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Motion Control Servo System

Servo System Catalog

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



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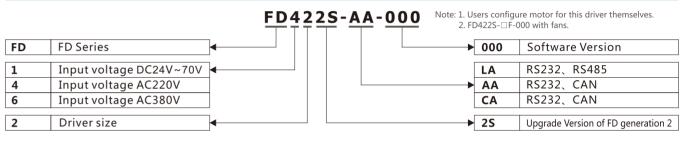
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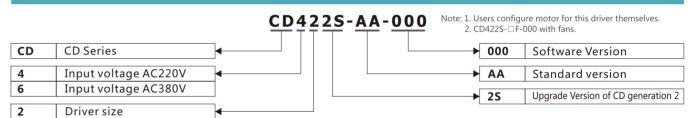
# JD 430 - AA - 000 Note: Users configure motor for this driver themselves. JD JD Series Input voltage AC 220V Input voltage AC 380V AR RS232, RS485, CAN RS232, RS485, CAN Support Motor with Resolver

### **Kinco FD2S Series Servo Driver**

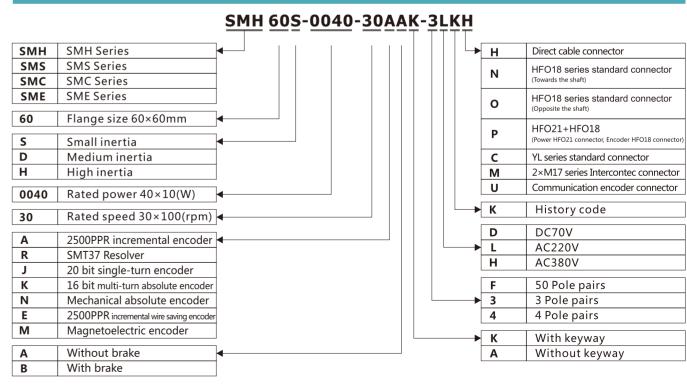


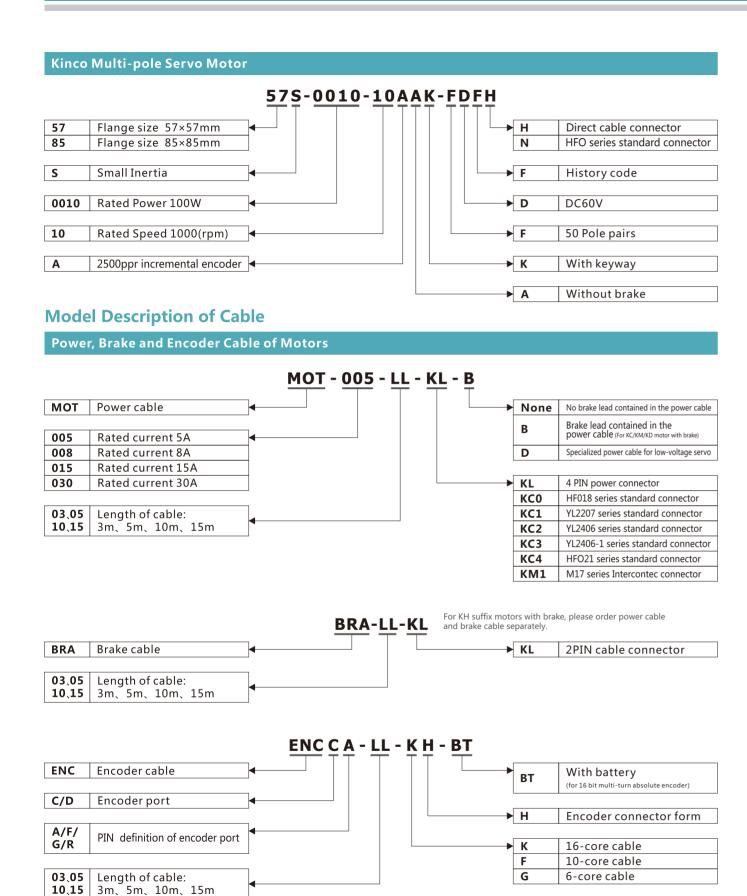
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# **Kinco CD2S Series Servo Driver**



### Kinco Servo Motor





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

Catagory	Rated Power/ Rated Speed/ Rated Torgue	Servo Motor	Description		Encoder Cable	Servo Driver
	50W	SMH40S-0005-30AAK-4LKH	2500P/R Cable connector	MOT-005-LL-KL		FD412S-CA-000
	3000rpm/0.16Nm	SMH40S-0005-30ABK-4LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL		FD412S-AA-000
	100W	SMH40S-0010-30AAK-4LKH	MH40S-0010-30AAK-4LKH 2500P/R Cable connector MOT-005-LL-KL		ENCCA-LL-KH	FD412S-LA-000
	3000rpm/0.32Nm	SMH40S-0010-30ABK-4LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL	LINCCA LL KIT	CD412S-AA-000
		SMH60S-0020-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL		
		SMH60S-0020-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL		
	200W	SMH60S-0020-30AAK-3LKN	2500P/R HFO18 series standard connector	MOT-005-LL-KC0		
	3000rpm/0.64Nm	SMH60S-0020-30ABK-3LKP	2500P/R HFO18+FHO21 connector with brake	MOT-005-LL-KC4-B	ENCCA-LL-KC0	
		SMH60S-0020-30AAK-3LKO	2500P/R HFO18 series standard connector	MOT-005-LL-KC0	ENCCA-EE-RC0	
		SMH60S-0020-30AAK-3LKM	2500P/R Intercontec connector	MOT-005-LL-KM1	ENCCA-LL-KM1	
		SMH60S-0020-30ABK-3LKM	2500P/R Intercontec connector with brake	MOT-005-LL-KM1-B	LIVECA LE RIVII	
		SMH60S-0040-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	
		SMH60S-0040-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL	LINCCA-LL-KIT	
Sn	40014	SMH60S-0040-30AAK-3LKN	2500P/R HFO18 series standard connector	MOT-005-LL-KC0		
nall	400W 3000rpm/1.27Nm	SMH60S-0040-30ABK-3LKP	2500P/R HFO18+FHO21 connector with brake	MOT-005-LL-KC4-B	ENCCA-LL-KC0	JD430-AA-000
Ine		SMH60S-0040-30AAK-3LKO	2500P/R HFO18 series standard connector	MOT-005-LL-KC0	ENCCA-LL-RC0	FD422S-CA-000
rtia		SMH60S-0040-30AAK-3LKM	2500P/R Intercontec connector	MOT-005-LL-KM1	ENCCA-LL-KM1	FD422S-AA-000
Small Inertia 220V		SMH60S-0040-30ABK-3LKM	2500P/R Intercontec connector with brake	MOT-005-LL-KM1-B	ENCCA-LL-RIVII	FD422S-LA-000
0		SMH80S-0075-30AAK-3LKH	2500P/R Cable connector	MOT-005-LL-KL ENCCA-LL-KH		CD422S-AA-000
		SMH80S-0075-30ABK-3LKH	2500P/R Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL	ENCCA-LL-KH	
	750W 3000rpm/2.39Nm	SMH80S-0075-30AAK-3LKN	2500P/R HFO18 series standard connector	MOT-005-LL-KC0		
		SMH80S-0075-30ABK-3LKP	2500P/R HFO18+FHO21 connector with brake	MOT-005-LL-KC4-B	ENICCA II VCO	
		SMH80S-0075-30AAK-3LKO	2500P/R HF018 series standard connector MOT-005-LL-KC0		ENCCA-LL-RC0	
				MOT-005-LL-KM1	ENCCA-LL-KM1	
		SMH80S-0075-30ABK-3LKM	2500P/R Intercontec connector with brake	MOT-005-LL-KM1-B	ENCCA-LL-KIVII	
	4.18Nm	85S-0025-05AAK-FLFN-02	2500P/R Multi-pole servo motor			
	6Nm	85S-0035-05AAK-FLFN-02 2500P/R Multi-pole servo motor MOTE-005-LL-KC0		MOTE-005-LL-KC0	ENCCF-LL-FC0	
	7.5Nm	85S-0045-05AAK-FLFN-02	2500P/R Multi-pole servo motor		ENCCF-LL-FC0	
		SMH80S-0100-30AAK-3LKH	2500P/R Cable connector	MOT-008-LL-KL	ENCCA-LL-KH	
	1kW	SMH80S-0100-30ABK-3LKH	2500P/R Cable connector with brake	MOT-008-LL-KL/BRA-LL-KL	ENCCA-LL-KH	
	3000rpm/3.18Nm	SMH80S-0100-30AAK-3LKM	2500P/R Intercontec connector	MOT-008-LL-KM1	ENCCA-LL-KM1	JD430-AA-000
		SMH80S-0100-30ABK-3LKM	2500P/R Intercontec connector with brake	MOT-008-LL-KM1-B	ENCCA-LL-RIVII	FD432S-CA-000
	1.05kW	SMH110D-0105-20AAK-4LKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1		FD432S-AA-000
ĭ e	2000rpm/5Nm	SMH110D-0105-20ABK-4LKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B		FD432S-LA-000
Medium Inertia 220V	1.26kW	SMH110D-0126-20AAK-4LKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1		CD432S-AA-000
ium Ine 220V	2000rpm/6Nm	SMH110D-0126-20ABK-4LKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B		
ertia	1.25kW	SMH110D-0125-30AAK-4LKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1		
	3000rpm/4Nm	SMH110D-0125-30ABK-4LKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B	ENCCALL VC1	
	1.26kW	SMH110D-0126-30AAK-4HKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	IDC20 44 000
≤ e	3000rpm/4Nm	SMH110D-0126-30ABK-4HKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B		JD620-AA-000
diun 38	1.57kW	SMH110D-0157-30AAK-4HKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1		FD622S-CA-000
n In	3000rpm/5Nm	SMH110D-0157-30ABK-4HKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B		FD622S-AA-000
Medium Inertia 380V	1.88kW	SMH110D-0188-30AAK-4HKC	2500P/R HFO18 series standard connector	MOT-008-LL-KC1		FD622S-LA-000
	3000rpm/6Nm	SMH110D-0188-30ABK-4HKC •	2500P/R HFO18+FHO21 connector with brake	MOT-008-LL-KC2-B		CD622S-AA-000

Note: User select the compatible motors themselves.

• It needs CD24V/2A delay when driver drive the brake device.

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

Catagory	Rated Power/ Rated Speed/ Rated Torgue	Servo Motor	Description	Power/ Brake Cable	Encoder Cable	Servo Driver
	SMH130D-0105-20AAK-4HKC 2500P/R YL series standard connector MOT-008-LL-KC2		MOT-008-LL-KC2		JD430-AA-000 JD620-AA-000	
Medium 220V,	2000rpm/5Nm	SMH130D-0105-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B		FD432S-CA-000 FD432S-AA-000 FD622S-CA-000
Medium Inertia 220V/380V	1.57kW	SMH130D-0157-20AAK-4HKC	2500P/R YL series standard connector	MOT-008-LL-KC2		FD622S-AA-000 FD432S-LA-000 FD622S-LA-000
	2000rpm/7.5Nm	SMH130D-0157-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B		CD432S-AA-000 CD622S-AA-000
	2.1kW	SMH130D-0210-20AAK-4HKC	2500P/R YL series standard connector	MOT-008-LL-KC2		JD620-AA-000
	2000rpm/10Nm	SMH130D-0210-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B		FD622S-CA-000 FD622S-AA-000
	2.3kW	SMH150D-0230-20AAK-4HKC	2500P/R YL series standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	FD622S-LA-000
	2000rpm/11.1Nm	SMH150D-0230-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B	LINCOA-LL-RCI	CD622S-AA-000
	3kW	SMH130D-0300-20AAK-4HKC	2500P/R YL series standard connector	MOT-008-LL-KC2		
	2000rpm/14.3Nm	SMH130D-0300-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B		
	3kW	SMH150D-0300-20AAK-4HKC	2500P/R YL series standard connector	MOT-008-LL-KC2		
<u>≤</u>	2000rpm/14.3Nm	SMH150D-0300-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-008-LL-KC2-B		JD630-AA-000
Medium Inertia 380V	3.8kW	SMH150D-0380-20AAK-4HKC	2500P/R YL series standard connector	MOT-015-LL-KC2		JD630-LA-000
m In	2000rpm/18Nm	SMH150D-0380-20ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-015-LL-KC2-B		
er.	3.5kW	SMH180D-0350-15AAK-4HKC	2500P/R YL series standard connector	MOT-015-LL-KC2		
<sub>σ</sub>	1500rpm/22Nm	SMH180D-0350-15ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-015-LL-KC2-B		
	4.4kW	SMH180D-0440-15AAK-4HKC	2500P/R YL series standard connector	MOT-015-LL-KC2		JD640-AA-000
	1500rpm/28Nm	SMH180D-0440-15ABK-4HKC •	2500P/R YL series standard connector with brake	MOT-015-LL-KC2-B		JD640-LA-000
	5.5kW	SMH180D-0550-15RAK-4HKC	SMT37 Resolver YL series standard connector	MOT-015-LL-KC2		JD040-EA-000
	1500rpm/35Nm	SMH180D-0550-15RBK-4HKC •	SMT37 Resolver YL series standard connector with brake	MOT-015-LL-KC2-B		JD640-AR-000
	7.5kW 1500rpm/48Nm	SMH180D-0750-15RAK-4HKC	SMT37 Resolver YL series standard connector	MOT-030-LL-KC3	ENCCR-LL-FC1	JD650-AR-000
		SMH40S-0005-30AAK-4DKH	2500P/R Cable connector	MOT-005-LL-KL-D		
	50W			MOT-005-LL-KL-D		
	3000rpm/0.16Nm	SMH40S-0005-30ABK-4DKH	2500P/R Cable connector with brake	BRA-LL-KL		
		SMH40S-0010-30AAK-4DKH	2500P/R Cable connector	MOT-005-LL-KL-D	ENCCA-LL-KH	
	100W	31411 103 0010 3070 IK 151(11		MOT-005-LL-KL-D		
	3000rpm/0.32Nm	SMH40S-0010-30ABK-4DKH	2500P/R Cable connector with brake	BRA-LL-KL		
ν	1Nm	57S-0010-10AAK-FDFH	2500P/R Multi-pole servo motor	MOT-005-LL-KL-D	ENCCF-LL-FH	
Small Inertia	1.5Nm	57S-0015-08AAK-FDFH				
Ine	2.4Nm	85S-0020-05AAK-FLFN-02	2500P/R Multi-pole servo motor	MOTE-005-LL-KC0	ENCCF-LL-FC0	FD122-CA-000
rtia	8 Nm	85S-0050-10AAK-FLFN-03				FD122-AA-000
DC	200W	SME60S-0020-30AAK-3DKH	2500P/R Wire saving encoder Cable connector	MOT-005-LL-KL-D		FD122-LA-000
DC60V	3000rpm/0.64Nm	SME60S-0020-30ABK-3DKH	2500P/R Wire saving encoder Cable connector with brake	MOT-005-LL-KL-D/ BRA-LL-KL		
		SME60S-0040-30AAK-3DKH	2500P/R Wire saving encoder Cable connector	MOT-008-LL-KL-D		
	400W 3000rpm/1.27Nm	SME60S-0040-30ABK-3DKH	2500P/R Wire saving encoder Cable connector	MOT-008-LL-KL-D/	ENCCF-LL-FH	
			with brake	BRA-LL-KL		
	400W	SME80S-0040-30AAK-3DKH	2500P/R Wire saving encoder Cable connector	MOT-008-LL-KL-D		
	3000rpm/1.27Nm	SME80S-0040-30ABK-3DKH	2500P/R Wire saving encoder Cable connector with brake	MOT-008-LL-KL-D/ BRA-LL-KL		
			Will Starc	DIVI LE ILE		

Note: User select the compatible motors themselves.

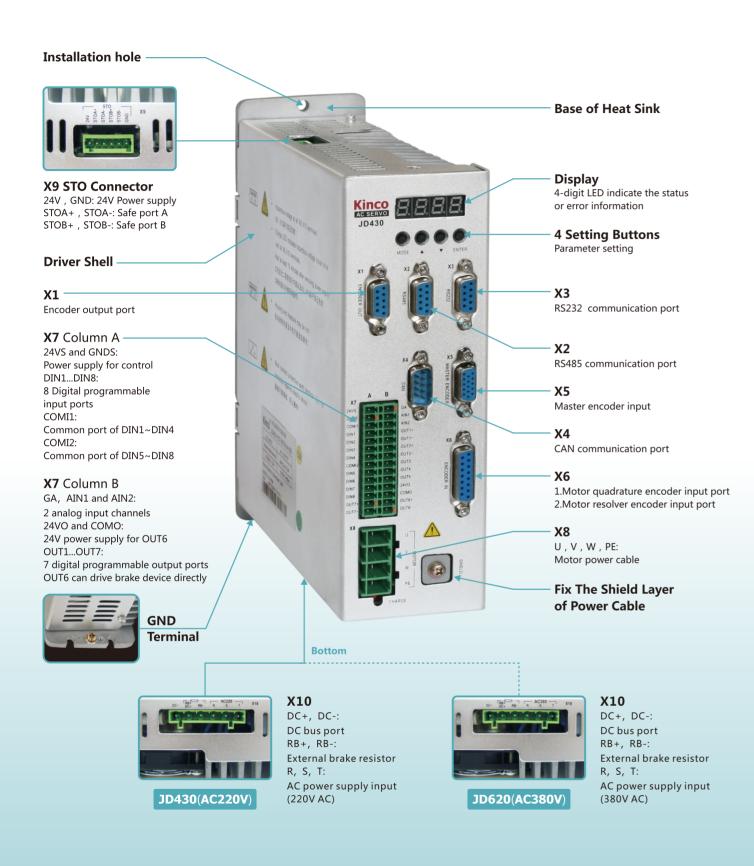
• It needs CD24V/2A delay when driver drive the brake device.

# **FD2S/CD2S Servo Driver and Motor Selection Table**

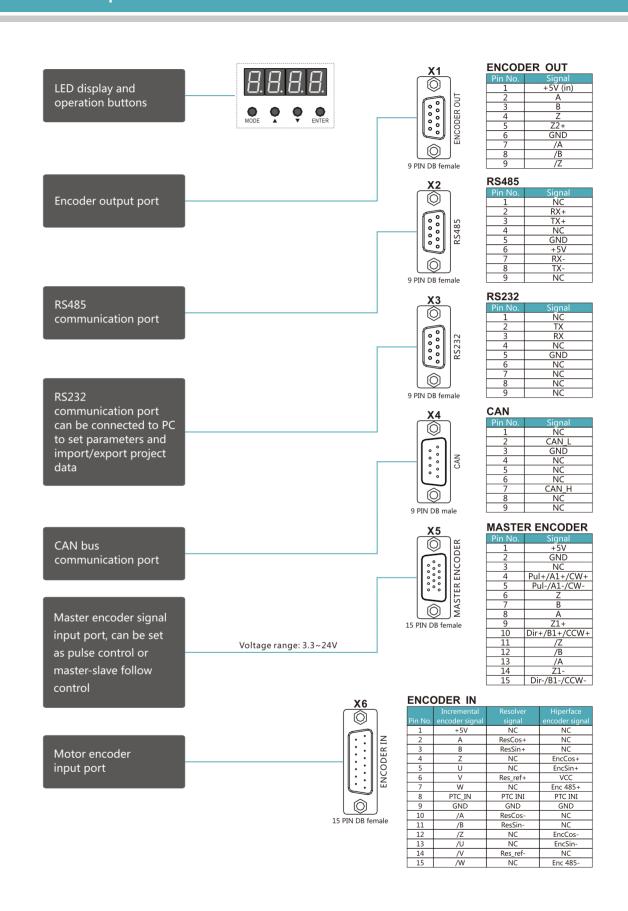
MOT-005-LL-KL/BRA-LL-KL   SMC605-0040-30EBK-3LKH   2000 N We saming encoder Colds connector with basis   MOT-005-LL-KL/BRA-LL-KL   MOT-005-LL-KL/BRA-LL-KL   SMC605-0040-30EBK-3LKH   2000 N We saming encoder Colds connector with basis   MOT-005-LL-KL/BRA-LL-KL   MOT-005-LL-KC4   MOT-005-L	Catagory	Rated Power/ Rated Speed/ Servo Motor Description Rated Torgue		Power/ Brake Cable	Encoder Cable	Servo Driver	
A00W   3000rpm/127Nm		200W	SMC60S-0020-30EAK-3LKH	2500P/R Wire saving encoder Cable connector	MOT-005-LL-KL		
SMC605-0040-30EBK-3LKH   2000% With suring recorder Color connection with braid   MOT-005-LL-KL/BRA-LL-KL   MOT-005-LL-KL/BRA-LL-KL   SMC605-0075-30EAK-3LKH   2000% With suring recorder Color connection   MOT-005-LL-KL/BRA-LL-KL   MOT-005-LL-KL/BRA-LL-KL   SMC130D-0100-20EAK-4LKP   2000% With suring recorder (2016-10021 connector with braid   MOT-005-LL-KL/BRA-LL-KL   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   MOT-008-LL-KC4-B   M		3000rpm/0.64Nm	SMC60S-0020-30EBK-3LKH	2500P/R Wire saving encoder Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL		FD422S-CA-000
SMC005-0040-30EBK-31KH   20007 Whe samp encoder Calle Connector with brake		400W	SMC60S-0040-30EAK-3LKH	2500P/R Wire saving encoder Cable connector	MOT-005-LL-KL	ENICCE II FII	FD422S-AA-000
3000rpm/2.39Nm		3000rpm/1.27Nm	.27Nm SMC60S-0040-30EBK-3LKH 2500P/R Wire saving encoder Cable connector with brake MOT		MOT-005-LL-KL/BRA-LL-KL	ENCCF-LL-FH	FD422S-LA-000
SMC130D-0100-20EAK-4LKP   2000/R Wire saving encode: H0131-H021 connector with braits   MOT-005-LL-KC4   FD4225-LF-00   FD4225-AF-00   FD42		750W SMC80S-0075-30EAK-3Lk		2500P/R Wire saving encoder Cable connector	MOT-005-LL-KL		CD422S-AA-000
1 kW   2000rpm/4.8Nm		3000rpm/2.39Nm	SMC80S-0075-30EBK-3LKH	2500P/R Wire saving encoder Cable connector with brake	MOT-005-LL-KL/BRA-LL-KL		
SMC   1.5kW   SMC130D-0150-20EBK-4LKP   2509/R Wire saving encode: HPG18-HPG1 connector with brake   MOT-008-LL-KC4   BCASSA   MOT-008-LL-KC4   BC			SMC130D-0100-20EAK-4LKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-005-LL-KC4		FD422S-CF-000 FD422S-AF-000
Series   2000rpm/1/2Nm   SMC130D-0150-20EBK-4LKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4LKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4LKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4LKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0200-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-30EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-30EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-30EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-20EBK-4HKP   2000/R Wire saving encoder. HF018-HF021 connector with brake   MOT-008-LL-KC4-B   SMC130D-030D-030D-030D-030D-030D-030D-030D-		2000171117111111	SMC130D-0100-20EBK-4LKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-005-LL-KC4-B		CD422S-AF-000
2kW   2000rpm/10Nm   SMC130D-0200-20EBK-4LKP   25009/R Wire saving encode; HF018-HF012 connector with brake   MOT-008-LL-KC4   MOT-008-LL-KC4   ENCCF-LL-FC0   FD612S-CA-00   CD432S-AA-00   CD432S-AA-	SMC		SMC130D-0150-20EAK-4LKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-008-LL-KC4		FD432S-CA-000
2000rpm/10Nm   SMC130D-0200-20EBK-4LKP   2000PR Wire saving encoder, HF018-FH021 connector   MOT-005-LL-KC4-B   ENCCF-LL-FC0   FD6125-CA-00   FD6125-CA-00	Series	2000rpm/7.2Nm	SMC130D-0150-20EBK-4LKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-008-LL-KC4-B		FD432S-AA-000
1.5kW   SMC130D-0150-20EAK-4HKP   2500P/R Wire saving encode; HF018-HH021 connector with brake   MOT-005-LL-KC4-B   MOT-005-LL-KC4-B   FD612S-CA-00   FD612S-AA-00   FD61			SMC130D-0200-20EAK-4LKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-008-LL-KC4		FD432S-LA-000
1.5kW   2000rpm/7.2Nm   SMC130D-0150-20EBK-4HKP   2500PR Wire saving encoder, HF018+HF021 connector with brake   MOT-005-LL-KC4   BC125-AA-00   FP6125-AA-00   FP6125-AA-		2000rpm/10Nm	SMC130D-0200-20EBK-4LKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-008-LL-KC4-B	FNCCE-LL-ECO	CD432S-AA-000
2kW   SMC130D-0200-20EAK-4HKP   2500PR Wire swing encode: HF018-HH021 connector with brake   MOT-008-LL-KC4   FD612S-LA-00   CD612S-AA-00			SMC130D-0150-20EAK-4HKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-005-LL-KC4	LIVEET LE TEO	FD612S-CA-000
2000rpm/10Nm   SMC130D-0200-20EBK-4HKP   2500PR Wire saving encoder; HF018+FH021 connector with brake   MOT-008-LL-KC4-B   SMC130D-0300-30EAK-4HKP   2500PR Wire saving encoder; HF018+FH021 connector with brake   MOT-008-LL-KC4-B   FD622S-CA-00   FD622S-AA-00   FD622S-AA-00		2000rpm/7.2Nm	SMC130D-0150-20EBK-4HKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-005-LL-KC4-B		FD612S-AA-000
SAW   SMC130D-0300-30EAK-4HKP   2500P/R Wire saving encoder, HF018+FH021 connector   MOT-008-LL-KC4   FD622S-CA-00   FD622S-AA-00   FD622S-			SMC130D-0200-20EAK-4HKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-008-LL-KC4		FD612S-LA-000
3000rpm/10Nm			SMC130D-0200-20EBK-4HKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-008-LL-KC4-B		CD612S-AA-000
SMC130D-0300-20EAK-4HKP   2500P/R Wire saving encoder, HF018+FH021 connector   MOT-008-LL-KC4   FD622S-AA-00		3000rpm/10Nm 3kW	SMC130D-0300-30EAK-4HKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-008-LL-KC4		FD622S-CA-000
2000rpm/14.3Nm SMC130D-0300-20EBK-4HKP ◆ 2500P/R Wire saving encoder, HF018+FH021 connector with brake MOT-008-LL-KC4-B SMH40S-0005-30JAK-4LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU ENCCG-(4)-GU-BT SMH40S-0010-30JAK-4LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU ENCCG-(4)-GU-BT FD412S-AA-00 FD412S-AA-00 SMH40S-0010-30JAK-4LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU ENCCG-LL-GU ENCCG-(4)-GU-BT SM560S-0020-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU ENCCG-(4)-GU-BT SM560S-0020-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU			SMC130D-0300-30EBK-4HKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-008-LL-KC4-B		FD622S-AA-000
SMH40S-0005-30JAK-4LKU   20 bit single-turn encoder   MOT-005-LL-KL   ENCCG-LL-GU   ENCCG-(4)-GU-BT   EDUCATION   ENCCG-(4)-GU-BT   ENCC			SMC130D-0300-20EAK-4HKP	2500P/R Wire saving encoder, HFO18+FHO21 connector	MOT-008-LL-KC4		FD622S-LA-000
SMH   Series   SMH40S-0005-30KAK-4LKU   16 bit multi-turn absolute encoder   MOT-005-LL-KL   ENCDG-LL-GU   ENCCG-(4)-GU-BT   FD412S-CA-00   FD412S-AA-00		2000rpm/14.3Nm	SMC130D-0300-20EBK-4HKP •	2500P/R Wire saving encoder, HFO18+FHO21 connector with brake	MOT-008-LL-KC4-B		CD622S-AA-000
SMH   Series   SMH40S-0005-30KAK-4LKU   16 bit multi-turn absolute encoder   MOT-005-LL-KL   ENCCG-(4)-GU-BT   FD412S-AA-00   FD412S-AA-00		FOW	SMH40S-0005-30JAK-4LKU	20 bit single-turn encoder	MOT-005-LL-KL	ENCCG-LL-GU	
100W 3000rpm/0.32Nm SMH40S-0010-30KAK-4LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCCG-(4)-GU-BT  SMS60S-0020-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL SMS60S-0020-30JBK-3LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU SMS60S-0020-30KAK-3LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCCG-LL-GU SMS60S-0020-30KAK-3LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCCG-(4)-GU-BT SMS60S-0020-30KBK-3LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCCG-(4)-GU-BT SMS60S-0040-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-(4)-GU-BT ENCCG-LL-GU FD422S-CA-00	SMH		SMH40S-0005-30KAK-4LKU	16 bit multi-turn absolute encoder	MOT-005-LL-KL		FD412S-CA-000 FD412S-AA-000
3000rpm/0.32Nm	Series	1000	SMH40S-0010-30JAK-4LKU	20 bit single-turn encoder	MOT-005-LL-KL	ENCCG-LL-GU	FD412S-LA-000
200W   SMS60S-0020-30JBK-3LKU   20 bit single-turn encoder, with brake   MOT-005-LL-KL/BRA-LL-KL   ENCCG-LL-GU			SMH40S-0010-30KAK-4LKU	16 bit multi-turn absolute encoder	MOT-005-LL-KL		CD412S-AA-000
200W   SMS60S-0020-30JBK-3LKU   20 bit single-turn encoder, with brake   MOT-005-LL-KL/BRA-LL-KL   SMS60S-0020-30KAK-3LKU   16 bit multi-turn absolute encoder   MOT-005-LL-KL   ENCDG-LL-GU   SMS60S-0020-30KBK-3LKU   16 bit multi-turn absolute encoder, with brake   MOT-005-LL-KL/BRA-LL-KL   ENCCG-(4)-GU-BT   SMS60S-0040-30JAK-3LKU   20 bit single-turn encoder   MOT-005-LL-KL   ENCCG-LL-GU			SMS60S-0020-30JAK-3LKU	20 bit single-turn encoder	MOT-005-LL-KL	FNCCG-U-GU	
SMS60S-0020-30KBK-3LKU			SMS60S-0020-30JBK-3LKU	20 bit single-turn encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	ENCCG-LL-GO	
SMS60S-0040-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL ENCCG-LL-GU FD422S-CA-00		3000rpm/0.64Nm	SMS60S-0020-30KAK-3LKU	16 bit multi-turn absolute encoder	MOT-005-LL-KL	ENCDG-LL-GU	
ENCCG-LL-GU			SMS60S-0020-30KBK-3LKU	16 bit multi-turn absolute encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	ENCCG-(4)-GU-BT	
EINCCG-LL-GI)			SMS60S-0040-30JAK-3LKU	20 bit single-turn encoder	MOT-005-LL-KL	ENCCC II CII	FD422S-CA-000
SMS 400W SMS60S-0040-30JBK-3LKU 20 bit single-turn encoder, with brake MOT-005-LL-KL/BRA-LL-KL FD422S-AA-00	SMS	'**''	SMS60S-0040-30JBK-3LKU	20 bit single-turn encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	EINCCG-LL-GU	FD422S-AA-000
Series 3000rpm/1.27Nm SMS60S-0040-30KAK-3LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCDG-LL-GU FD422S-LA-00	Series	3000rpm/1.27Nm	SMS60S-0040-30KAK-3LKU	16 bit multi-turn absolute encoder	MOT-005-LL-KL	ENCDG-LL-GU	FD422S-LA-000
SMS60S-0040-30KBK-3LKU 16 bit multi-turn absolute encoder, with brake MOT-005-LL-KL/BRA-LL-KL ENCCG-(4)-GU-BT CD422S-AA-00			SMS60S-0040-30KBK-3LKU	16 bit multi-turn absolute encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	ENCCG-(4)-GU-BT	CD422S-AA-000
SMS80S-0075-30JAK-3LKU 20 bit single-turn encoder MOT-005-LL-KL			SMS80S-0075-30JAK-3LKU	20 bit single-turn encoder	MOT-005-LL-KL	ENICCO III CIII	
750W SMS80S-0075-30JBK-3LKU 20 bit single-turn encoder, with brake MOT-005-LL-KL/BRA-LL-KL ENCCG-LL-GU		750W	SMS80S-0075-30JBK-3LKU	20 bit single-turn encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	ENCCG-LL-GU	
3000rpm/2.39Nm SMS80S-0075-30KAK-3LKU 16 bit multi-turn absolute encoder MOT-005-LL-KL ENCDG-LL-GU		3000rpm/2.39Nm	SMS80S-0075-30KAK-3LKU	16 bit multi-turn absolute encoder	MOT-005-LL-KL	ENCDG-LL-GU	
SMS80S-0075-30KBK-3LKU 16 bit multi-turn absolute encoder, with brake MOT-005-LL-KL/BRA-LL-KL ENCCG-(4)-GU-BT			SMS80S-0075-30KBK-3LKU	16 bit multi-turn absolute encoder, with brake	MOT-005-LL-KL/BRA-LL-KL	1	

Note: User select the compatible motors themselves.

• It needs CD24V/2A delay when driver drive the brake device.



Note: 1. JD430/JD620 drivers share the same interface definition, except for X10 power interfaces. 2. Suggested brake resistor: JD430 39ohms/200W or 75ohms/100W, JD620 75ohms/200W, JD630 & JD640 47ohms/500W. The customer should chose the power of brake resister 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			
_	Main supply voltage	Single-phase or	3-phase AC380V	3-phase AC380V	3-phase AC380V	3-phase AC380V			
Power		3-phase AC220V -20/+15% 47~63Hz	-20/+15% 47~63Hz	-20/+15% 47~63Hz	-20/+15% 47~63Hz	-20/+15% 47~63Hz			
<u> </u>	Control circuit voltage	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A			
Cur	Rated current (RMS)	10A	7A	10A	13A	18A			
Current	Peak current (PEAK)	27.5A	25A	35A	45A	65A			
	ke chopper threshold	DC380V±5V	DC680V±5V	DC680V±5V	DC680V±5V	DC680V±5V			
Over-voltage alarming threshold DC400V±5V DC700V±5V DC700V±5V DC700V±5V DC700V±5V				DC700V±5V					
Und	Under-voltage alarming threshold DC200V±5V DC400V±5V DC4			DC400V±5V	DC400V±5V	DC400V±5V			
Cooling method Forced air cooling Forced air cooling Fo				Forced air cooling					
Weight (Kg) 2.51 3.62					6.7				
Size(W*H*D, mm) 220×195×66 255×230×77 33					320×280.5×95				
	Digital operation panel	4 buttons and 4 LED di	splay						
		7 digital outputs(OUT1	, OUT2, OUT7 are 0.1A a	nd OUT3~OUT6 are 0.5	A, can define driver ready	and			
	External I/O	other functions freely;							
	8 digital inputs(12.5~30V), can define driver enables and other functions freely.								
	Analog input	2 analog inputs, can be	analog inputs, can be used to control speed and torque, the input range is -10V~10V						
	Encoder signal	Output encoder signal	Output encoder signal and master encoder signal are optional, can be used in the multiple axises synchronization,						
Gene	output function	the max. output frequency is 2MHz. Do not support this function if driver is matched with resolver motor.							
eral F	Master encoder	oder Can receive 3.3V~24V pulse/direction signal, CW/CCW signal, and the RS422 difference signal, the max. input frequency is 4MH							
General Functions	input function								
tions		Incremental encoder 2	ncremental encoder 2500P/R						
	Feedback signal	Resolver、Hiperface/si	ncos ® Encoder						
		16 bit multi-turn absol	6 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, o	or via free protocol to comm	nunicate with controller			
	RS485	The max. baudrate is 1	15.2KHz, use Modbus RT	U protocol to communic	cate with controller				
	CAN BUS	The max. baudrate is 1	MHz, use CANopen prot	ocol to communicate wi	th controller				
	STO function	STO port can be conne	TO port can be connected to safe controller, switch, and sensor to protect the system						
	Operating temperature	0~40°C							
Op.	Storage temperature	-10 ~ 70°C							
erati	Humidity (non-condensing)	Below 90% RH							
on E	Protection class	IP20							
Operation Environment	Installation environment	Installed in a dust-free,	dry and lockable enviror	nment (such as in a elect	rical cabinet)				
mm	Installation mode	Vertical installation							
ent	Height	No power limitation be	elow 1000m						
	Atmospheric pressure	86 ~ 106kpa							

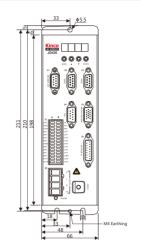
Note①: □=LA: Communication port RS232、RS485 Note②: AA is a direct driving servo system

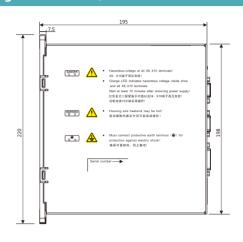
□=AA: Communication port RS232、RS485、CANopen

□=AR : Communication port RS232、RS485、CANopen , support motor with Resolver

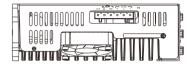
# Mechanical Dimension Diagram of JD430/JD620

(Unit: mm



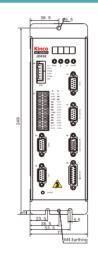


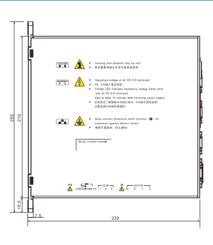




# Mechanical Dimension Diagram of JD630/JD640

(Unit: mm



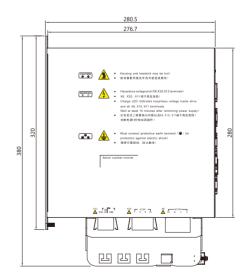


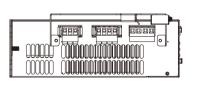


# Mechanical Dimension Diagram of JD650

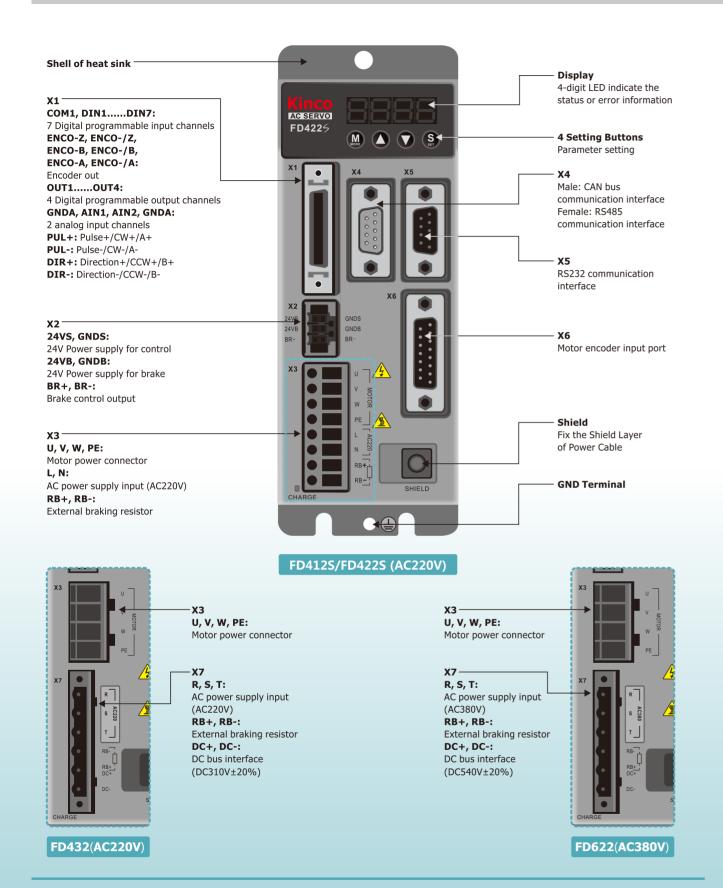
(Unit: mm





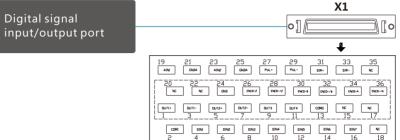


 $^{10}$ 



Note: 1. FD412S/FD422S/FD432S/FD622S share the same interface definition except the X3 and X7 power interfaces;





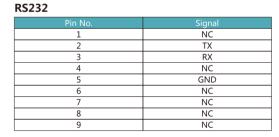
X1							
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
2	COM1	1	OUT1+	20	NC	19	AIN1
4	DIN1	3	OUT1-	22	NC	21	GNDA
6	DIN2	5	OUT2+	24	GND	23	AIN2
8	DIN3	7	OUT2-	26	ENCO-Z	25	GNDA
10	DIN4	9	OUT3	28	ENCO-/Z	27	PUL+
12	DIN5	11	OUT4	30	ENCO-B	29	PUL-
14	DIN6	13	COM0	32	ENCO-/B	31	DIR+
16	DIN7	15	NC	34	ENCO-A	33	DIR-
18	NC	17	NC	36	ENCO-/A	35	NC

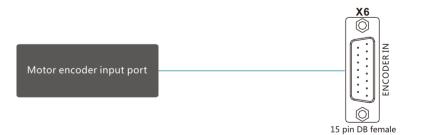


CAN		RS485	
Pin No.	Signal	Pin No.	
1	NC	1	
2	CAN_L	2	
3	GND	3	
4	NC	4	
5	NC	5	
6	NC	6	
7	CAN_H	7	
8	NC	8	
9	NC	9	

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







### **ENCODER IN**

Incremental encoder signal	Communication encoder signal		
+5V	+ 5V		
Α	NC		
В	NC		
Z	NC		
U	NC		
V	NC		
W	SD		
PTC_IN	NC		
GND	GND		
/A	NC		
/B	NC		
/Z	NC		
/U	NC		
/V	NC		
/W	/SD		
	+5V A B Z U V W PTC_IN GND /A /B /Z /U /V		

<sup>2.</sup> Suggested brake resistor: FD412S/FD422S 75ohms/100W, FD432S 39ohms/200W, FD622S 75ohms/200W. The customer should choose the power of brake resistor according to the actual application.

# **Technical Specifications of FD2S Servo Driver**

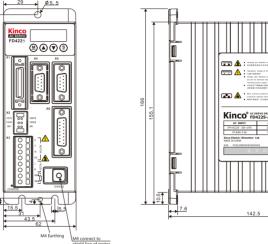
Model Parameter		FD412S- □A-000	FD422S- □A-000	FD422S- □F-000	FD432S- □A-000	FD612S- □A-000	FD622S- □A-000		
Power	Main supply voltage	Single-phase AC220V       Single-phase or 3-phase AC220V       3-phase AC380V         -20/+15% 47~63Hz       -20/+15% 47~63Hz							
٦	Control circuit voltage	18VDC~30VDC 1A							
Current	Rated current(RMS)	2A	4A	5A	11A	5.5A	7A		
ent	Peak current(PEAK)	7A	15A	15A	27.5A	15A	25A		
Fee	dback signal	2500PPR (increme	ntal encoder with 5V	supply), 16 bit multi	-turn absolute encod	ler, 20 bit single-turn	absolute encoder		
Bra	ke chopper	Use an external braking resistor according to application, mainly in occasion of quick stop.							
Brake chopper threshold		DC380V±5V			DC380V±5V	DC680V±5V			
Ove	er-voltage alarming threshold	DC400V±5V			DC400V±5V	DC700V±5V			
Und	der-voltage alarming threshold	DC200V±5V			DC200V±5V	DC400V±5V			
Cod	oling method	Natural air coolir	ng	Fan	Fan				
We	ight(Kg)	1.2		1.2	2.4				
	Digital input specification					ction.			
	Digital input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negetive 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					everse		
	Digital output specification	5 digital outputs,OUT1 ~ OUT4 current is 100mA, BR+/BR- (Brake control ourtput ) current is 500mA, can drive brake device directly							
Define freely according to requirement, supporting position reached, motor at zero speed, motor brake speed obtained in torque mode, motor brake, position  Analog input  2 analog input, can be used to control speed and				ed, motor brake, m	notor speed reached, Z signal, maximum				
Analog input		2 analog input, can be used to control speed and torque, the input range is -10V~10V.							
nctions	Encoder signal output function	Output encoder signal is optional, can be used in the multiple axises synchronization, the max. output frequency is 2MHz. Motor A、B、Z signal, Plus signal (PLS+DIR、CW/CCW、A+B)							
RS232 The max. baudrate is 115.2KHz, use JD-PC software to communicate with PC, or via free protocol to communicate with controller.									
Protection functions  Over-voltage protection,under-voltage protection,motor over-heat protection(I²T),short-circuit protection,drive over-heat protection,etc.				uit					
RS4	85	The max. baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller.							
CAI	N BUS	The max. baudrate is 1MHz, use CANopen protocol to communicate with controller.							
	Operating temperature	0~40℃							
Ope	Storage temperature	-10°C~70°C							
ratic	Humidity(non-condensing)	Below 90%RH							
Operation Environment	Protection class	IP20							
viro	Installation environment	Installed in a dus	t-free,dry and lock	able environment(s	such as in a electric	al cabinet)			
nme	Installation mode	Vertical installation	on						
P.	Height	No power limitat	ion below 1000m						
	Atmospheric pressure	86kpa~106kpa							

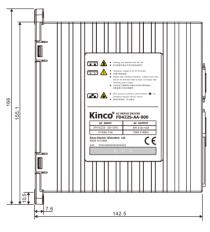
Note①: □=L: Communication port RS232, RS485

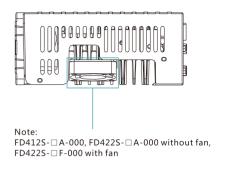
□=A/C: Communication port RS232, CANopen

Note2: AA is a direct driving servo system

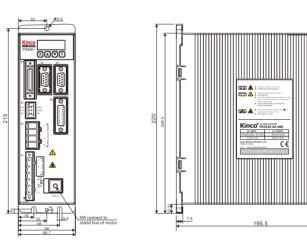
# Mechanical Dimension Diagram of FD412S/FD422S

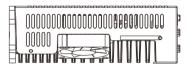




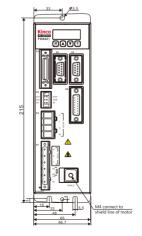


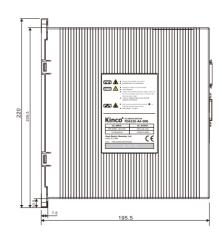
# **Mechanical Dimension Diagram of FD432S**

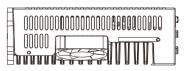


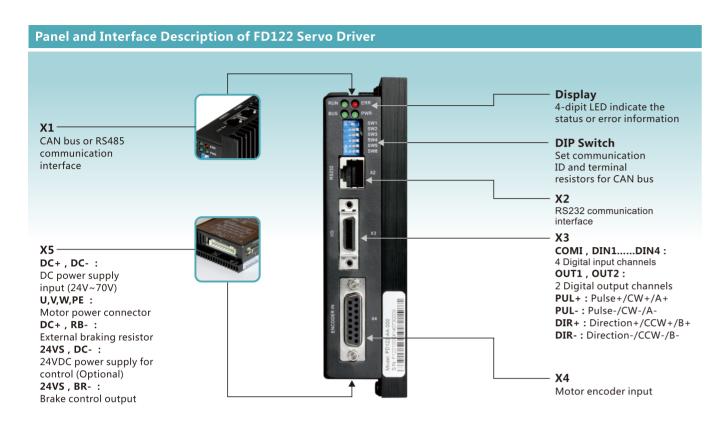


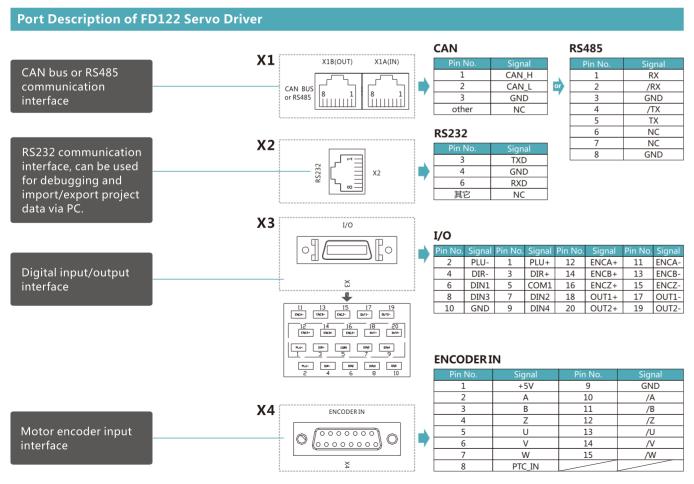
# Mechanical Dimension Diagram of FD612S/FD622S











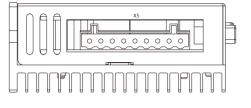
# **Technical Specifications Table of FD122 Servo Driver**

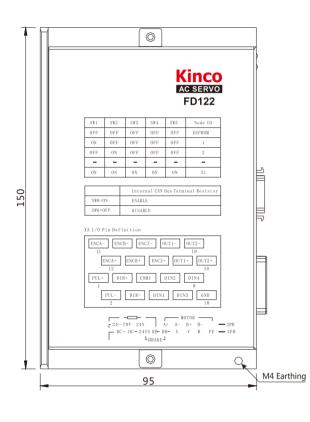
Model parameter		FD122-LA-000 FD122-CA-000 FD122-AA-000						
Po	Main supply voltage	24VDC~70VDC						
Main supply voltage 24VDC ~ 70VDC  Control circuit voltage DC24V 1A ( Optional )								
Rated current(RMS) 10A								
Current	Peak current(PEAK)	30A						
Fee	edback signal	2500PPR (incremental encoder with 5V supply)						
Bra	ike chopper	Use an external braking resistor a	according to application, mainly in h	nigh speed start and stop application.				
Bra	ake chopper threshold	DC79V ± 2V						
Ov	er-voltage alarming threshold	DC86V ± 2V						
Un	der-voltage alarming threshold	18V± 2V						
Со	oling method	Natural air cooling						
We	eight (Kg)	0.565						
	Input specification	4 digital inputs, with COMI termi	nal for PNP (high level valid 12.5-30	(IV) or NPN (low level valid) connection.				
		Define freely according to require	ement, supporting following function	ons: Driver enable, driver fault reset,				
	Input function	driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command,						
	Input function	internal speed section control, internal positive section control, quick stop, start homing, active command,						
_		switch electronic gear ratio, switc	th gain					
3ene	Output specification	3 digital outputs, OUT1-OUT2 current is 100mA, BR+/BR- (Brake control output ) current is 500mA,						
General Functions	output specimention	can drive brake device directly						
unc:		Define freely according to requirement, supporting following functions: Driver ready, driver fault, position						
tions	Output function	reached, motor at zero speed, motor brake, motor speed reached, N signal, maximum speed obtained in						
0,		torque mode, motor brake, position limiting, reference found, multi-position reached						
	Encoder Signal Output	Output the encoder signal of motor, Used in multiple axis synchronous control, supports 2MHz						
	RS232	The max. baud rate is 115.2KHz, use JD-PC software to communicate with PC, or via free						
	110232	protocol to communicate with co	ontroller.					
	Protection Functions	Over-voltage protection, under-v	oltage protection, motor over-heat	$protection (I^{z}T), \ short-circuit \ protection,$				
		drive over-heat protection, etc						
CAN BUS		Supports 1M baud rate, commur	nicates with controller via CANopen	protocol				
	Operating temperature	0~40°C						
Opo	Storage temperature	-10℃~70℃						
erati	Humidity(non-condensing)							
on E	Protection class	IP20						
Operation Environment	Installation environment	Installed in a dust-free, dry and le	ockable environment(such as in a el	ectrical cabinet)				
mnc	Installation mode	Vertical installation						
ent	Altitude	No power limitation below 1000	n					
	Atmospheric pressure	86kpa ~ 106kpa						

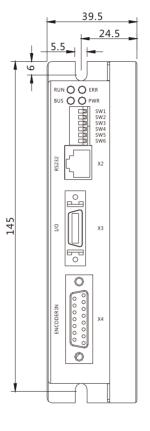
Note①: □=L: Communication port RS232, RS485 □=A/C: Communication port RS232, CANopen Note(2): AA is a direct driving servo system

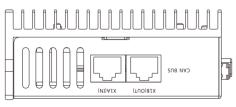
**Mechanical Dimension Diagram of FD122** 

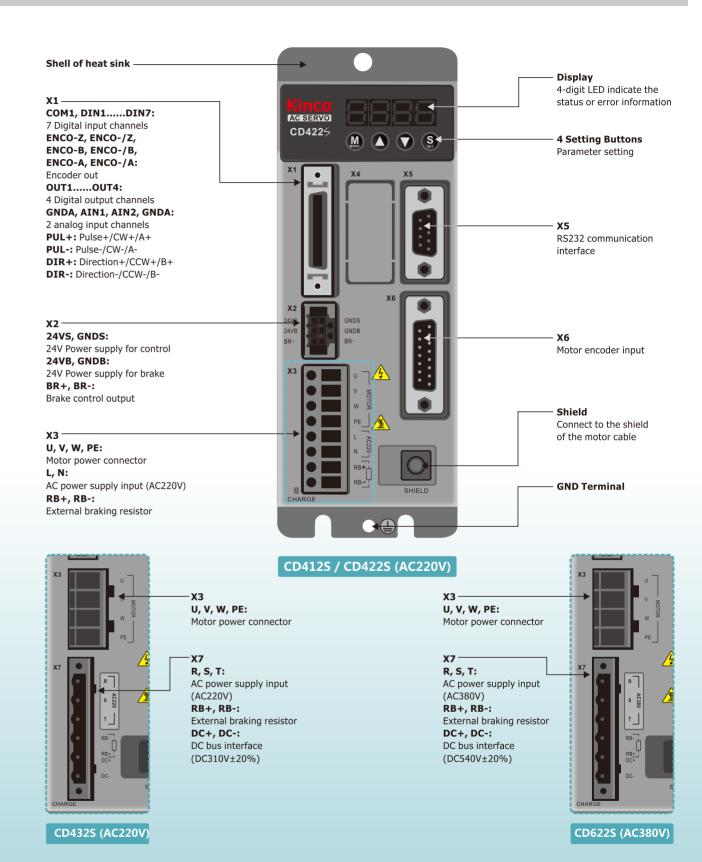
(Unit: mm)







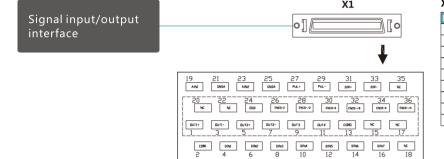




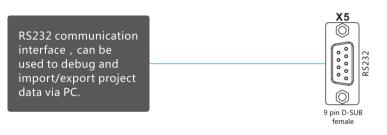
Note: 1. CD412S/CD422S/CD432S/CD622S drivers share the same interface definition, except for X3 and X7 power interfaces.

2. Suggested brake resistor: CD412S/CD422S 75ohms/100W, CD432S 39ohms/200W, CD622S 75Ω/200W, The customer should chose the power of brake resister according to the actual application.

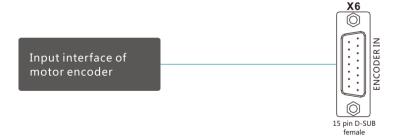




X1							
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
2	COM1	1	OUT1+	20	NC	19	AIN1
4	DIN1	3	OUT1-	22	NC	21	GNDA
6	DIN2	5	OUT2+	24	GND	23	AIN2
8	DIN3	7	OUT2-	26	ENCO-Z	25	GNDA
10	DIN4	9	OUT3	28	ENCO-/Z	27	PUL+
12	DIN5	11	OUT4	30	ENCO-B	29	PUL-
14	DIN6	13	COM0	32	ENCO-/B	31	DIR+
16	DIN7	15	NC	34	ENCO-A	33	DIR-
18	NC	17	NC	36	ENCO-/A	35	NC







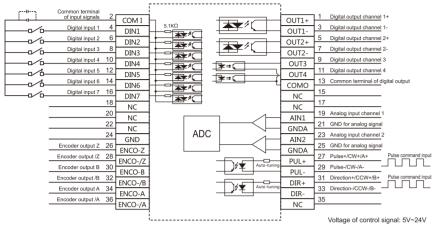
Pin No.	Signal
1	+5V
2	A
3	В
4	Z
5	U
6	V
7	W
8	PTC_IN
9	GND
10	/A
11	/B
12	/Z
13	/U
14	//
15	/W

**ENCODER IN** 

# **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
_	Main supply voltage	Single-phase AC2 -20/+15% 47~63H			Single-phase or 3-phase AC220V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63H	lz
Power	Control circuit voltage	18VDC~30VDC	1A				
	Max. continuous current	2A	4A	5A	11A	5.5A	7A
Current	Peak current(PEAK)	7A	15A	15A	27.5A	15A	25A
Feedbac	ck signal		ental encoder with	n 5V supply) . 20 bit single-turn	absolute encoder	,	
Brake ch	nopper					asion of quick stop	
	hopper threshold	DC380V±5V	<u> </u>	3 11	, , ,	DC680V±5V	
	Itage alarming threshold	DC400V±5V				DC700V±5V	
	oltage alarming threshold	DC200V±5V				DC400V±5V	
Cooling	method	Natural air coolir	ng	Fan	Fan	!	
Weight		1.2		1.2	2.4		
	Max. frequency of input pulse	Differential signal:	500KPPS, Open-co	llector signal: 200KF	PPS		
	Pulse command mode	Pulse+direction, C	CW+CW, A+B phas	se(5V-24V)			
	Command smoothing			nal parameter settir	ng)		
Position	Feedforward gain	<u> </u>	rnal parameter sett		<u> </u>		
Mode	Electronic gear ratio				1~32767, 1/50≤ Ge	ar factor/Gear divid	er ≤50
	Position loop sampling frequency	1KHz				<u> </u>	•
	Analog input voltage range	-10V~+10V(Resol	ution 12bit)				
	Input impedance	200K	-				
	Analog input sampling frequency	4KHz					
	Command source	External analog co	mmand / internal c	ommand			
Speed	Command smoothing			nal parameter settir	ng)		
Mode	Input voltage dead-zone setting		rnal parameter sett	•			
	Input voltage offset settiong		rnal parameter sett				
	Speed limit		rnal parameter sett				
	Torque limit				g command control		
	Speed loop sampling frequency	4KHz	· ·		<u> </u>		
	Analog voltage input range	-10V~+10V(Resol	ution 12bit)				
	Input impedance	200K	·				
	Input sampling frequency	4KHz					
_	Command source	External analog co	mmand / internal c	ommand			
Torque	Command smoothing	Low-pass filtering	(Adjustable by inter	nal parameter settir	ng)		
Mode	Speed limit	Adjustable by inte	rnal parameter sett	ing / External analog	g command control		
	Input voltage dead-zone setting	Adjustable by inte	rnal parameter sett	ing			
	Input voltage offset setting	Adjustable by inte	rnal parameter sett	ing			
	Current sampling frequency	16KHz					
D: :: 1	Input specification	7 digital inputs, w	ith COM1 terminal	for PNP (high level va	lid 12.5-30V) or NPN	(low level valid) conne	ection.
Digital Input	Input function	proportional control,	positive limit, negetive	limit, homing signal,re		er fault reset,driver moc al speed section contro ratio, switch gain	
	Output specification	5 digital outputs,Ol	JT1~OUT4 current is	100mA,OUT5 current	is 800mA, can drive b	orake device directly	
Digital Output	Output function	Define freely accord	ling to requirement, s d, motor brake, motor	upporting following f	functions: Driver ready nal, maximum speed	y, driver fault, positior obtained in torque m	
Protecti	on functions	Over-voltage protection	n,under-voltage protectio	n,motor over-heat protec	tion(I <sup>2</sup> T),short-circuit prote	ection,drive over-heat pro	tection,etc.
Commu	inication interface	RS232 (Connection	ons with PC: 2-2, 3	-3, 5-5)			
	Operating temperature	0~40°C					
	Storage temperature	-10°C~70°C					
	Humidity(non-condensing) Below 90%RH						
шÕ	,						
Opera Enviro	Protection class	IP20 Installed in a dust-free,dry and lockable environment(such as in a electrical cabinet)					
Operation Environm	Protection class Installation environment		t-free,dry and lock	able environment	(such as in a electr	ical cabinet)	
Operation Environment				able environment	(such as in a electr	ical cabinet)	
Operation Environment	Installation environment	Installed in a dus Vertical installation		able environment	(such as in a electr	ical cabinet)	

# **Wiring Diagram for Position Control Mode**



Default setting for digital inputs: Din 1: Driver enable Din 2: Fault reset Din 3: Operation mode Din 4: P control Din 5: Positive limit Din 6: Negative limit Din 7: Home signal	Default setting for digital output: Out 1: Ready Out 2: Error Out 3: Position reached Out 4: Zero velocity Out 5: Motor brake
To use other functions, please redefine the digital inputs, Other functions that can be defined are as followings:  Reverse command  Internal speed section control  Internal position section control  Start homing  Active command  Quick stop  Switch electronic gear ratio  Switch gain	To use other functions, please redefine the digital inputs, Other functions that can be defined are as followings: - Index - Motor brake - Position limiting - References found - Multi-function output signal (Multi-position reached)

Default setting for digital output

To use other functions, please

Multi-function output signa

(Multi-position reached)

edefine the digital inputs,

defined are as followings:

Motor brake

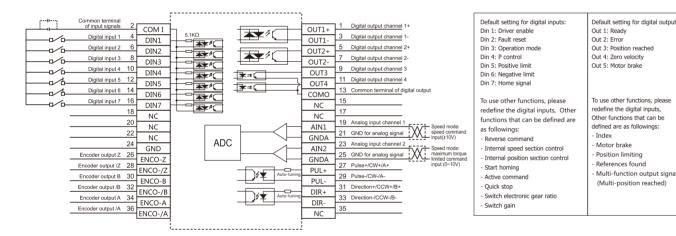
Position limiting

Out 3: Position reached

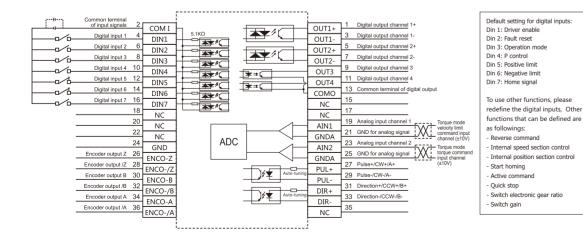
Out 5: Motor brake

Out 1: Ready Out 2: Error

# Wiring Diagram for Speed Control Mode

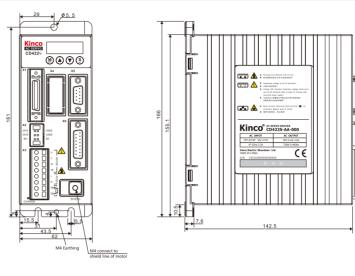


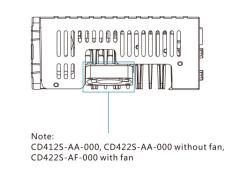
# Wiring Diagram for Torque Control Mode



# Mechanical Dimension Diagram of CD412S/CD422S

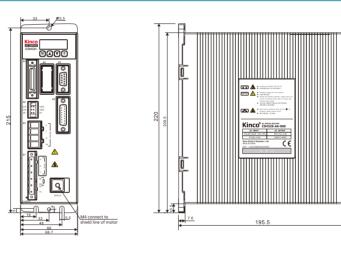


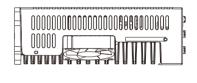




# **Mechanical Dimension Diagram of CD432S**

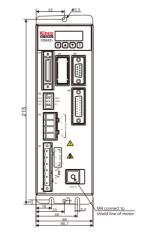
(Unit: mm)

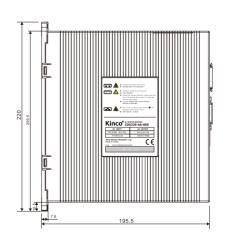


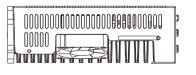


# Mechanical Dimension Diagram of CD612S/CD622S

(Unit: mm)







# Technical Specifications of **SMH** Servo Motor

# **Technical Specifications of SMH Servo Motor (1)**

Motor series	Motor series		inge size 40mm	Small inertia fla	ange size 60mm	Small inertia fla	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 matchin	Driver matching		FD412S-CA-000 FD412S-AA-000 FD412S-LA-000 CD412S-AA-000		JD430-AA-000 FD422S-CA-000 FD422S-AA-000 FD422S-LA-000 CD422S-AA-000		JD430-AA-000 FD432S-CA-000 FD432S-AA-000 FD432S-LA-000 CD432S-AA-000	
DC link voltage	UDC	300	300	300	300	300	300	
	Rated power P <sub>N</sub> (W)	50	100	200	400	750	1000	
Continuous	Rated torque T <sub>N</sub> (Nm)	0.16	0.32	0.64	1.27	2.39	3.18	
performance	Rated speed n <sub>N</sub> (rpm)	3000	3000	3000	3000	3000	3000	
	Rated current IN (A)	0.7	1.4	1.6	3.1	3.9	6.3	
Maximum torq	ue T <sub>™</sub> (Nm)	0.48	0.96	1.92	3.82	7.17	9.48	
Maximum curr	ent I <sub>n</sub> (A)	2.1	4.2	4.8	9.3	11.7	18.9	
Standstill torqu	ie Ts (Nm)	0.176	0.352	0.7	1.39	2.63	3.3	
Standstill curre	nt IS (A)	0.77	1.54	1.79	3.38	4.4	6.93	
Resistance line	-line RL (Ω)	16.6	5.53	8.02	3.52	1.4	0.86	
Inductance line	e-line LL (mH)	14	6	16.3	7.8	7.5	4.5	
Electrical time	constant τe (ms)	0.84	1.08	2.03	2.22	5.35	5.23	
Mechanical tim	ne constant τm (ms)	1.28	0.86	2.26	1.35	0.75	0.89	
Reverse voltage	e constant Ke(V/krpm)	16	14	29	29	40	34	
Torque constar	nt Kt (Nm/A)	0.265	0.265	0.48	0.48	0.662	0.562	
Data u ma a ma a ma	of in out in 1 (Vor one)	0.031	0.059	0.375	0.51	1.36	1.9	
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	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 numb	per	4	4	3	3	3	3	
Maximum volta	ge rising du/dt (KV/µs)	8	8	8	8	8	8	
Insulation class	;	F	F	F	F	F	F	
Maximum radi	al force F (N)	120	120	180	180	335	335	
Maximum axia	l force F (N)	60	60	90	90	167.5	167.5	
\A/aiadat	C(Ve)	0.5	0.8	1.3	1.8	3.3	3.9	
Weight	G(Kg)	0.8 (with brake)	1.0 (with brake)	1.8 (with brake)	2.3 (with brake)	4 (with brake)	4.6 (with brake)	
Langth of mat	or 1 (mm)	85.3±1	110.8±1	120	150	147	167	
Length of motor L(mm)		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 feedba	ack device	Incremental enco	der 2500ppr					
Cooling metho	Cooling method		non-ventilated					
Protection leve	I	IP65 for body, sha	ft sealing IP54					
F	Temperature	-20°C ~ 40°C (Non	-freezing)					
Environmental conditions for	Humidity	Below 90% RH (N	on-condensing)					
operation	Ambient environment	Away from active	gas, combustible o	gas, oil drops and d	lust			
	Altitude	Maximum altitude	e 4000m, Rated po	wer at 1000m or be	elow, Above 1000m	n: Decreasing 1.5%	per 100m rise	

# Technical Specifications of SMH Servo Motor (2)

		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	1	FD432S-LA-000	FD622S-AA-000	FD432S-LA-000	JD620-AA-000 FD622S-CA-000 FD622S-AA-000 FD622S-LA-000 CD622S-AA-000	FD432S-LA-000	JD620-AA-000 FD622S-CA-000 FD622S-AA-000 FD622S-LA-000 CD622S-AA-000	
DC link voltage	UDC	300	560	300	560	300	560	
	Rated power P <sub>N</sub> (W)	1250	1260	1050	1570	1260	1880	
Continuous	Rated torque T <sub>N</sub> (Nm)	4.0	4.0	5.0	5.0	6.0	6.0	
performance	Rated speed n <sub>N</sub> (rpm)	3000	3000	2000	3000	2000	3000	
	Rated current IN (A)	6.5	4.3	5.9	5.9	6.2	6.2	
Maximum torqu	ıe T <sub>™</sub> (Nm)	12	12	15.0	15.0	18.0	18.0	
Maximum curre	nt I <sub>m</sub> (A)	19.5	12.9	17.7	17.7	18.6	18.6	
Standstill torque	e Ts (Nm)	4.4	4.4	5.5	5.5	6.6	6.6	
Standstill curren	it IS (A)	6.82	4.73	6.49	6.49	6.765	6.765	
Resistance line-l	line RL (Ω)	0.8	1.83	1.03	1.03	1.258	1.258	
Inductance line-	line LL (mH)	6.4	13.5	7.8	7.8	9.62	9.62	
Electrical time co	onstant τe (ms)	7.9	7.37	7.57	7.57	7.64	7.64	
Mechanical time	e constant τm (ms)	1.4	1.63	1.55	1.55	1.65	1.65	
Reverse voltage	constant Ke(V/krpm)	45	64	55	55	64	64	
Torque constant	t Kt (Nm/A)	0.744	1.058	0.910	0.910	1.058	1.058	
Poter memont	of inertia J <sub>m</sub> (Kg·cm²)	5.8	5.8	7.2	7.2	8.5	8.5	
Notor moment	or mertia om (kg·ciii)	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 numbe	er	4	4	4	4	4	4	
Maximum voltag	ge rising du/dt (KV/µs)	8	8	8	8	8	8	
Insulation class		F	F	F	F	F	F	
Maximum radial	l force F (N)	630	630	630	630	630	630	
Maximum axial	force F (N)	315	315	315	315	315	315	
\Maight	C(Va)	6.2	6.2	7.2	7.2	8.2	8.2	
Weight	G(Kg)	8.2 (with brake)	8.2 (with brake)	9.2 (with brake)	9.2 (with brake)	10.2 (with brake)	10.2 (with brake)	
Langth of moto	r   (2000)	168	168	185	185	202	202	
Length of motor	r L(mm)	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		Incremental encode	der 2500ppr					
Cooling method	d	Totally enclosed, r	non-ventilated					
Protection level		IP65 for body, sha	ft sealing IP54					
	Temperature	-20°C ~ 40°C (Non	-freezing)					
Environmental conditions for	Humidity	Below 90% RH (N	on-condensing)					
	Ambient environment			as, oil drops and d				
	Altitude	Maximum altitude	4000m, Rated po	wer at 1000m or be	elow, Above 1000m	n: Decreasing 1.5%	per 100m rise	

**Note** : □=A ——Without brake □=H ——Cable connector

□=B —With brake □=N —HFO18 seri

 $\square$  =N ——HFO18 series standard connector (Towards the shaft)

□=O ——HFO18 series standard connector (Opposite the shaft)

□=P ——HFO21+HFO18 (Power HFO21 connector, Encoder HFO18 connector)

□=M ——2xM17 series Intercontec connector

Note : □=A ——Without brake □=B ——With brake

# **Technical Specifications of SMH Servo Motor (3)**

Motor series			Medium inertia flange size 130mm					
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		
Driver matching		JD430-AA-000 FD432S-CA-000 FD432S-AA-000 FD432S-LA-000 CD432S-AA-000	JD620-AA-000 FD622S-CA-000 FD622S-AA-000 FD622S-LA-000	JD620-AA-000 FD622S-CA-000 FD622S-AA-000 FD622S-LA-000	JD630-AA-000 JD630-LA-000	JD620-AA-000 FD622S-CA-000 FD622S-AA-000 FD622S-LA-000		
DC link voltage	e UDC	560	560	560	560	560		
	Rated power P <sub>N</sub> (W)	1050	1570	2100	3000	2300		
Continuous	Rated torque T <sub>N</sub> (Nm)	5	7.5	10	14.3	11.1		
performance	Rated speed n <sub>N</sub> (rpm)	2000	2000	2000	2000	2000		
	Rated current IN (A)	4.3	6.3	7.6	7.9	7.1		
Maximum torc	ue T <sub>™</sub> (Nm)	12.5	18.75	25	35.75	27.5		
Maximum curr	rent I <sub>m</sub> (A)	10.75	15.75	19	19.75	17.75		
Standstill torqu	ue Ts (Nm)	5.5	8.25	11	15.73	12.1		
Standstill curre	nt IS (A)	4.73	6.93	8.36	8.7	7.81		
Resistance line	-line RL (Ω)	1.85	1.17	0.98	0.84	2.2		
Inductance line-line LL (mH)		23.7	16.2	14.3	12.7	14(AVG)		
Electrical time	constant τe (ms)	12.81	13.846	14.592	14.94	6.36		
Mechanical tin	ne constant τm (ms)	2.868	2.529	2.268	1.53	4.68		
Reverse voltag	e constant Ke(V/krpm)	70	72	80	110	100		
Torque constar	nt Kt (Nm/A)	1.1578	1.191	1.3232	1.82	1.65		
Dotor moment	of inartia   (Ka am²)	12	17.7	23.4	34.8	33.5		
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	12.04 (with brake)	17.74 (with brake)	23.44 (with brake)	34.9 (with brake)	33.6 (with brake)		
Pole pair numb	per	4	4	4	4	4		
Maximum volta	ge rising du/dt (KV/µs)	8	8	8	8	8		
Insulation class	5	F	F	F	F	F		
Maximum radi	al force F (N)	900	900	900	900	1200		
Maximum axia	l force F (N)	450	450	450	450	600		
Weight	G(Kg)	7.5	9.1	10.7	13.9	12		
vveignt	G(Kg)	9.7 (with brake)	11.3 (with brake)	12.9 (with brake)	14.9 (with brake)	15.5 (with brake)		
Length of mot	or L(mm)	159±1.5	179±1.5	199±1.5	239±1.5	226±1.5		
Length of mot	OI L(IIIII)	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)		
Position feedb	ack device	Incremental encoder	2500ppr					
Cooling metho	od	Totally enclosed, non	-ventilated					
Protection leve		IP65 for body, shaft s	ealing IP54					
Fundament	Temperature	-20°C ~ 40°C (Non-fre	ezing)					
Environmental conditions for	Humidity	Below 90% RH (Non-	condensing)					
operation	Ambient environment	Away from active gas	, combustible gas, oil	drops and dust				
,	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise						

# Technical Specifications of SMH Servo Motor (4)

Motor series		Medium inertia fl	ange size 150mm	ize 150mm Medium inertia flange size 180mm			
Model		SMH150D-0300 -20A□K-4HKC	SMH150D-0380 -20A K-4HKC	SMH180D-0350 -15A□K-4HKC	SMH180D-0440 -15A K-4HKC	SMH180D-0550 -15R□K-4HKC	SMH180D-0750 -15R□K-4HKC
Driver matching	Driver matching		AA-000 LA-000	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	560	560
	Rated power P <sub>N</sub> (W)	3000	3800	3500	4400	5500	7500
Continuous	Rated torque T <sub>N</sub> (Nm)	14.3	18	22	28	35	48
performance	Rated speed n <sub>N</sub> (rpm)	2000	2000	1500	1500	1500	1500
	Rated current IN (A)	8.5	9.3	10.3	11.9	13.5(REF)	19.2 (REF)
Maximum torq	ue T <sub>m</sub> (Nm)	35.75	45	55	70	87.5	120
Maximum curre	ent I <sub>m</sub> (A)	21.25	23.25	25.75	29.75	33.7(REF)	47.9 (REF)
Standstill torqu	e Ts (Nm)	15.73	19.8	24.2	30.8	38.5	52.8
Standstill curre	nt IS (A)	9.35	10.23	11.33	13.09	14.8(REF)	21.1(REF)
Resistance line-	-line RL (Ω)	1.4	1.3	1.2	0.65	0.53	0.38
Inductance line	e-line LL (mH)	10.6(AVG)	10.5(AVG)	12.7(AVG)	8.5	7.86	5.89
Electrical time	constant τe (ms)	7.57	8.08	10.58	13.08	14.83	15.5
Mechanical tim	ne constant τm (ms)	3.68	3.32	3.42	2.16	1.9	1.81
Reverse voltage	e constant Ke(V/krpm)	107	125	135	150	165	159
Torque constan	nt Kt (Nm/A)	1.77	2.07	2.23	2.48	2.73	2.63
Datar mamant	of inertia J <sub>m</sub> (Kg·cm²)	47.6	63.1	82	118	154	190
Rotor moment	Of Inertia Jm (Ng·Ciff)	47.7 (with brake)	63.2 (with brake)	82.2 (with brake)	118.2 (with brake)	154.3 (with brake)	190.3 (with brake)
Pole pair numb	per	4	4	4	4	4	4
Maximum volta	ge rising du/dt (KV/µs)	8	8	8	8	8	8
Insulation class		F	F	F	F	F	F
Maximum radia	al force F (N)	1200	1200	1600	1600	1600	1600
Maximum axial	l force F (N)	600	600	800	800	800	800
Weight	C(Va)	15	18	22.7	28.6	34.4	40
weight	G(Kg)	18.5 (with brake)	22.5 (with brake)	27.9 (with brake)	33.8 (with brake)	41.4	47 (with brake)
Longth of motor	or I (mm)	254±1.5	282±1.5	260±1.5	298±1.5	336±1.5	374±1.5
Length of mot	Length of motor L(mm)		$352\pm1.5$ (with brake)	332±1.5 (with brake)	370±1.5 (with brake)	413±1.5 (with brake)	451±1.5 (with brake
Position feedback device		Incremental enco	der 2500ppr			SMT37 Resolver	
Cooling metho	d	Totally enclosed, r	non-ventilated				
Protection leve	I	IP65 for body, sha					
Emironacant	Temperature	-20°C ~ 40°C (Non	-freezing)				
Environmental conditions for	Humidity	Below 90% RH (N					
operation	Ambient environment	Away from active	gas, combustible g	gas, oil drops and d	lust		
	Altitude	Maximum altitude	4000m, Rated po	wer at 1000m or be	elow, Above 1000m	n: Decreasing 1.5%	per 100m rise

**Note**: □=A ——Without brake □=B ——With brake

Note : □=A ——Without brake □=B ——With brake

# Technical Specifications of Low-voltage Servo Motor

Motor series		Low-voltage	SMH Series	Low-voltage SME Series			
Wieter series		Small inertia fla	ange size 40mm	Small inertia fla	ange size 60mm	Small inertia flange size 80mm	
Model		SMH40S-0005- 30A□K-4DKH	SMH40S-0010- 30A□K-4DKH	SME60S-0020- 30A□K-3DKH	SME60S-0040- 30A□K-3DKH	SME80S-0040- 30A□K-3DKH	
Driver matching	g		FD122-CA-000	FD122-AA-000	FD122-LA-000		
DC link voltage	UDC	60	60	48	48	48	
	Rated power P <sub>N</sub> (W)	50	100	200	400	400	
Continuous	Rated torque T <sub>N</sub> (Nm)	0.16	0.32	0.64	1.27	1.27	
performance	Rated speed n <sub>N</sub> (rpm)	3000	3000	3000	3000	3000	
	Rated current IN (A)	1.2	2.5	4.6	10	9.6	
Maximum torq	ue T <sub>™</sub> (Nm)	0.48	0.96	1.92	3.18	3.18	
Maximum curre	ent I <sub>n</sub> (A)	3.6	7.5	13.8	25	24	
Standstill torqu	ie Ts (Nm)	0.176	0.352	0.7	1.4	1.4	
Standstill curre	nt IS (A)	1.32	2.75	5.06	11	10.6	
Resistance line-	-line RL (Ω)	4.2	2.1	1.1	0.42	0.22	
Inductance line	e-line LL (mH)	3.5	2.5	2.4	0.79	1	
Electrical time	constant τe (ms)	0.84	1.2	2.18	1.88	4.55	
Mechanical tim	ne constant τm (ms)	1.28	1.22	3.22	1.84	1.65	
Reverse voltage	e constant Ke(V/krpm)	8	8	9	8	8	
Torque constar	nt Kt (Nm/A)	0.1323	0.1323	0.149	0.13232	0.13232	
Determination	- f ' t ' 1 (1/ 2)	0.031	0.059	0.375	0.443	0.76	
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	0.033 (with brake)	0.061 (with brake)	0.375 (with brake)	0.447 (with brake)	0.77 (with brake)	
Pole pair numb	per	4	4	3	3	3	
Maximum volta	ge rising du/dt (KV/µs)	8	8	8	8	8	
Insulation class	;	F	F	F	F	F	
Maximum radia	al force F (N)	120	120	180	180	180	
Maximum axial	l force F (N)	60	60	90	90	90	
\A/-:	C(V-)	0.5	0.8	1.3	1.6	2.5	
Weight	G(Kg)	0.8 (with brake)	1.0 (with brake)	1.8 (with brake)	2.1 (with brake)	3.2 (with brake)	
1	1 ()	85.3±1	110.8±1	120 ± 1.5	135 ± 1.5	117 ± 1.5	
Length of moto	or L(mm)	119±1.5 (with brake)	145±1.5 (with brake)	159±1.5 (with brake)	174±1.5 (with brake)	167±1.5 (with brake)	
Position feedback device		Incremental encoder	· 2500ppr				
Cooling metho	od	Totally enclosed, nor	n-ventilated				
Protection level		IP65 for body, shaft :	sealing IP54				
	Temperature	-20°C ~ 40°C (Non-fr	eezing)				
Environmental conditions for	Humidity	Below 90% RH (Non-	-condensing)				
operation	Ambient environment	Away from active ga	s, combustible gas, oil	drops and dust			
5,5141011	Altitude	Maximum altitude 4	000m, Rated power at	1000m or below, Abov	e 1000m: Decreasing 1	L.5% per 100m rise	

Note : □=A ——Without brake □=B ——With brake

# **Technical Specifications of Multi-pole Servo Motor**

Motor series	Small inertia flange size 57mm		Small inertia flange size 85mm					
Model	57S-0010- 10AAK-FDFH	57S-0015- 08AAK-FDFH	85S-0020- 05AAK-FLFN-02	85S-0025- 05AAK-FLFN-02	85S-0035- 05AAK-FLFN-02	85S-0045- 05AAK-FLFN-02	85S-0050- 10AAK-FLFN-03	
Driver matching		FD122-CA-000 FD122-AA-000 FD122-LA-000		JD430-AA FD422S-C FD422S-A FD422S-L	A-000 A-000	2S-AA-000	FD122-CA-000 FD122-AA-000 FD122-LA-000	
Rated phase current (A)	6.5	5.8	6	4	4	4	8.5	
Holding torque (Nm)	0.9	1.5	2.4	4.18	6	7.5	7.5	
Damping torque (Nm)	0.04	0.068	0.25	0.3	0.4	0.45	0.45	
Resistance line-line $(\Omega)$	0.35	0.7	0.44	1.13	2.3	1.78	0.43	
Inductance line-line(mH)	1.28	2.4	3	5.75	12.4	17.1	3.9	
Motor moment of inertia(Kg.cm²)	0.03	0.048	0.14	0.232	0.33	0.44	0.44	
Length L (mm)	90±1.5	113±1.5	125±1	142±1	172±1	202±1	202±1	
Maximum radial force(N)	15	15	60	60	60	60	60	
Maximum axial force (N)	75	75	220	220	220	220	220	
Weight (Kg)	1.05	1.3	2.3	2.7	3.8	5.3	5.3	
Dielectric strength	600V AC 1S 5mA	600V AC 1S 5mA	1200V AC 1S 2mA	1500V AC 1S 5m	ıA		1800V AC 1S 5mA	
Insulation class	В							
Ambient temperature	-20 ~ 50°C	-20 ~ 50°C						
Surface temperature rising	Max. 80°C							
Insulation impedance	Min. $100 M\Omega$ , $50$	00V DC						

# **Technical Specifications of SMC Servo Motor**

Motor series		Small iner	tia flange size 60mm	Small inertia flange size 80mm				
Model		SMC60S-0020-30E□K-3LKH	SMC60S-0040-30E□K-3LKH	SMC80S-0075-30E□K-3LKH				
Driver matching		FD422S-CA-000 FD422S-AA-000 FD422S-LA-000 CD422S-AA-000						
DC link voltage	UDC	300	300	300				
	Rated power P <sub>N</sub> (W)	200	400	750				
Continuous	Rated torque T <sub>N</sub> (Nm)	0.64	1.24	2.39				
performance	Rated speed n <sub>N</sub> (rpm)	3000	3000	3000				
	Rated current I <sub>N</sub> (A)	1.4	2.4	3.8				
Maximum toro	ue T <sub>™</sub> (Nm)	1.92	3.81	7.17				
Maximum curr	ent I <sub>n</sub> (A)	4.2	7.2	11.4				
Standstill torqu	ie Ts (Nm)	0.7	1.4	2.63				
Standstill curre	nt Is (A)	1.5	2.6	4.2				
Resistance line	-line R <sub>L</sub> (Ω)	11.2	5.8	2.1				
Inductance line	e-line L (mH)	20.9	11.5	10.5				
Electrical time	constant τe (ms)	1.87	1.98	5				
Mechanical tim	ne constant τm (ms)	1.8	1.29	0.9				
Reverse voltag	e constant K <sub>e</sub> (V/krpm)	29	34	40				
Torque constar	nt K <sub>1</sub> (Nm/A)	0.48	0.563	0.662				
Datas saasaa	of in outing 1 (1/2) and	0.214	0.405	1.087				
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	0.218 (with brake)	0.409 (with brake)	1.099 (with brake)				
Pole pair numb	per	3	3	3				
Maximum volta	ge rising du/dt (KV/µs)	8	8	8				
Insulation class	;	F	F	F				
Maximum radi	al force F (N)	180	180	335				
Maximum axia	l force F (N)	90	90	167.5				
Weight	C(Va)	1.1	1.6	2.8				
vveignt	G(Kg)	1.6 (with brake)	2.1 (with brake)	3.4 (with brake)				
		109±1.5	135±1.5	139±1.5				
Length of motor L(mm)		150±1.5 (with brake)	176±1.5 (with brake)	182±1.5 (with brake)				
Position feedba	ack device	Incremental encoder 2500ppr						
Cooling metho	od	Totally enclosed, non-ventilated	d					
Protection leve	l	IP65 for body, shaft sealing IP5	4					
	Temperature	-20°C ~ 40°C (Non-freezing)						
Environmental conditions for	Humidity	Below 90% RH (Non-condensin	ng)					
operation	Ambient environment	Away from active gas, combust	ible gas, oil drops and dust					
operation	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise						

# Technical Specifications of SMS Servo Motor

Motor series		Medium inertia flange size 130mm					
Model		SMC130D-0100-20E□K-4LKP	SMC130D-0150-20E□K-4LKP	SMC130D-0200-20E□K-4LKP			
Driver matching		FD422S-CF-000 FD422S-AF-000 FD422S-LF-000 CD422S-AF-000	FD4325 FD4325	5-CA-000 5-AA-000 5-LA-000 5-AA-000			
DC link voltage	e UDC	300	300	300			
	Rated power P <sub>N</sub> (W)	1000	1500	2000			
Continuous	Rated torque T <sub>N</sub> (Nm)	4.8	7.2	10			
performance	Rated speed n <sub>N</sub> (rpm)	2000	2000	2000			
	Rated current I <sub>N</sub> (A)	4.2(REF)	6.5(REF)	8.5(REF)			
Maximum torq	` ,	12	18	25			
Maximum curre	. ,	10.4(REF)	16.2(REF)	21.1(REF)			
Standstill torqu		5.28	7.92	11			
Standstill curre		4.6(REF)	7.1(REF)	9.3(REF)			
Resistance line-	-line R <sub>ι</sub> (Ω)	3.1	1.53	0.93			
Inductance line-line L (mH)		22.7	13.3	8.8			
Electrical time	constant τe (ms)	7.32	8.69	9.46			
Mechanical tim	ne constant τm (ms)	2.72	2.31	1.85			
Reverse voltage	e constant K <sub>e</sub> (V/krpm)	73	71	75			
Torque constar	nt K <sub>1</sub> (Nm/A)	1.21	1.17	1.24			
Determination	-f:	7.4	12	17.7			
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	7.5 (with brake)	12.1 (with brake)	17.8 (with brake)			
Pole pair numb	per	4	4	4			
Maximum volta	ge rising du/dt (KV/µs)	8	8	8			
Insulation class	;	F	F	F			
Maximum radia	al force F (N)	900	900	900			
Maximum axial	I force F (N)	450	450	450			
\A/-:	C(V-)	6.2	7.5	9.1			
Weight	G(Kg)	8.5 (with brake)	9.8 (with brake)	11.4 (with brake)			
		143±1.5	159±1.5	179±1.5			
Length of motor	or L(mm)	204±1.5 (with brake)	220±1.5 (with brake)	240±1.5 (with brake)			
Position feedba	ack device	Incremental encoder 2500ppr	_1	1			
Cooling metho		Totally enclosed, non-ventilated					
Protection leve		IP65 for body, shaft sealing IP54					
	Temperature	-20°C ~ 40°C (Non-freezing)					
Environmental	Humidity	Below 90% RH (Non-condensing)					
conditions for	Ambient environment	Away from active gas, combustible	e gas, oil drops and dust				
operation	Altitude		power at 1000m or below, Above 1000	m: Decreasing 1.5% per 100m rise			

**Note**: □=A ——Without brake □=B ——With brake

Note : □=A ——Without brake □=B ——With brake

# **Technical Specifications of SMC Servo Motor**

Motor series		Medium inertia flange size 130mm					
Model		SMC130D-0150 -20E□K-4HKP	SMC130D-0200 -20E□K-4HKP	SMC130D-0300 -20E□K-4HKP	SMC130D-0300 -30E□K-4HKP		
Driver matchin	g	FD612S-CA-000 FD612S-AA-000 FD612S-LA-000 CD612S-AA-000		FD FD	622S-CA-000 622S-AA-000 622S-LA-000 622S-AA-000		
DC link voltage	e UDC	560	560	560	560		
	Rated power P <sub>N</sub> (W)	1500	2000	3000	3000		
Continuous	Rated torque T <sub>N</sub> (Nm)	7.2	10	14.3	10		
performance	Rated speed n <sub>N</sub> (rpm)	2000	2000	2000	3000		
	Rated current I <sub>N</sub> (A)	4.3(REF)	6.2(REF)	6.5(REF)	6.4(REF)		
Maximum torc	ue T <sub>™</sub> (Nm)	18	25	35.75	25		
Maximum curr	rent I <sub>m</sub> (A)	10.8(REF)	15.5(REF)	16.3(REF)	15.9(REF)		
Standstill torqu	ue Ts (Nm)	7.92	11	15.73	11		
Standstill curre	nt Is (A)	4.8(REF)	6.8(REF)	7.2(REF)	7(REF)		
Resistance line	-line R <sub>ι</sub> (Ω)	3.6	1.79	1.77	1.23		
Inductance line	e-line L (mH)	29.6	16.3	18.2	12.1		
Electrical time	constant τe (ms)	8.22	9.11	10.28	9.84		
Mechanical tin	ne constant τm (ms)	2.44	1.92	1.69	1.83		
Reverse voltag	e constant K₀(V/krpm)	106	102	139	100		
Torque constar	nt K <sub>t</sub> (Nm/A)	1.75	1.69	2.3	1.65		
D-1	- f : t :- 1 (1/ à	12	17.7	29.1	23.4		
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	12.1 (with brake)	17.8 (with brake)	29.2 (with brake)	23.5 (with brake)		
Pole pair numb	per	4	4	4	4		
Maximum volta	ige rising du/dt (KV/µs)	8	8	8	8		
Insulation class	5	F	F	F	F		
Maximum radi	al force F (N)	900	900	900	900		
Maximum axia	l force F (N)	450	450	450	450		
\A/aimba	C(Va)	7.5	9.1	12.3	10.7		
Weight	G(Kg)	9.8 (with brake)	11.4 (with brake)	14.9 (with brake)	13 (with brake)		
		159±1.5	179±1.5	219±1.5	199±1.5		
Length of mot	or L(mm)	220±1.5 (with brake)	240±1.5 (with brake)	280±1.5 (with brake)	260±1.5 (with brake)		
Position feedb	ack device	Incremental encoder	2500ppr	<u> </u>	•		
Cooling metho	od	Totally enclosed, non-	ventilated				
Protection leve	þ	IP65 for body, shaft so	ealing IP54				
	Temperature	-20°C ~ 40°C (Non-fre	ezing)				
Environmental	Humidity	Below 90% RH (Non-	condensing)				
conditions for operation	Ambient environment		combustible gas, oil drops	and dust			
Speration	Altitude	-			ecreasing 1.5% per 100m rise		

# **Technical Specifications of SMS Servo Motor**

Motor series		Small inertia	lange size 60mm	Small inertia flange size 80mm			
Model		SMS60S-0020-30□AK-3LKU	SMS60S-0040-30□□K-3LKU	SMS80S-0075-30□□K-3LKU			
Driver matchin	g		FD422S-CA-000 FD422S-AA-000 FD422S-LA-000 CD422S-AA-000				
DC link voltage	e UDC	300	300	300			
	Rated power P <sub>N</sub> (W)	200	400	750			
Continuous	Rated torque T <sub>N</sub> (Nm)	0.64	1.27	2.39			
performance	Rated speed n <sub>N</sub> (rpm)	3000	3000	3000			
	Rated current I <sub>N</sub> (A)	1.4	2.4	3.8			
Maximum toro	ue T₁ (Nm)	1.92	3.81	7.17			
Maximum curr	rent I <sub>m</sub> (A)	4.2	7.2	11.4			
Standstill torqu	ue Ts (Nm)	0.7	1.4	2.63			
Standstill curre	ent Is (A)	1.5	2.6	4.2			
Resistance line	-line R <sub>ι</sub> (Ω)	11.2	5.8	2.1			
Inductance line	e-line L (mH)	20.9	11.5	10.5			
Electrical time	constant τe (ms)	1.87	1.98	5			
Mechanical tin	ne constant τm (ms)	1.8 1.29		0.9			
Reverse voltag	e constant K <sub>e</sub> (V/krpm)	29 34		40			
Torque constar	nt K <sub>t</sub> (Nm/A)	0.48 0.563		0.662			
Dotor moment	of inartia   (Va cm²)	0.214	0.405	1.087			
Rotor moment	of inertia J <sub>m</sub> (Kg·cm²)	0.218 (with brake)	0.409 (with brake)	1.099 (with brake)			
Pole pair numb	per	3	3	3			
Maximum volta	ige rising du/dt (KV/μs)	8	8	8			
Insulation class	5	F	F	F			
Maximum radi	al force F (N)	180	180	335			
Maximum axia	l force F (N)	90	90	167.5			
Weight	G(Kg)	1.1	1.6	2.8			
weight	G(Kg)	1.6 (with brake)	2.1 (with brake)	3.4 (with brake)			
Length of mot	or L(mm)	94±1.5	115±1.5	132±1.5			
Length of mot	Of L(IIIII)	133±1.5 (with brake)	154±1.5 (with brake)	182±1.5 (with brake)			
Position feedb	ack device	20 bit single-turn encoder, 16 bit ı	multi-turn absolute encoder				
Cooling metho	od	Totally enclosed, non-ventilated					
Protection leve		IP65 for body, shaft sealing IP54					
Francisco manage to t	Temperature	-20°C ~ 40°C (Non-freezing)					
Environmental conditions for	Humidity	Below 90% RH (Non-condensing)					
operation	Ambient environment	Away from active gas, combustible	e 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

Note: □=J — Motor equipped with 20 bit single-turn encoder

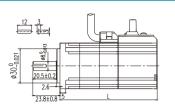
<sup>□=</sup>A ----Without brake

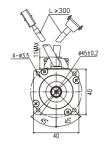
<sup>□=</sup>K — Motor equipped with 16 bit multi-turn absolute encoder

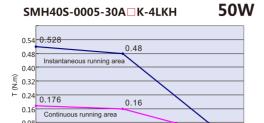
<sup>□=</sup>B ----With brake

# Dimensions/Torque curve of **SMH** Servo Motor

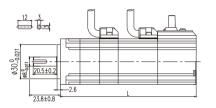
# 40 flange motor with direct cable

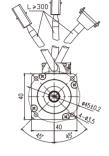






# 40 flange motor with direct cable and brake

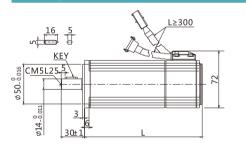


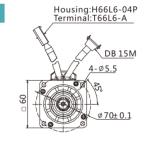


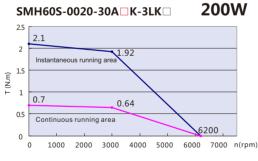
### 100W SMH40S-0010-30A K-4LKH



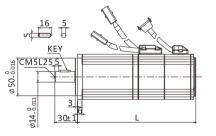
# 60 flange motor with direct cable

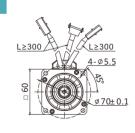




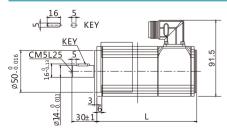


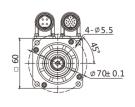
# 60 flange motor with direct cable and brake



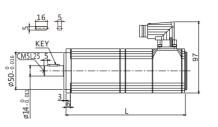


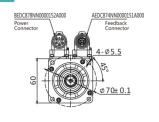
# 60 flange motor with HFO standard connector





# 60 flange motor with Intercontec connector



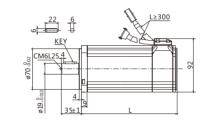


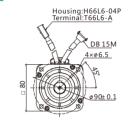
# 400W SMH60S-0040-30A K-3LK 1000 2000 3000 4000 5000 6000 7000 n(rpm)

**750W** 

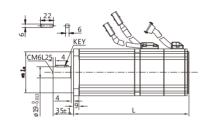
5000

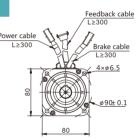
# 80 flange motor with direct cable

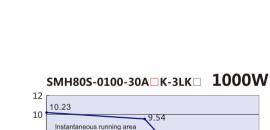




# 80 flange motor with direct cable and brake

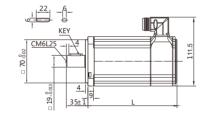


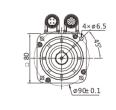


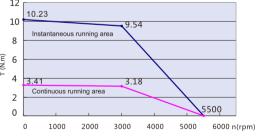


SMH80S-0075-30A K-3LK

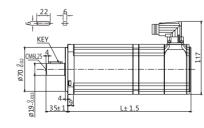
# 80 flange motor with HFO standard connector

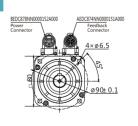






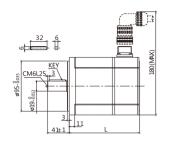
# 80 flange motor with Intercontec connector

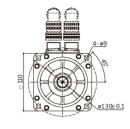




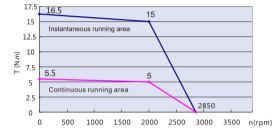
# Dimensions/Torque curve of **SMH** Servo Motor

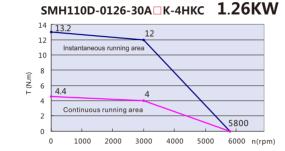
### 110 flange motor with standard connector





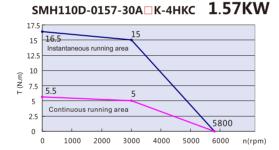
# SMH110D-0105-20A K-4LKC 1.05KW



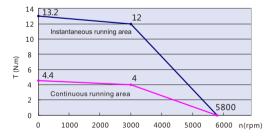


# SMH110D-0126-20A K-4LKC 1.26KW

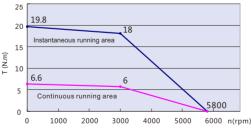




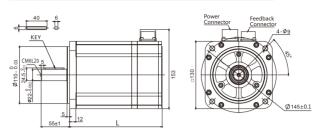
# SMH110D-0125-30A K-4LKC 1.25KW



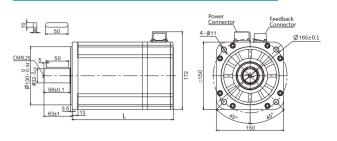




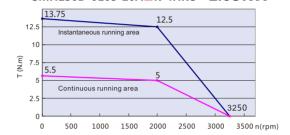
### 130 flange motor with standard connector



### 150 flange motor with standard connector



# SMH130D-0105-20A K-4HKC 1.05KW



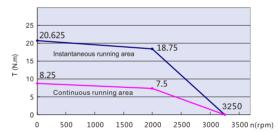


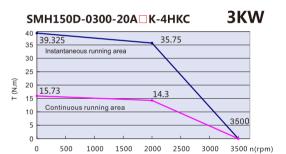


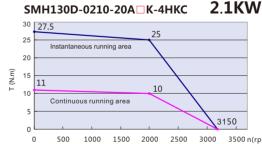
500 1000 1500 2000 2500 3000 3500 4000 n(rpm)

SMH150D-0230-20A K-4HKC 2.3KW

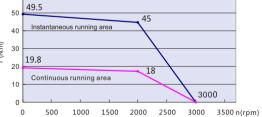
# SMH130D-0157-20A K-4HKC 1.57KW



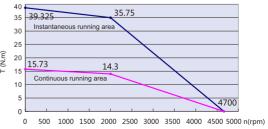




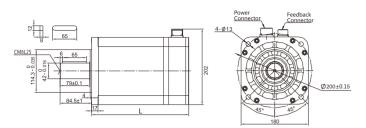


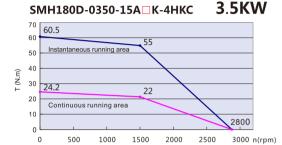


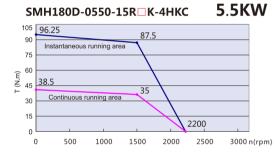
# 3KW SMH130D-0300-20A K-4HKC

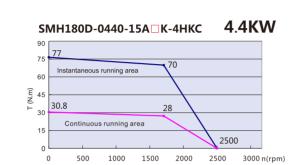


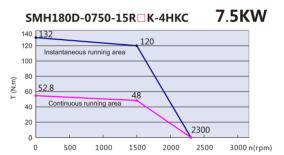
# 180 flange motor with standard connector





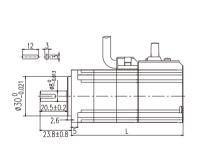


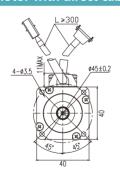


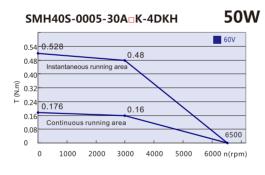


# Dimensions/Torque curve of **Low-voltage** Servo Motor

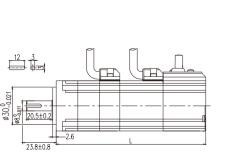
# 40 flange SMH low-voltage servo motor with direct cable

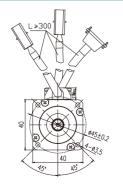


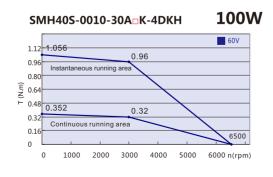




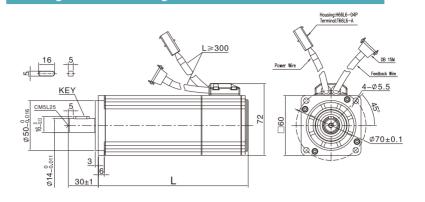


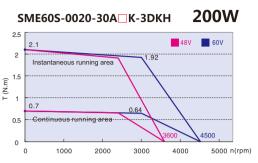




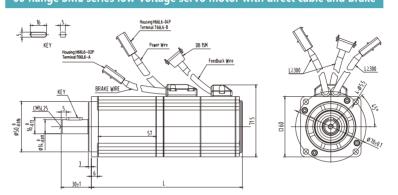


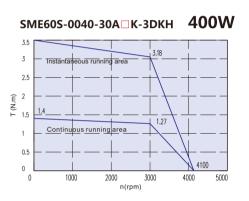
# 60 flange SME low-voltage servo motor with direct cable



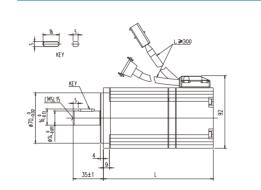


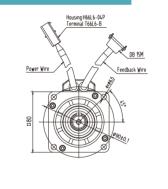
# 60 flange SME series low-voltage servo motor with direct cable and brake

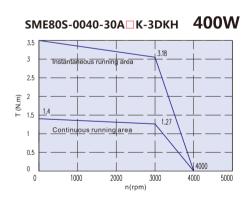




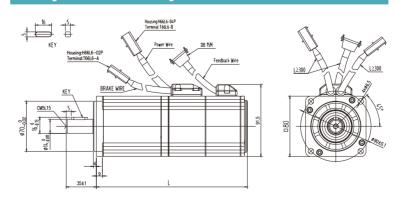
# 80 flange SME low-voltage servo motor with direct cable





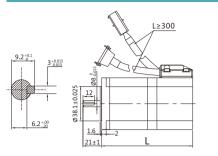


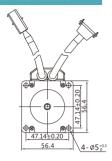
# 80 flange SME series low-voltage servo motor with direct cable and brake



# Dimensions/Torque curve of **SMC** Servo Motor

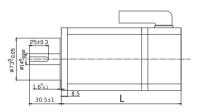
# 57 series multi-pole servo motor with direct cable

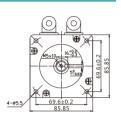


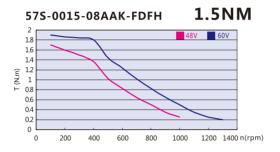


# **1NM** 57S-0010-10AAK-FDFH 1200 1400 n(rpm)

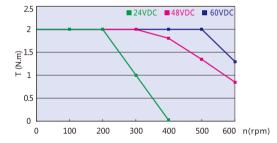
# 85 series multi-pole servo motor with connector

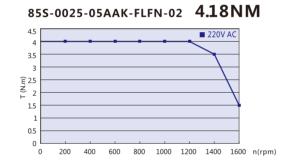




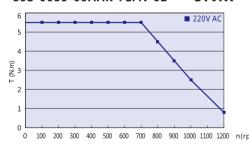


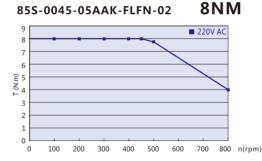
# 85S-0020-05AAK-FLFN-02 2.4NM



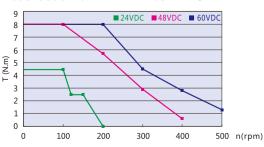


### 6NM 85S-0035-05AAK-FLFN-02

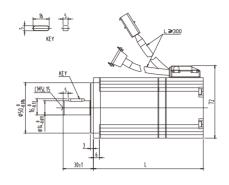


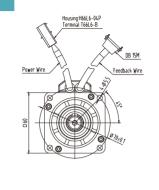


### 8NM 85S-0050-10AAK-FLFN-03

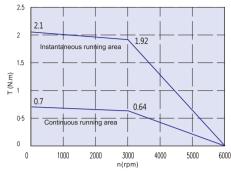


# 60 flange motor with direct cable

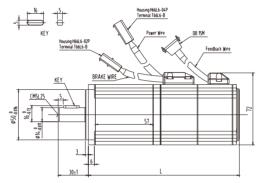


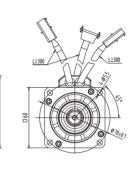


# SMC60S-0020-30E K-3LKH 200W



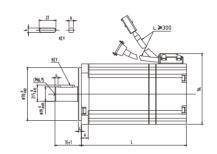
# 60 flange motor with direct cable and brake

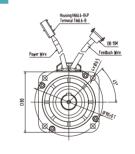


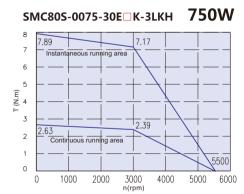


# SMC60S-0040-30E K-3LKH 400W

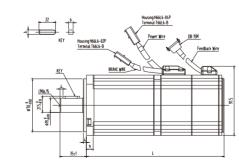
# 80 flange motor with direct cable

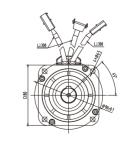






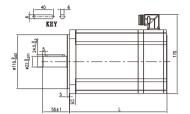
# 80 flange motor with direct cable and brake





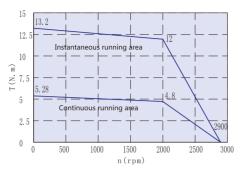
# Dimensions/Torque curve of **SMS** Servo Motor

# 130 flange motor with standard connector

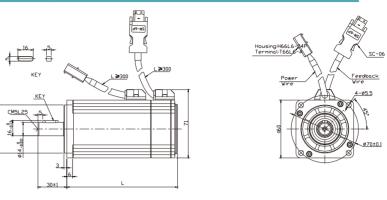




### SMC130D-0100-20E K-4LKP



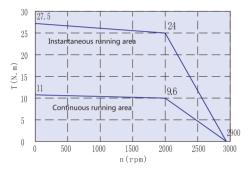
60 flange motor with communication encoder



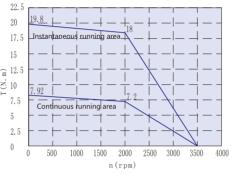
SMS60S-0020-30 AK-3LKU 200W

4.5
4.2
Instanta leous running area 3.81
2.5
1.4
1.4
1.5
1
0.5
0
1000 2000 3000 4000 5000 6000
n (rpm)

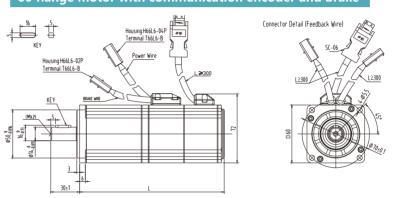
### SMC130D-0200-20E K-4LKP



SMC130D-0150-20E□K-4HKP



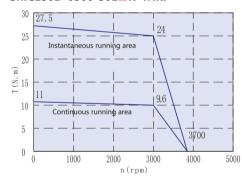
60 flange motor with communication encoder and brake



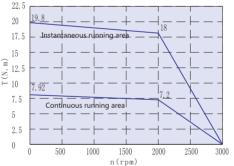
SMS60S-0040-30 K-3LKU 400W

4.5
4.2
Instantaneous running area 3.81
2.5
2
1.5
Continuous running area 1.27
Continuous running area 0.5
0
0 1000 2000 3000 4000 5000 6000

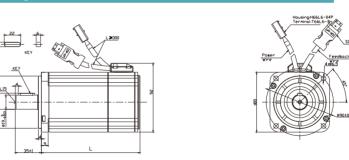
# SMC130D-0300-30E K-4HKP

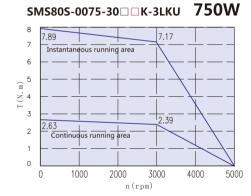


SMC130D-0150-20E□K-4LKP

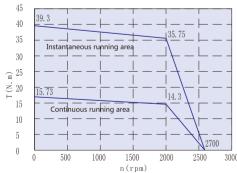


80 flange motor with communication encoder

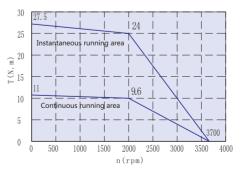




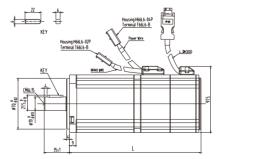
### SMC130D-0300-20E K-4HKP

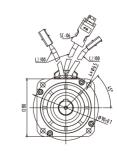


SMC130D-0200-20A K-4HKP



80 flange motor with communication encoder and brake





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# Wiring Diagram for The **Power Cable**



Wire Spec. 4×18AWG(41/0.167)

The sectional area of 18AWG is 0.8107mm<sup>2</sup>



Yellow	U	PIN1		
Red	٧	PIN2		
Black	W	PIN3		
Yellow-Green	PE	PIN4		
(	(		Driver Side	Yellow
				Red ■ Rlack

40

# MOT-005-LL-KL

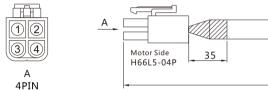
Wire Spec.UL20328 4C×18AWG(41/0.16T) black

The sectional area of 18AWG is 0.8107mm<sup>2</sup>

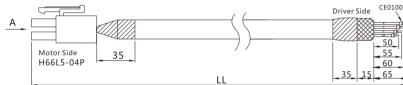
MOT-005-LL-KL			
Cable color	Signal	PIN#	
Yellow	U	PIN1	
Red	٧	PIN2	
Black	W	PIN3	
Yellow-Green	PE	PIN4	

MOT-005-LL-KL-D

Cable color Signal PIN#



H66L5-04P



# MOT-005-LL-KC0

Wire Spec.4C×18AWG(41/0.16T)

The sectional area of 18AWG is 0.8107mm<sup>2</sup>



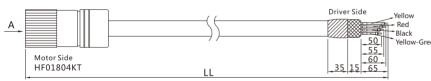


Cable color

Red

Black

Yellow-Green



MOT-005-LL-KC4 Signal

W

PE

HFO2106TK

PIN2

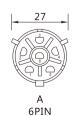
PIN3

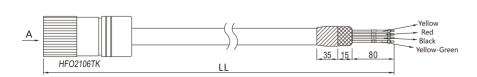
PIN4 PIN6

# MOT-005-LL-KC4

Wire Spec. UL20328 4×18AWG

The sectional area of 18AWG is 0.8107mm<sup>2</sup>

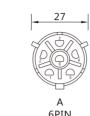


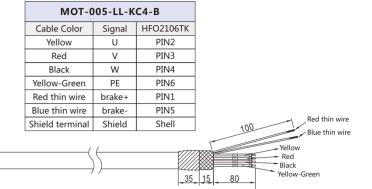


# MOT-005-LL-KC4-B

Wire Spec. 4×18AWG+2×20AWG

The sectional area of 18AWG is 0.8107mm<sup>2</sup> The sectional area of 20AWG is 0.5189mm





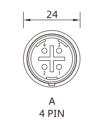
# MOTE-005-LL-KC0

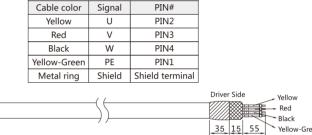
Wire Spec. 4C×18AWG(41/0.16T)

The sectional area of 18AWG is 0.8107mm<sup>2</sup>

HFO2106TK

Motor Side HF01804KT





PIN#

PIN1

MOTE-005-LL-KC0

**BRA-LL-KL** 

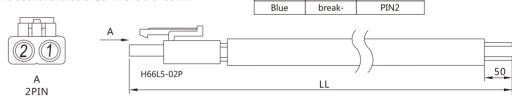
Signal

break+



Wire Spec. 2×20AWG

The sectional area of 20AWG is 0.5189mm<sup>2</sup>



Cable color

Red

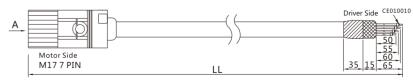
# MOT-005-LL-KM1

Wire Spec. UL20328 4C×18AWG(41/0.16T) black

The sectional area of 18AWG is 0.8107mm<sup>2</sup>



MOT-005-LL-KM1		
Cable color	Signal	PIN#
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-Green	PE	÷



# Wiring Diagram for The Power Cable

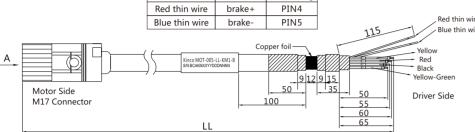


Wire Spec. RVVYP 4×18AWG+2×20AWG

The sectional area of 18AWG is 0.8107mm<sup>2</sup> The sectional area of 20AWG is 0.5189mm

MOT-0	1-B	
Cable color	Signal	M17 7PIN
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-Green	PE	Ť
Shield terminal	Shield	Metal ring
Red thin wire	brake+	PIN4
Blue thin wire	brake-	PIN5





MOT-008-LL-KL-D

Signal H66L5-04P

# MOT-008-LL-KL-D

Wire Spec. UL2586 4×16AWG

The sectional area of 16AWG is 1.318mm<sup>2</sup>







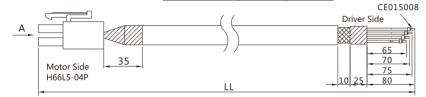
Cable color

# MOT-008-LL-KL

Wire Spec. cable 4C×1.5mm<sup>2</sup>

MOT-008-LL-KL				
Cable	color	Signal	PIN#	
1	Yellow	U	PIN1	
2	Red	٧	PIN2	
3	Black	W	PIN3	
Yellow	-Green	PE	PIN4	

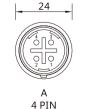




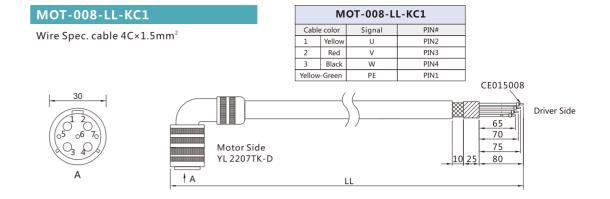
# MOT-008-LL-KC0

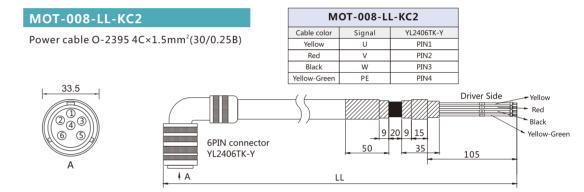
Wire Spec. ECHU H05VVC4V5-K 4×1.5mm<sup>2</sup> BLACK

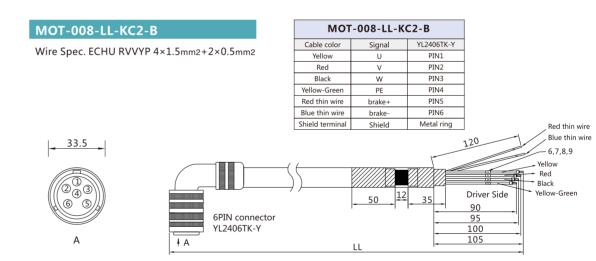
MOT-008-LL-KC0					
Cable color Signal PIN#					
Yellow	U	PIN2			
Red	V	PIN3			
Black	W	PIN4			
Yellow-Green		PIN1			
Metal ring		Shield terminal			
	Yellow Red Black	e color Signal Yellow U Red V Black W -Green PE			

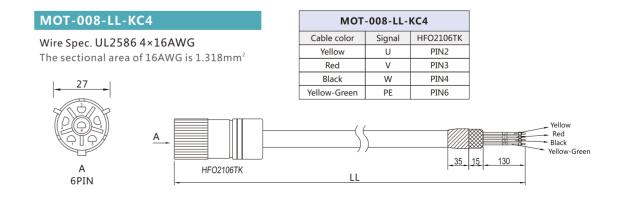








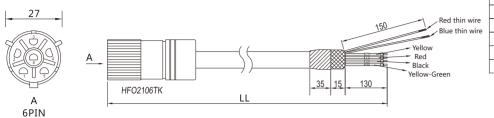




# Wiring Diagram for The **Power Cable** & **Encoder Cable**

# MOT-008-LL-KC4-B

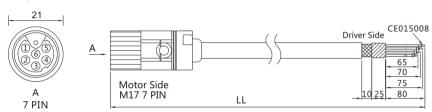
Wire Spec. 4×1.5mm2+2×0.5mm2



	MOT-008-LL-KC4-B				
	Cable color	Signal	HFO2106TK		
	Yellow	U	PIN2		
	Red	V	PIN3		
	Black	W	PIN4		
	Yellow-Green	PE	PIN6		
	Red thin wire	brake+	PIN1		
	Blue thin wire	brake-	PIN5		

# MOT-008-LL-KM1

Wire Spec. cable 4C×1.5mm<sup>2</sup>



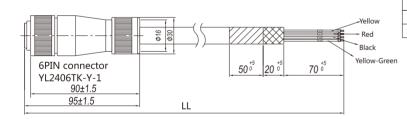
MOT-008-LL-KM1				
Cable	PIN#			
1	Yellow	U	PIN1	
2	Red	V	PIN2	
3	Black	W	PIN3	
Yellow	-Green	PE	Ť	

### MOT-015-LL-KC2

Power Cable Cableplus UL2856  $4 \times 14$ AWG(50/0.25T)

The sectional area of 14AWG is 2.075mm<sup>2</sup>



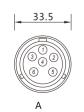


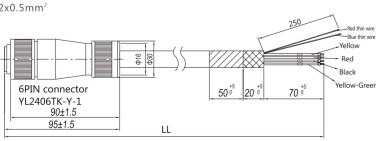
MOT-015-LL-KC2			
Cable color	Signal	YL2406TK-Y-1	
Yellow	U	PIN1	
Red	V	PIN2	
Black	W	PIN3	
Yellow-Green	PE	PIN4	
Shield terminal	Shield	Metal ring	

# MOT-015-LL-KC2-B

Power Cable Cableplus

EKM715734x2.5mm2+2x0.5mm<sup>2</sup>

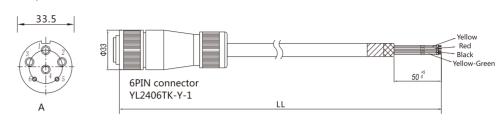




MOT-015-LL-KC2-B			
Cable color	Cable color Signal YL2406TK-Y-1 Yellow U PIN1		
Yellow			
Red	Red         V         PIN2           Black         W         PIN3		
Black			
Yellow-Green	PE	PIN4	
Red thin wire			
Blue thin wire			
Shield terminal	Shield	Metal ring	

### MOT-030-LL-KC3

Wire Spec. ECHU RVVYP 4×4mm2



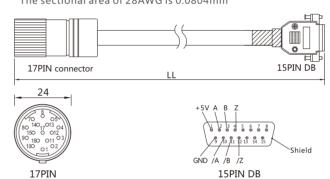
MOT-030-LL-KC3				
Cable color	Signal	YL2406TK-Y-1		
Yellow	U	PIN1		
Red	V	PIN2		
Green	W	PIN3		
Yellow-Green	PE	PIN4		
Shield terminal	Shield	Metal ring		

# Wiring Diagram for The Encoder Cable

# ENCCF-LL-FC0

Wire Spec. 1P×24AWG(7/0.20T)+4P×28AWG(7/0.127T)

The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>

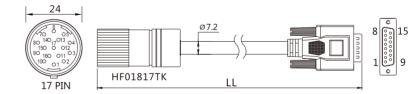


ENCCF-LL-FC0					
17PIN connector	15PIN DB	Signal	External wire colour	Motor wire colour	
PIN1	PIN1	+5V	Red(thick)	Red	
PIN3	PIN2	Α	Brown	Blue-black	
PIN5	PIN3	В	Yellow	Green	
PIN14	PIN4	Z	Green	Yellow	
PIN2	PIN9	GND	Black(thick)	Black	
PIN4	PIN10	/A	Brown-white	Blue	
PIN6	PIN11	/B	Yellow-white	Green-black	
PIN15	PIN12	/Z	Green-white	Yellow-black	
Other pins empty	Other pins empty				
Metal coil	Shell	Shield	Shield	Shield	

# ENCCA-LL-KC0

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

The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>



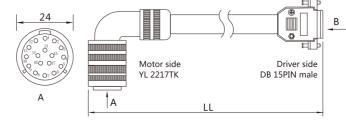
17PIN	15PIN DB	Signal	External wire colour	Motor wire colour
PIN1	PIN1	+5V	Red(thick)	Red
PIN3	PIN2	Α	Orange	Blue
PIN5	PIN3	В	Yellow	Green
PIN14	PIN4	Z	Green	Yellow
PIN9	PIN5	U	Brown	Brown
PIN11	PIN6	٧	Purple	Gray
PIN16	PIN7	W	Blue	White
PIN2	PIN9	GND	Black(thick)	Black
PIN4	PIN10	/A	Orange-white	Blue-black
PIN6	PIN11	/B	Yellow-white	Green-black
PIN15	PIN12	/Z	Green-white	Yellow-black
PIN10	PIN13	/U	Brown-white	Brown-black
PIN12	PIN14	/V	Purple-white	Gray-black
PIN17	PIN15	/W	Blue-white	White-black
Internal	DB metal	Shield	Shield	Shield

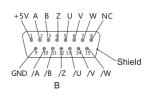
ENCCA-LL-KC0/ENCCA-LL-KC1

# ENCCA-LL-KC1

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

The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>



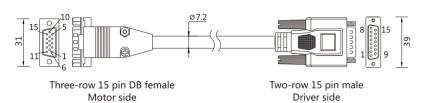


# Wiring Diagram for The **Encoder Cable**

# ENCCA-LL-KH

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

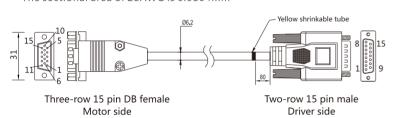
The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>



# ENCCF-LL-FH

Wire Spec. 1P×24AWG(7/0.20T)+4P×28AWG(7/0.127T)

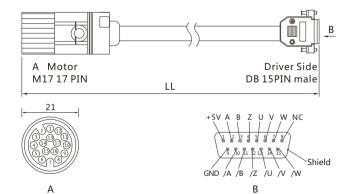
The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>



# ENCCA-LL-KM1

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

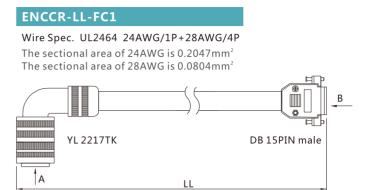
The sectional area of 24AWG is 0.2047mm<sup>2</sup> The sectional area of 28AWG is 0.0804mm<sup>2</sup>



ENCCA-LL-KH				
Three-row 15 pin DB	Two-row 15 pin DB	Signal	External wire color	Motor wire color
PIN1	PIN1	+ 5V	Red(thick)	Red
PIN8	PIN2	Α	Orange	Blue-black
PIN7	PIN3	В	Yellow	Green
PIN6	PIN4	Z	Green	Yellow
PIN4	PIN5	U	Brown	Brown-black
PIN10	PIN6	٧	Purple	White-black
PIN9	PIN7	W	Blue	Gray-black
PIN2	PIN9	GND	Black(thick)	Black
PIN13	PIN10	/A	Orange-white	Blue
PIN12	PIN11	/B	Yellow-white	Green-black
PIN11	PIN12	/Z	Green-white	Yellow-black
PIN5	PIN13	/U	Brown-white	Brown
PIN15	PIN14	/V	Purple-white	White
PIN14	PIN15	/W	Blue-white	Gray
PIN3 empty	PIN8 empty			
Metal shell	DB metal shell	Shield	Shield	Metal shell

ENCCF-LL-FH					
Three-row 15 pin DB	Two-row 15 pin DB	Signal	Wire color	Motor wire color	
PIN1	PIN1	+ 5V	Red(thick)	Red	
PIN8	PIN2	Α	Brown	Blue-black	
PIN7	PIN3	В	Yellow	Green	
PIN6	PIN4	Z	Green	Yellow	
PIN2	PIN9	GND	Black(thick)	Black	
PIN13	PIN10	/A	Brown-white	Blue	
PIN12	PIN11	/B	Yellow-white	Green-black	
PIN11	PIN12	/Z	Green-white	Yellow-black	
Other pins empty	Other pins empty				
Shell	Shell	Shield	Shield	Shield	

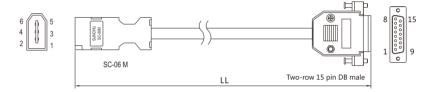
ENCCA-LL-KM1					
17PIN	15PIN DB	Signal	External wire colour	Motor wire colour	
PIN1	PIN1	+5V	Red(thick)	Red	
PIN3	PIN2	Α	Orange	Blue	
PIN5	PIN3	В	Yellow	Green	
PIN14	PIN4	Z	Green	Yellow	
PIN9	PIN5	U	Brown	Brown	
PIN11	PIN6	٧	Purple	Gray	
PIN16	PIN7	W	Blue	White	
PIN2	PIN9	GND	Black(thick)	Black	
PIN4	PIN10	/A	Orange-white	Blue-black	
PIN6	PIN11	/B	Yellow-white	Green-black	
PIN15	PIN12	/Z	Green-white	Yellow-black	
PIN10	PIN13	/U	Brown-white	Brown-black	
PIN12	PIN14	/V	Purple-white	Gray-black	
PIN17	PIN15	/W	Blue-white	White-black	
Internal metal ring	DB metal shell	Shield	Shield	Shield	



ENCCR-LL-FC1					
YL2217TK	15PIN DB	Signal	Wire color		
PIN1	PIN6	ref+	Brown		
PIN2	PIN14	ref-	Brown-white		
PIN3	PIN2	cos+	Green		
PIN4	PIN10	cos-	Green-white		
PIN5	PIN3	sin+	Yellow		
PIN6	PIN11	sin-	Yellow-white		
PIN7	PIN8	KTY+	Blue		
PIN8	PIN9	KTY-	Blue-white		
Metal ring	Metal shell	Shield	Shield		

# ENCCG-LL-GU

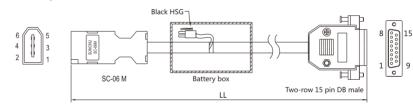
Wire Spec. 3×2×0.2mm2



ENCCG-LL-GU					
SC-06F	Wire color	Signal	15PIN DB		
PIN1	Red	+5V	PIN1		
PIN2	Black	GND	PIN9		
PIN5	Yellow	SD	PIN7		
PIN6	Green	/SD	PIN15		
Shell	Shield	Shield	Shell		

# ENCCG-(4)-GU-BT

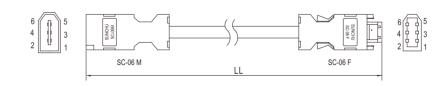
Wire Spec. 3×2×0.2mm2



ENCCG-(4)-GU-BT						
SC-06F	Cable color	Black HSG	External wire	Signal	15PIN DB	
PIN1	Red			+5V	PIN1	
PIN2	Black			GND	PIN9	
PIN3	Brown	PIN1	Red	BAT+		
PIN4	Blue	PIN2	Black	BAT-		
PIN5	Yellow			SD	PIN7	
PIN6	Green			/SD	PIN15	
Shell	Shield			Shield	Shell	

# **ENCDG-LL-GU**

Wire Spec. 3×2×0.2mm2



ENCDG-LL-GU				
Wire color	Signal	SC-06		
Red	+5V	PIN1		
Black	GND	PIN2		
Brown	BAT+	PIN3		
Blue	BAT-	PIN4		
Yellow	SD	PIN5		
Green	/SD	PIN6		
Shield	Shield	Shell		

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