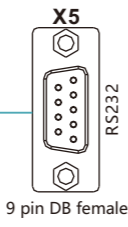
CAN

Pin No.	Signal
1	NC
2	CAN L
3	GND
4	NC
5	NC
6	NC
7	CAN H
8	NC
9	NC

RS485

Pin No.	Signal
1	NC
2	RX+
3	TX+
4	NC
5	GND
6	+5V
7	RX-
8	TX-
9	NC

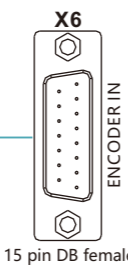
RS232 communication port, can be connected to PC to set parameters and import/export project data



RS232

Pin No.	Signal
1	NC
2	TX
3	RX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Motor encoder input port



ENCODER IN

Pin No.	Incremental encoder signal	Communication encoder signal
1	+5V	+5V
2	A	NC
3	B	NC
4	Z	NC
5	U	NC
6	V	NC
7	W	SD
8	PTC IN	NC
9	GND	GND
10	/A	NC
11	/B	NC
12	/Z	NC
13	/U	NC
14	/V	NC
15	/W	/SD

EtherCAT communication interface



EtherCAT

pin	X10A signal	X10B signal
1	TD+	TD+
2	TD-	TD-
3	RD+	RD+
4	NC	NC
5	NC	NC
6	RD-	RD-
7	NC	NC
8	NC	NC

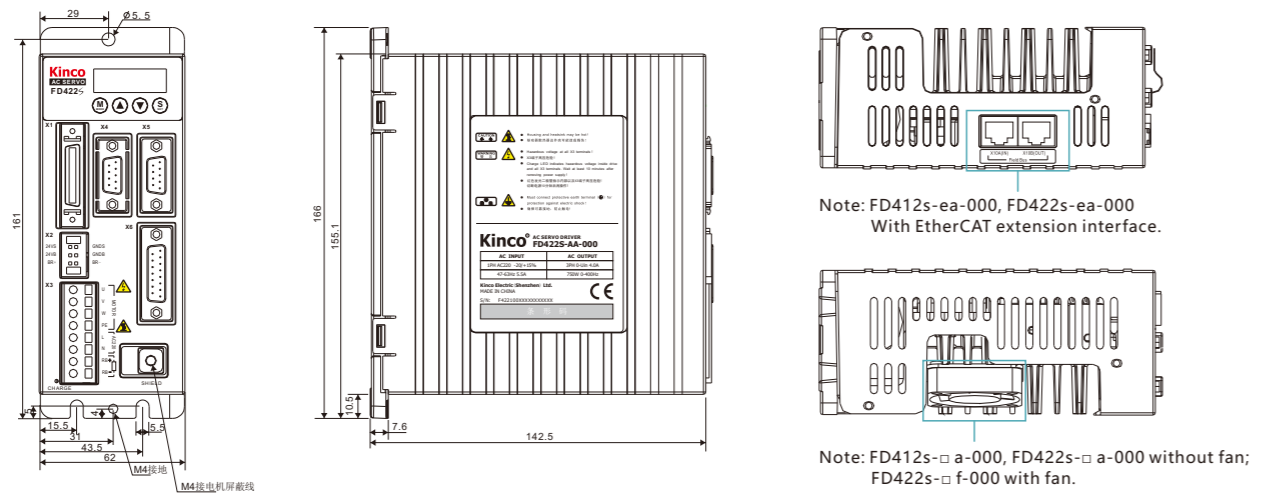
Technical Specifications of FD2S Servo Motor

Model Parameter	FD412S-□A-000	FD422S-□A-000	FD422S-□F-000	FD432S-□A-000	FD612S-□A-000	FD622S-□A-000	
Power	Main supply voltage	Single-phase AC220V-20/+15% 47~63Hz			Single-phase or 3-phase AC 220 V - 20 / + 15 % 47 ~ 63Hz	3-phase AC 380 V - 20 / + 15 % 47 ~ 63Hz	
	Control circuit voltage	18VDC ~ 30VDC 1A					
Current	Rated current(RMS)	2A	4A	5A	11A	5.5A	7A
	Peak current(PEAK)	7A	15A	15A	27.5A	15A	25A
Feedback signal	2500 P/R (incremental encoder with 5V supply 16 bit multi-turn absolute encoder, 20 bit single-turn Communication encoder)						
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop .						
Brake chopper threshold	DC380V±5V						
Over-voltage alarming threshold	DC400V±5V						
Under-voltage alarming threshold	DC200V±5V						
Cooling method	Natural air cooling		Fan	Fan			
Weight(Kg)	1.2		1.2	2.4			
General Functions	Digital input specification	7 digital inputs, with COM1 terminal for PNP (high level valid 12.5V~30V) or NPN (low level valid) connection					
	Digital input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain .					
	Digital output specification	5 digital outputs, out 1~out 4 current is 100 mA, BR+/BR- (brake control output) current is 500 mA, can drive brake device directly.					
	Digital output function	Define freely according to the requirement, supporting following functions: driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found.					
	Analog input	2 analog inputs, can be used to control speed and torque, the input range is -10V ~ 10V"					
	Encoder signal output function	Output encoder signal is optional, can be used in the multiple axes synchronization, the maximum output frequency is 2MHz. Motor A, B, Z signal, plus signal (PLS+DIR, CW/CCW, A+B) Do not support this function if the driver is matched with 16 bit multi-turn encoder or 20 bit single-turn encoder"					
Protection functions	Over-voltage protection, under-voltage protection, motor over-heat protection (I2T), short-circuit protection, drive over-heat protection, etc						
RS232	The maximum baudrate is 115.2KHz, use JD-PC software to communicate with PC, or via free protocol to communicate with controller						
RS485	The maximum baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller						
CAN BUS	The maximum baudrate is 1MHz, use CANopen protocol to communicate with controller						
EtherCAT	The maximum baudrate is 100MHz, support COE (CIA 402 protocol) and CSP / CSV / PP / PV / PT / HM mode						
Environment conditions for operation	Operating temperature	0 ~ 40°C					
	Storage temperature	-100°C ~ 700°C					
	Humidity(non-condensing)	Below 90% RH					
	Protection class	IP20					
	Installation environment	Installed in a dust-free, dry, lockable environment (such as in a electric cabinet)					
	Installation mode	Vertical installation					
Height	No power limit below 1000 m						
Atmospheric pressure	86kpa ~ 106kpa						

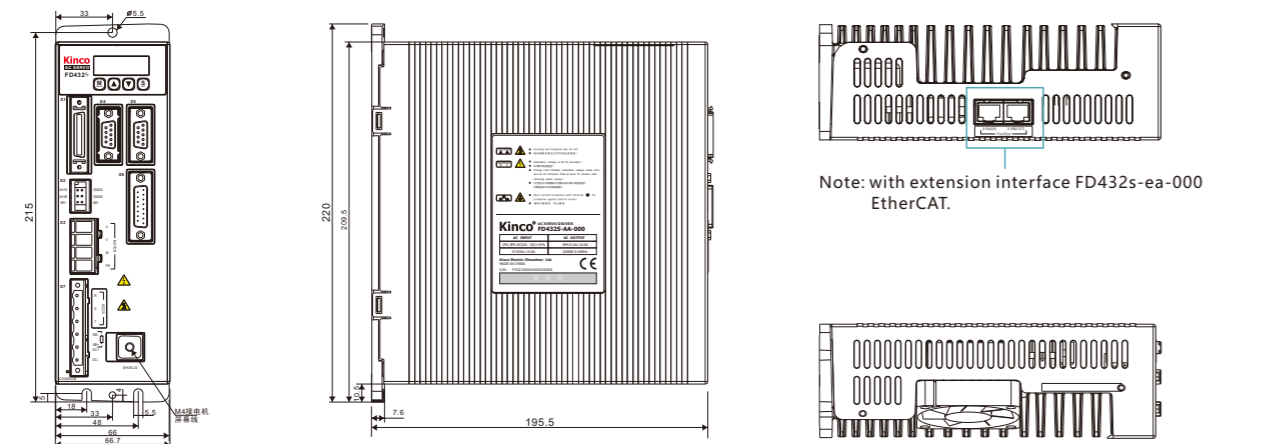
Note①: □=L —Communication port RS232, RS485
□=A/C —Communication port RS232, CANopen

Note②: AA is a direct driving servo system

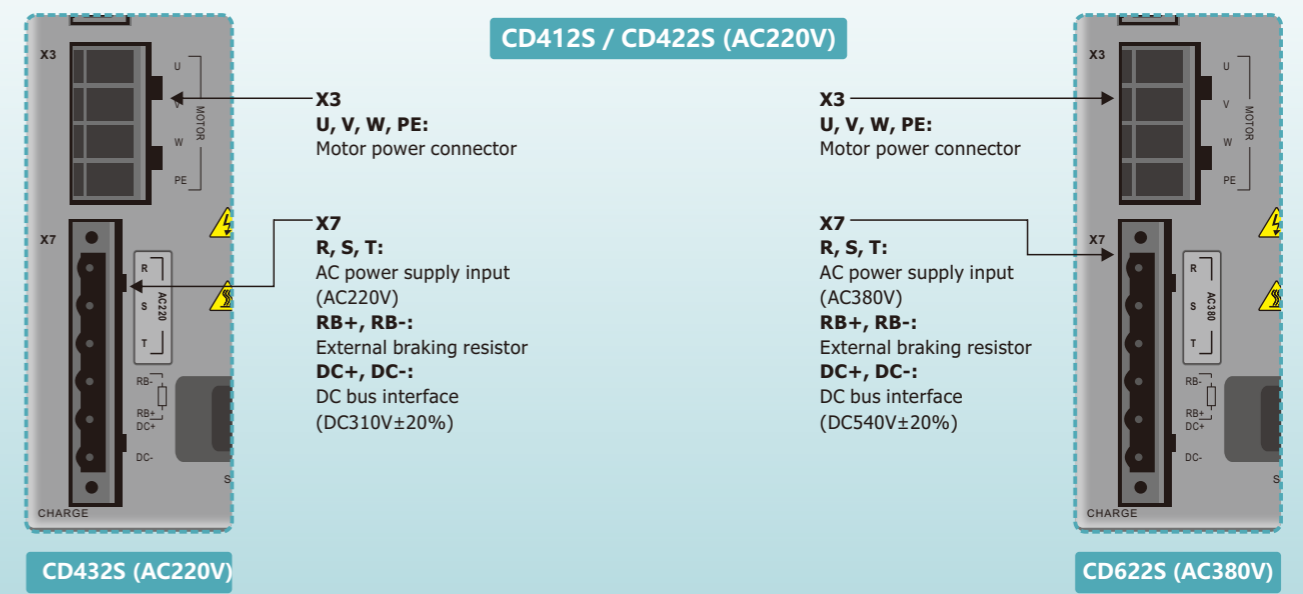
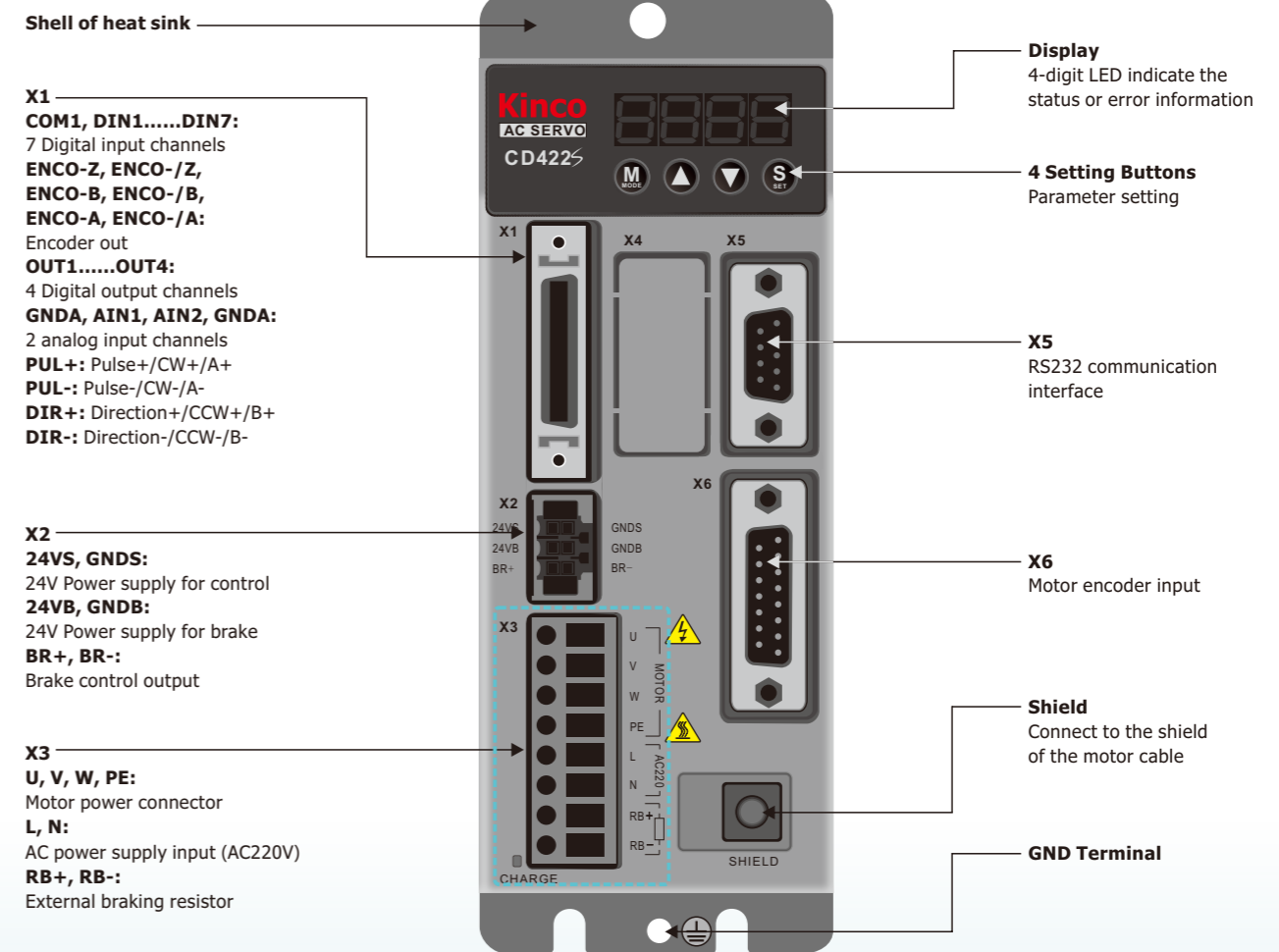
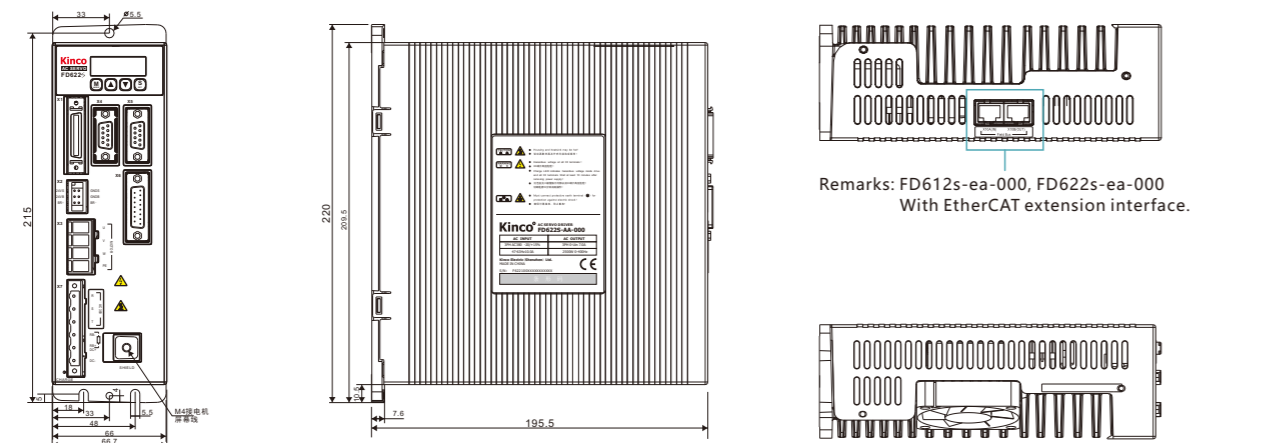
Mechanical Dimension Diagram of FD412S/FD422S (Unit: mm)



Mechanical Dimension Diagram of FD432S (Unit: mm)



Mechanical Dimension Diagram of FD612S/FD622S (Unit: mm)

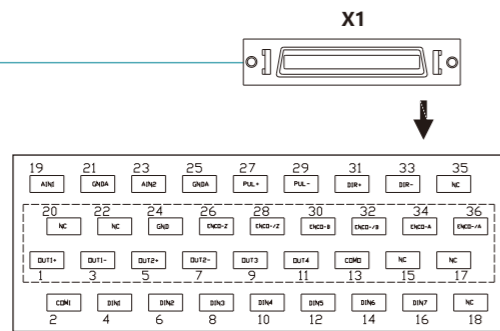


Note: 1. CD412S/CD422S/CD432S/CD622S drivers share the same interface definition, except for X3 and X7 power interfaces.
2. Suggested brake resistor: CD412S/CD422S 75Ω/100W, CD432S 39Ω/200W, CD622S 75Ω/200W, The customer should chose the power of brake resistor according to the actual application.

LED display and Setting Buttons



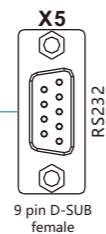
Signal input/output interface



X1

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
2	COM1	1	OUT1+	20	NC	19	AIN1
4	DIN1	3	OUT1-	22	NC	21	GND
6	DIN2	5	OUT2+	24	GND	23	AIN2
8	DIN3	7	OUT2-	26	ENCO-Z	25	GND
10	DIN4	9	OUT3	28	ENCO-/Z	27	PUL+
12	DIN5	11	OUT4	30	ENCO-B	29	PUL-
14	DIN6	13	COM0	32	ENCO-/B	31	DIR+
16	DIN7	15	NC	34	ENCO-A	33	DIR-
18	NC	17	NC	36	ENCO-/A	35	NC

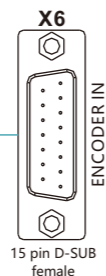
RS232 communication interface, can be used to debug and import/export project data via PC.



RS232

Pin No.	Signal
1	NC
2	TX
3	RX
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Input interface of motor encoder



ENCODER IN

Pin No.	Signal
1	+5V
2	A
3	B
4	Z
5	U
6	V
7	W
8	PTC IN
9	GND
10	/A
11	/B
12	/Z
13	/U
14	/V
15	/W

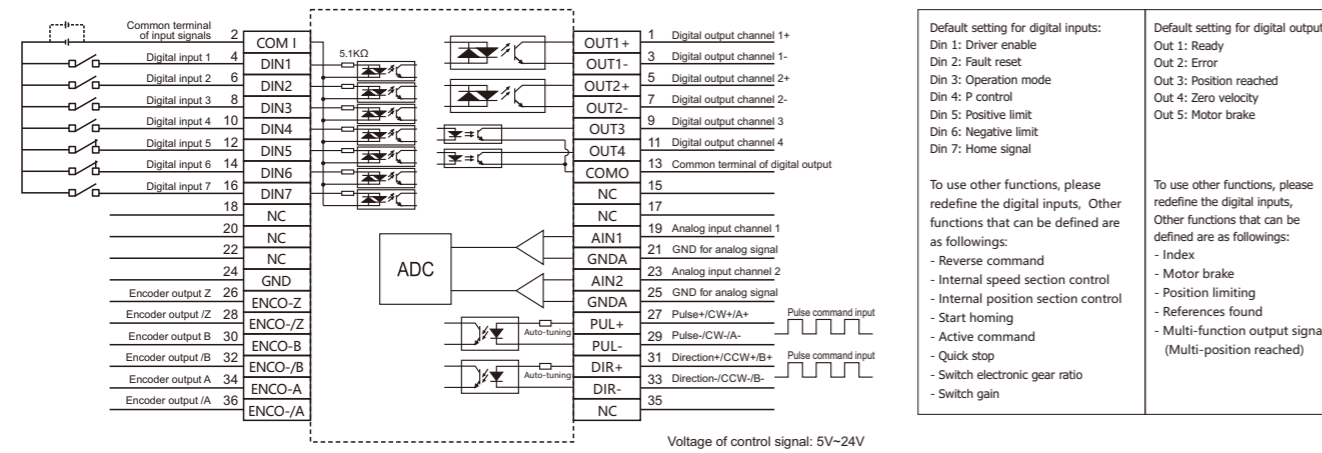
Technical Specifications of CD2S Servo Driver

Model parameter	CD412S-AA-000	CD422S-AA-000	CD422S-AF-000	CD432S-AA-000	CD612S-AA-000	CD622S-AA-000	
Power	Main supply voltage	Single-phase AC220V -20/+15% 47~63Hz			Single-phase or 3-phase AC220V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz	
	Control circuit voltage	18VDC~30VDC 1A					
Current	Max. continuous current	2A	4A	4.6A	11A	5.5A	7A
	Peak current(PEAK)	7A	15A	15A	27.5A	15A	25A
Feedback signal	2500 P/R (incremental encoder with 5V supply 16 bit multi-turn absolute encoder, 20 bit single-turn encoder						
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop .						
Brake chopper threshold	DC380V±5V				DC680V±5V		
Over-voltage alarming threshold	DC400V±5V				DC700V±5V		
Under-voltage alarming threshold	DC200V±5V				DC400V±5V		
Cooling method	Natural air cooling		Fan	Fan			
Weight (Kg)	1.2		1.2	2.4			
Position Mode	Maximum frequency of input pulse	Differential signal: 500 KPPS, open-collector signal: 200 KPPS					
	Pulse command mode	Pulse+direction, CCW + CW, A+B Phase(5V - 24V)					
	Command smoothing	Low-pass filtering (adjustable by internal parameter setting)					
	Feedforward gain	Adjustable by internal parameter setting					
	Electronic gear ratio	Setting range, Gear factor : -32768 ~ 32767 , Gear divider : 1 ~ 32767 , 1/50 ≤ Gear factor/Gear divider ≤ 50					
Position loop sampling frequency	1KHz						
Speed Mode	Analog input voltage range	- 10 ~ 10V (resolution 12 bit)					
	Input impedance	200K					
	Analog input sampling frequency	4KHz					
	Command source	External analog command / internal command					
	Command smoothing	Low-pass filtering (adjustable by internal parameter setting)					
	Input voltage dead-zone setting	Adjustable by internal parameter setting					
	Input voltage offset setting	Adjustable by internal parameter setting					
	Speed limit	Adjustable by internal parameter setting					
	Torque limit	Adjustable by internal parameter setting/external analog command					
Speed loop sampling frequency	4KHz						
Torque Mode	Analog voltage input range	-10 ~ 10V (Resolution 12 bit)					
	Input impedance	200K					
	Input sampling frequency	4KHz					
	Command source	External analog command / internal command					
	Command smoothing	Low-pass filtering (adjustable by internal parameter setting)					
	Speed limit	Adjustable by internal parameter setting/external analog command					
Digital Input	Input voltage dead-zone setting	Adjustable by internal parameter setting					
	Input voltage offset setting	Adjustable by internal parameter setting					
	Current sampling frequency	16KHz					
Digital Output	Digital input specification	7 digital inputs, with COM1 terminal for PNP (high level valid 12.5V~30V) or NPN (low level valid) connection					
	Digital input function	Define freely according to requirement, supporting following functions. Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain					
Digital Output	Digital output specification	5 digital outputs, out 1~out 4 current is 100 mA, BR+/BR-(brake control output) current is 500 mA, can drive brake device directly					
	Digital output function	Define freely according to the requirement, supporting following functions: driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found					
Protection functions	Over-voltage protection, under-voltage protection, motor over-heat protection (I2T), short-circuit protection, drive over-heat protection, etc						
Communication interface	RS232 (Connections with PC: 2-2, 3-3, 5-5)						
Operation Environment	Operation temperature	0 ~ 400C					
	Storage temperature	- 100C ~ 700C					
	Humidity (non- condensation)	Below 90% RH					
	Protection class	IP20					
	Installation mode	Installed in a dust-free, dry, lockable environment (such as in a electric cabinet)					
	Installation method	Vertical installation					
	Height	No power limit below 1000 m					
Atmospheric pressure	86kpa ~ 106kpa						

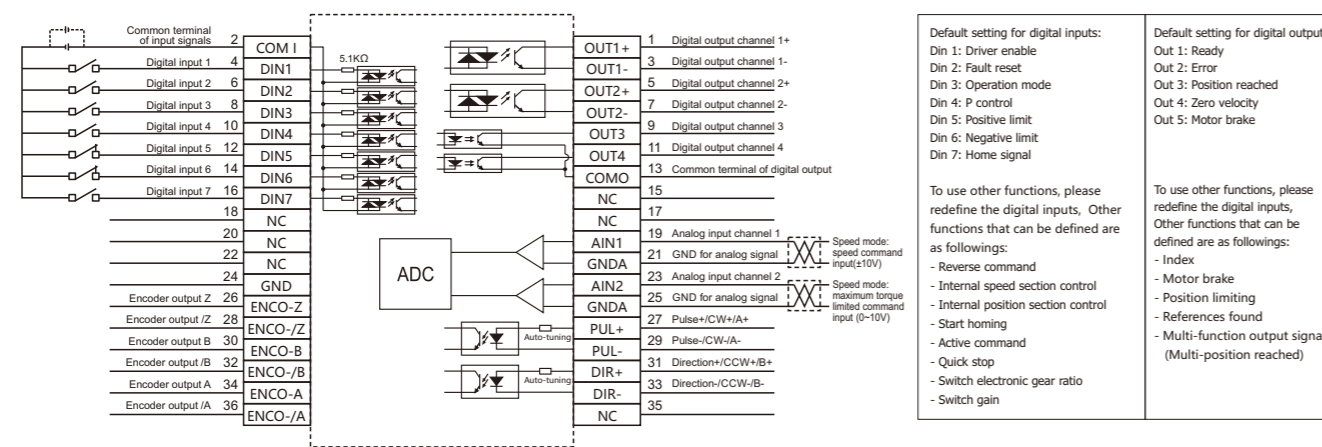
Wiring Diagram of CD2S Servo Driver

Mechanical Dimension Diagram of CD2S Servo Driver

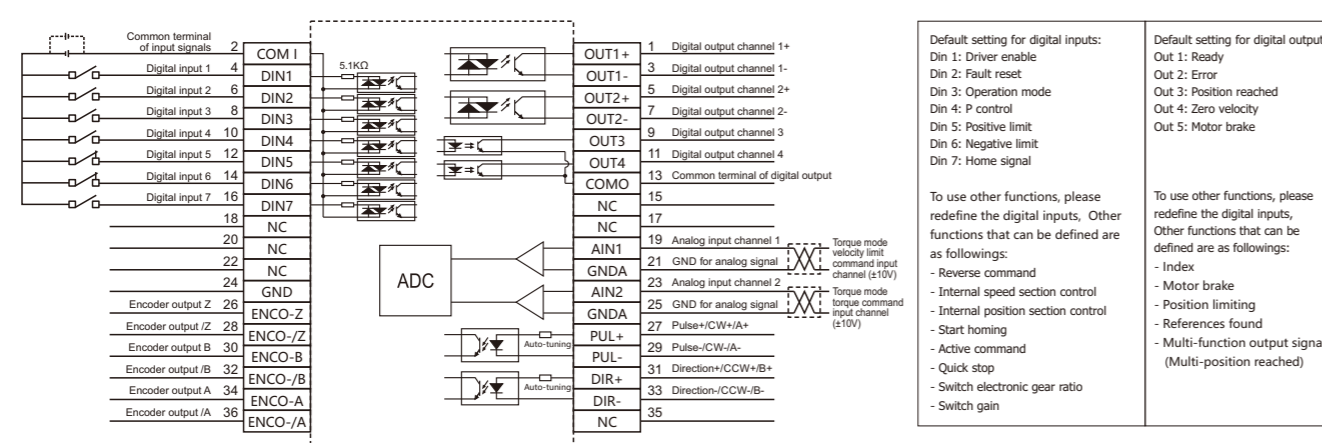
Wiring Diagram for Position Control Mode



Wiring Diagram for Speed Control Mode

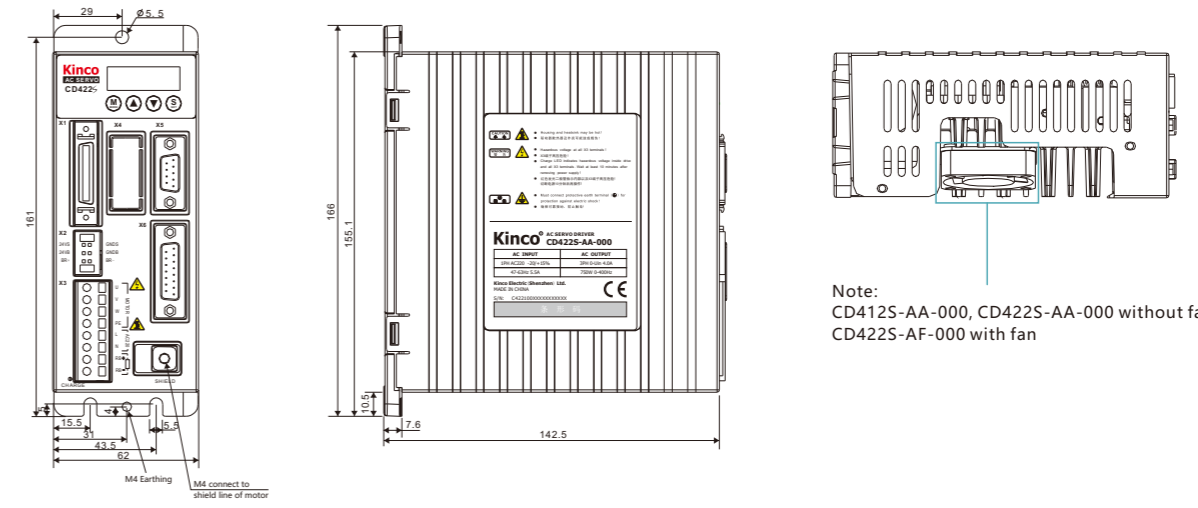


Wiring Diagram for Torque Control Mode



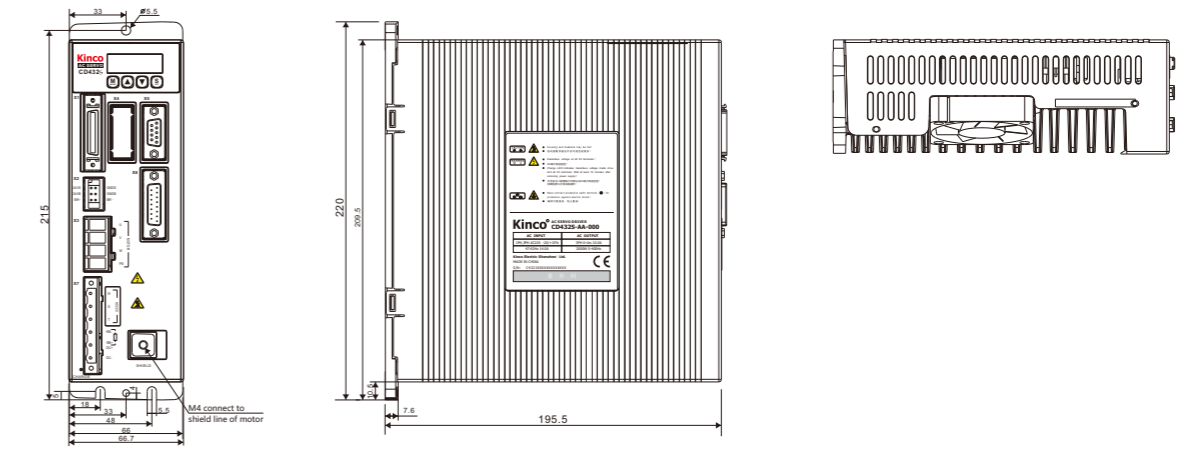
Mechanical Dimension Diagram of CD412S/CD422S

(Unit: mm)



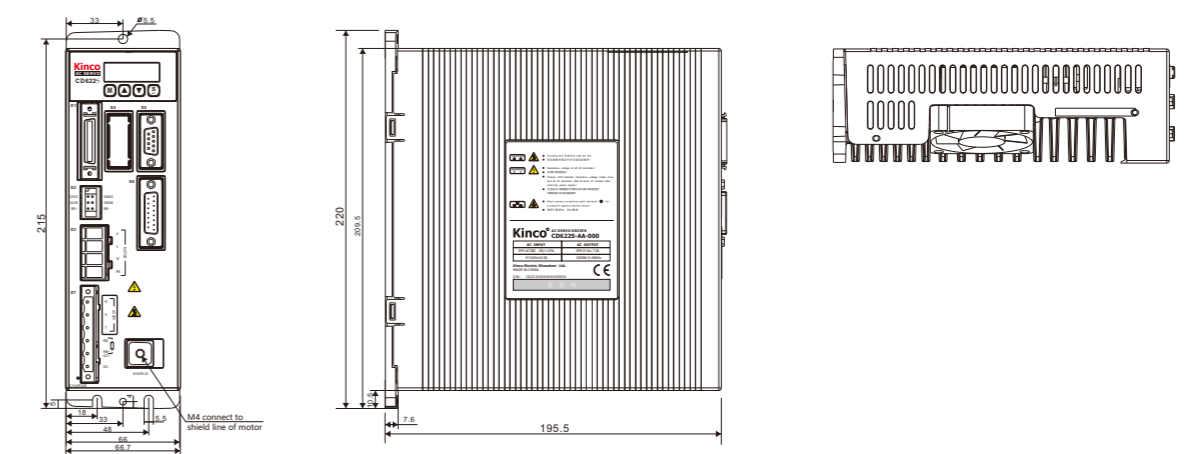
Mechanical Dimension Diagram of CD432S

(Unit: mm)



Mechanical Dimension Diagram of CD612S/CD622S

(Unit: mm)



Technical Specifications of SMH Servo Motor(1)



Motor series	SMH Servo Motor					
	Small inertia flange size 40mm		Small inertia flange size 60mm		Small inertia flange size 80mm	
Model	SMH40S-0005-30A□K-4LKH	SMH40S-0010-30A□K-4LKH	SMH60S-0020-30A□K-3LK□	SMH60S-0040-30A□K-3LK□	SMH80S-0075-30A□K-3LK□	SMH80S-0100-30A□K-3LK□
Driver matching	FD412S-CA-000 FD412S-LA-000 FD412S-EA-000 CD412S-AA-000		JD430-AA-000 FD422S-CA-000 FD422S-LA-000 FD422S-EA-000 CD422S-AA-000		JD430-AA-000 FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	
DC link voltage UDC	300	300	300	300	300	300
Continuous performance	Rated power P_N (W)	50	100	200	400	1000
	Rated torque T_N (Nm)	0.16	0.32	0.64	1.27	3.18
	Rated speed n_N (rpm)	3000	3000	3000	3000	3000
	Rated current I_N (A)	0.7	1.4	1.6	3.1	3.9
Maximum torque T_m (Nm)	0.48	0.96	1.92	3.82	7.17	9.48
Maximum current I_m (A)	2.1	4.2	4.8	9.3	11.7	18.9
Standstill torque T_s (Nm)	0.176	0.352	0.7	1.39	2.63	3.3
Standstill current I_s (A)	0.77	1.54	1.79	3.38	4.4	6.93
Resistance line-line R_L (Ω)	16.6	5.53	8.02	3.52	1.4	0.86
Inductance line-line L_L (mH)	14	6	16.3	7.8	7.5	4.5
Electrical time constant τ_e (ms)	0.84	1.08	2.03	2.22	5.35	5.23
Mechanical time constant τ_m (ms)	1.28	0.86	2.26	1.35	0.75	0.89
Reverse voltage constant K_e (V/krpm)	16	14	29	29	40	34
Torque constant K_t (Nm/A)	0.265	0.265	0.48	0.48	0.662	0.562
Rotor moment of inertia J_m (Kg-cm ²)	0.031	0.059	0.375	0.51	1.36	1.9
	0.031 (with brake)	0.061 (with brake)	0.379 (with brake)	0.514 (with brake)	1.385 (with brake)	1.925 (with brake)
Pole pair number	4	4	3	3	3	3
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	8
Insulation class	F	F	F	F	F	F
Maximum radial force F_r (N)	120	120	180	180	335	335
Maximum axial force F_a (N)	60	60	90	90	167.5	167.5
Weight G(Kg)	0.5	0.8	1.3	1.8	3.3	3.9
	0.8 (with brake)	1.0 (with brake)	1.8 (with brake)	2.3 (with brake)	4 (with brake)	4.6 (with brake)
Length of motor L(mm)	85.3±1	110.8±1	120	150	147	167
	119±1.5(with brake)	145±1.5(with brake)	159±1.5(with brake)	189±1.5(with brake)	197±1.5(with brake)	217±1.5(with brake)
Position feedback device	2500 P/R Incremental encoder					
Cooling method	Totally enclosed, non - ventilated					
Protection level	IP65, shaft sealing IP54					
Environmental conditions for operation	Temperature	-20°C ~ 40°C (Non-freezing)				
	Humidity	Below 90 % RH (no condensation)				
	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				

Note : □=A —without brake □=B —with brake □=H —3 rows of 15-pin Connector □=N —HFO18 series aviation standard connector(towards the shaft) □=O —HFO18 series aviation standard connector(opposite the shaft) □=P —HFO21+HFO18 series aviation standard connector(HFO21 power connector,HFO18 encoder connector) □=M —2× M17 series aviation intercontec connector

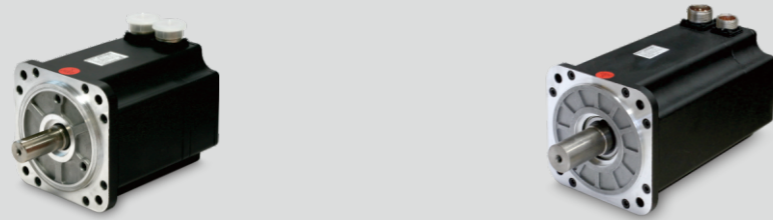
Technical Specifications of SMH Servo Motor(2)



Motor series	SMH Servo Motor						
	Medium inertia flange size 110mm						
Model	SMH110D-0125-30A□K-4LKC	SMH110D-0126-30A□K-4HKC	SMH110D-0105-20A□K-4LKC	SMH110D-0157-30A□K-4HKC	SMH110D-0126-20A□K-4LKC	SMH110D-0188-30A□K-4HKC	
Driver matching	JD430-AA-000 FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	JD430-AA-000 FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	JD430-AA-000 FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	
DC link voltage UDC	300	560	300	560	300	560	
Continuous performance	Rated power P_N (W)	1250	1260	1050	1570	1260	1880
	Rated torque T_N (Nm)	4	4	5.0	5.0	6.0	6.0
	Rated speed n_N (rpm)	2000	3000	2000	3000	2000	3000
	Rated current I_N (A)	6.5	4.3	5.9	5.9	6.2	6.2
Maximum torque T_m (Nm)	12	12	15.0	15.0	18.0	18.0	
Maximum current I_m (A)	19.5	12.9	17.7	17.7	18.6	18.6	
Standstill torque T_s (Nm)	4.4	4.4	5.5	5.5	6.6	6.6	
Standstill current I_s (A)	6.82	4.73	6.49	6.49	6.765	6.765	
Resistance line-line R_L (Ω)	0.8	1.83	1.03	1.03	1.258	1.258	
Inductance line-line L_L (mH)	6.4	13.5	7.8	7.8	9.62	9.62	
Electrical time constant τ_e (ms)	7.9	7.37	7.57	7.57	7.64	7.64	
Mechanical time constant τ_m (ms)	1.4	1.63	1.55	1.55	1.65	1.65	
Reverse voltage constant K_e (V/krpm)	45	64	55	55	64	64	
Torque constant K_t (Nm/A)	0.744	1.058	0.910	0.910	1.058	1.058	
Rotor moment of inertia J_m (Kg-cm ²)	5.8	5.8	7.2	7.2	8.5	8.5	
	5.85 (with brake)	5.85 (with brake)	7.25 (with brake)	7.25 (with brake)	8.55 (with brake)	8.55 (with brake)	
Pole pair number	4	4	4	4	4	4	
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	8	
Insulation class	F	F	F	F	F	F	
Maximum radial force F_r (N)	630	630	630	630	630	630	
Maximum axial force F_a (N)	315	315	315	315	315	315	
Weight G(Kg)	6.2	6.2	7.2	7.2	8.2	8.2	
	8.2 (with brake)	8.2 (with brake)	9.2 (with brake)	9.2 (with brake)	10.2 (with brake)	10.2 (with brake)	
Length of motor L(mm)	168	168	185	185	202	202	
	228±1 (with brake)	228±1 (with brake)	245±1 (with brake)	245±1 (with brake)	262±1 (with brake)	262±1 (with brake)	
Position feedback device	2500 P/R Incremental encoder						
Cooling method	Totally enclosed, non - ventilated						
Protection level	IP65, shaft sealing IP54						
Environmental conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)					
	Humidity	Below 90 % RH (no condensation)					
	Ambient environment	Away from active gas,combustible gas,oil drops and dust					
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise					

Note : □=A —without brake □=B —with brake

Technical Specifications of SMH Servo Motor(3)



Motor series	SMH Series Motor						
	Medium inertia flange size 130mm				Medium inertia flange size 150mm		
Model	SMH130D-0105 -20A□K-4HKC	SMH130D-0157 -20A□K-4HKC	SMH130D-0210 -20A□K-4HKC	SMH130D-0300 -20A□K-4HKC	SMH150D-0230 -20A□K-4HKC	SMH150D-0300 -20A□K-4HKC	SMH150D-0380 -20A□K-4HKC
Driver matching	JD430-AA-000 JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	JD630-AA-000 JD630-LA-000	JD620-AA-000 FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	JD630-LA-000 JD630-AA-000	
DC link voltage UDC	560	560	560	560	560	560	560
Continuous performance	Rated power P_N (W)	1050	1570	2100	3000	2300	3800
	Rated torque T_N (Nm)	5	7.5	10	14.3	11.1	18
	Rated speed n_N (rpm)	2000	2000	2000	2000	2000	2000
	Rated current I_N (A)	4.3	6.3	7.6	7.9	7.1	9.3
Maximum torque T_m (Nm)	12.5	18.75	25	35.75	27.5	35.75	45
Maximum current I_m (A)	10.75	15.75	19	19.75	17.75	21.25	23.25
Standstill torque T_s (Nm)	5.5	8.25	11	15.73	12.1	15.73	19.8
Standstill current I_s (A)	4.73	6.93	8.36	8.7	7.81	9.35	10.23
Resistance line-line R_L (Ω)	1.85	1.17	0.98	0.84	2.2	1.4	1.3
Inductance line-line L_L (mH)	23.7	16.2	14.3	12.7	14(AVG)	10.6(AVG)	10.5(AVG)
Electrical time constant τ_e (ms)	12.81	13.846	14.592	14.94	6.36	7.57	8.08
Mechanical time constant τ_m (ms)	2.868	2.529	2.268	1.53	4.68	3.68	3.32
Reverse voltage constant K_e (V/krpm)	70	72	80	110	100	107	125
Torque constant K_t (Nm/A)	1.1578	1.191	1.3232	1.82	1.65	1.77	2.07
Rotor moment of inertia J_m (Kg-cm ²)	12	17.7	23.4	34.8	33.5	47.6	63.1
	12.0(with brake)	17.74(with brake)	23.44(with brake)	34.9(with brake)	33.6(with brake)	47.7(with brake)	63.2(with brake)
Pole pair number	4	4	4	4	4	4	4
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	8	8
Insulation class	F	F	F	F	F	F	F
Maximum radial force F (N)	900	900	900	900	1200	1200	1200
Maximum axial force F (N)	450	450	450	450	600	600	600
Weight G (Kg)	7.5	9.1	10.7	13.9	12	15	18
	9.7(with brake)	11.3(with brake)	12.9(with brake)	14.9(with brake)	15.5(with brake)	18.5(with brake)	22.5(with brake)
Length of motor L (mm)	159±1.5	179±1.5	199±1.5	239±0.15	226±1.5	254±1.5	282±1.5
	220±1.5(with brake)	240±1.5(with brake)	260±1.5(with brake)	280±1.5(with brake)	292±1.5(with brake)	320±1.5(with brake)	352±1.5(with brake)
Position feedback device	2500 P/R Incremental encoder						
Cooling method	Totally enclosed, non - ventilated						
Protection level	IP65, shaft sealing IP54						
Environmental conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)					
	Humidity	Below 90 % RH (no condensation)					
	Ambient environment	Away from active gas,combustible gas,oil drops and dust					
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise					

Note : □=A —without brake
 □=B —with brake

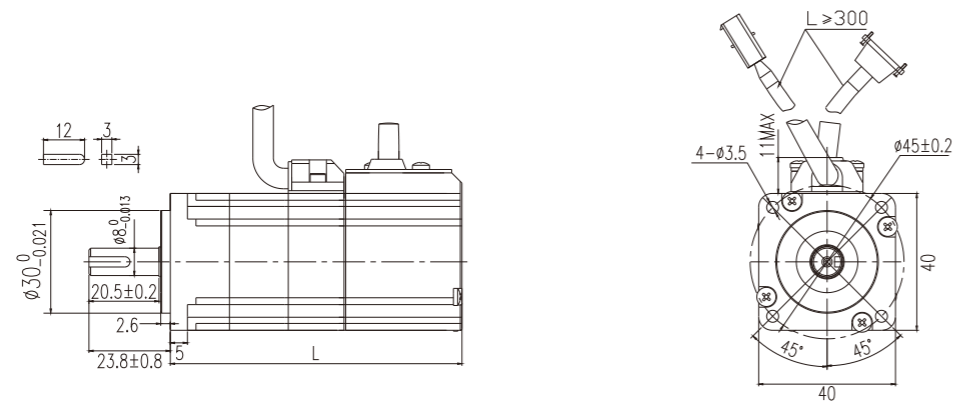
Technical Specifications of SMH Servo Motor(4)



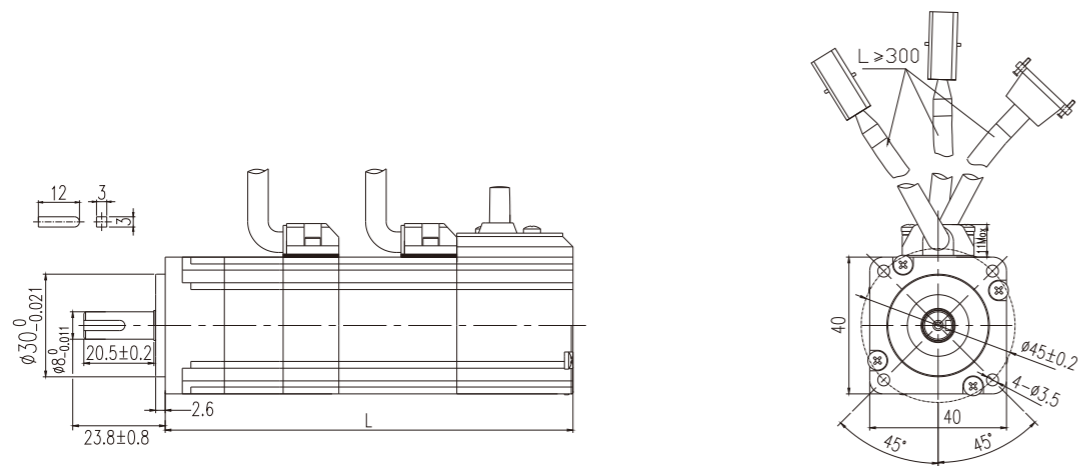
Motor series	SMH Series Motor				
	Medium inertia flange size 180mm				
Model	SMH180D-0350 -15A□K-4HKC	SMH180D-0440 -15A□K-4HKC	SMH180D-0440 -15A□K-4HKC	SMH180D-0750 -15A□K-4HKC	
Driver matching	JD630-LA-000 JD630-AA-000	JD640-LA-000 JD640-AA-000	JD640-AR-000	JD650-AR-000	
DC link voltage UDC	560	560	560	560	
Continuous performance	Rated power P_N (W)	3500	4400	4400	7500
	Rated torque T_N (Nm)	22	28	28	48
	Rated speed n_N (rpm)	1500	1500	1500	1500
	Rated current I_N (A)	10.3	11.9	11.9	19.2(REF)
Maximum torque T_m (Nm)	55	70	70	120	
Maximum current I_m (A)	25.75	29.75	29.75	47.9(REF)	
Standstill torque T_s (Nm)	24.2	30.8	30.8	52.8	
Standstill current I_s (A)	11.33	13.09	13.09	21.1(REF)	
Resistance line-line R_L (Ω)	1.2	0.65	0.65	0.38	
Inductance line-line L_L (mH)	12.7(AVG)	8.5	8.5	5.89	
Electrical time constant τ_e (ms)	10.58	13.08	13.08	15.5	
Mechanical time constant τ_m (ms)	3.42	2.16	2.16	1.81	
Reverse voltage constant K_e (V/krpm)	135	150	150	159	
Torque constant K_t (Nm/A)	2.23	2.48	2.48	2.63	
Rotor moment of inertia J_m (Kg-cm ²)	82	118	118	190	
	82.2 (with brake)	118.2 (with brake)	118.2 (with brake)	190.3 (with brake)	
Pole pair number	4	4	4	4	
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	
Insulation class	F	F	F	F	
Maximum radial force F (N)	1600	1600	1600	1600	
Maximum axial force F (N)	800	800	800	800	
Weight G (Kg)	22.7	28.6	28.6	40	
	27.9 (with brake)	33.8 (with brake)	33.8 (with brake)	47 (with brake)	
Length of motor L (mm)	260±1.5	298±1.5	298±1.5	374±1.5	
	332±1.5 (with brake)	370±1.5 (with brake)	370±1.5 (with brake)	451±1.5 (with brake)	
Position feedback device	Incremental encoder 2500P/R				
Cooling method	Totally enclosed, non-ventilated				
Protection level	IP65 for body, shaft sealing IP54				
Environmental conditions for 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			

Note : □=A —without brake
 □=B —with brake

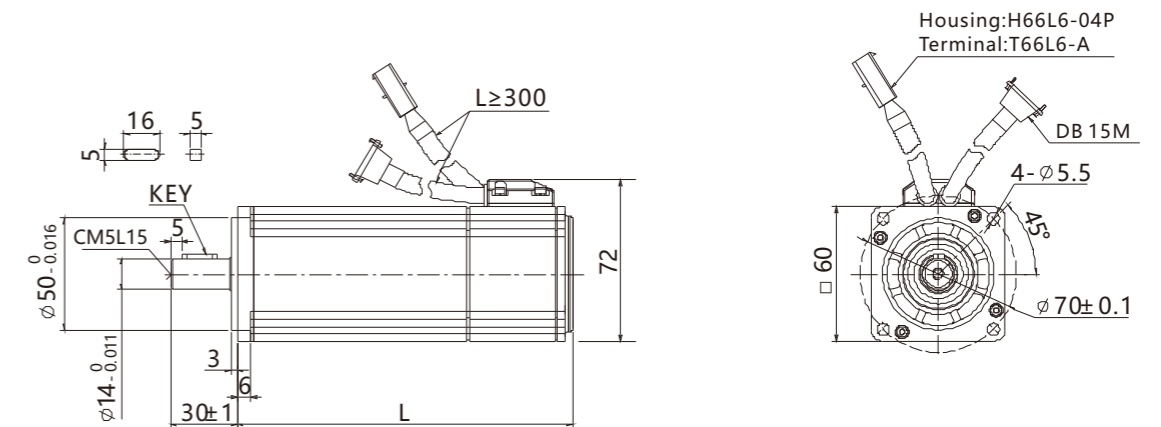
SMH Series 40 Flange Outlet Motor



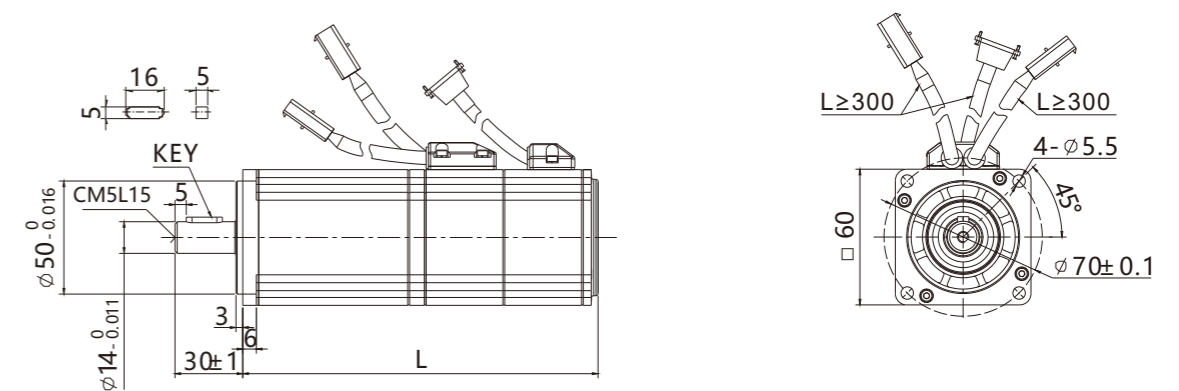
SMH Series 40 Flange Outlet Motor (with brake)



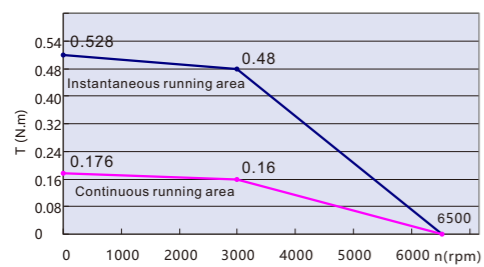
SMH Series 60 Flange Outlet Motor



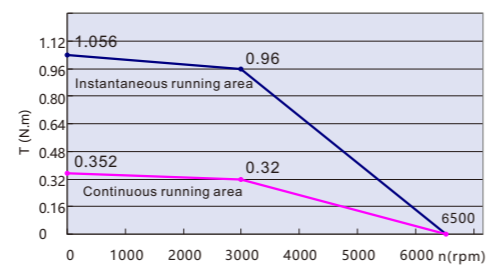
SMH Series 60 Flange Outlet Motor (with brake)



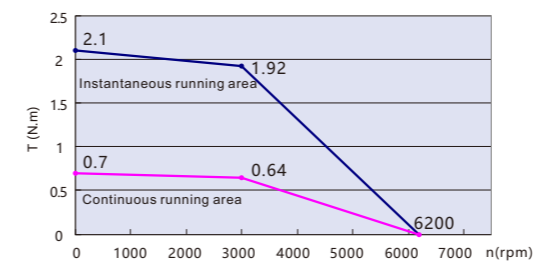
SMH40S-0005-30A □ K-4LKH 50W



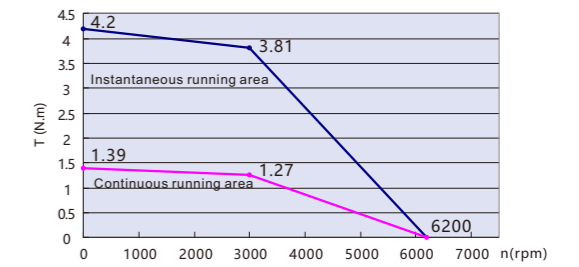
SMH40S-0010-30A □ K-4LKH 100W



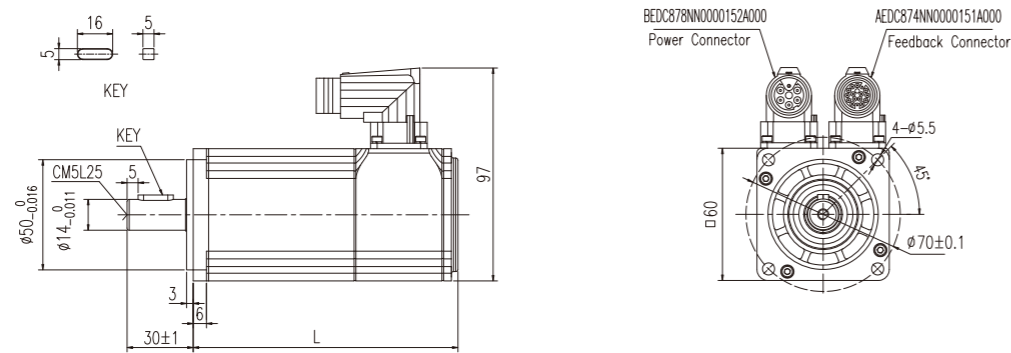
SMH60S-0020-30A □ K-3LK □ 200W



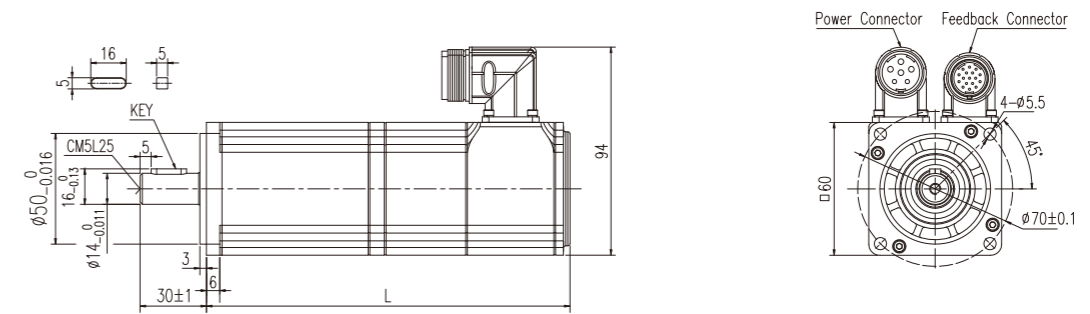
SMH60S-0040-30A □ K-3LK □ 400W



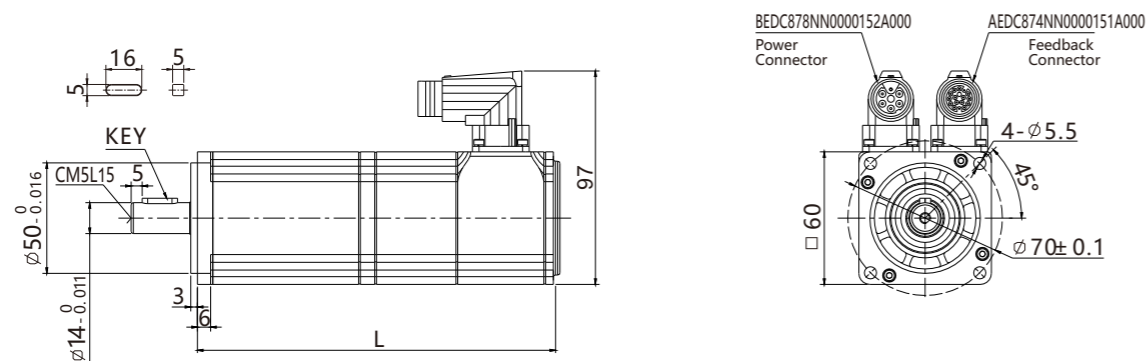
SMH Series 60 flange inlet aviation socket motor



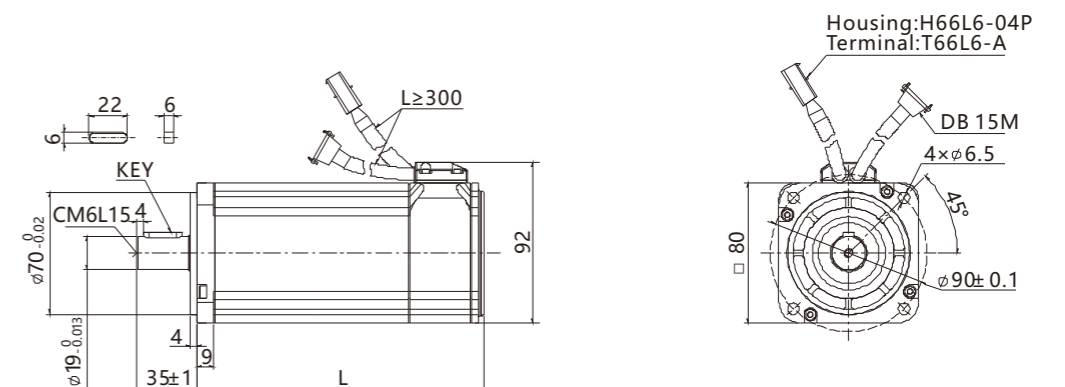
SMH Series 60 flange HFO aviation socket motor (with brake)



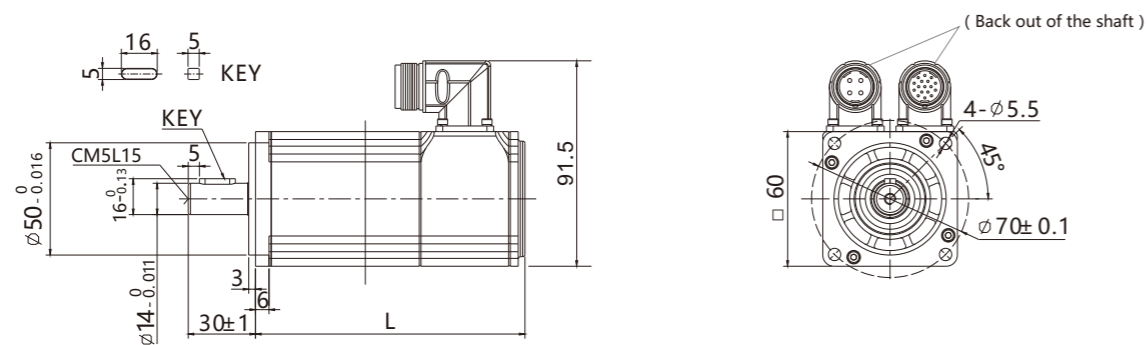
SMH Series 60 flange inlet aviation socket motor (with brake)



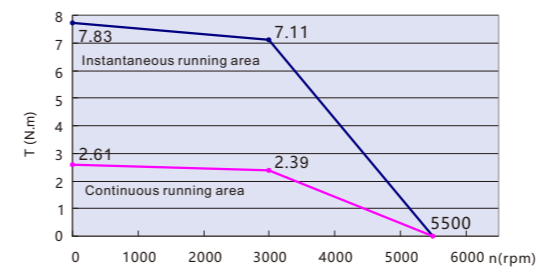
SMH Series 80 Flange Outlet Motor



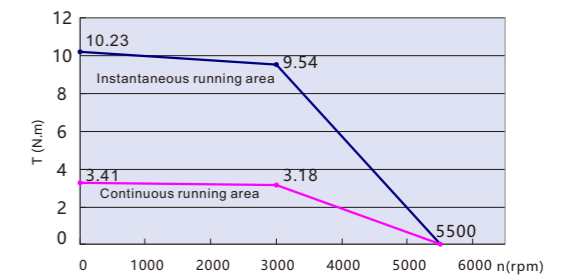
SMH Series 60 flange HFO aviation socket motor



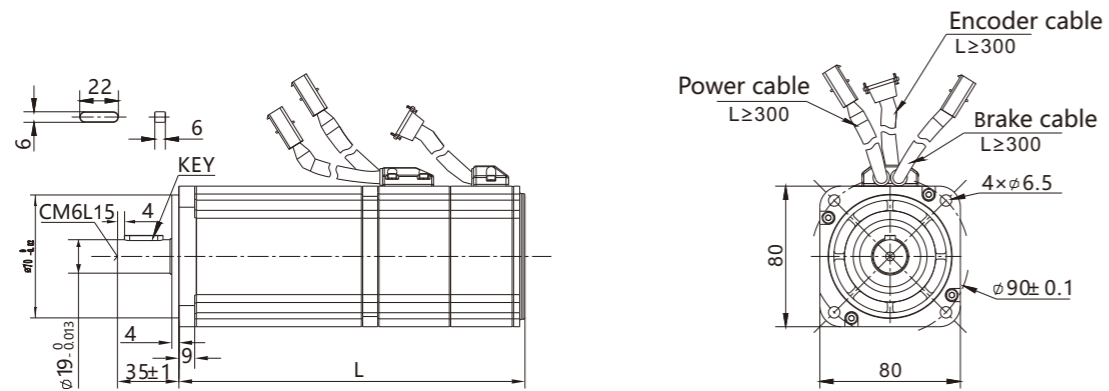
SMH80S-0075-30A □ K-3LK □ 750W



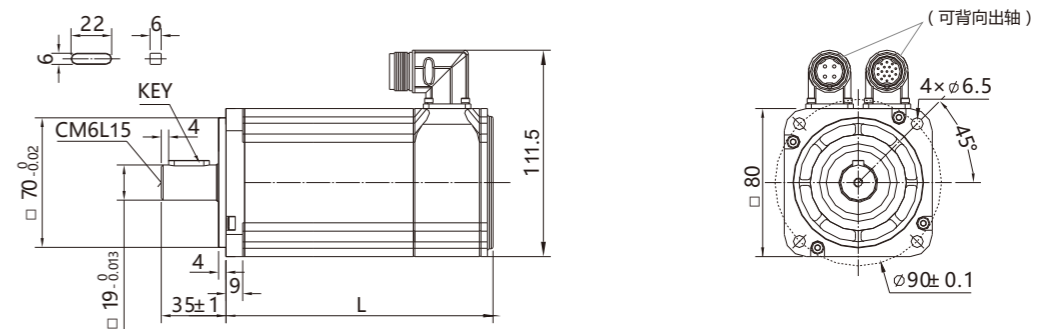
SMH80S-0100-30A □ K-3LK □ 1000W



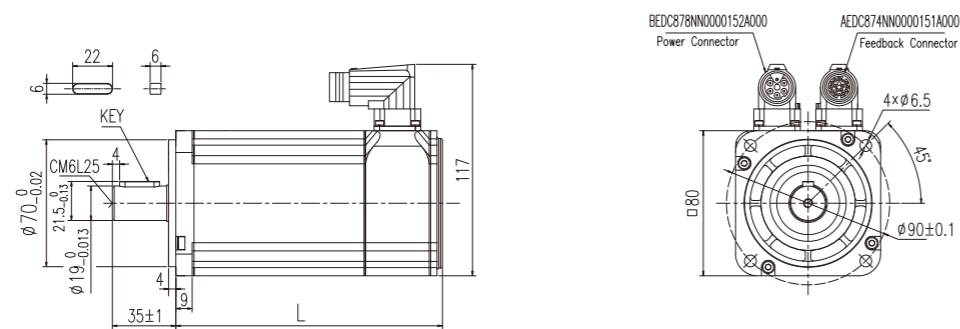
SMH Series 80 Flange Outlet Motor (with brake)



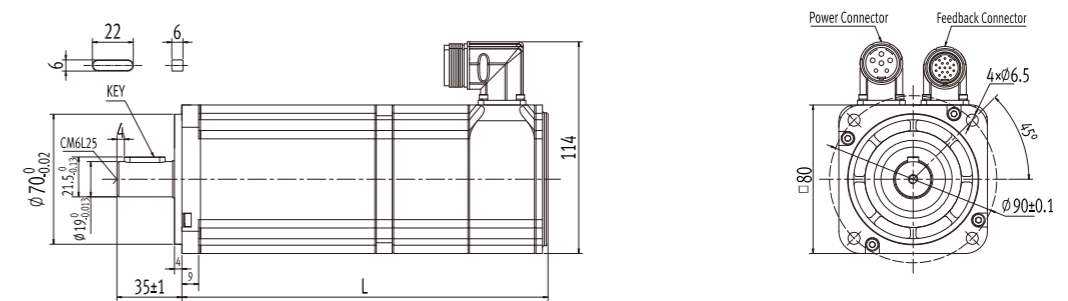
SMH Series 80 flange HFO aviation socket motor



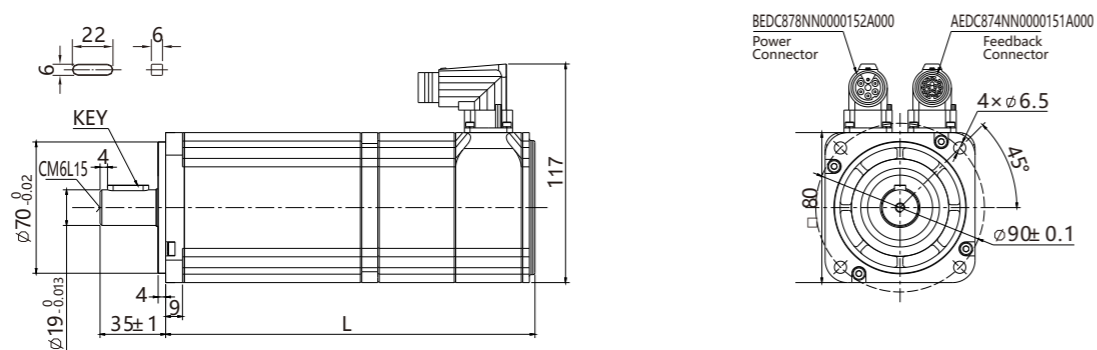
SMH Series 80 flange inlet aviation socket motor



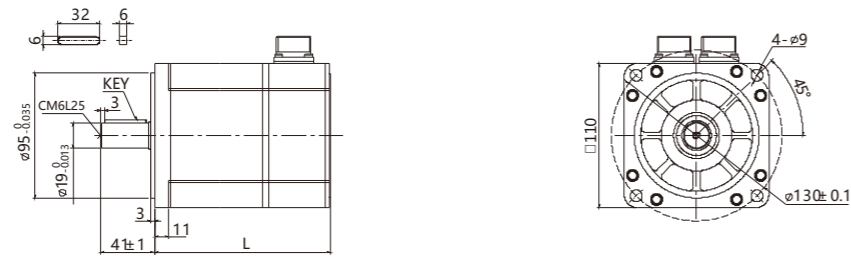
SMH Series 80 flange HFO aviation socket motor (with brake)



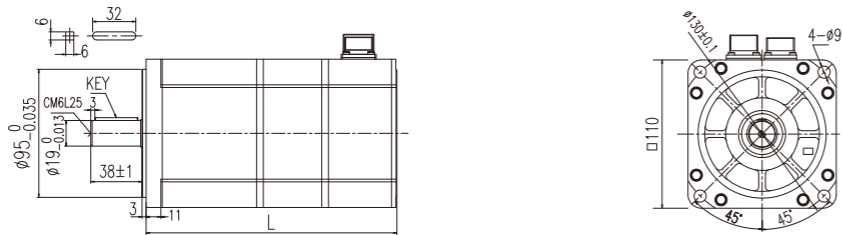
SMH Series 80 flange inlet aviation socket motor (with brake)



SMH Series 110 flange general aviation socket motor

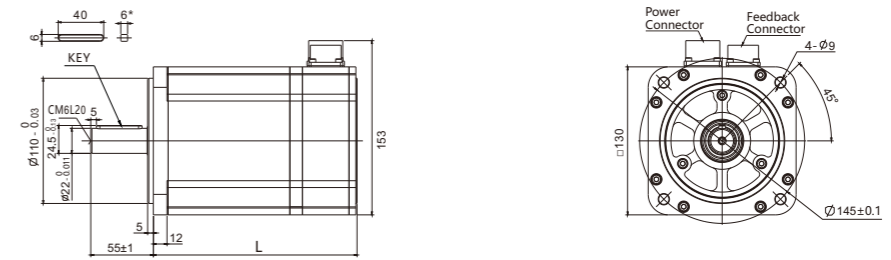


SMH Series 110 flange general aviation socket motor (with brake)

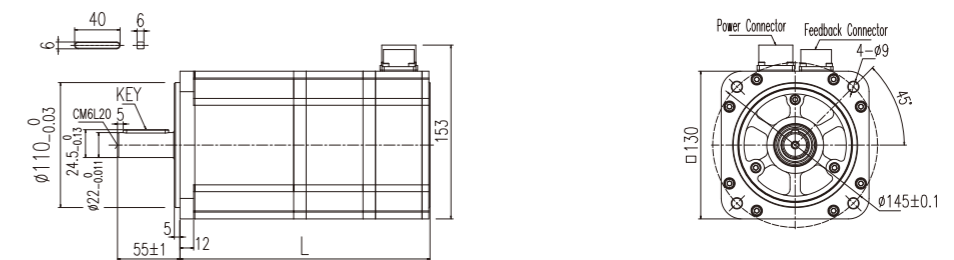


SMH Series 130 flange general aviation socket motor

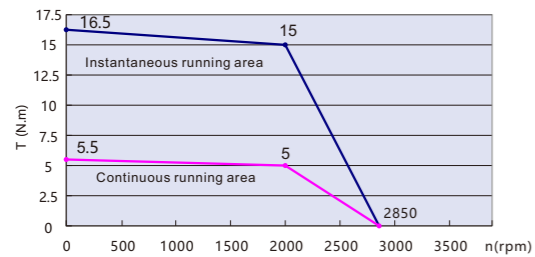
*Note: the SMH130D-0300-20A □ K-4HKC key is 8.



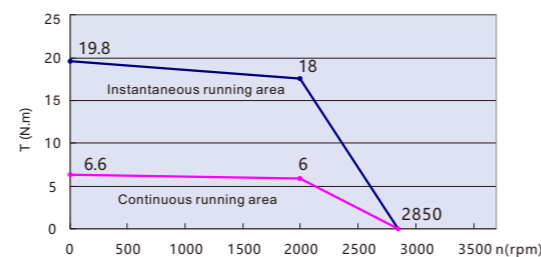
SMH Series 130 flange general aviation socket motor (with brake)



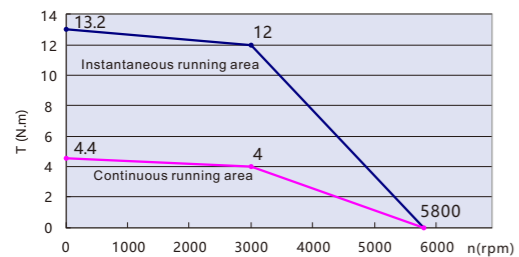
SMH110D-0105-20A □ K-4LKC 1.05KW



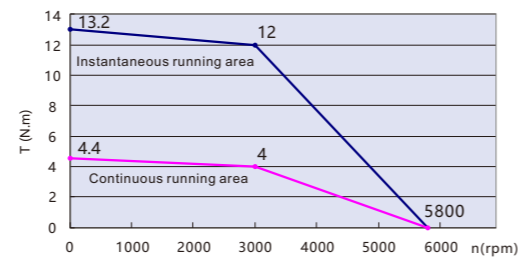
SMH110D-0126-20A □ K-4LKC 1.26KW



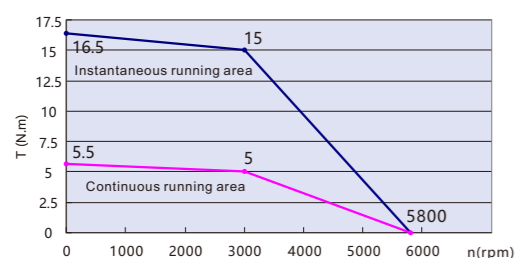
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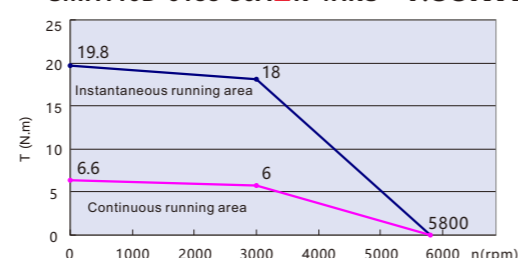
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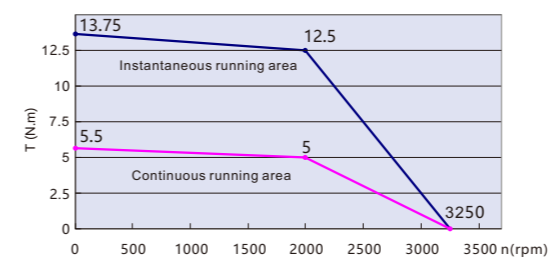
SMH110D-0157-30A □ K-4HKC 1.57KW



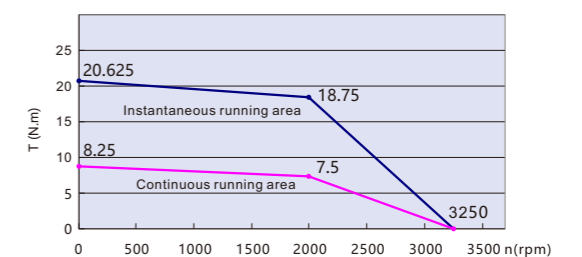
SMH110D-0188-30A □ K-4HKC 1.88KW



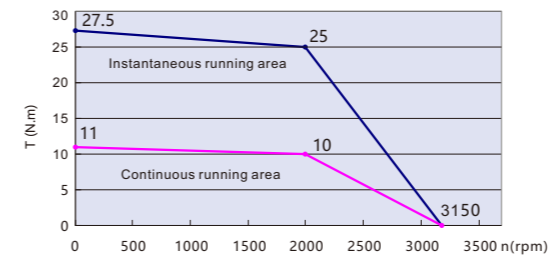
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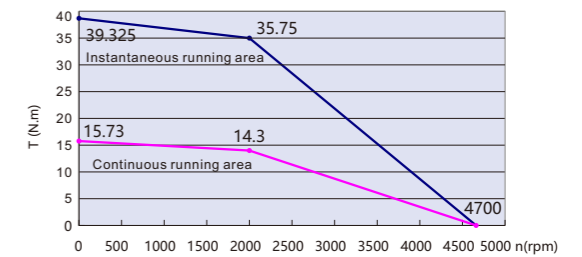
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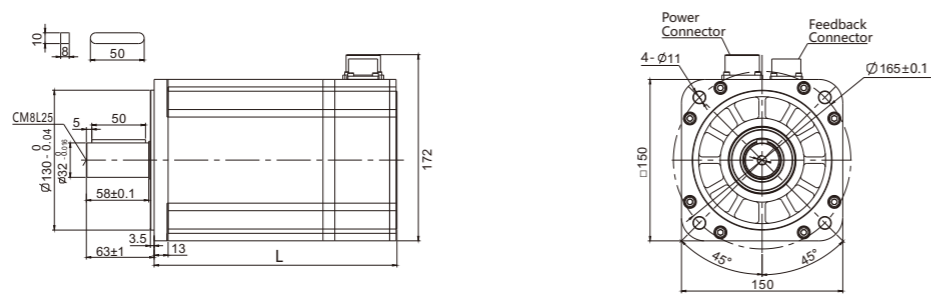
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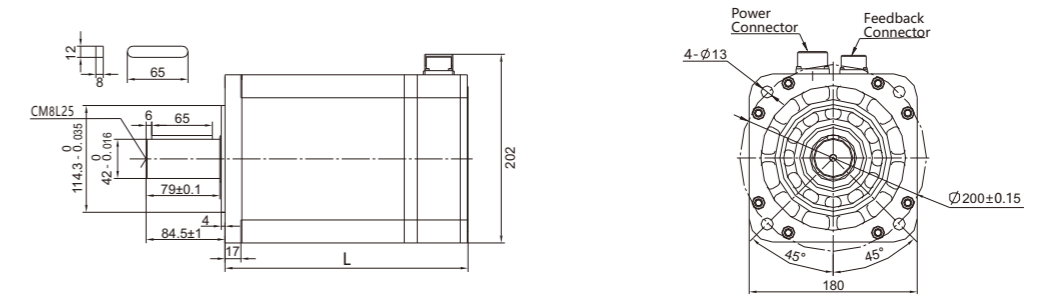
SMH130D-0300-20A □ K-4HKC 3KW



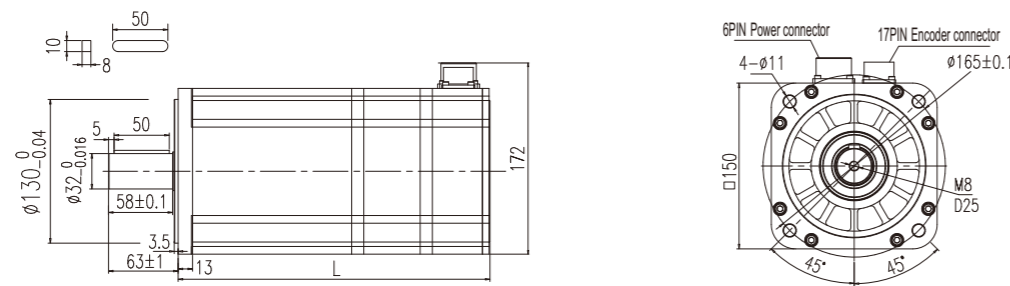
SMH Series 150 flange general aviation socket motor



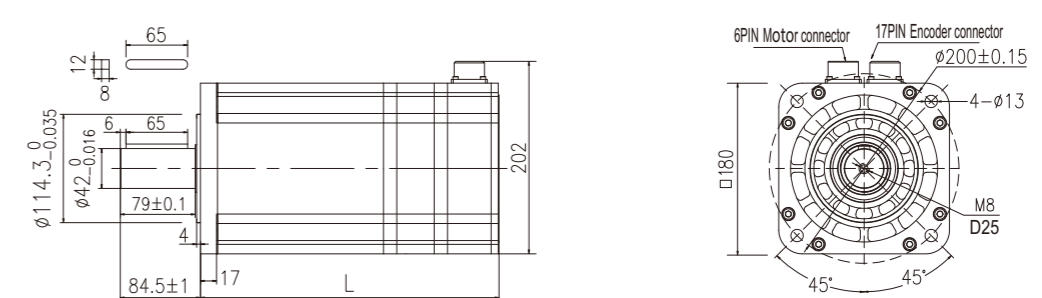
SMH Series 180 flange general aviation socket motor



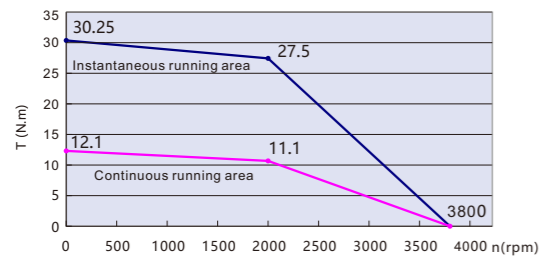
SMH Series 150 flange general aviation socket motor (with brake)



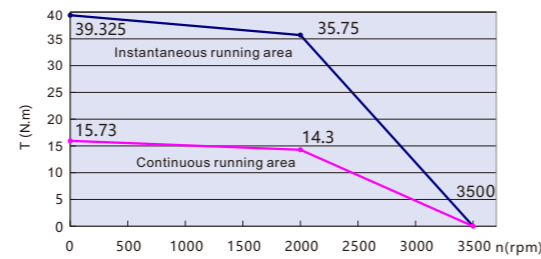
SMH Series 180 flange general aviation socket motor (with brake)



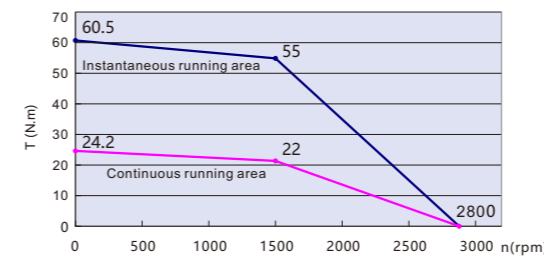
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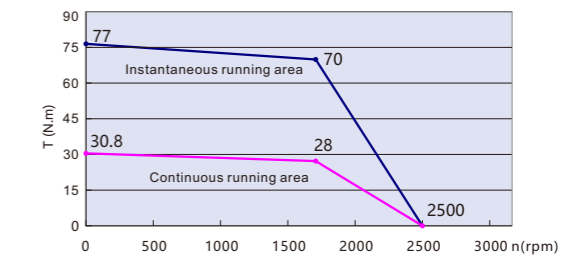
SMH150D-0300-20A □K-4HKC 3KW



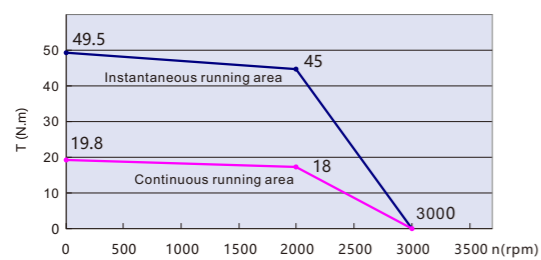
SMH180D-0350-15A □K-4HKC 3.5KW



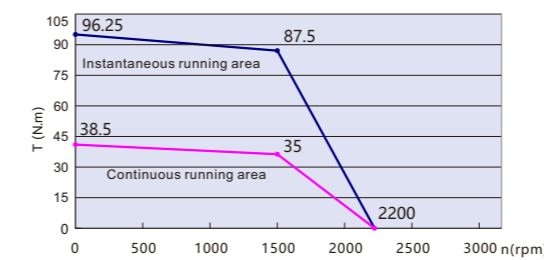
SMH180D-0440-15A □K-4HKC 4.4KW



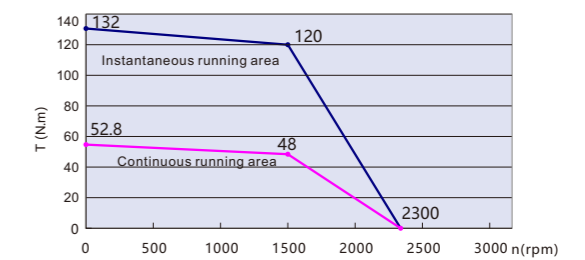
SMH150D-0380-20A □K-4HKC 3.8KW



SMH180D-0550-15R □K-4HKC 5.5KW



SMH180D-0750-15R □K-4HKC 7.5KW



Technical Specifications of SMG Servo Motor (1)



Motor Series	SMG Series Motor						
	Medium inertia flange size 130mm						
Model	SMG130D-0100 -10A □ K-4LKG	SMG130D-0100 -20A □ K-4LKG	SMG130D-0150 -20A □ K-4LKG	SMG130D-0150 -20A □ K-4HKG	SMG130D-0200 -20A □ K-4LKG	SMG130D-0200 -20A □ K-4HKG	SMG130D-0300 -20A □ K-4HKG
Driver matching	FD422S-LF-000 FD422S-CF-000 FD422S-EF-000 CD422S-AF-000 JD430-AA-000		CD432S-AA-000 FD432S-LA-000 FD432S-CA-000 FD432S-EA-000 JD430-AA-000	FD612S-LA-000 FD612S-CA-000 FD612S-EA-000 CD612S-AA-000 JD620-AA-000	CD432S-AA-000 FD432S-LA-000 FD432S-CA-000 FD432S-EA-000 JD430-AA-000	FD612S-LA-000 FD612S-CA-000 FD612S-EA-000 CD612S-AA-000 JD620-AA-000	FD622S-LA-000 FD622S-CA-000 FD622S-EA-000 CD622S-AA-000 JD620-AA-000
Rated Power (kW)	1	1	1.5	1.5	2	2	3
Rated voltage (V)	220	220	220	380	220	380	380
Rated current (A)	4.5	5	7.5	4.7	10	5.9	7.4
Rated speed (RPM)	1000	2000	2000	2000	2000	2000	2000
Rated torque (Nm)	10	5	7.7	7.7	10	10	15
Peak torque (Nm)	20	12.5	19.25	19.25	25	25	30
Peak current (A)	9	12.5	18.75	11.75	25	14.75	18.5
Reverse voltage	140	68	68	111	70	115	125
constant K_e (V/1000r/min) Torque constant k_t (Nm/A)	2.2	1	1.03	1.64	1	1.69	2.03
Rotor moment of inertia J_m (Kg·m ²)	1.94×10 ⁻³ 1.95×10 ⁻³ (with brake)	1.06×10 ⁻³ 1.07×10 ⁻³ (with brake)	1.53×10 ⁻³ 1.54×10 ⁻³ (with brake)	1.53×10 ⁻³ 1.54×10 ⁻³ (with brake)	1.94×10 ⁻³ 1.95×10 ⁻³ (with brake)	1.94×10 ⁻³ 1.95×10 ⁻³ (with brake)	2.77×10 ⁻³ 2.78×10 ⁻³ (with brake)
Resistance Line-Line R_L (Ω)	2.7	1.84	1.01	2.49	0.73	1.986	1.41
Inductance Line-Line L_L (mH)	8.8	4.9	2.94	7.08	2.45	6.2	5.5
Electrical time constant τ_e (ms)	3.26	2.66	2.91	2.84	3.36	3.12	3.9
Length of motor L (mm)	213±1 294±1 (with brake)	171±1 228±1 (with brake)	192±1 249±1 (with brake)	192±1 249±1 (with brake)	209±1 290±1 (with brake)	209±1 290±1 (with brake)	231±1 312±1 (with brake)
Weight (Kg)	10.2±0.7 12.5±0.7 (with brake)	6.6±0.7 8.9±0.7 (with brake)	8.3±0.7 10.6±0.7 (with brake)	8.3±0.7 10.6±0.7 (with brake)	9.8±0.7 12.1±0.7 (with brake)	9.8±0.7 12.1±0.7 (with brake)	11.7±0.7 14±0.7 (with brake)
Maximum radial force F_r (N)	900	900	900	900	900	900	900
Maximum axial force F_a (N)	300	300	300	300	300	300	300
Pole pair number	4						
Encoder	2500 P/R Incremental encoder						
Insulation class	F						
Protection level	IP65						
Environment conditions for operation	Temperature: - 20 ~ 40°C (non-freezing) ;Humidity : Below 90 % RH (no condensation)						

Note : □=A —without brake
□=B —with brake

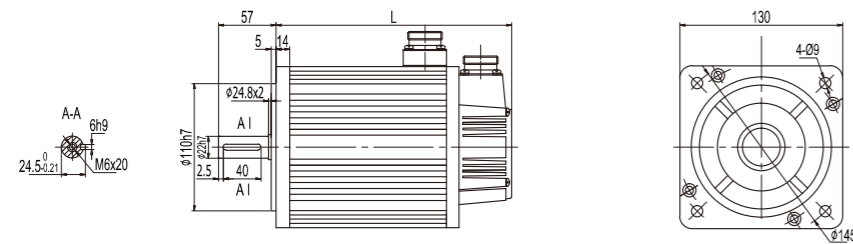
Technical Specifications of SMG Servo Motor(2)



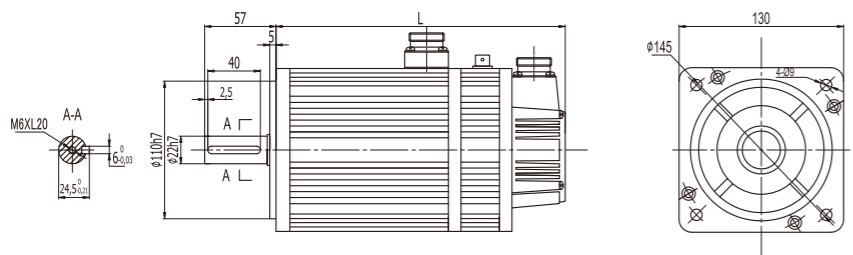
Motor Series	SMG Series Motor		
	Medium inertia flange size 180mm		
Model	SMG180D-0440-15A □ K-4HKG	SMG180D-0550-15A □ K-4HKG	SMG180D-0750-15A □ K-4HKG
Driver matching	JD640-LA-000 JD640-AA-000		JD650-AA-000
Rated Power (kW)	4.4	5.5	7.5
Rated voltage (V)	380	380	380
Rated current (A)	10	12	20
Rated speed (RPM)	1500	1500	1500
Rated torque (Nm)	27	35	48
Peak torque (Nm)	67	70	96
Peak current (A)	24.81	30	50
Reverse voltage constant K_e (V/1000r/min)	172	181	156
Torque constant k_t (Nm/A)	2.7	2.9	2.4
Rotor moment of inertia J_m (Kg·m ²)	9.64 × 10 ⁻³ 9.66 × 10 ⁻³ (with brake)	12.25 × 10 ⁻³ 12.28 × 10 ⁻³ (with brake)	16.72 × 10 ⁻³ 16.75 × 10 ⁻³ (with brake)
Resistance Line - Line R_L (Ω)	0.796	0.62	0.273
Inductance Line - Line L_L (mH)	4.83	4	2.14
Electrical time constant τ_e (ms)	6	6.45	7.8
Length of motor L (mm)	262±1.4 334±1.4(with brake)	292±1.4 365±1.4(with brake)	346±1.4 418±1.4(with brake)
Weight (Kg)	25.5±0.7 30.7±0.7(with brake)	30.5±0.7 37.5±0.7(with brake)	40±0.7 47±0.7(with brake)
Maximum radial force F_r F(N)	1500	1500	1500
Maximum axial force F (N)	600	600	600
Pole pair number	4		
Encoder	2500 P/R Incremental encoder		
Insulation class	F		
Protection level	IP65		
Environment conditions for operation	Temperature: - 20 ~ 40°C (non-freezing) ;Humidity : Below 90 % RH (no condensation)		

Note : □=A —without brake
□=B —with brake

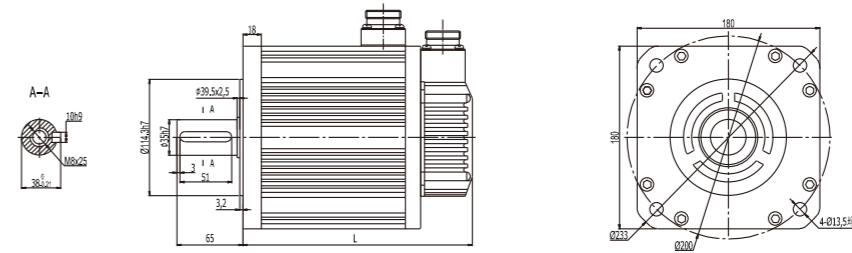
SMG Series 130 flange general aviation socket motor



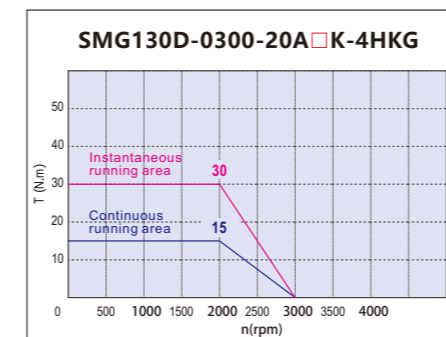
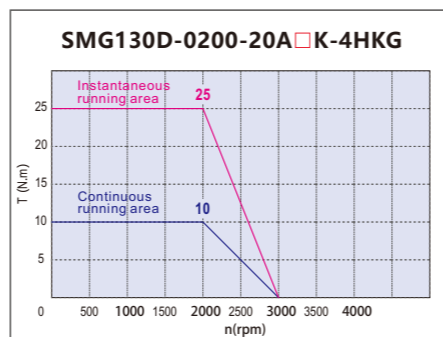
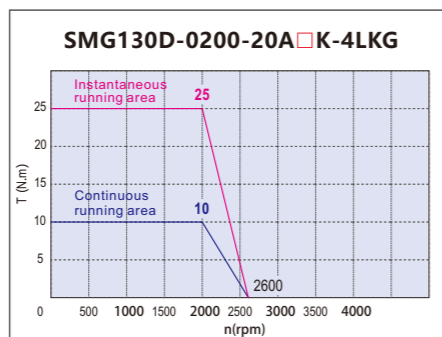
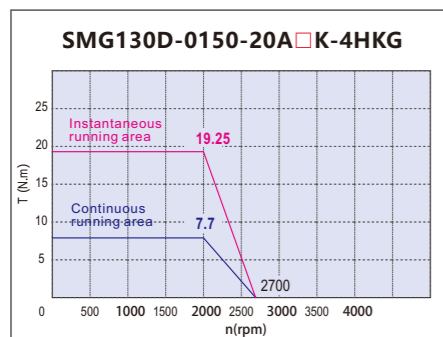
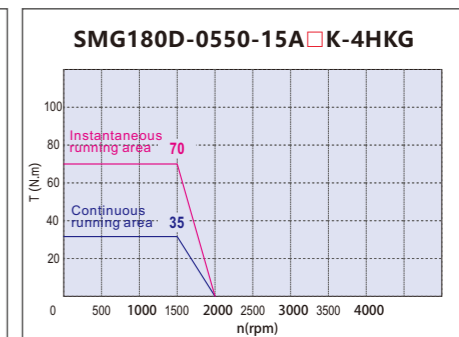
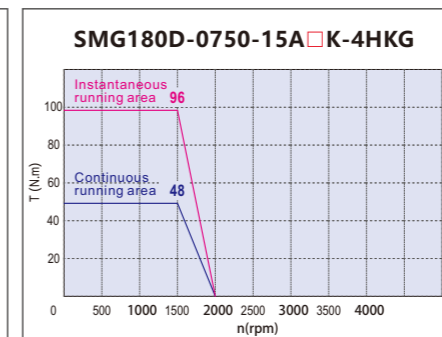
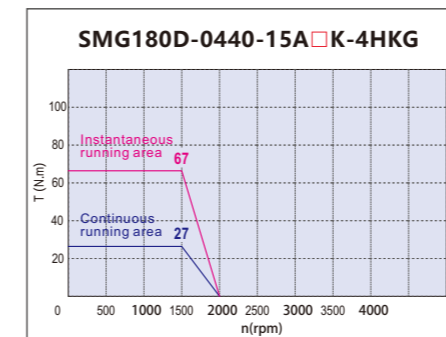
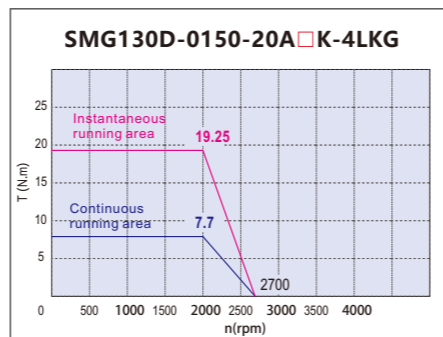
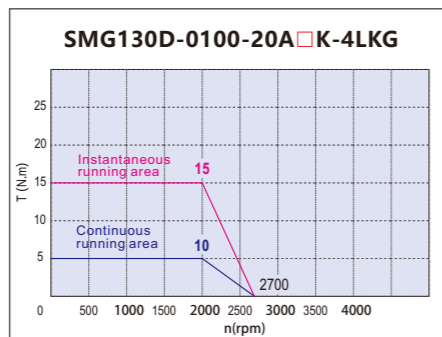
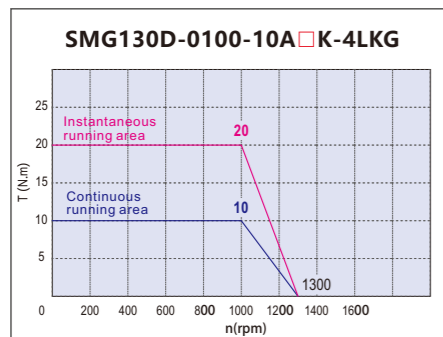
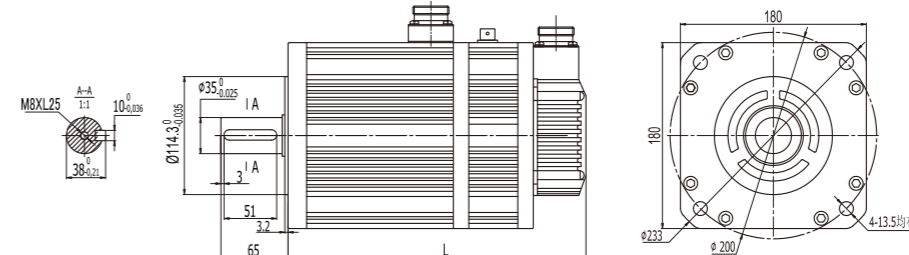
SMG Series 130 flange general aviation socket motor (with brake)

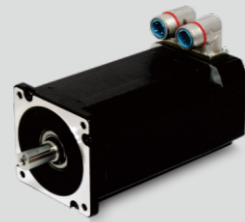


SMG Series 180 flange general aviation socket motor



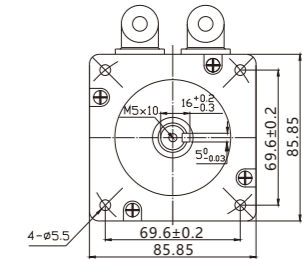
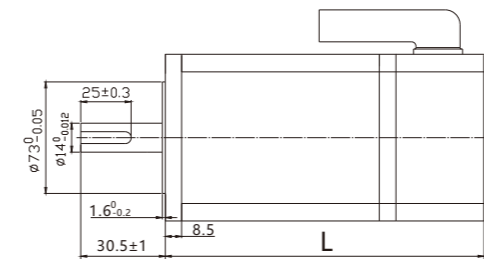
SMG Series 180 flange general aviation socket motor (with brake)



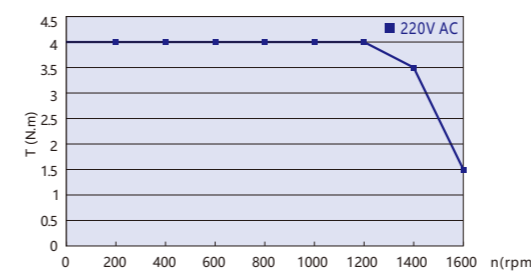


Multi-pole servo motor	Multipole servo motor		
	Small inertia flange size 85mm		
Model	85S-0025-05AAK-FLFN-02	85S-0035-05AAK-FLFN-02	85S-0045-05AAK-FLFN-02
Driver matching	FD422S-CA-000 FD422S-LA-000 FD422S-EA-000 CD422S-AA-000		
Rated phase current (A)	4	4	4
Holding torque (Nm)	4.18	6	7.5
Damping torque (Nm)	0.3	0.4	0.45
Resistance line-line (Ω)	1.13	2.3	1.78
Inductance line-line (mH)	5.75	12.4	17.1
Rotor moment of inertia J_m (Kg·cm ²)	0.232	0.33	0.44
Length L (mm)	142±1	172±1	202±1
Maximum radial force F_r (N)	60	60	60
Maximum axial force F_a (N)	220	220	220
weight (Kg)	2.7	3.8	5.3
Dielectric strength	1500V AC 1S 5mA		
Insulation class	B		
operation teperature	- 20 ~ 50°C		
Surface temperature rising	Max,80°C		
Insulation impedance	Min.100M Ω , 500V DC		

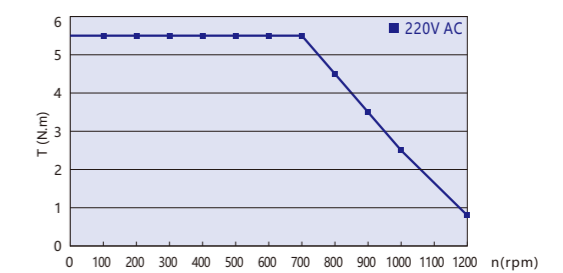
Multipole 85S aviation socket motor



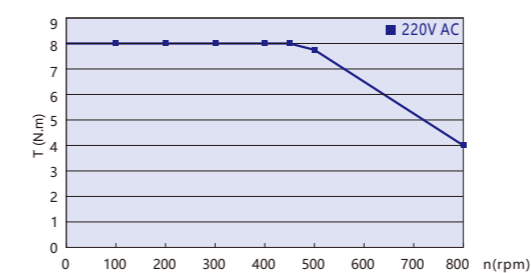
85S-0025-05AAK-FLFN-02 4.18NM



85S-0035-05AAK-FLFN-02 6NM



85S-0045-05AAK-FLFN-02 8NM





Model	SMC Series Motor		
	Small inertia flange size 60mm		Small inertia flange size 80mm
Driver matching	SMC60S-0020-30A□K-3LK□	SMC60S-0040-30A□K-3LK□	SMC80S-0075-30A□K-3LK□
DC link voltage UDC	FD422S-CA-000 FD422S-LA-000 FD422S-EA-000 CD422S-AA-000		
DC link voltage UDC	300	300	300
Maintain torque	Rated power P_N (W)	200	400
	Rated torque T_N (Nm)	0.64	1.27
	Rated speed n_N (rpm)	3000	3000
	Rated current I_N (A)	1.4	2.4
maximum torque T_m (Nm)	1.92	3.81	7.17
maximum current I_m (A)	4.2	7.2	11.4
Standstill torque T_s (Nm)	0.7	1.4	2.63
Standstill current I_s (A)	1.5	2.6	4.2
Resistance Line - Line R_L (Ω)	11.2	5.8	2.1
Inductance Line - Line L_L (mH)	20.9	11.5	10.5
Electrical time constant τ_e (ms)	1.87	1.98	5
Mechanical time constant τ_m (ms)	1.8	1.29	0.9
Reverse voltage constant K_e (V/krpm)	29	34	40
Torque constant K_t (Nm/A)	0.48	0.562	0.662
Rotor moment of inertia J_m (Kg-cm ²)	0.214	0.405	1.087
	0.218(with brake)	0.409(with brake)	1.099(with brake)
Maintain torque T (Nm)	1.3	1.3	3.2
pole pair number	3	3	3
Maximum voltage rising du/dt (KV/ μ s)	8	8	8
Insulation class	F	F	F
Maximum radial force F_r (N)	180	180	335
Maximum axial force F_a (N)	90	90	167.5
Weight G (Kg)	1.1	1.6	2.8
	1.6(with brake)	2.1(with brake)	3.4(with brake)
Length of motor L (mm)	109±1.5	135±1.5	139±1.5
	150±1.5(with brake)	176±1.5(with brake)	182±1.5(with brake)
Position feedback device	2500 P/R Incremental encoder		
Cooling method	Totally enclosed, non - ventilated		
Protection level	IP65, shaft sealing IP54		
Environment conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)	
	Humidity	Below 90 % RH (no condensation)	
	Ambient environment	Away from active gas,combustible gas,oil drops and dust	
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise	

Note : □=A — without brake □=H — 3 rows of 15-pin Connector
 □=B — with brake □=N — HFO18 series aviation standard connector(towards the shaft)
 □=P — HFO21+HFO18 series aviation standard connector(HFO21 power connector,HFO18 encoder connector)



Model	SMC Series Motor		
	Medium inertia flange size 130mm		
Driver matching	SMC130D-0100-20A□K-4LKP	SMC130D-0150-20A□K-4LKP	SMC130D-0200-20A□K-4LKP
DC link voltage UDC	FD422S-CF-000 FD422S-LF-000 FD422S-EF-000 CD422S-AF-000	FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000	
DC link voltage UDC	300	300	300
Maintain torque	Rated power P_N (W)	1000	1500
	Rated torque T_N (Nm)	4.8	7.2
	Rated speed n_N (rpm)	2000	2000
	Rated current I_N (A)	4.4	6.8
maximum torque T_m (Nm)	12	18	24
maximum current I_m (A)	13.2	20.4	26.4
Standstill torque T_s (Nm)	5.28	7.92	10.56
Standstill current I_s (A)	4.84	7.48	9.68
Resistance Line - Line R_L (Ω)	3.1	1.51	0.93
Inductance Line - Line L_L (mH)	24.07	13.8	8.8
Electrical time constant τ_e (ms)	7.76	9.14	9.46
Mechanical time constant τ_m (ms)	2.72	2.28	1.97
	2.76 (with brake)	2.3 (with brake)	1.98 (with brake)
Reverse voltage constant K_e (V/krpm)	73	71	72.8
Torque constant K_t (Nm/A)	1.21	1.17	1.2
Rotor moment of inertia J_m (Kg-cm ²)	7.4	12	17.7
	7.5 (with brake)	12.1 (with brake)	17.8 (with brake)
Maintain torque T (Nm)	10	10	10
pole pair number	4	4	4
Maximum voltage rising du/dt (KV/ μ s)	8	8	8
Insulation class	F	F	F
Maximum radial force F_r (N)	900	900	900
Maximum axial force F_a (N)	450	450	450
Weight G (Kg)	6.2	7.5	9.1
	8.5 (with brake)	9.8 (with brake)	11.4 (with brake)
Length of motor L (mm)	143±1.5	159±1.5	179±1.5
	204±1.5 (with brake)	220±1.5 (with brake)	240±1.5 (with brake)
Position feedback device	2500 P/R Incremental encoder		
Cooling method	Totally enclosed, non - ventilated		
Protection level	IP65, shaft sealing IP54		
Environment conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)	
	Humidity	Below 90 % RH (no condensation)	
	Ambient environment	Away from active gas,combustible gas,oil drops and dust	
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise	

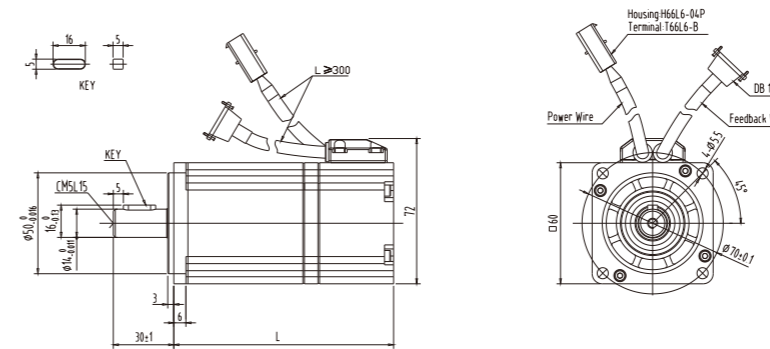
Note : □=A — without brake
 □=B — with brake



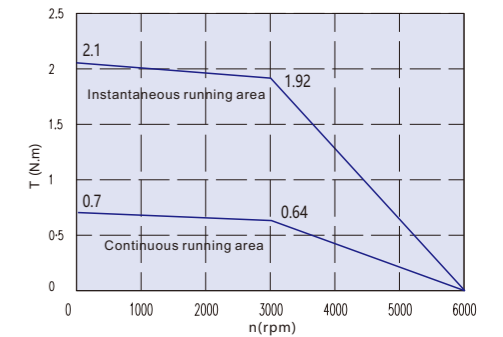
Model		SMC Series Motor		
		Medium inertia flange size 130mm		
Driver matching		SMC130D-0150-20A□K-4HKP	SMC130D-0200-20A□K-4HKP	SMC130D-0300-20A□K-4HKP
DC link voltage UDC		FD612S-CA-000 FD612S-LA-000 FD612S-EA-000 CD612S-AA-000		FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000
DC link voltage UDC		560	560	560
Maintain torque	Rated power P_N (W)	1500	2000	3000
	Rated torque T_N (Nm)	7.2	9.6	14.3
	Rated speed n_N (rpm)	2000	2000	2000
	Rated current I_N (A)	4.5	6.2	6.7
maximum torque T_m (Nm)		18	24	35.75
maximum current I_m (A)		13.5	18.6	20.1
Standstill torque T_s (Nm)		7.92	10.56	15.73
Standstill current I_s (A)		4.95	6.82	7.37
Resistance Line - Line R_L (Ω)		3.44	1.72	1.74
Inductance Line - Line L_L (mH)		31.26	17.1	18.9
Electrical time constant τ_e (ms)		9.09	9.9	10.86
Mechanical time constant τ_m (ms)		2.33	1.85	1.59
		2.35 (with brake)	1.86 (with brake)	1.59 (with brake)
Reverse voltage constant K_e (V/krpm)		106	102	142
Torque constant K_t (Nm/A)		1.75	1.69	2.35
Rotor moment of inertia J_m (Kg·cm ²)		12	17.7	29.1
		12.1 (with brake)	17.8 (with brake)	29.2 (with brake)
Maintain torque T (Nm)		10	10	10
pole pair number		4	4	4
Maximum voltage rising du/dt (KV/ μ s)		8	8	8
Insulation class		F	F	F
Maximum radial force F_r (N)		900	900	900
Maximum axial force F_a (N)		450	450	450
Weight G (Kg)		7.5	9.1	12.3
		9.8 (with brake)	11.4 (with brake)	14.9 (with brake)
Length of motor L (mm)		159±1.5	179±1.5	219±1.5
		220±1.5 (with brake)	240±1.5 (with brake)	280±1.5 (with brake)
Position feedback device		2500 P/R Incremental encoder		
Cooling method		Totally enclosed, non - ventilated		
Protection level		IP65, shaft sealing IP54		
Environment conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)		
	Humidity	Below 90 % RH (no condensation)		
	Ambient environment	Away from active gas,combustible gas,oil drops and dust		
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise.		

Note : □=A — without brake
 □=B — with brake

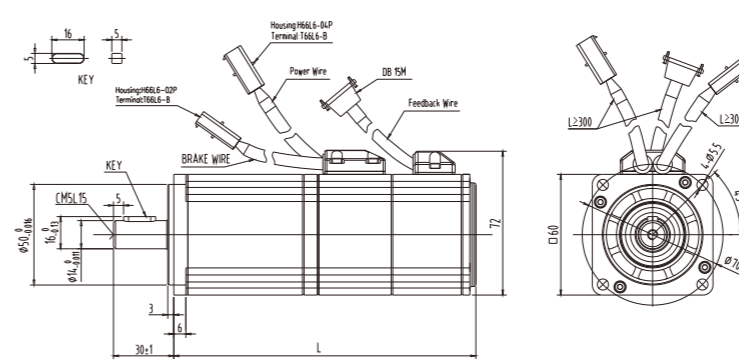
SMC Series 60 flange lead - out motor



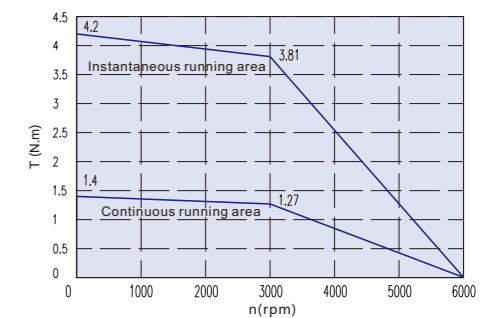
SMC60S-0020-30A□K-3LK□ 200W



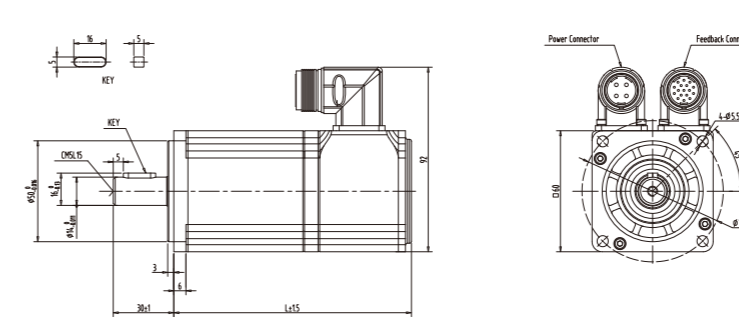
SMC Series 60 flange lead - out motor(with brake)



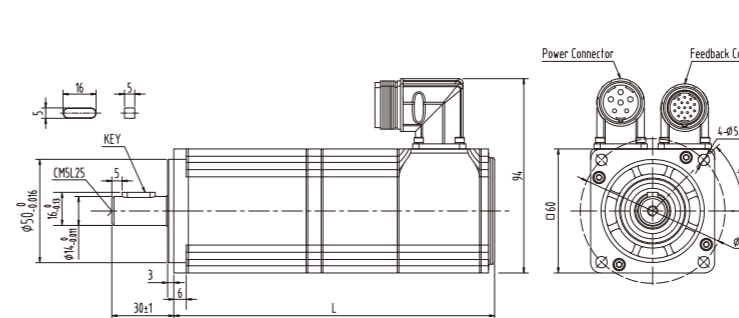
SMC60S-0040-30A□K-3LK□ 400W



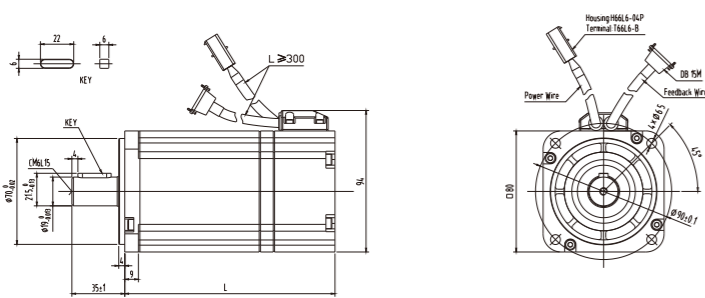
SMC Series 60 flange HFO aviation socket motor



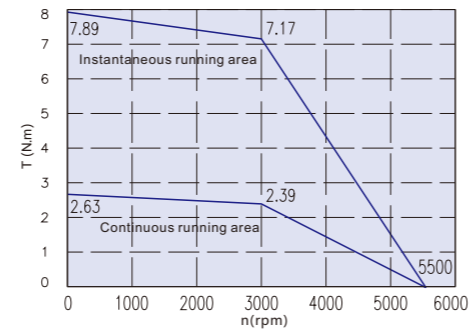
SMC Series 60 flange HFO aviation socket motor(with brake)



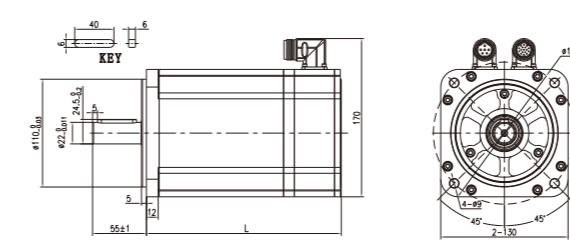
SMC Series 80 flange lead - out motor



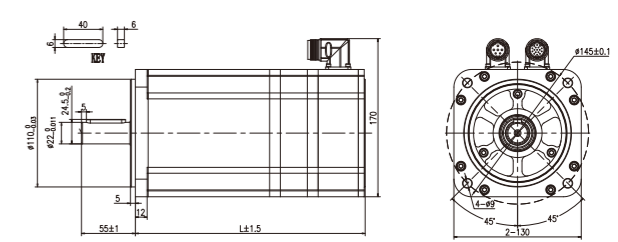
SMC80S-0075-30A □ K-3LK □ 750W



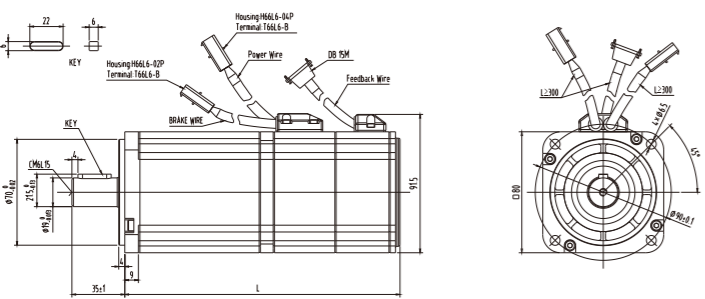
SMC series 130 flange general aviation socket motor



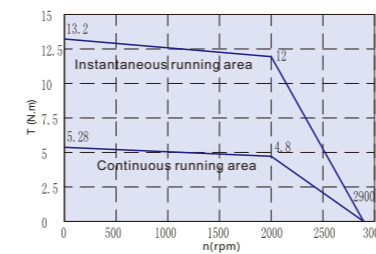
SMC series 130 flange general aviation socket motor (with brake)



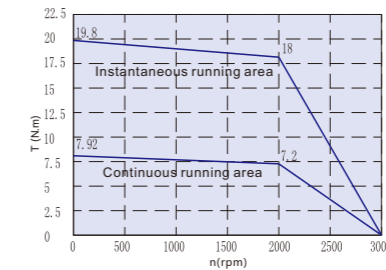
SMC Series 80 flange lead - out motor (with brake)



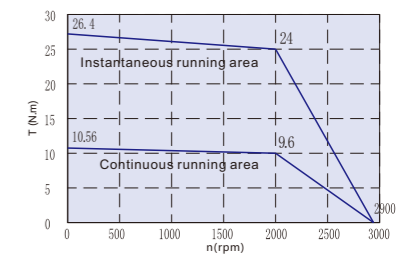
SMC130D-0100-20A □ K-4LKP



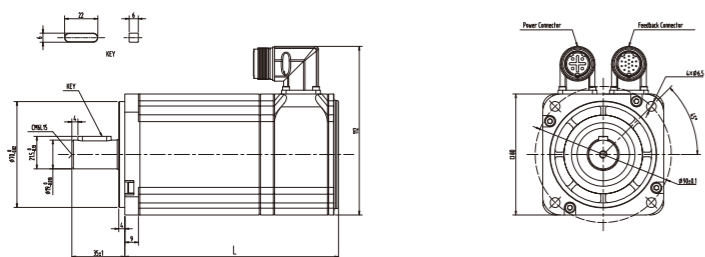
SMC130D-0150-20A □ K-4LKP



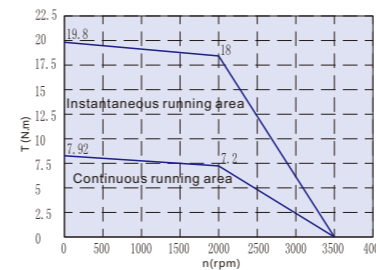
SMC130D-0200-20A □ K-4LKP



SMC Series 80 flange HFO aviation socket motor



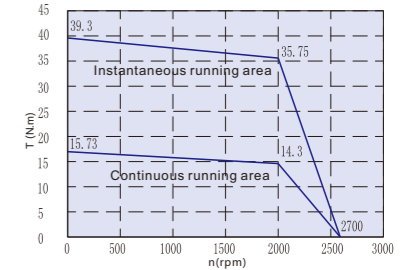
SMC130D-0150-20A □ K-4HKP



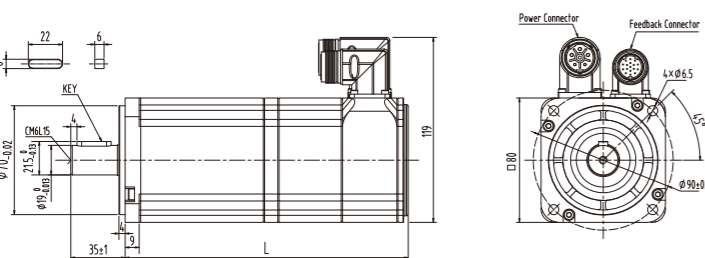
SMC130D-0200-20A □ K-4HKP



SMC130D-0300-20A □ K-4HKP



SMC Series 80 flange HFO aviation socket motor (with brake)



Technical Specifications of SMS Magnetolectric Encoder Motor(1)



Model	SMS Series Motor					
	Small inertia flange size 40mm		Small inertia flange size 60mm		Small inertia flange size 80mm	
Driver matching	SMS40S-0005-30K□K-5LSU	SMS40S-0010-30K□K-5LSU	SMS60S-0020-30K□K-3LSU	SMS60S-0040-30K□K-3LSU	SMS80S-0075-30K□K-3LSU	
DC link voltage UDC	FD412S-CA-000 FD412S-LA-000 FD412S-EA-000 CD412S-AA-000		FD422S-CA-000 FD422S-LA-000 FD422S-EA-000 CD422S-AA-000			
DC link voltage UDC	300	300	300	300	300	
Maintain torque	Rated power P_N (W)	50	100	200	400	750
	Rated torque T_N (Nm)	0.16	0.32	0.64	1.27	2.39
	Rated speed n_N (rpm)	3000	3000	3000	3000	3000
	Rated current I_N (A)	0.7	1.4	1.4	2.4	3.8
maximum torque T_m (Nm)	0.48	0.96	1.92	3.81	7.17	
maximum current I_m (A)	2.25	4.2	4.2	7.2	11.4	
Standstill torque T_s (Nm)	0.176	0.352	0.7	1.4	2.63	
Standstill current I_s (A)	0.83	1.54	1.5	2.6	4.2	
Resistance Line - Line R_L (Ω)	16.2	7.9	11.2	5.8	2.1	
Inductance Line - Line L_L (mH)	18.5	10.5	20.9	11.5	10.5	
Electrical time constant τ_e (ms)	1.14	1.33	1.87	1.98	5	
Mechanical time constant τ_m (ms)	1.51	0.99	1.8	1.29	0.9	
	0.51(with brake)	0.99(with brake)	1.85(with brake)	1.3(with brake)	0.9(with brake)	
Reverse voltage constant K_e (V/krpm)	14	16.2	29	34	40	
Torque constant K_t (Nm/A)	0.232	0.268	0.48	0.563	0.662	
Rotor moment of inertia J_m (Kg·cm ²)	0.018	0.033	0.214	0.405	1.087	
	0.021 (with brake)	0.046(with brake)	0.218(with brake)	0.409(with brake)	1.099(with brake)	
Maintain torque T (Nm)	0.32	0.32	1.5	1.5	3.2	
pole pair number	5	5	3	3	3	
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	
Insulation class	F	F	F	F	F	
Maximum radial force F_r (N)	120	120	180	180	335	
Maximum axial force F_a (N)	60	60	90	90	167.5	
Weight G (Kg)	0.5	0.7	1.2	1.6	2.8	
	0.6(brake)	0.7(with brake)	1.6(with brake)	2.1(with brake)	3.4(with brake)	
Length of motor L (mm)	74.6±1	96.6±1	91±1.5	117±1.5	128.5±1.5	
	104.6±1(with brake)	126.6(with brake)	121±1.5(with brake)	147±1.5(with brake)	158±1.5(with brake)	
Position feedback device	multi-turn absolute encoder					
Cooling method	Totally enclosed, non - ventilated					
Protection level	IP65, shaft sealing IP54					
Environment conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)				
	Humidity	Below 90 % RH (no condensation)				
	Ambient environment	Away from active gas,combustible gas,oil drops and dust				
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise				

Note : □=A — without brake
 □=B — with brake

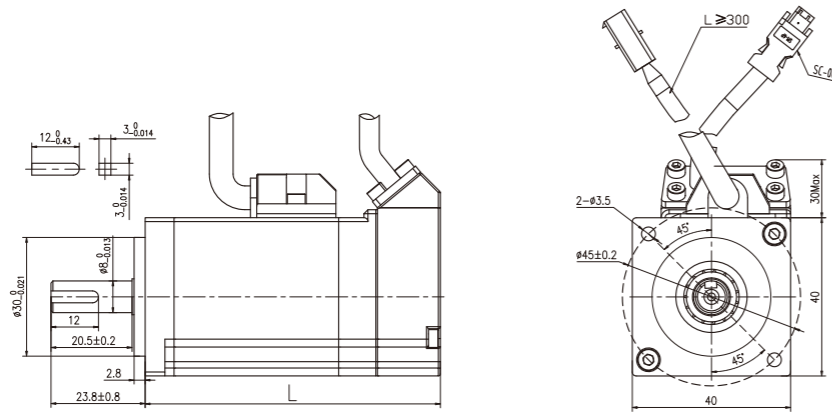
Technical Specifications of SMS Magnetolectric Encoder Motor(2)



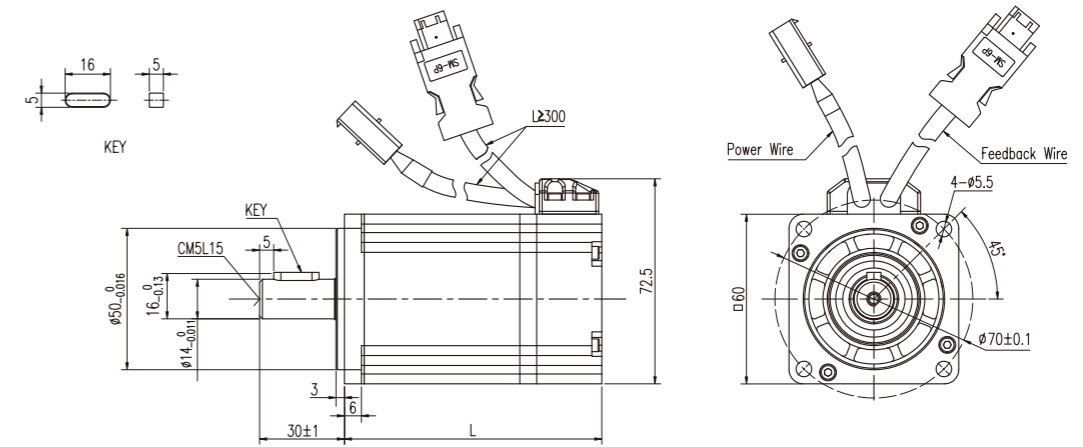
Model	SMS Series Motor						
	Medium inertia flange size 130mm						
Driver matching	SMS130D-0100-20K□K-4LKP	SMS130D-0150-20K□K-4LKP	SMS130D-0200-20K□K-4LKP	SMS130D-0150-20K□K-4HKP	SMS130D-0200-20K□K-4HKP	SMS130D-0300-20K□K-4HKP	
DC link voltage UDC	FD422S-CA-000 FD422S-LA-000 FD422S-EA-000 CD422S-AA-000	FD432S-CA-000 FD432S-LA-000 FD432S-EA-000 CD432S-AA-000		FD612S-CA-000 FD612S-LA-000 FD612S-EA-000 CD612S-AA-000		FD622S-CA-000 FD622S-LA-000 FD622S-EA-000 CD622S-AA-000	
DC link voltage UDC	300	300	300	300	300	300	
Maintain torque	Rated power P_N (W)	1000	1500	2000	1500	2000	3000
	Rated torque T_N (Nm)	4.8	7.2	9.6	7.2	9.6	14.3
	Rated speed n_N (rpm)	2000	2000	2000	2000	2000	2000
	Rated current I_N (A)	4.4	6.8	8.8	4.5	6.2	6.7
maximum torque T_m (Nm)	12	18	24	18	24	35.75	
maximum current I_m (A)	13.2	20.4	26.4	13.5	18.6	20.1	
Standstill torque T_s (Nm)	5.28	7.92	10.56	7.92	10.56	15.73	
Standstill current I_s (A)	4.84	7.48	9.68	4.95	6.82	7.37	
Resistance Line - Line R_L (Ω)	3.1	1.51	0.93	3.44	1.72	1.74	
Inductance Line - Line L_L (mH)	24.07	13.8	8.8	31.26	17.1	18.9	
Electrical time constant τ_e (ms)	7.76	9.14	9.46	9.09	9.9	10.86	
Mechanical time constant τ_m (ms)	2.72	2.28	1.97	2.33	1.85	1.59	
	2.76(with brake)	2.3(with brake)	1.98(with brake)	2.35(with brake)	1.86(with brake)	1.59(with brake)	
Reverse voltage constant K_e (V/krpm)	73	71	72.8	106	102	142	
Torque constant K_t (Nm/A)	1.21	1.17	1.2	1.75	1.69	2.35	
Rotor moment of inertia J_m (Kg·cm ²)	7.4	12	17.7	12	17.7	29.1	
	7.5(with brake)	12.1 (with brake)	17.8(with brake)	12.1 (with brake)	17.8(with brake)	29.2(with brake)	
Maintain torque T (Nm)	10	10	10	10	10	10	
pole pair number	4	4	4	4	4	4	
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	8	
Insulation class	F	F	F	F	F	F	
Maximum radial force F_r (N)	900	900	900	900	900	900	
Maximum axial force F_a (N)	450	450	450	450	450	450	
Weight G (Kg)	6.2	7.5	9.1	7.5	9.1	12.3	
	8.5(with brake)	9.8(with brake)	11.4(with brake)	9.8(with brake)	11.4(with brake)	14.9(with brake)	
Length of motor L (mm)	143±1.5	159±1.5	179±1.5	159±1.5	179±1.5	219±1.5	
	204±1.5(with brake)	220±1.5(with brake)	240±1.5(with brake)	220±1.5(with brake)	240±1.5(with brake)	280±1.5(with brake)	
Position feedback device	multi-turn absolute encoder						
Cooling method	Totally enclosed, non - ventilated						
Protection level	IP65, shaft sealing IP54						
Environment conditions for operation	Temperature	- 20 ~ 40°C (non-freezing)					
	Humidity	Below 90 % RH (no condensation)					
	Ambient environment	Away from active gas,combustible gas,oil drops and dust					
	Altitude	Maximum altitude 4000 m, rated power at 1000 m or below. Above 1000m, decreasing 1.5 % per every 100m rise					

Note : □=A — without brake
 □=B — with brake

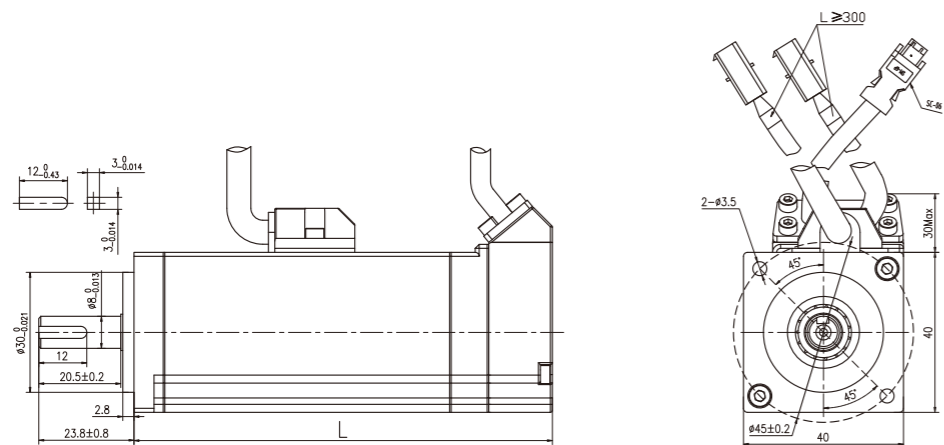
SMS Series 40 flange communication encoder motor



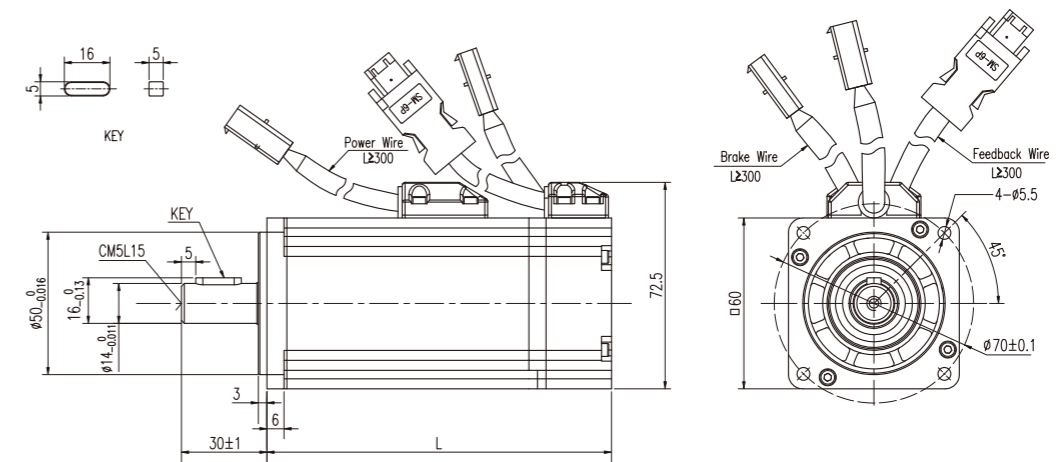
SMS Series 60 flange communication encoder motor



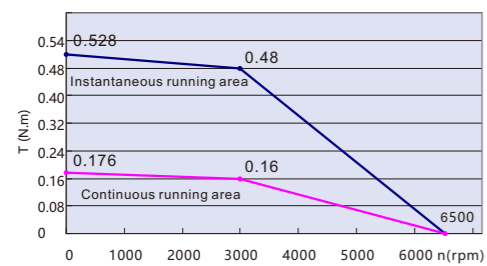
SMS Series 40 flange communication encoder motor (with brake)



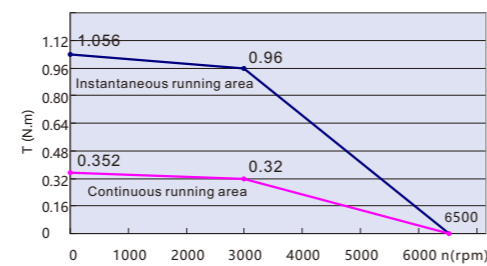
SMS Series 60 flange communication encoder motor (with brake)



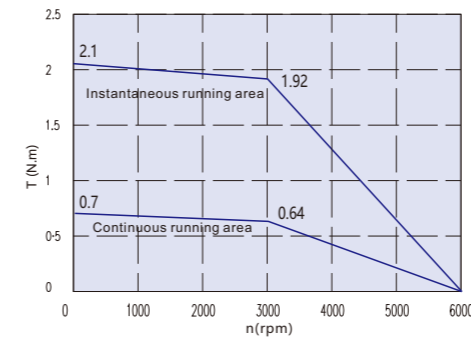
SMS40S-0005-30K □ K-5LSU 50W



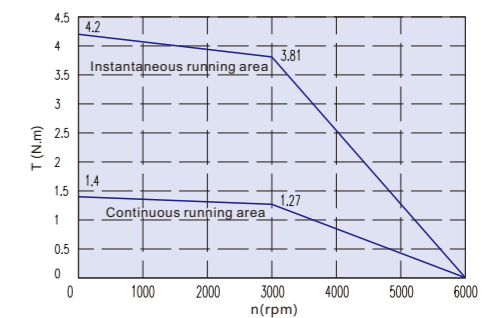
SMS40S-0010-30K □ K-5LSU 100W



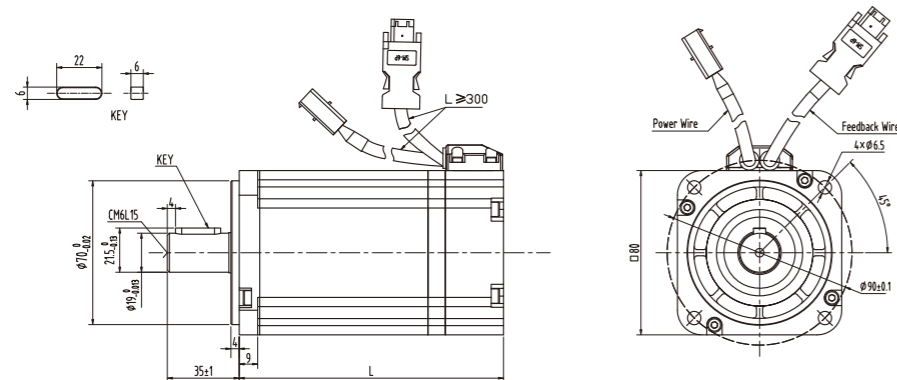
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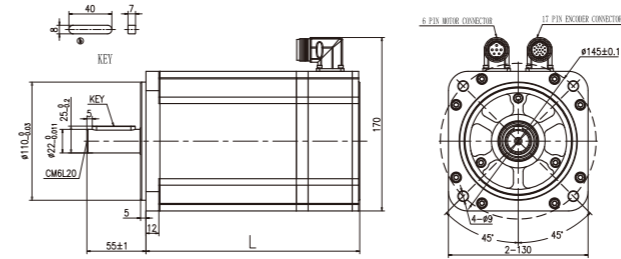
SMS60S-0040-30K □ K-3LSU 400W



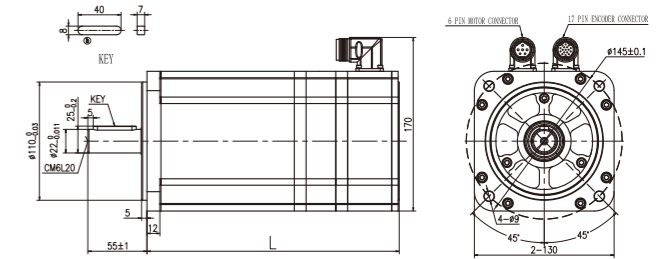
SMS Series 80 flange communication encoder motor



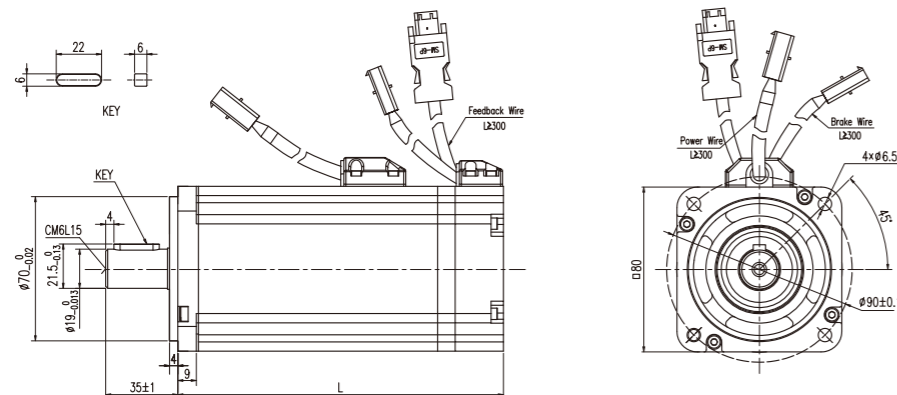
SMS Series 130 flange communication encoder motor



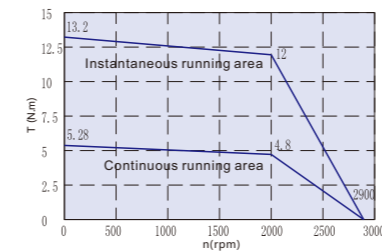
SMS Series 130 flange communication encoder motor (with brake)



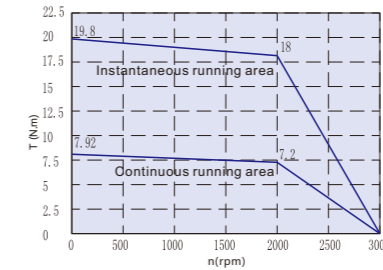
SMS Series 80 flange communication encoder motor (with brake)



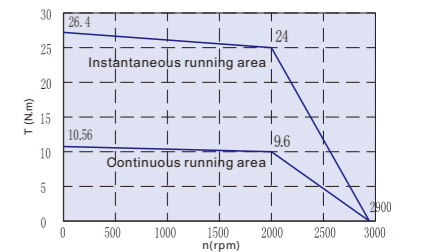
SMS130D-0100-20 □ □ K-4LKP



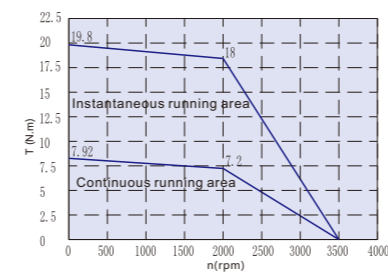
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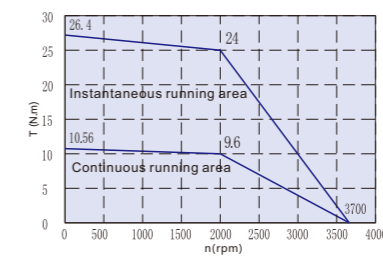
SMS130D-0200-20 □ □ K-4LKP



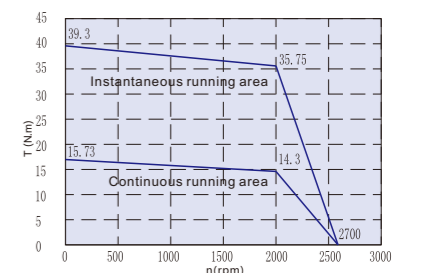
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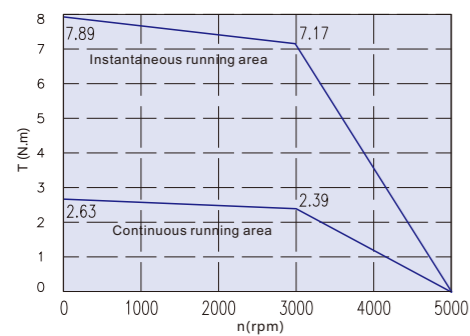
SMS130D-0200-20 □ □ K-4HKP



SMS130D-0300-20 □ □ K-4HKP



SMS80S-0075-30K □ K-3LSU 750W

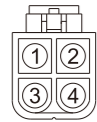


Power Cable Wiring List

Power Cable Wiring List

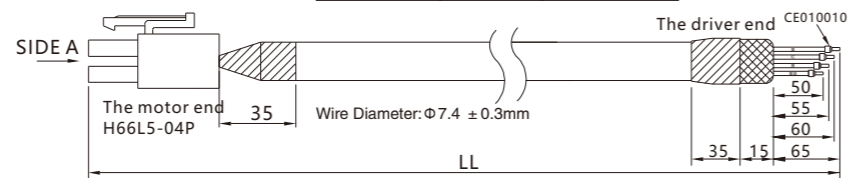
MOT-005-LL-KL

Wire Spec : UL2586 4C*18AWG(41/0.16T)
18AWG cross sectional area=0.8107mm²



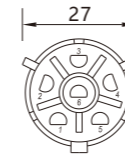
Side A
4 pin connector

Wire color	Signal	4PIN Terminal
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow green	PE	PIN4



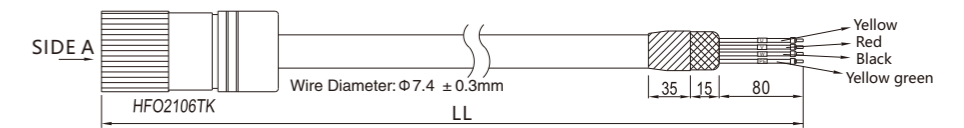
MOT-005-LL-KC4

Wire Spec : UL2586 4C*18AWG(41/0.16T)
18AWG cross sectional area=0.8107mm²



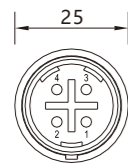
Side A
6PIN

Wire color	Signal	HFO2106TK
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow green	PE	PIN6



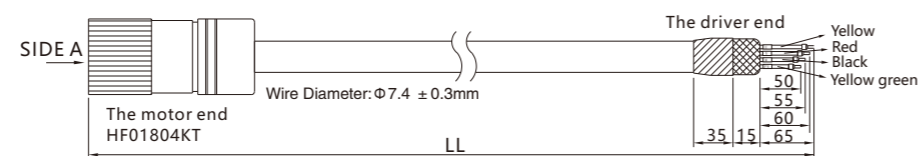
MOT-005-LL-KC0

Wire Spec : UL2586 4C*18AWG(41/0.16T)
18AWG cross sectional area=0.8107mm²



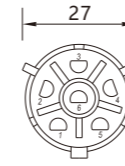
Side A
4 PIN

Wire color	Signal	4PIN Terminal
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow green	PE	PIN1
Metal ring	Shield	Shielded



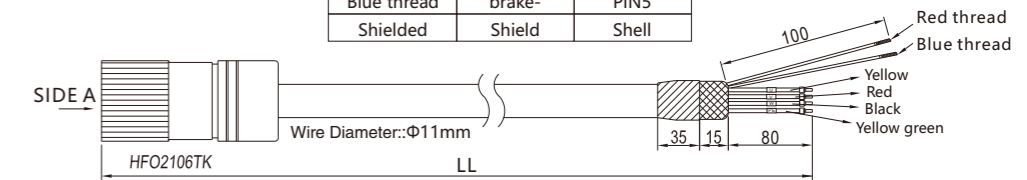
MOT-005-LL-KC4-B

Wire Spec : RVVYP 4*18AWG+2*20AWG BLACK
18AWG cross sectional area=0.8107mm²
20AWG cross sectional area=0.5189mm²



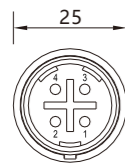
Side A
6PIN

Wire color	Signal	HFO2106TK
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow green	PE	PIN6
Red thread	brake+	PIN1
Blue thread	brake-	PIN5
Shielded	Shield	Shell



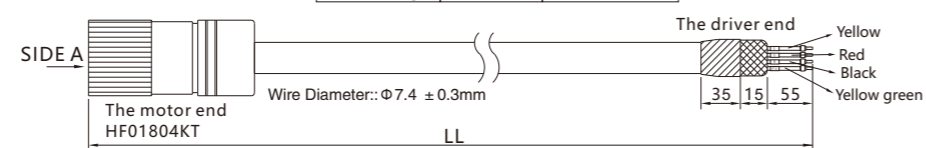
MOTE-005-LL-KC0

Wire Spec : UL2586 4C*18AWG(41/0.16T)
18AWG cross sectional area=0.8107mm²



Side A
4 PIN

Wire color	Signal	4PIN Terminal
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow green	PE	PIN1
Metal ring	Shield	Shielded



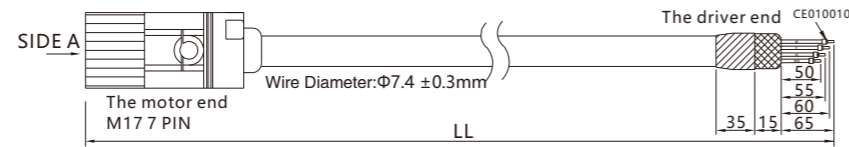
Power Cable Wiring List

MOT-005-LL-KM1

Wire Spec : UL2586 4C*18AWG(41/0.16T)
18AWG cross sectional area=0.8107mm²

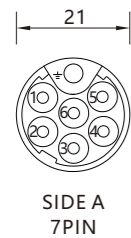


Wire color	Signal	7PIN Air plug
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow green	PE	⊕

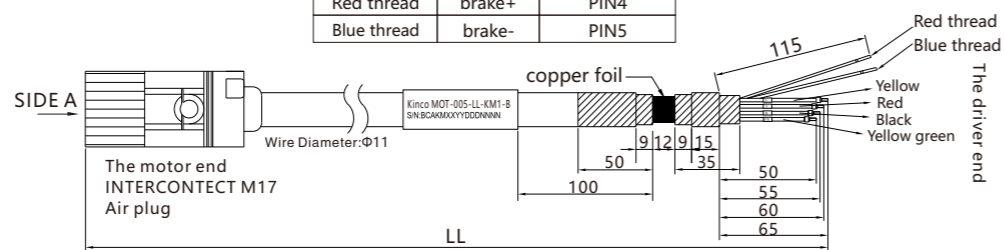


MOT-005-LL-KM1-B

Wire Spec : RVVYP 4*18AWG+2*20AWG BLACK
18AWG cross sectional area=0.8107mm²
20AWG cross sectional area=0.5189mm²

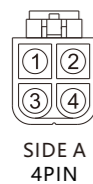


Wire color	Signal	M17 7PIN
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow green	PE	⊕
Shielded	Shield	metal ring
Red thread	brake+	PIN4
Blue thread	brake-	PIN5

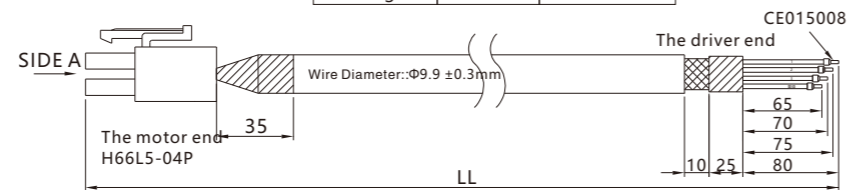


MOT-008-LL-KL

Wire Spec : UL2586 4*16AWG
16AWG cross sectional area=1.318mm²



Wire color	Signal	4PIN Terminal
1 Yellow	U	PIN1
2 Red	V	PIN2
3 Black	W	PIN3
Yellow green	PE	PIN4



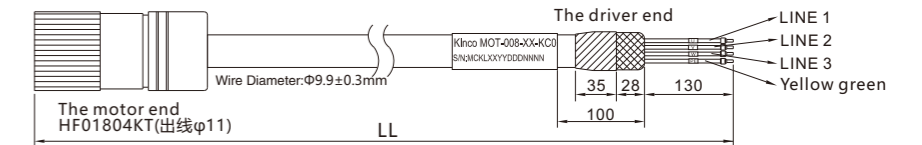
Power Cable Wiring List

MOT-008-LL-KC0

Wire Spec : UL2586 4*16AWG
16AWG cross sectional area=1.318mm²



Wire color	Signal	4PIN Air plug
1 Yellow	U	PIN2
2 Red	V	PIN3
3 Black	W	PIN4
Yellow green	PE	PIN1
Metal ring	Shield	Shielded

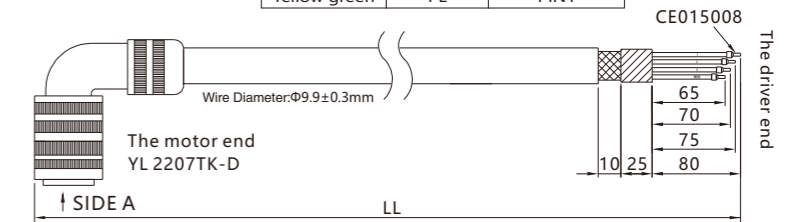


MOT-008-LL-KC1

Wire Spec : UL2586 4*16AWG
16AWG cross sectional area=1.318mm²



Wire color	Signal	7PIN Air plug
1 Yellow	U	PIN2
2 Red	V	PIN3
3 Black	W	PIN4
Yellow green	PE	PIN1



MOT-008-LL-KC2

Wire Spec : UL2586 4*16AWG
16AWG cross sectional area=1.318mm²



Wire color	Signal	YL2406TK-Y
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow green	PE	PIN4

