

Kinco Servo System
CD/FD/JD/FD122 Series



Kinco Servo System CD/FD/JD Series FD122 Series

www.famcocorp.com
E-mail: info@famcocorp.com
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Kinco® Automation
http://www.kinco.cn Email:sales@kinco.cn

(All trademarks and logos in this brochure are property of and registered by their respective owners.)

K1E05-1407

Kinco® Automation

02 Model Description

Model Description of Servo Drivers and Motors
Model Description of Cable

04 Selection Table

CD & CDII Servo Driver and Motor Selection Table
FD Servo Driver and Motor Selection Table
JD Servo Driver and Motor Selection Table

10 CD Servo Driver

Panel and Interface Description of CD Servo Drivers
Technical Specifications of CD Servo Drivers
Wiring Diagram for CD Servo Drivers
Mechanical Dimension Diagram for CD Servo Driver

14 CDII Servo Driver

Panel and Interface Description of CDII Servo Drivers
Port Description of CDII Servo Drivers
Technical Specifications of CDII Servo Drivers
Wiring Diagram for CDII Servo Drivers
Mechanical Dimension Diagram for CDII Servo Driver

19 FD Servo Driver

Panel and Interface Description of FD Servo Drivers
Port Description of FD Servo Drivers
Technical Specifications of FD Servo Drivers
Mechanical Dimension Diagram for FD Servo Driver

23 JD Servo Driver

Panel and Interface Description of JD Servo Drivers
Port Description of JD Servo Drivers
Technical Specifications of JD Servo Drivers
Mechanical Dimension Diagram of JD Servo Drivers

27 Servo Motor

Dimensions/Torque curve of Servo Motors (40/60 flange)
Dimensions/Torque curve of Servo Motors (60/80 flange)
Technical Specifications of SMH40/60/80 Motors
Technical Specifications of SME60/80 Motors
Dimensions/Torque curve of Servo Motors (110 flange)
Technical Specifications of SMH110 Servo Motors
Dimensions/Torque curve of Servo Motors (130/150/180 flange)
Technical Specification of SMH130/150/180 Motors

35 FD Series Low-voltage Servo System

Servo Driver and Motor Selection Table
Panel and Interface Description
Interface Description of FD122 Servo Driver
Technical Specification of FD122
Mechanical Dimension Diagram for FD122
Dimensions/Torque curve of Low-voltage Servo Motor (40/60 flange)
Technical Specifications of SMH40/60 Series Low-voltage Servo Motor
Dimensions/Torque curve of 57S/85S series Multi-pole Servo Motor
Technical Specifications of 57S/85S series Multi-pole Servo Motor

43 Wiring Diagram for Cable

Wiring Diagram for The Power Cable
Wiring Diagram for The Encoder Cable

www.famcocorp.com

E-mail: info@famcocorp.com

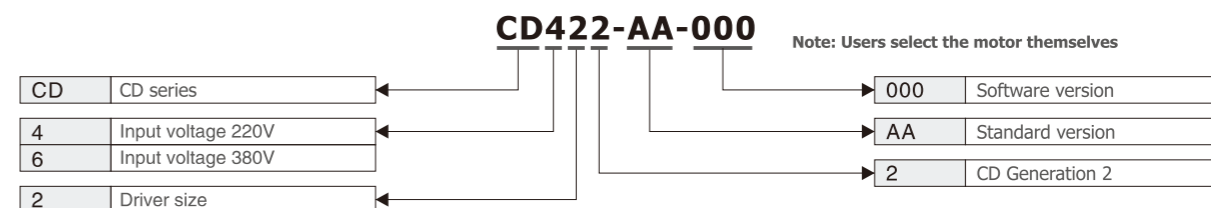
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

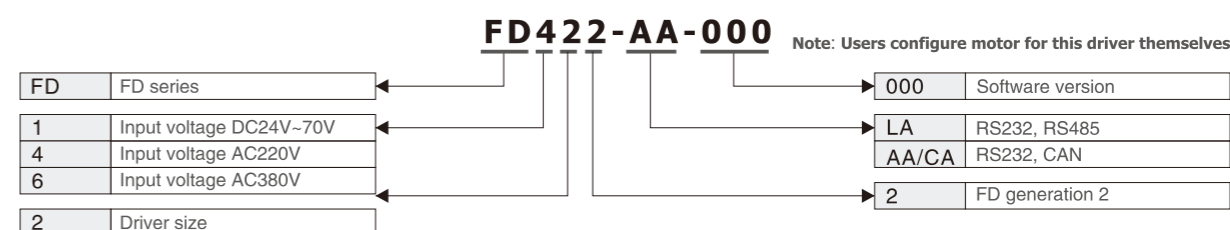
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

Model Description of Servo Drivers and Motors

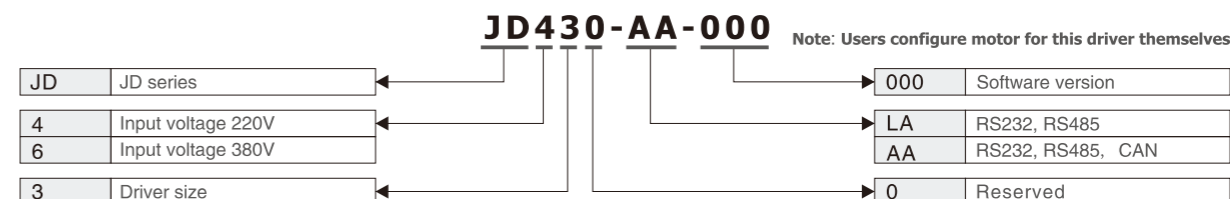
Kinco CD Series Servo Drivers



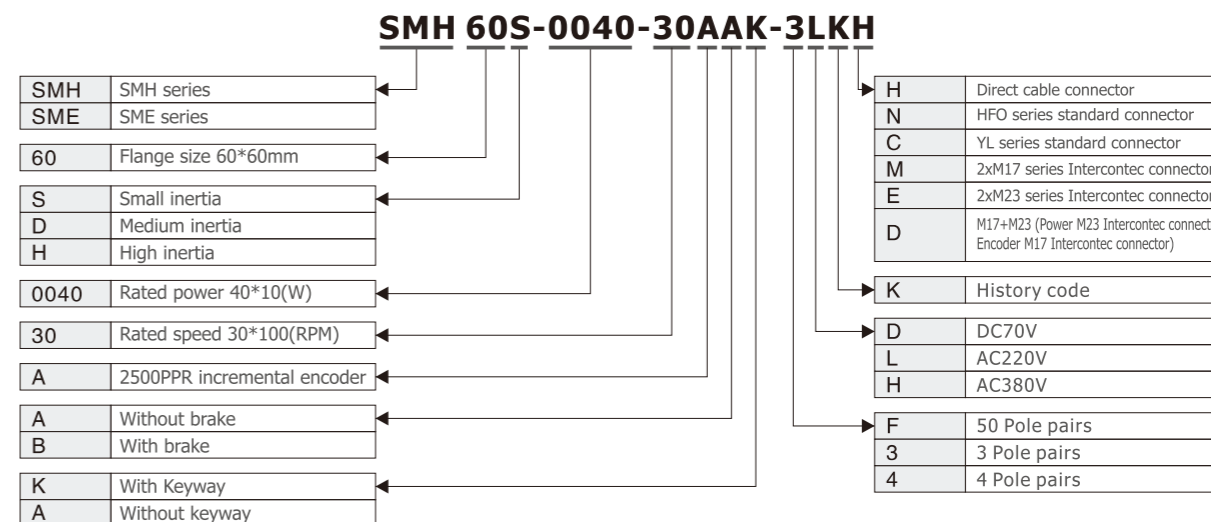
Kinco FD Series Servo Driver



Kinco JD Series Servo Driver



Kinco Servo Motors



تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

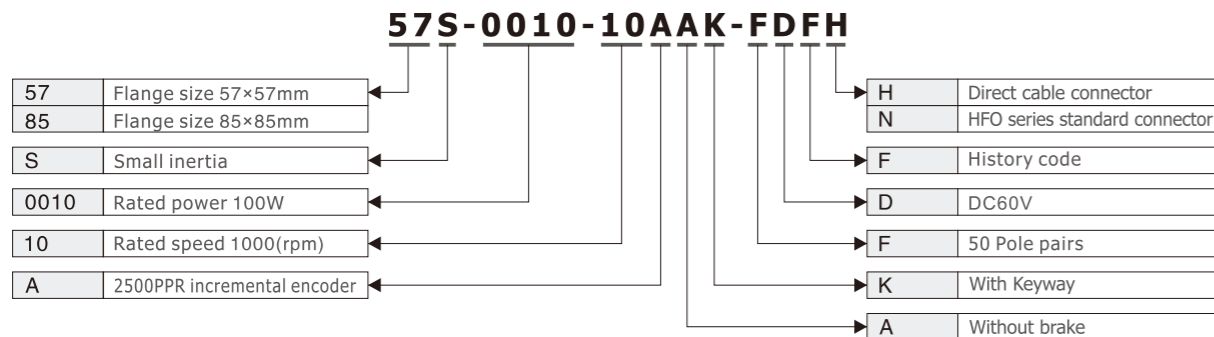
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Model Description of Servo Drivers and Motors



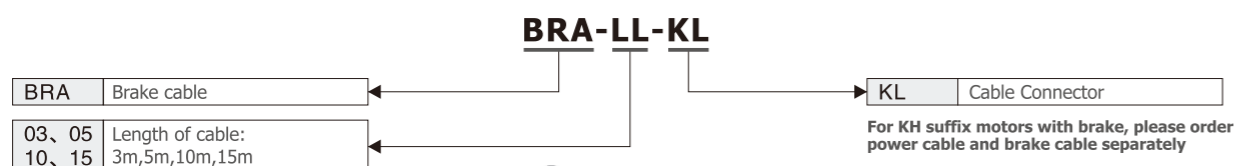
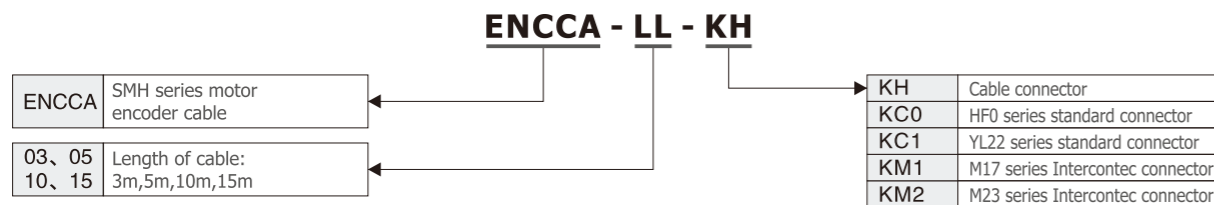
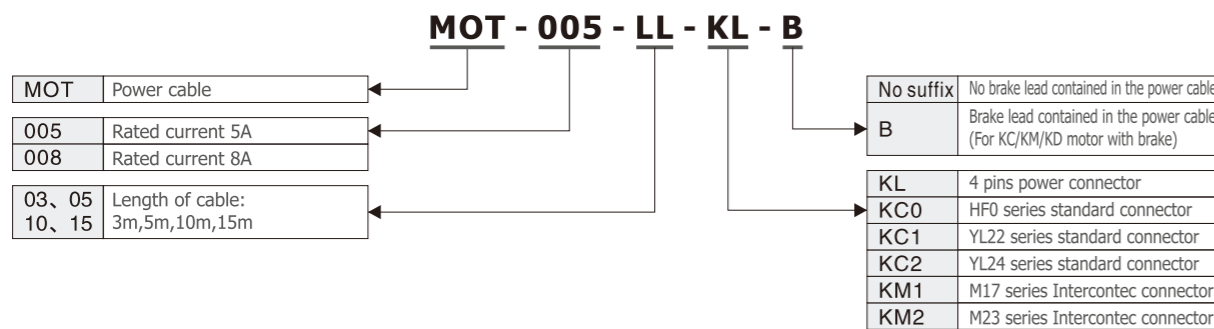
CD & CDII Servo Driver and Motor Selection Table

Kinco Multi-pole Servo Motor



Model Description of Cable

Power, Brake and Encoder Cable of Motors



www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۴۶۴۲

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current	
Small Inertia 220V	CD412-AA-000	SMH40S-0005-30AAK-4LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/ 0.16Nm/ 0.7A	
		SMH40S-0005-30ABK-4LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL			
		SMH40S-0010-30AAK-4LKH	Cable connector	MOT-005-LL-KL		3000rpm/ 0.32Nm/ 1.4A	
		SMH40S-0010-30ABK-4LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL			
	CD420-AA-000 CD422-AA-000	SMH60S-0020-30AAK-3LKH	SMH60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KC0	3000rpm/ 0.64Nm/ 1.6A
			SMH60S-0020-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		
			SMH60S-0020-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0		ENCCA-LL-KM1
			SMH60S-0020-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		
		SMH60S-0020-30ABK-3LKM	SMH60S-0020-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B		
			SMH60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/ 1.27Nm/ 3.1A
			SMH60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		
			SMH60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0		ENCCA-LL-KC0
		SMH60S-0040-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1	ENCCA-LL-KM1		
		SMH60S-0040-30ABK-3LKM	SMH60S-0040-30ABK-3LKM	Intercontec connector with brake		MOT-005-LL-KM1-B	
			SMH80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/ 2.39Nm/ 3.9A
			SMH80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		
			SMH80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0		ENCCA-LL-KC0
		SMH80S-0075-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1	ENCCA-LL-KM1		
		SME60S-0020-30ABK-3LKH	SMH80S-0075-30ABK-3LKM	Intercontec connector with brake		MOT-005-LL-KM1-B	
			SME60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCF-LL-FH	3000rpm/ 0.64Nm/ 1.6A
	SME60S-0020-30ABK-3LKH		Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL			
	SME60S-0020-30AAK-3LKN		HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0		
	SME60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCF-LL-FH			3000rpm/ 1.27Nm/ 3.1A
	SME60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL				
SME60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0				
SME80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL			ENCCF-LL-FH	3000rpm/ 2.39Nm/ 3.9A	
SME80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL					
SME80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0				
SME80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0					

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

CD & CDII Servo Driver and Motor Selection Table

FAMCO FD Servo Driver and Motor Selection Table

هایر صنعت

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current		
Small Inertia 220V	CD430-AA-000 CD432-AA-000	SMH110D-0105-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/		
		SMH110D-0105-20ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		5Nm/		
		SMH110D-0105-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	5.9A		
		SMH110D-0105-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B				
		SMH110D-0126-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/		
		SMH110D-0126-20ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		6Nm/		
		SMH110D-0126-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.2A		
		SMH110D-0126-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B				
		Medium Inertia 220V	CD620-AA-000 CD622-AA-000	SMH110D-0125-30AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
				SMH110D-0125-30ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		4Nm/
SMH110D-0125-30AAK-4LKD	Intercontec connector			MOT-008-LL-KM2	ENCCA-LL-KM1	6.5A		
SMH110D-0125-30ABK-4LKD	Intercontec connector with brake			MOT-008-LL-KM2-B				
SMH110D-0126-30AAK-4HKC	YL22 standard connector			MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/		
SMH110D-0126-30ABK-4HKC	YL24 standard connector and brake			MOT-008-LL-KC2-B		4Nm/		
SMH110D-0126-30AAK-4HKD	Intercontec connector			MOT-008-LL-KM2	ENCCA-LL-KM1	4.3A		
SMH110D-0126-30ABK-4HKD	Intercontec connector with brake			MOT-008-LL-KM2-B				
Medium Inertia 380V	CD620-AA-000 CD622-AA-000			SMH110D-0157-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
				SMH110D-0157-30ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		5Nm/
		SMH110D-0157-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	5.9A		
		SMH110D-0157-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B				
		SMH110D-0188-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/		
		SMH110D-0188-30ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		6Nm/		
		SMH110D-0188-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.2A		
		SMH110D-0188-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B				
		Medium Inertia 220V	CD430-AA-000 CD432-AA-000 CD620-AA-000 CD622-AA-000	SMH130D-0105-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 5Nm/ 4.3A
				SMH130D-0105-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		
SMH130D-0157-20AAK-4HKC	YL24 standard connector			MOT-008-LL-KC2	2000rpm/ 7.5Nm/ 6.3A			
SMH130D-0157-20ABK-4HKC	YL24 standard connector and brake			MOT-008-LL-KC2-B				
Medium Inertia 380V	CD620-AA-000 CD622-AA-000	SMH130D-0210-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 10Nm/ 7.6A		
		SMH130D-0210-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B				
		SMH150D-0230-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2		2000rpm/ 11.1Nm/ 7.1A		
		SMH150D-0230-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B				

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current
Small Inertia 220V	FD422-LA-000 FD422-CA-000 FD422-AA-000	SMH60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/
		SMH60S-0020-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		
		SMH60S-0020-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCA-LL-KC0	0.64Nm/
		SMH60S-0020-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		1.6A
		SMH60S-0020-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B	ENCCA-LL-KM1	3000rpm/
		SMH60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL		
		SMH60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL	ENCCA-LL-KC0	1.27Nm/
		SMH60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0		3.1A
		SMH60S-0040-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1	ENCCA-LL-KM1	3000rpm/
		SMH60S-0040-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B		
		SMH80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	2.39Nm/
		SMH80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		3.9A
		SMH80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCA-LL-KC0	3000rpm/
		SMH80S-0075-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		0.64Nm/
		SMH80S-0075-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B	ENCCA-LL-KM1	1.6A
		SME60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL		ENCCF-LL-FH
		SME60S-0020-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL	0.64Nm/	
		SME60S-0020-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0	1.6A
		SME60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL		3000rpm/
		SME60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL	ENCCF-LL-FH	1.27Nm/
SME60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	3.1A			
SME80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCF-LL-FH	3000rpm/		
SME80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		2.39Nm/		
SME80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0	3.9A		

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

www.famcocorp.com
E-mail: info@famcocorp.com
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس، پلاک ۱۲

FD Servo Driver and Motor Selection Table



JD Servo Driver and Motor Selection Table

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current
Medium Inertia 220V	FD432-LA-000 FD432-CA-000 FD432-AA-000	SMH110D-0105-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/
		SMH110D-0105-20ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		5Nm/
		SMH110D-0105-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	5.9A
		SMH110D-0105-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0126-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/
		SMH110D-0126-20ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		6Nm/
		SMH110D-0126-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.2A
		SMH110D-0126-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0125-30AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
		SMH110D-0125-30ABK-4LKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		4Nm/
		SMH110D-0125-30AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.5A
		SMH110D-0125-30ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
Medium Inertia 380V	FD622-LA-000 FD622-CA-000 FD622-AA-000	SMH110D-0126-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
		SMH110D-0126-30ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		4Nm/
		SMH110D-0126-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	4.3A
		SMH110D-0126-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0157-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
		SMH110D-0157-30ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		5Nm/
		SMH110D-0157-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	5.9A
		SMH110D-0157-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0188-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/
		SMH110D-0188-30ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		6Nm/
		SMH110D-0188-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.2A
		SMH110D-0188-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
Medium Inertia 220V/380V	FD432-LA-000 FD432-CA-000 FD432-AA-000 FD622-LA-000 FD622-CA-000 FD622-AA-000	SMH130D-0105-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 5Nm/ 4.3A
		SMH130D-0105-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		
		SMH130D-0157-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2		2000rpm/ 7.5Nm/ 6.3A
		SMH130D-0157-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		
Medium Inertia 380V	FD622-LA-000 FD622-CA-000 FD622-AA-000	SMH130D-0210-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 10Nm/ 7.6A
		SMH130D-0210-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		
		SMH150D-0230-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2		2000rpm/ 11.1Nm/ 7.1A
		SMH150D-0230-20ABK-4HKC	YL24 standard connector and brake	MOT-008-LL-KC2-B		

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

www.famcocorp.com
E-mail: info@famcocorp.com
[@famco_group](https://www.instagram.com/famco_group)

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current
Small Inertia 220V	JD430-AA-000	SMH60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/
		SMH60S-0020-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		0.64Nm/
		SMH60S-0020-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCA-LL-KM1	1.6A
		SMH60S-0020-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		
		SMH60S-0020-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B		
		SMH60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/
		SMH60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		1.27Nm/
		SMH60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCA-LL-KM1	3.1A
		SMH60S-0040-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		
		SMH60S-0040-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B		
		SMH80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCA-LL-KH	3000rpm/
		SMH80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		2.39Nm/
		SMH80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCA-LL-KM1	3.9A
		SMH80S-0075-30AAK-3LKM	Intercontec connector	MOT-005-LL-KM1		
		SMH80S-0075-30ABK-3LKM	Intercontec connector with brake	MOT-005-LL-KM1-B		
		SME60S-0020-30AAK-3LKH	Cable connector	MOT-005-LL-KL	ENCCF-LL-FH	3000rpm/
		SME60S-0020-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL		0.64Nm/
		SME60S-0020-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0	1.6A
		SME60S-0040-30AAK-3LKH	Cable connector	MOT-005-LL-KL		3000rpm/
		SME60S-0040-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL	1.27Nm/	
		SME60S-0040-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0	3.1A
		SME80S-0075-30AAK-3LKH	Cable connector	MOT-005-LL-KL		3000rpm/
		SME80S-0075-30ABK-3LKH	Cable connector and brake	MOT-005-LL-KL/BRA-LL-KL	2.39Nm/	
		SME80S-0075-30AAK-3LKN	HFO standard connector	MOT-005-LL-KC0	ENCCF-LL-FC0	3.9A
Medium Inertia 220V		SMH110D-0105-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/
		SMH110D-0105-20ABK-4LKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		5Nm/
		SMH110D-0105-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	5.9A
		SMH110D-0105-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0126-20AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	2000rpm/
		SMH110D-0126-20ABK-4LKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		6Nm/
		SMH110D-0126-20AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	6.2A
		SMH110D-0126-20ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

تهران ، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس ، پلاک ۱۲

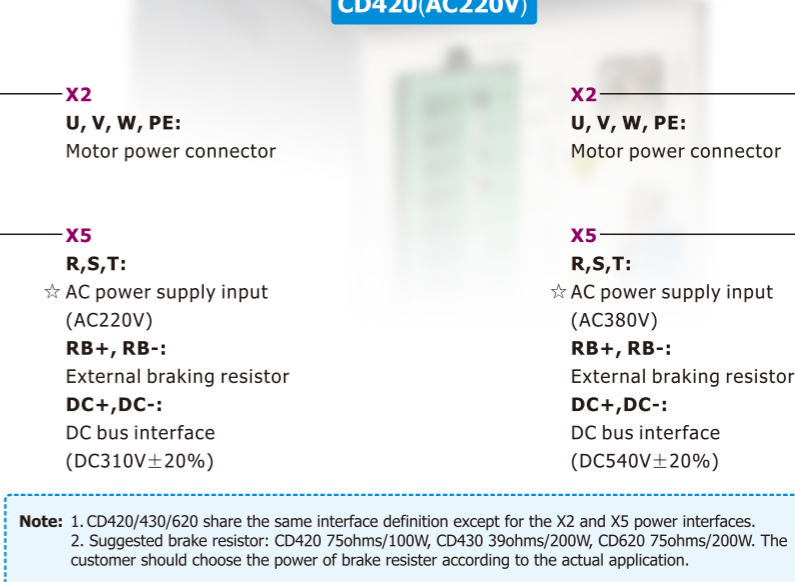
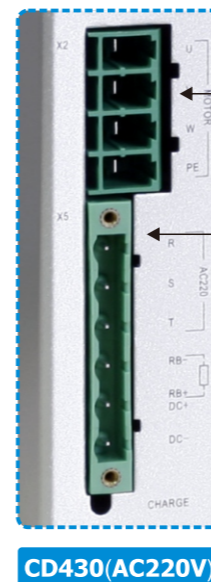
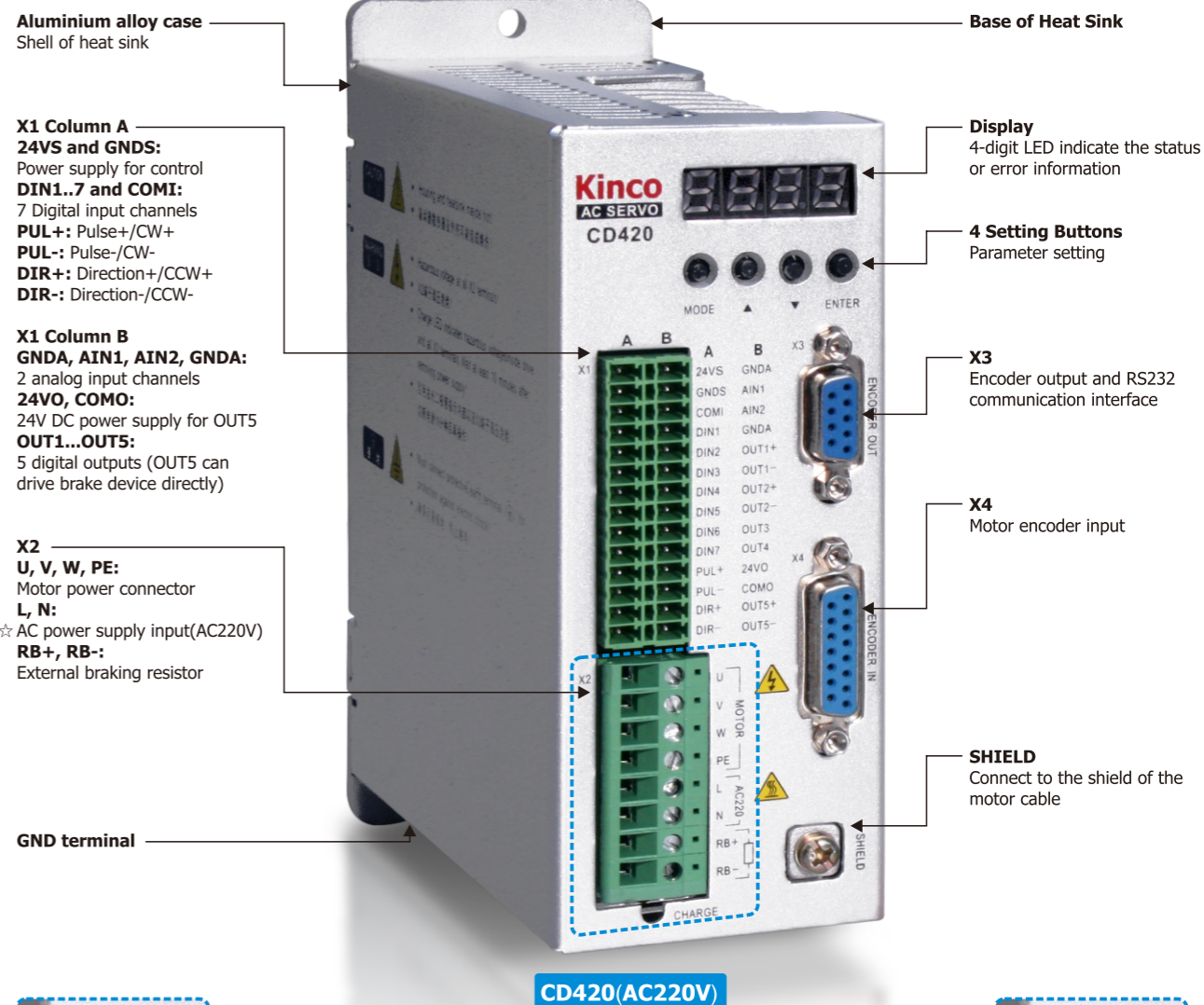
JD Servo Driver and Motor Selection Table



Panel and Interface Description of CD Servo Drivers

Category	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current
Medium Inertia 220V	JD430-AA-000	SMH110D-0125-30AAK-4LKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/ 4Nm/ 6.5A
		SMH110D-0125-30ABK-4LKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH110D-0125-30AAK-4LKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	3000rpm/ 4Nm/ 4.3A
		SMH110D-0125-30ABK-4LKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
Medium Inertia 380V	JD620-AA-000	SMH110D-0126-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/ 4Nm/ 4.3A
		SMH110D-0126-30ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH110D-0126-30AAK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	3000rpm/ 5Nm/ 5.9A
		SMH110D-0126-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0157-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/ 6Nm/ 6.2A
		SMH110D-0157-30ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH110D-0157-30ABK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	3000rpm/ 6Nm/ 6.2A
		SMH110D-0157-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
		SMH110D-0188-30AAK-4HKC	YL22 standard connector	MOT-008-LL-KC1	ENCCA-LL-KC1	3000rpm/ 6Nm/ 6.2A
		SMH110D-0188-30ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH110D-0188-30ABK-4HKD	Intercontec connector	MOT-008-LL-KM2	ENCCA-LL-KM1	3000rpm/ 6Nm/ 6.2A
		SMH110D-0188-30ABK-4HKD	Intercontec connector with brake	MOT-008-LL-KM2-B		
Medium Inertia 220V/380V	JD430-AA-000 JD620-AA-000	SMH130D-0105-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 5Nm/ 4.3A
		SMH130D-0105-20ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH130D-0157-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2		2000rpm/ 7.5Nm/ 6.3A
		SMH130D-0157-20ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
Medium Inertia 380V	JD620-AA-000	SMH130D-0210-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 10Nm/ 7.6A
		SMH130D-0210-20ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH150D-0230-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2		2000rpm/ 11.1Nm/ 7.1A
		SMH150D-0230-20ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
	JD630-LA-000 JD630-AA-000	SMH150D-0300-20AAK-4HKC	YL24 standard connector	MOT-008-LL-KC2	ENCCA-LL-KC1	2000rpm/ 14.3Nm/ 8.5A
		SMH150D-0300-20ABK-4HKC	YL24 standard connector with brake	MOT-008-LL-KC2-B		
		SMH150D-0380-20AAK-4HKC	YL24 standard connector	MOT-015-LL-KC2		2000rpm/ 18Nm/ 9.3A
		SMH150D-0380-20ABK-4HKC	YL24 standard connector with brake	MOT-015-LL-KC2-B		
	JD640-LA-000 JD640-AA-000	SMH180D-0350-15AAK-4HKC	YL24 standard connector	MOT-015-LL-KC2	ENCCA-LL-KC1	1500rpm/ 22Nm/ 10.3A
		SMH180D-0350-15ABK-4HKC	YL24 standard connector with brake	MOT-015-LL-KC2-B		
		SMH180D-0440-15AAK-4HKC	YL24 standard connector	MOT-015-LL-KC2		1500rpm/ 28Nm/ 13.3A
		SMH180D-0440-15ABK-4HKC	YL24 standard connector with brake	MOT-015-LL-KC2-B		

Note: 1. User select the compatible motors themselves.
2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.



Note: 1. CD420/430/620 share the same interface definition except for the X2 and X5 power interfaces.
2. Suggested brake resistor: CD420 75ohms/100W, CD430 39ohms/200W, CD620 75ohms/200W. The customer should choose the power of brake resistor according to the actual application.

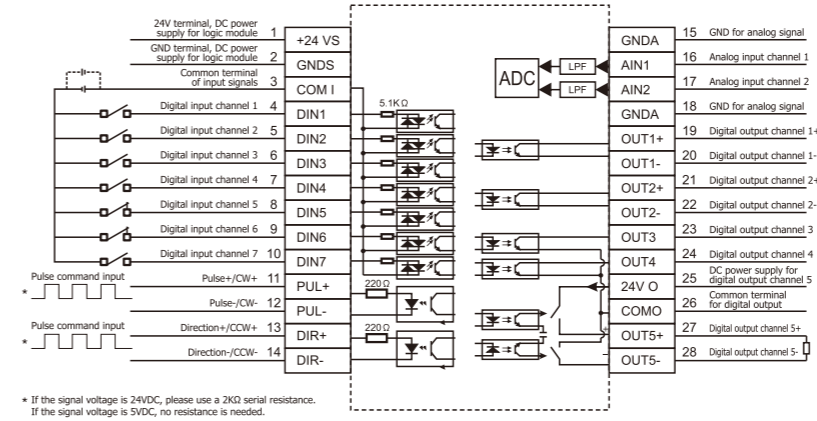
Technical Specifications of CD Servo Drivers



Wiring Diagram for CD Servo Drivers

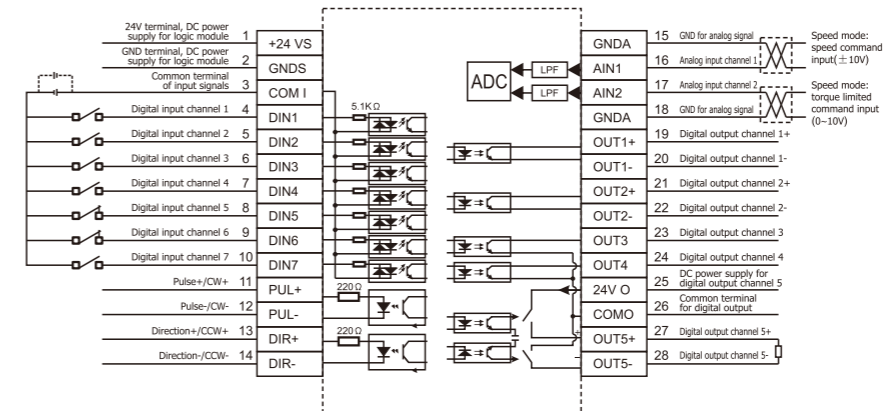
Model parameter	CD420-AA-000	CD430-AA-000	CD620-AA-000	
Power	Main supply voltage	Single-phase AC220V -20/+15% 47~63Hz	Single-phase or 3-phase AC220V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz
	Control circuit voltage	18VDC~30VDC 1A		
Current	Max. continuous current	4A	10A	7A
	Peak current(PEAK)	15A	27.5A	25A
Feedback signal	2500PPR (incremental encoder with 5V)			
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop.			
Brake chopper threshold	DC380V ± 5V	DC680V ± 5V		
Over-voltage alarming threshold	DC400V ± 5V	DC700V ± 5V		
Under-voltage alarming threshold	DC200V ± 5V	DC400V ± 5V		
Cooling method	Natural air cooling	Fan		
Weight	1.2kg	2.4kg		
Position Mode	Max. frequency of input pulse	Differential signal: 500KPPS, Open-collector signal: 200KPPS		
	Pulse command mode	Pulse+direction, CCW+CW, (5V, if the input is 24V, the 2K resistor is needed) (do not support A+B phase)		
	Command smoothing	Low-pass filtering(Adjustable by internal parameter setting)		
	Feedforward gain	Adjustable by internal parameter setting		
	Electronic gear ratio	Setting range, Gear factor: -32768~32767, Gear divider: 1~32767, $1/50 \leq Gear\ factor/Gear\ divider \leq 50$		
Speed Mode	Position loop sampling frequency	1KHz		
	Analog input voltage range	-10V~+10V(Resolution 12bit)		
	Input impedance	200K		
	Analog input sampling frequency	4KHz		
Torque Mode	Command source	External analog command / internal command		
	Command smoothing	Low-pass filtering(Adjustable by internal parameter setting)		
	Input voltage dead-zone setting	Adjustable by internal parameter setting		
	Input voltage offset setting	Adjustable by internal parameter setting		
	Speed limit	Adjustable by internal parameter setting		
	Torque limit	Adjustable by internal parameter setting / External analog command control		
	Speed loop sampling frequency	4KHz		
	Analog voltage input range	-10V~+10V(Resolution 12bit)		
Digital Input	Input specification	7 digital inputs, with COM1 terminal for PNP (high level valid 12.5-30V) or NPN (low level valid) connection.		
	Input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal position section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain		
	Output specification	5 digital outputs, OUT1~OUT4 current is 100mA, OUT5 current is 800mA, can drive brake device directly		
	Output function	Define freely according to requirement, supporting following functions: Driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found, multi-position reached		
Protection functions	Over-voltage protection, under-voltage protection, motor over-heat protection(°T), short-circuit protection, drive over-heat protection, etc.			
	Communication interface	RS232 (Connections with PC: 2-5, 3-1, 5-6)		
Operation Environment	Operating temperature	0~40°C		
	Storage temperature	-10°C~70°C		
	Humidity(non-condensing)	Below 90%RH		
	Protection class	IP20		
	Installation environment	Installed in a dust-free, dry and lockable environment(such as in a electrical cabinet)		
	Installation mode	Vertical installation		
Altitude	No power limitation below 1000m			
Atmospheric pressure	86kpa~106kpa			

Wiring Diagram for Position Control Mode



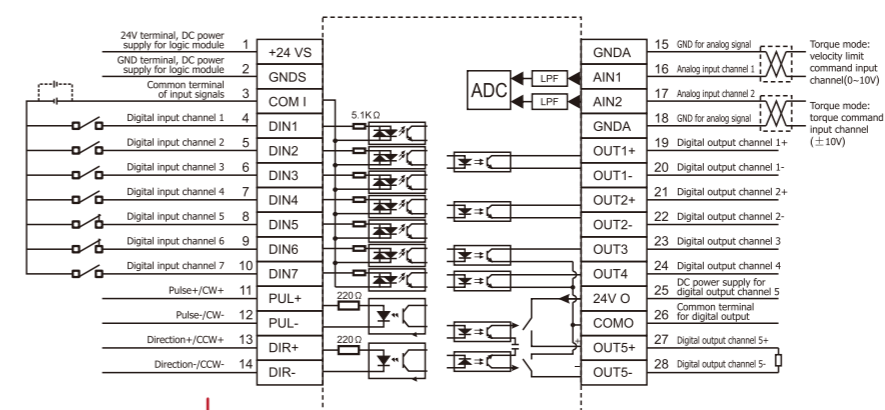
Default setting for digital inputs: Din 1: Driver enable Din 2: Fault reset Din 3: Operation mode Din 4: P control Din 5: Positive limit Din 6: Negative limit Din 7: Home signal	Default setting for digital output: Out 1: Ready Out 2: Error Out 3: Position reached Out 4: Zero velocity Out 5: Motor brake
To use other functions, please redefine the digital inputs. Other functions that can be defined are as follows: - 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 follows: - Index - Motor brake - Position limiting - Reference found - Multi-function output signal (Multi-position reached)

Wiring Diagram for Speed 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 follows: - 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 follows: - Index - Motor brake - Position limiting - Reference found - Multi-function output signal (Multi-position reached)

Wiring Diagram for Torque 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 follows: - 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 follows: - Index - Motor brake - Position limiting - Reference found - Multi-function output signal (Multi-position reached)

www.famcocorp.com
E-mail: info@famcocorp.com
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

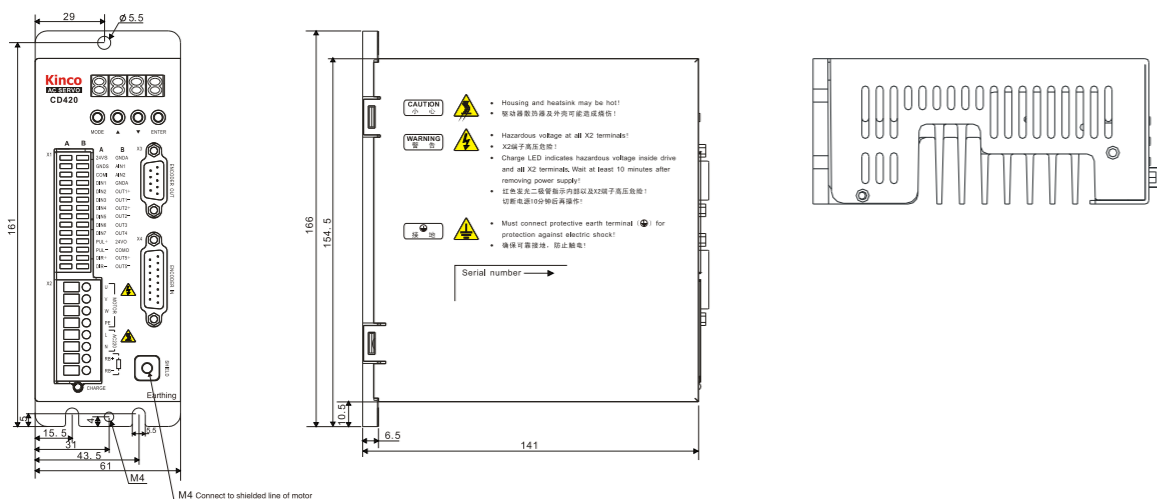
تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Mechanical Dimension Diagram for CD Servo Driver (Unit: mm)

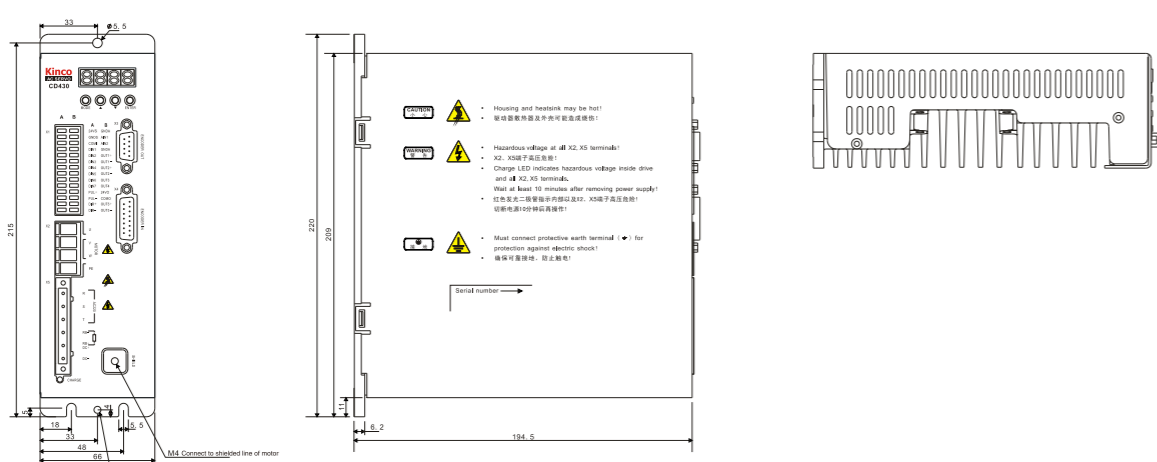


Panel and Interface Description of CDII Servo Drivers

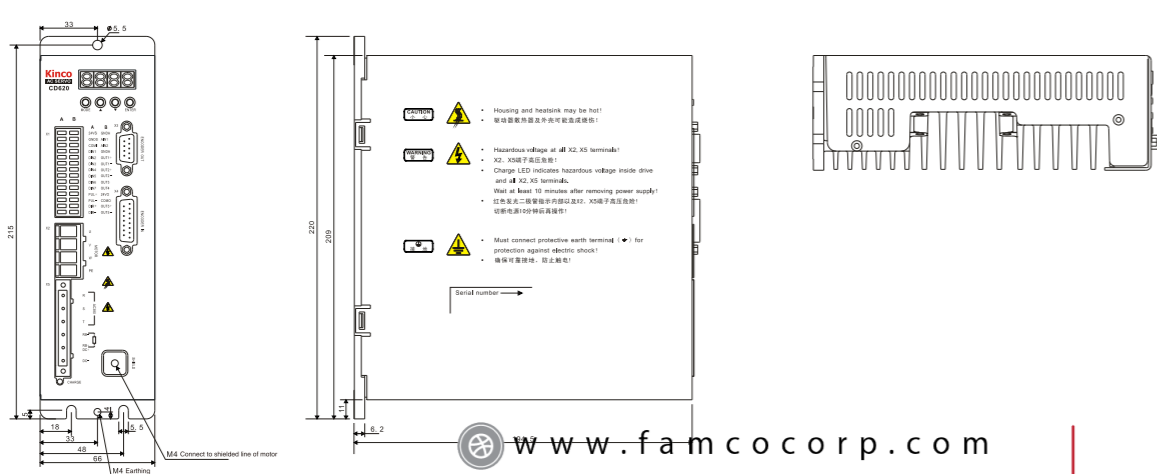
Mechanical Dimension Diagram for CD420



Mechanical Dimension Diagram for CD430



Mechanical Dimension Diagram for CD620

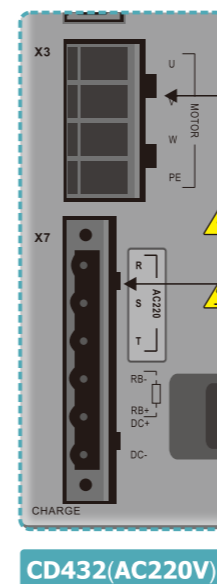
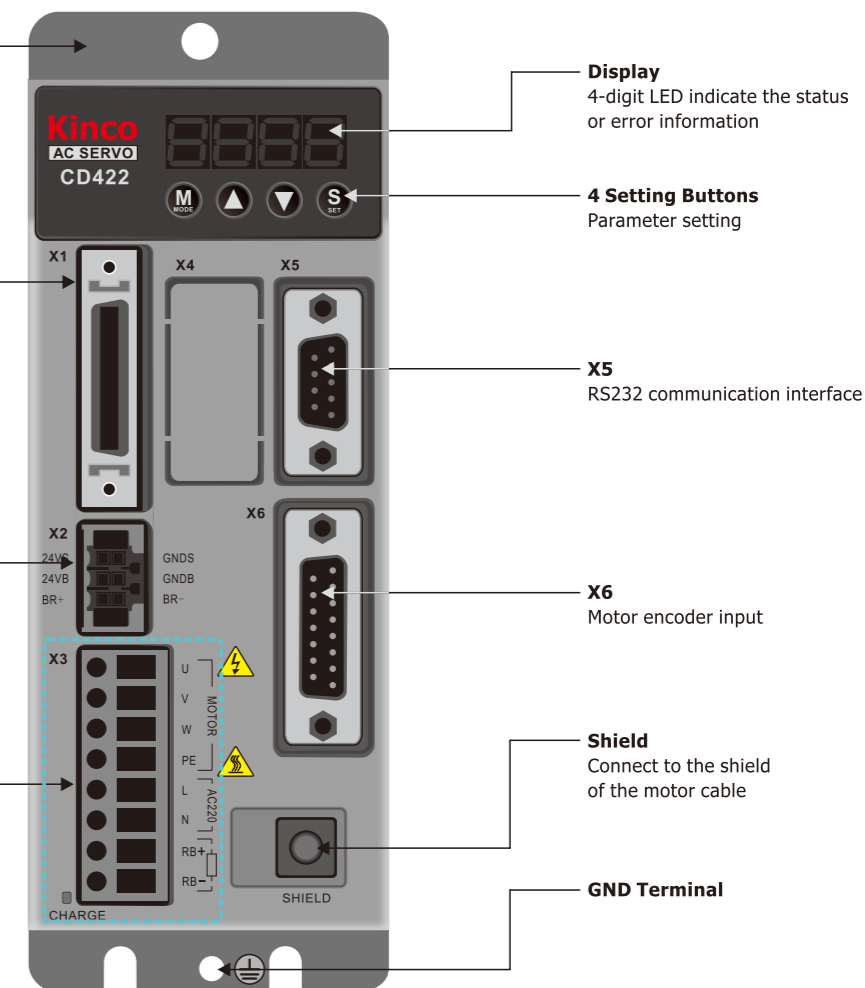


Shell of heat sink

X1
COM1, DIN1.....DIN7:
7 Digital input channels
ENCO-Z, ENCO-/Z,
ENCO-B, ENCO-/B,
ENCO-A, ENCO-/A:
Encoder out
OUT1.....OUT4:
4 Digital output channels
GNDA, AIN1, AIN2, GNDA:
2 analog input channels
PUL+: Pulse+/CW+/A+
PUL-: Pulse-/CW-/A-
DIR+: Direction+/CCW+/B+
DIR-: Direction-/CCW-/B-

X2
24VS, GNDS:
24V Power supply for control
24VB, GNDB:
24V Power supply for brake
BR+, BR-:
Brake control output

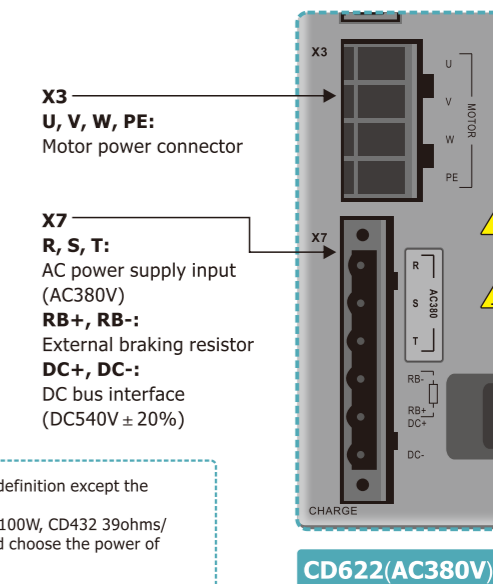
X3
U, V, W, PE:
Motor power connector
L, N:
AC power supply input (AC220V)
RB+, RB-:
External braking resistor



CD422(AC220V)

Note:

- CD412/CD422/432/622 share the same interface definition except the X3 and X7 power interfaces;
- Suggested brake resistor: CD412/CD422 75ohms/100W, CD432 39ohms/200W, CD622 75ohms/200W. The customer should choose the power of brake resistor according to the actual application.

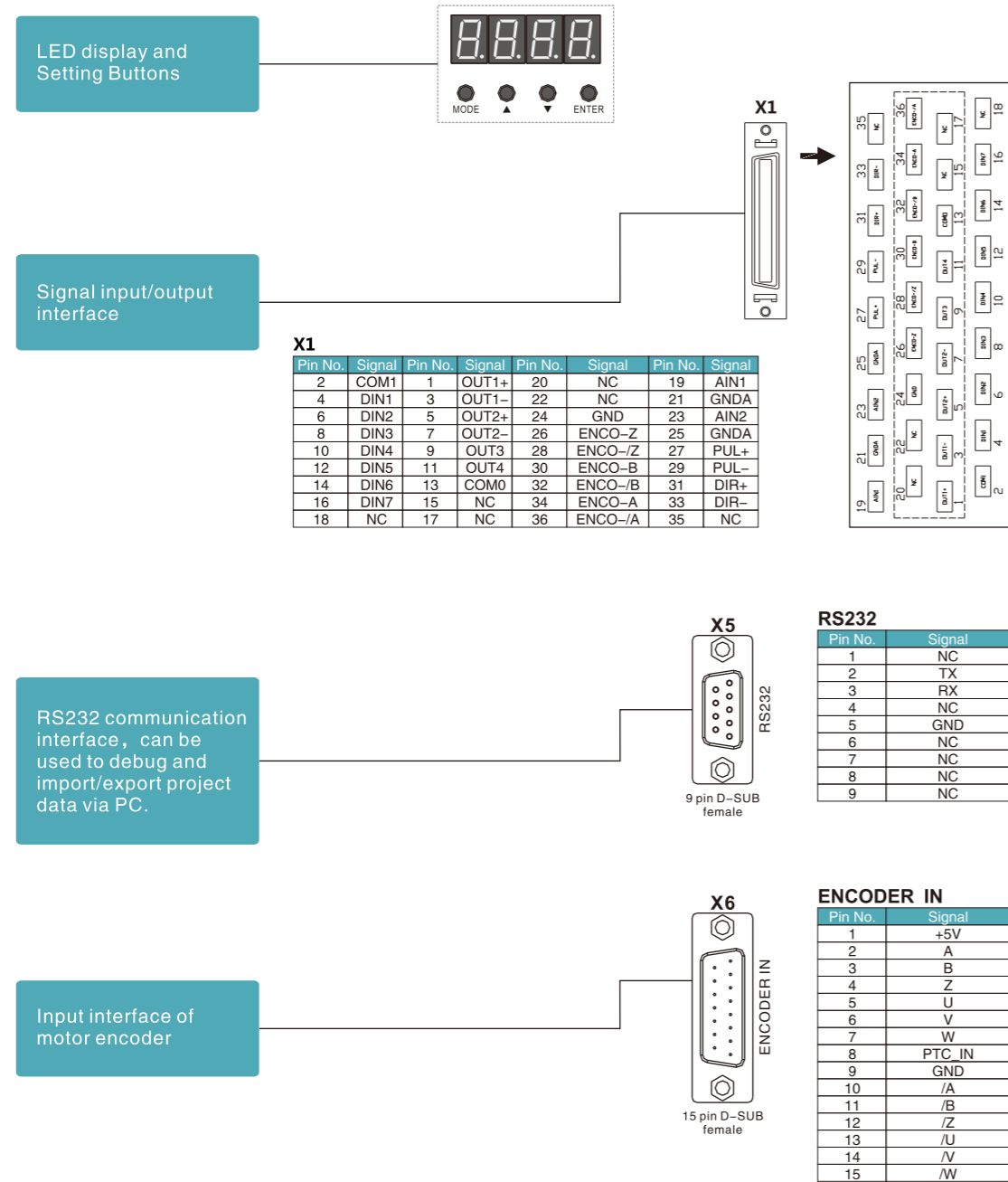


CD622(AC380V)

Port Description of CDII Servo Drivers



Technical Specifications of CDII Servo Drivers



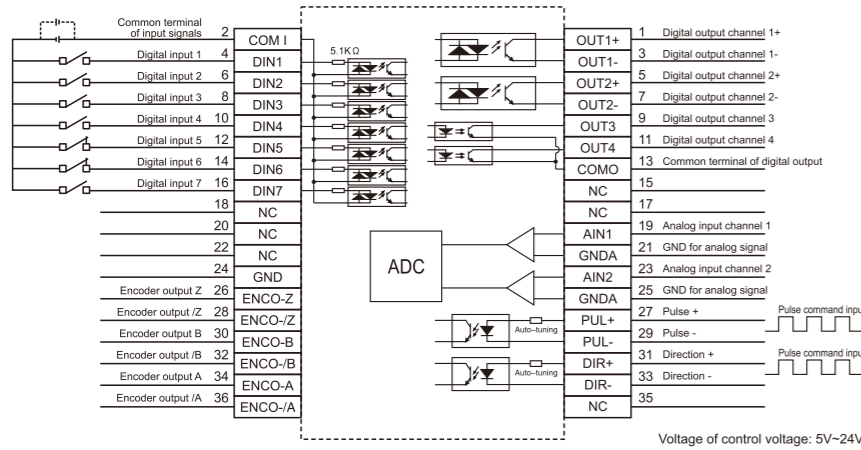
Model parameter	CD412-AA-000	CD422-AA-000	CD432-AA-000	CD622-AA-000
Power	Main supply voltage	Single-phase AC220V -20/+15% 47-63Hz		Single-phase or 3-phase AC220V -20/+15% 47-63Hz
	Control circuit voltage	18VDC-30VDC 1A		
Current	Max. continuous current	2A	4A	10A
	Peak current(PEAK)	12A	15A	27.5A
Feedback signal	2500PPR (incremental encoder with 5V)			
Brake chopper	Use an external braking resistor according to application, mainly in occasion of quick stop.			
Brake chopper threshold	DC380V ± 5V			DC680V ± 5V
Over-voltage alarming threshold	DC400V ± 5V			DC700V ± 5V
Under-voltage alarming threshold	DC200V ± 5V			DC400V ± 5V
Cooling method	Natural air cooling		Fan	
Weight	1.2kg		2.4kg	
Position Mode	Max. frequency of input pulse	Differential signal: 500KPPS, Open-collector signal: 200KPPS		
	Pulse command mode	Pulse+direction, CCW+CW, A+B phase(5V-24V)		
	Command smoothing	Low-pass filtering(Adjustable by internal parameter setting)		
	Feedforward gain	Adjustable by internal parameter setting		
	Electronic gear ratio	Setting range, Gear factor: -32768-32767, Gear divider: 1-32767, 1/50 ≤ Gear factor/Gear divider ≤ 50		
Position loop sampling frequency	1KHz			
Speed Mode	Analog input voltage range	-10V~+10V(Resolution 12bit)		
	Input impedance	200K		
	Analog input sampling frequency	4KHz		
	Command source	External analog command / internal command		
	Command smoothing	Low-pass filtering(Adjustable by internal parameter setting)		
	Input voltage dead-zone setting	Adjustable by internal parameter setting		
	Input voltage offset setting	Adjustable by internal parameter setting		
Speed limit	Adjustable by internal parameter setting			
Torque limit	Adjustable by internal parameter setting / External analog command control			
Speed loop sampling frequency	4KHz			
Torque Mode	Analog voltage input range	-10V~+10V(Resolution 12bit)		
	Input impedance	200K		
	Input sampling frequency	4KHz		
	Command source	External analog command / internal command		
	Command smoothing	Low-pass filtering(Adjustable by internal parameter setting)		
	Speed limit	Adjustable by internal parameter setting / External analog command control		
Digital Input	Input voltage dead-zone setting	Adjustable by internal parameter setting		
	Input voltage offset setting	Adjustable by internal parameter setting		
Digital Output	Current sampling frequency	16KHz		
	Input specification	7 digital inputs, with COM1 terminal for PNP (high level valid 12.5-30V) or NPN (low level valid) connection.		
Digital Output	Input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain		
	Output specification	5 digital outputs, OUT1-OUT4 current is 100mA, OUT5 current is 800mA, can drive brake device directly		
Digital Output	Output function	Define freely according to requirement, supporting following functions: Driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found, multi-position reached		
	Protection functions	Over-voltage protection, under-voltage protection, motor over-heat protection(I ² T), short-circuit protection, drive over-heat protection, etc.		
Communication interface	RS232 (Connections with PC: 2-2, 3-3, 5-5)			
Operation Environment	Operating temperature	0-40°C		
	Storage temperature	-10°C~70°C		
	Humidity(non-condensing)	Below 90%RH		
	Protection class	IP20		
	Installation environment	Installed in a dust-free, dry and lockable environment(such as in a electrical cabinet)		
	Installation mode	Vertical installation		
	Altitude	No power limitation below 1000m		
Atmospheric pressure	86kpa~106kpa			

Wiring Diagram for CDII Servo Drivers



Mechanical Dimension Diagram for CDII Servo Driver (Unit: mm)

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

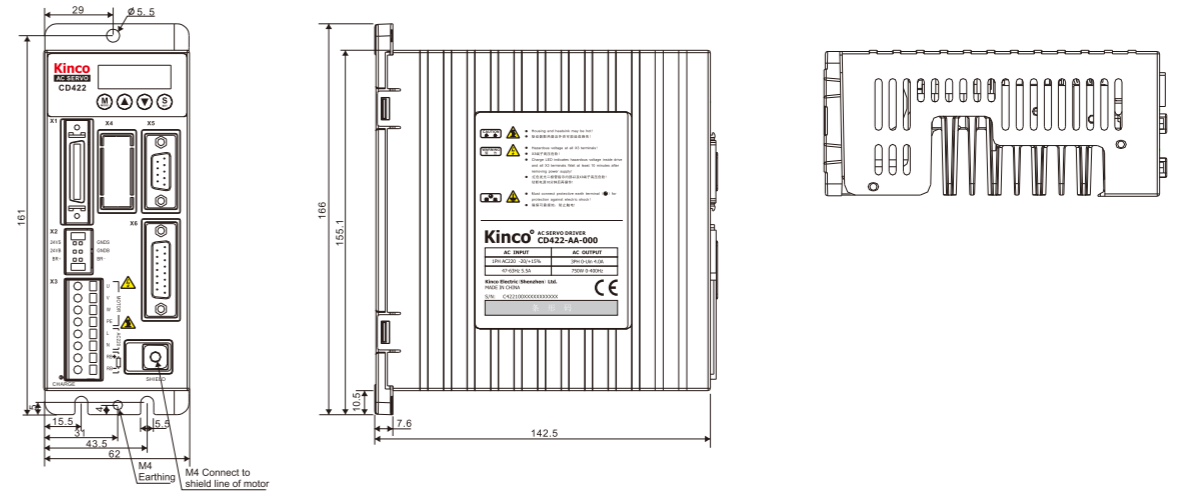
To use other functions, please redefine the digital inputs. Other functions that can be defined are as follows:
 - Reverse command
 - Internal speed section control
 - Internal position section control
 - Start homing
 - Active command
 - Quick stop
 - Switch electronic gear ratio
 - Switch gain

Default setting for digital output:
 Out 1: Ready
 Out 2: Error
 Out 3: Position reached
 Out 4: Zero velocity
 Out 5: Motor brake

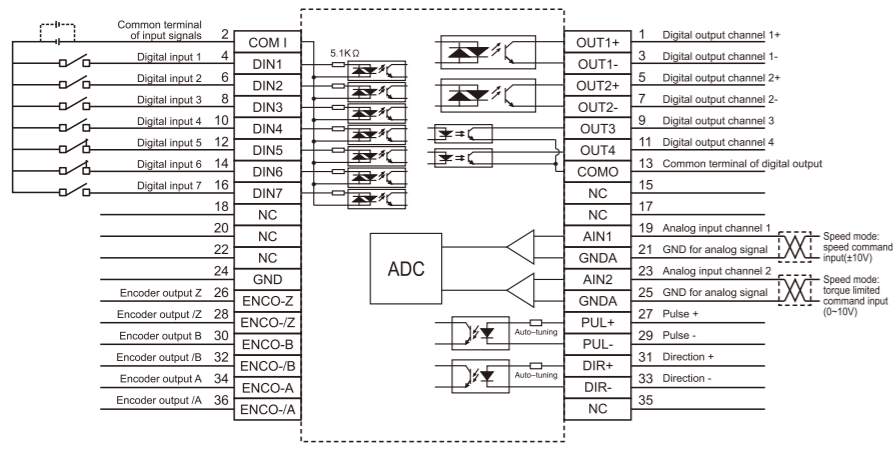
To use other functions, please redefine the digital outputs. Other functions that can be defined are as follows:
 - Index
 - Motor brake
 - Position limiting
 - References found
 - Multi-function output signal (Multi-position reached)

Voltage of control voltage: 5V~24V

Mechanical Dimension Diagram for CD412/CD422



Wiring Diagram for Speed Control Mode



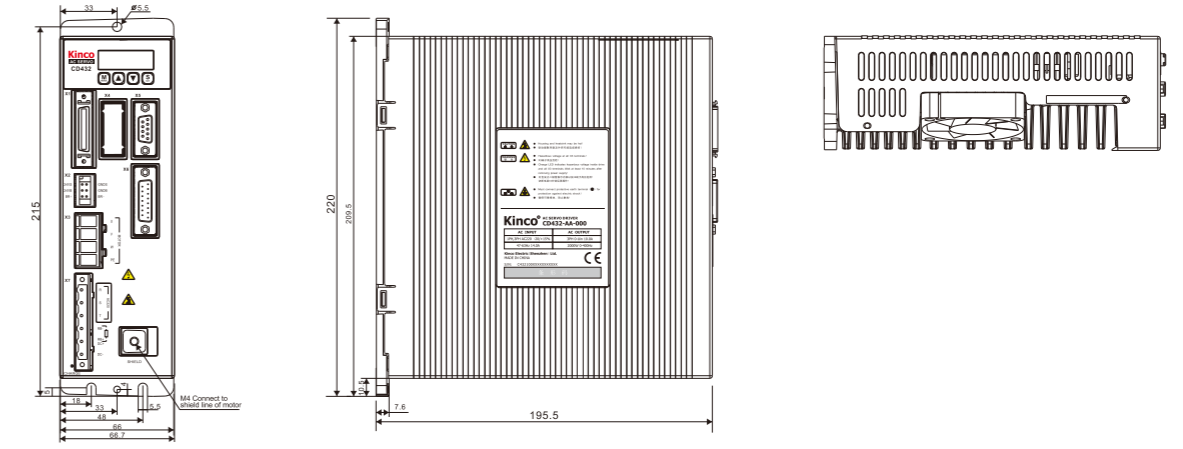
Default setting for digital inputs:
 Din 1: Driver enable
 Din 2: Fault reset
 Din 3: Operation mode
 Din 4: P control
 Din 5: Positive limit
 Din 6: Negative limit
 Din 7: Home signal

To use other functions, please redefine the digital inputs. Other functions that can be defined are as follows:
 - Reverse command
 - Internal speed section control
 - Internal position section control
 - Start homing
 - Active command
 - Quick stop
 - Switch electronic gear ratio
 - Switch gain

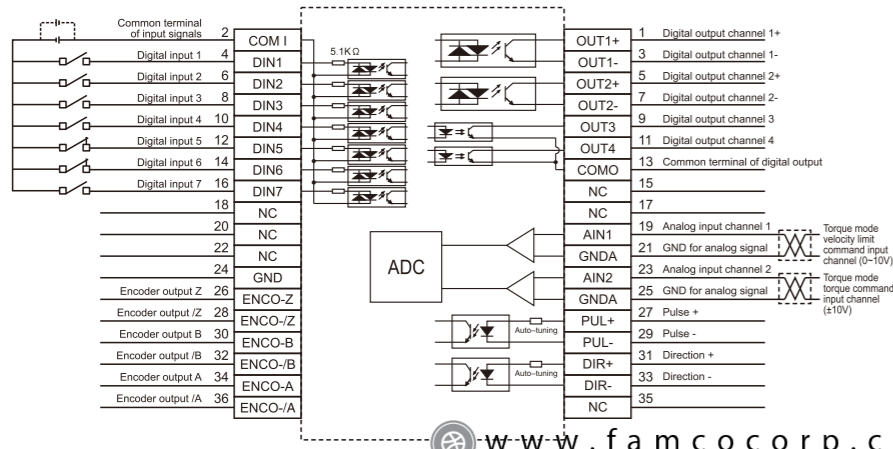
Default setting for digital output:
 Out 1: Ready
 Out 2: Error
 Out 3: Position reached
 Out 4: Zero velocity
 Out 5: Motor brake

To use other functions, please redefine the digital outputs. Other functions that can be defined are as follows:
 - Index
 - Motor brake
 - Position limiting
 - References found
 - Multi-function output signal (Multi-position reached)

Mechanical Dimension Diagram for CD432



Wiring Diagram for Torque Control Mode



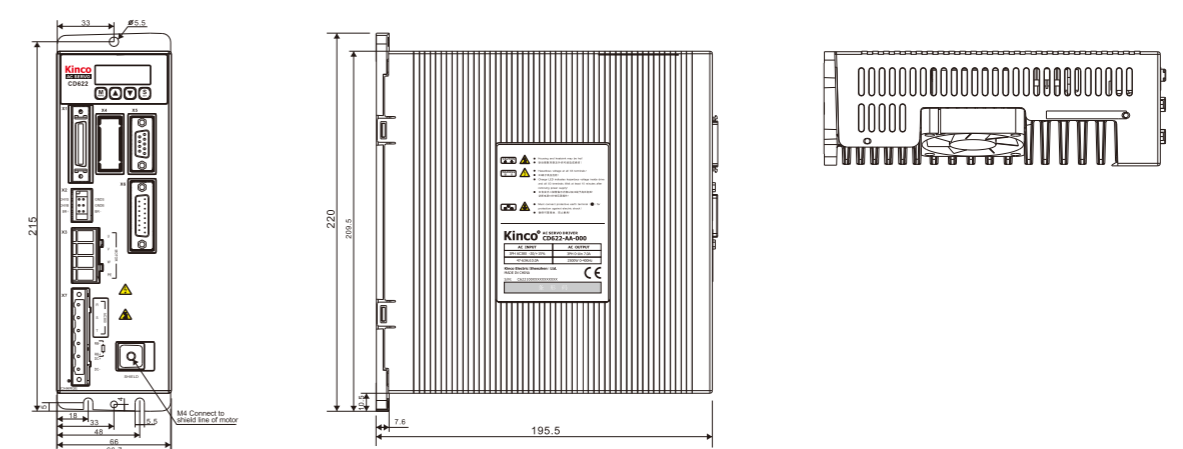
Default setting for digital inputs:
 Din 1: Driver enable
 Din 2: Fault reset
 Din 3: Operation mode
 Din 4: P control
 Din 5: Positive limit
 Din 6: Negative limit
 Din 7: Home signal

To use other functions, please redefine the digital inputs. Other functions that can be defined are as follows:
 - Reverse command
 - Internal speed section control
 - Internal position section control
 - Start homing
 - Active command
 - Quick stop
 - Switch electronic gear ratio
 - Switch gain

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 outputs. Other functions that can be defined are as follows:
 - Index
 - Motor brake
 - Position limiting
 - References found
 - Multi-function output signal (Multi-position reached)

Mechanical Dimension Diagram for CD622



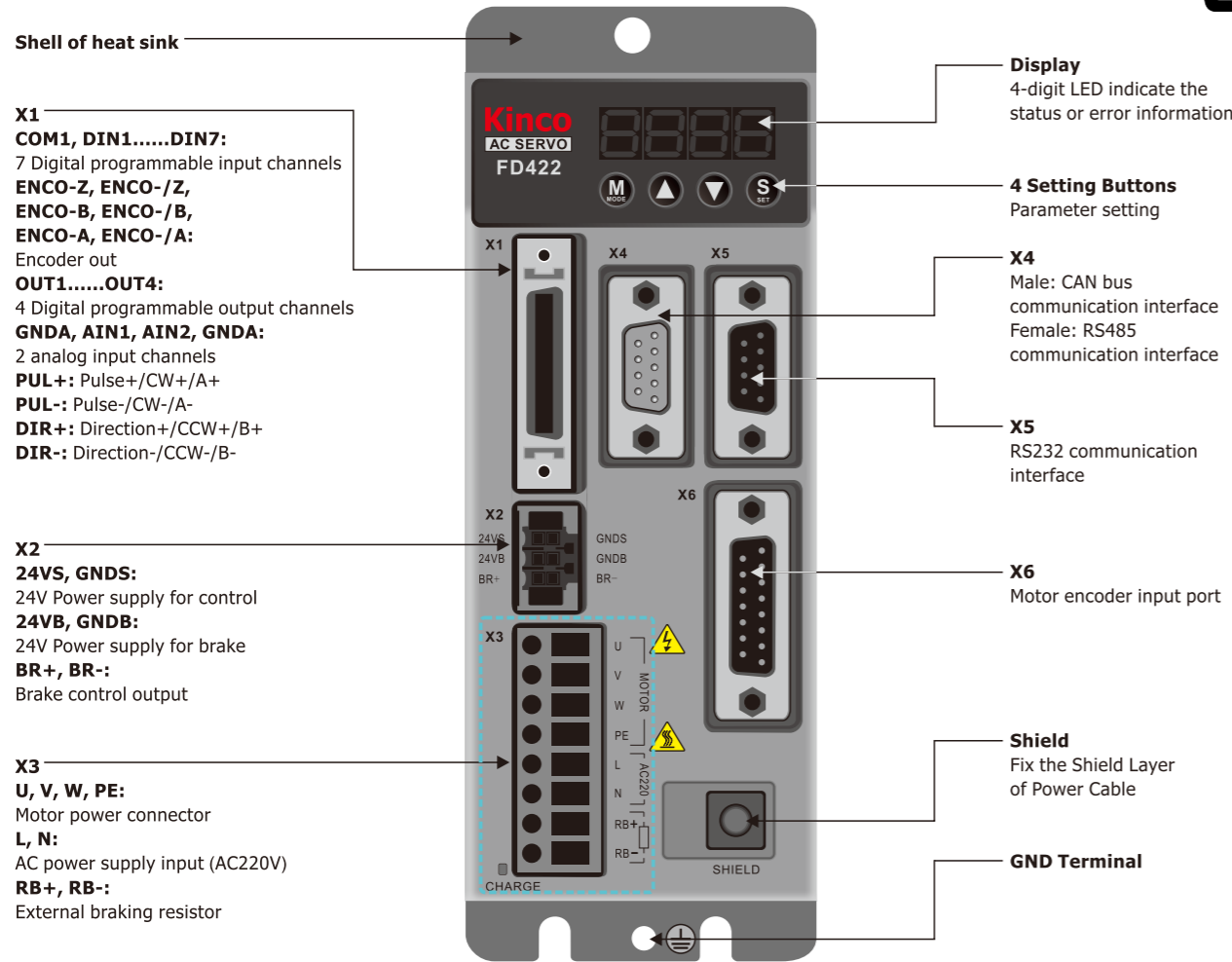
تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

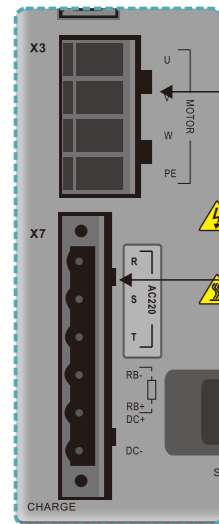
Panel and Interface Description of FD Servo Drivers



Port Description of FD Servo Drivers



FD422(AC220V)



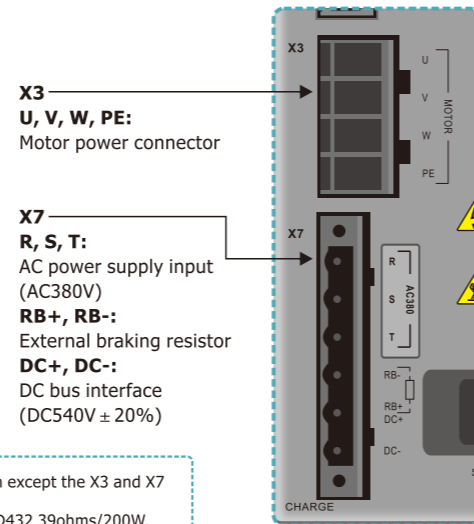
FD432(AC220V)

Note: 1. FD422/432/622 share the same interface definition except the X3 and X7 power interfaces;
2. Suggested brake resistor: FD422 75ohms/100W, FD432 39ohms/200W, FD622 75ohms/200W. The customer should choose the power of brake resistor according to the actual application.

www.famcocorp.com

E-mail: info@famcocorp.com

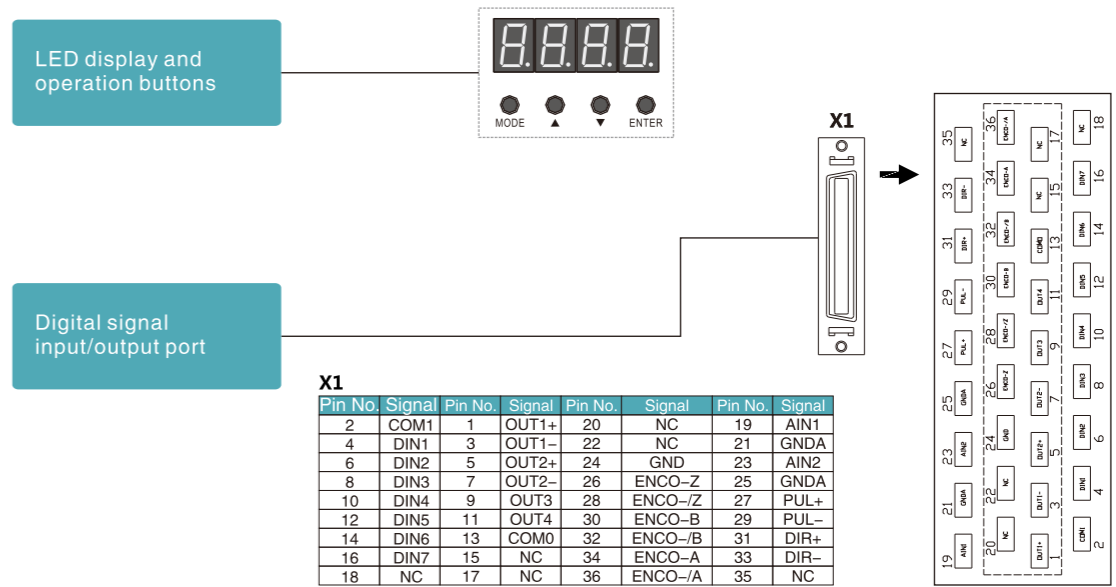
@famco_group



FD622(AC380V)

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۴۶۴۲



CAN

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

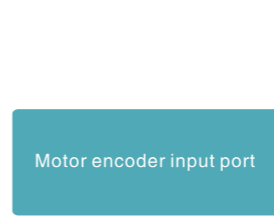
RS485

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



RS232

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



ENCODER IN

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

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

Technical Specifications of FD Servo Drivers

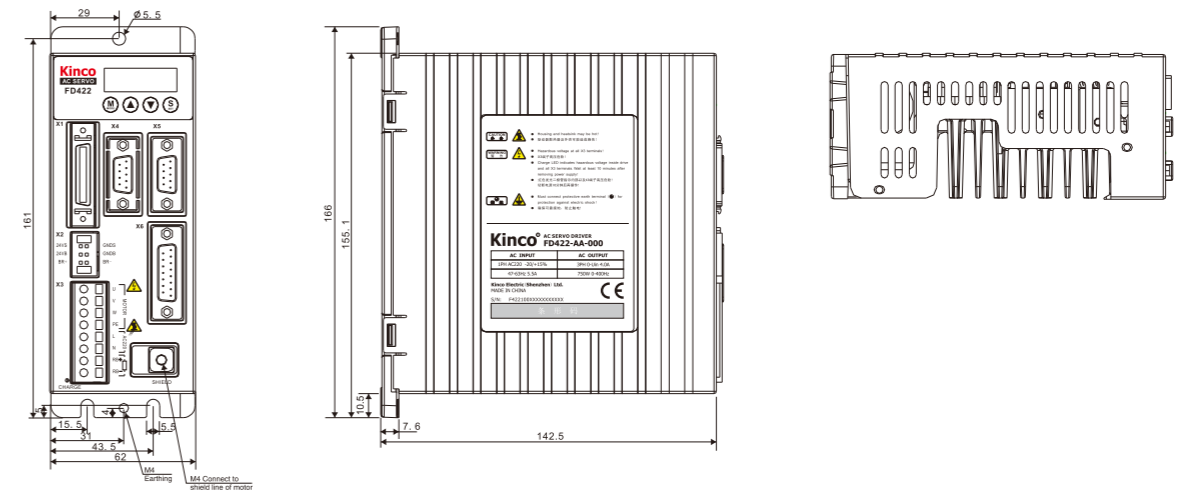


Mechanical Dimension Diagram for FD Servo Driver (Unit: mm)

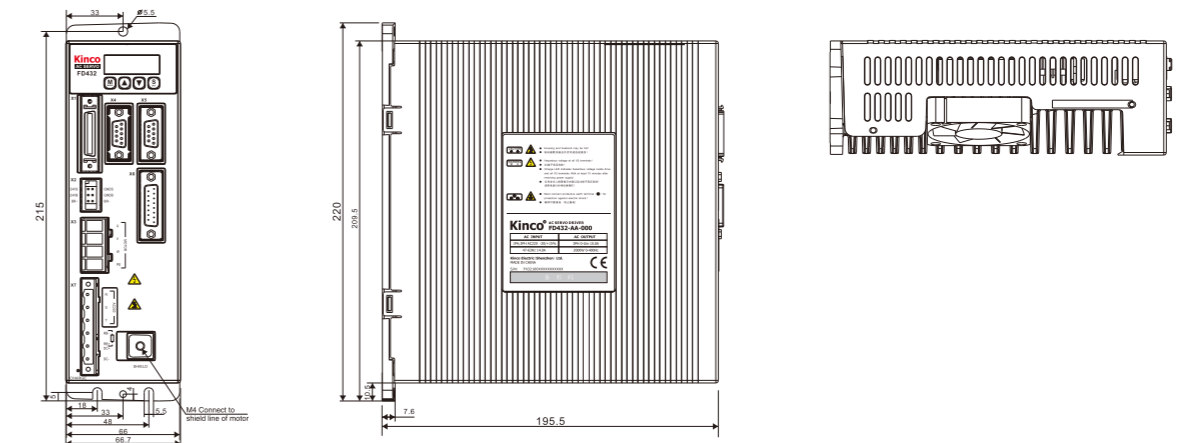
Model Parameter		FD422-□A-000	FD432-□A-000	FD622-□A-000
Power	Main supply voltage	Single-phase AC220V -20/+15% 47-63Hz	Single-phase or 3-phase AC220V -20/+15% 47-63Hz	3-phase AC380V -20/+15% 47-63Hz
	Control circuit voltage	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A
Current	Rated current(RMS)	4A	10A	7A
	Peak current(PEAK)	15A	27.5A	25A
Feedback signal		2500PPR (incremental encoder with 5V supply)		
Brake chopper		Use an external braking resistor according to application, mainly in occasion of quick stop.		
Brake chopper threshold		DC380V ± 5V	DC380V ± 5V	DC680V ± 5V
Over-voltage alarming threshold		DC400V ± 5V	DC400V ± 5V	DC700V ± 5V
Under-voltage alarming threshold		DC200V ± 5V	DC200V ± 5V	DC400V ± 5V
Cooling method		Natural air cooling	Fan	Fan
Weight(Kg)		1.2	2.4	2.4
General Functions	Digital input specification	7 digital inputs, with COM1 terminal for PNP (high level valid 12.5-30V) or NPN (low level valid) connection.		
	Digital input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain		
	Digital output specification	5 digital outputs, OUT1 - OUT4 current is 100mA, BR+/BR- (Brake control output) current is 500mA, can drive brake device directly		
	Digital output function	Define freely according to requirement, supporting following functions: Driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, Z signal, maximum speed obtained in torque mode, motor brake, position limiting, reference found, multi-position reached.		
	Analog input	2 analog input, can be used to control speed and torque, the input range is -10V-10V.		
	Encoder signal output function	Output encoder signal is optional, can be used in the multiple axes synchronization, the max. output frequency is 2MHz.		
	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 (I+T), short-circuit protection, drive over-heat protection, etc.		
RS485		The max. baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller.		
CAN BUS		The max. baudrate is 1MHz, use CANopen protocol to communicate with controller.		
Operation Environment	Operating temperature	0~40°C		
	Storage temperature	-10°C~70°C		
	Humidity(non-condensing)	Below 90%RH		
	Protection class	IP20		
	Installation environment	Installed in a dust-free, dry and lockable environment (such as in a electrical cabinet)		
	Installation mode	Vertical installation		
	Height	No power limitation below 1000m		
Atmospheric pressure		86kpa~106kpa		

Note: □=L: Communication port RS232, RS485.
□=A/C: Communication port RS232, CANopen.

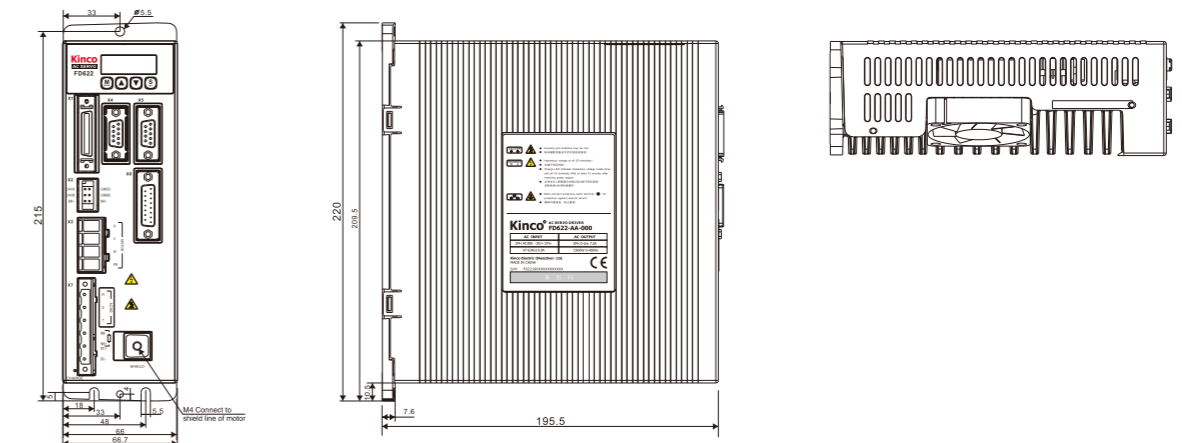
Mechanical Dimension Diagram for FD422



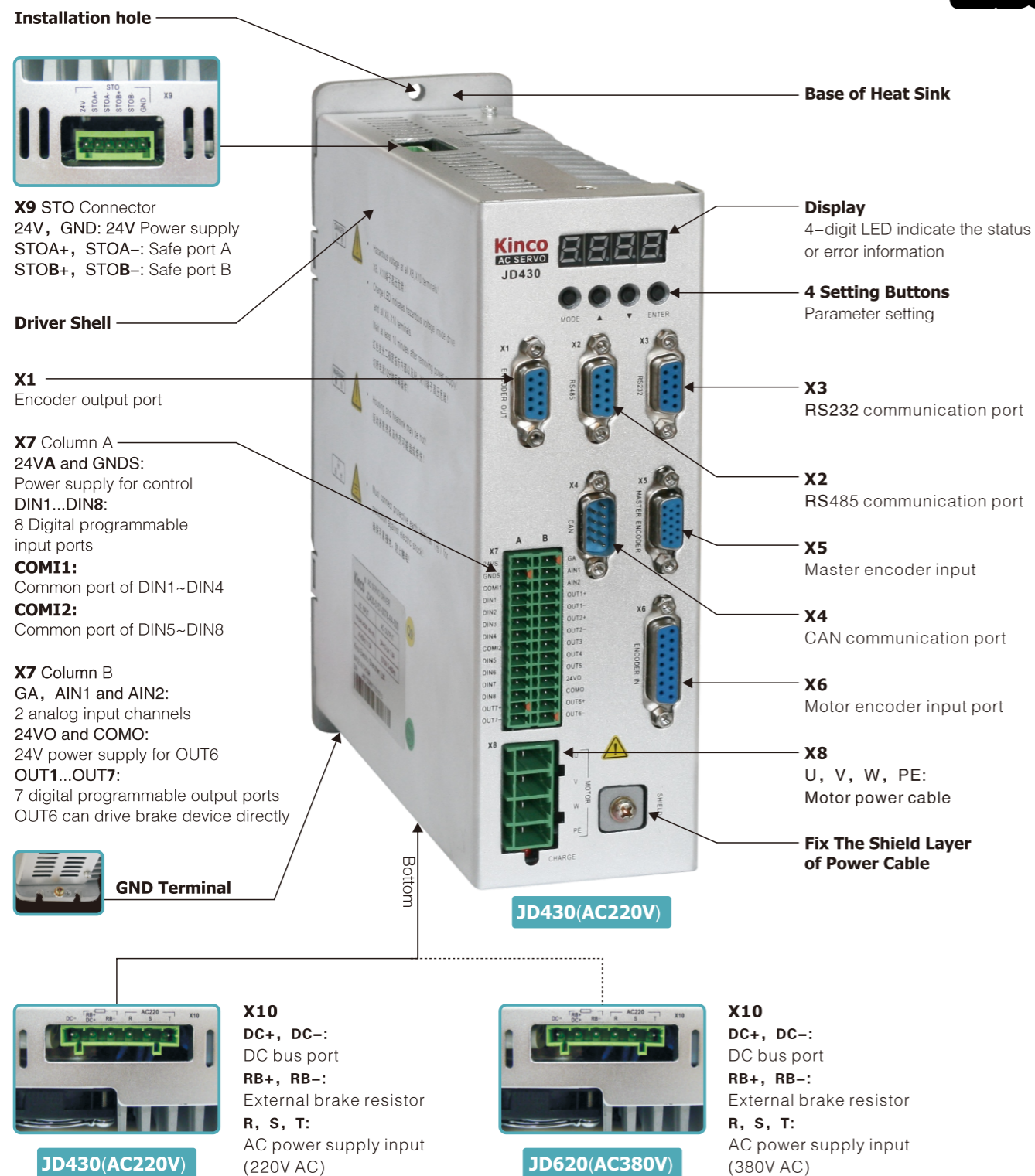
Mechanical Dimension Diagram for FD432



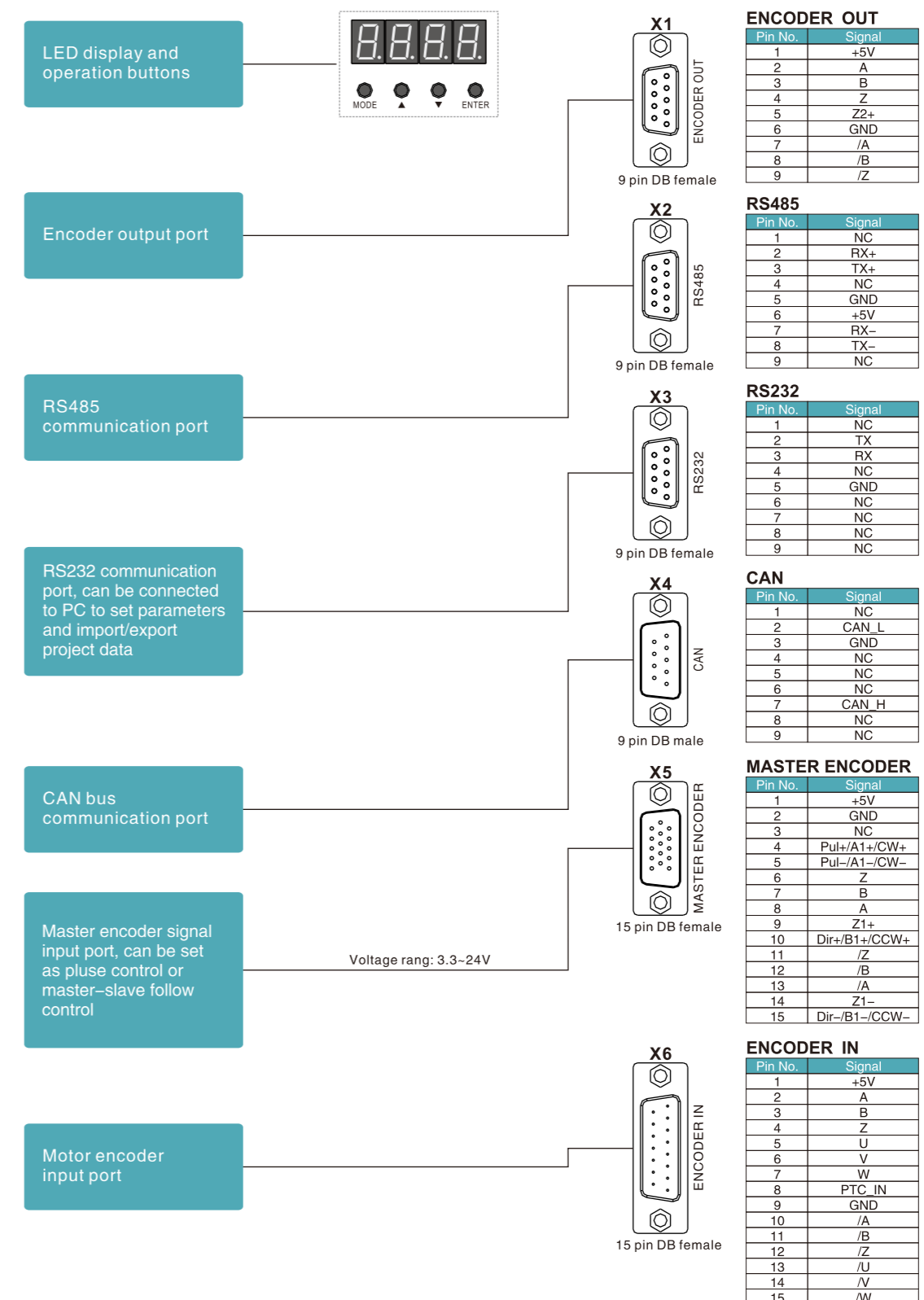
Mechanical Dimension Diagram for FD622



Panel and Interface Description of JD Servo Drivers



Port Description of JD Servo Drivers



Note: 1. JD430/JD620 drivers share the same interface definition, except for X10 power interfaces.
2. Suggested brake resistor: JD430 390hms/200W, JD620 750hms/100W, JD620 750hms/200W. The customer should chose the power of brake resistor according to the actual application.

Technical Specifications of JD Servo Drivers

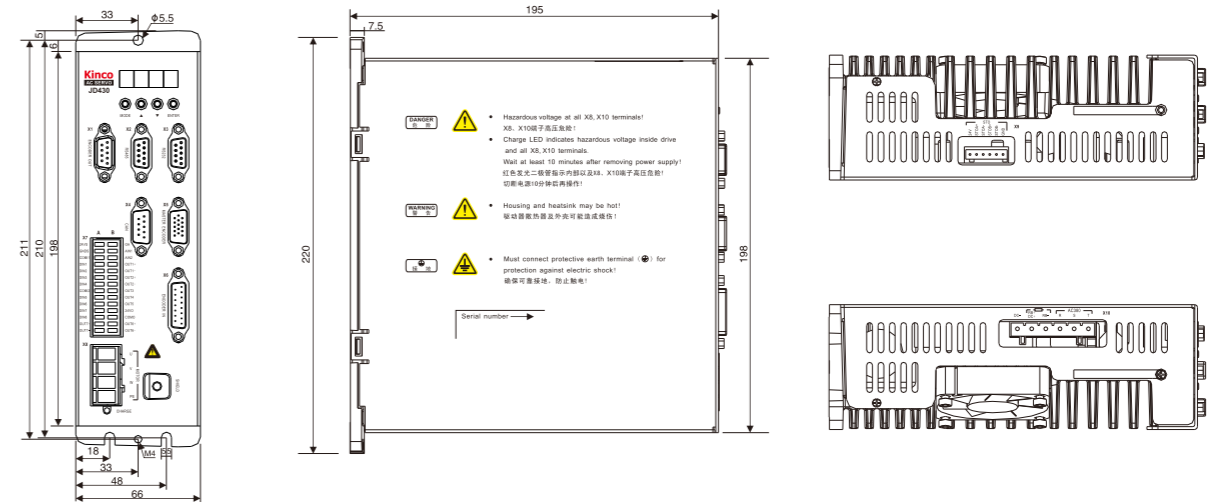


Mechanical Dimension Diagram of JD Servo Drivers (Unit: mm)

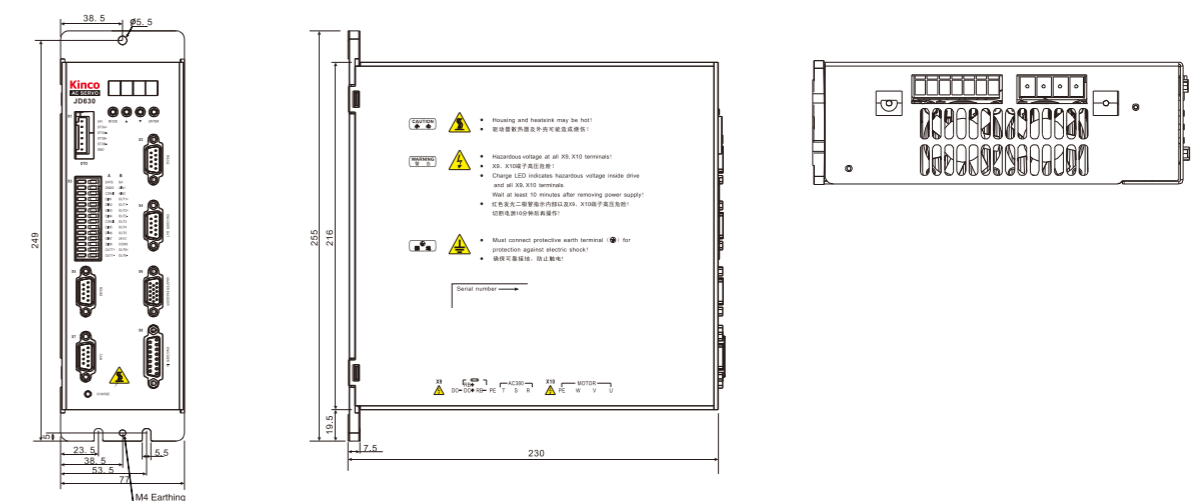
Model Parameter		JD430-AA-000	JD620-AA-000	JD630-□A-000	JD640-□A-000
Power	Main supply voltage	Single-phase or 3-phase AC220V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz	3-phase AC380V -20/+15% 47~63Hz
	Control circuit voltage	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A	18VDC~30VDC 1A
Current	Rated current(RMS)	10A	7A	10A	13A
	Peak current(PEAK)	27.5A	25A	35A	45A
Brake chopper threshold		DC380V ± 5V	DC680V ± 5V	DC680V ± 5V	DC680V ± 5V
Over-voltage alarming threshold		DC400V ± 5V	DC700V ± 5V	DC700V ± 5V	DC700V ± 5V
Under-voltage alarming threshold		DC200V ± 5V	DC400V ± 5V	DC400V ± 5V	DC400V ± 5V
Cooling method		Forced air cooling		Forced air cooling	
Weight(Kg)		2.51		3.62	
Size(width*height*thicker)		220 × 195 × 66 mm		255 × 230 × 77 mm	
General Functions	Digital operation panel	4 buttons and 4 LED display.			
	External I/O	7 digital outputs(OUT1, OUT2, OUT7 are 0.1A and OUT3~OUT6 are 0.5A, can define driver ready and other functions freely; 8 digital inputs(12.5~30V), can define driver enables and other functions freely.			
	Analog input	2 analog inputs, can be used to control speed and torque, the input range is -10V~10V.			
	Encoder signal output function	Output encoder signal and master encoder signal are optional, can be used in the multiple axes synchronization, the max. output frequency is 2MHz.			
	Master encoder input function	Can receive 3.3V~4.4V pulse/direction signal, CW/CCW signal, and the RS422 difference signal, the max. input frequency is 4MHz.			
	Feedback signal	Incremental A. B. Z. U. V. W. A/. B/. Z/. U/. V/. W/. signal			
	RS232	The max. baudrate is 115.2KHz, use JD-PC software to communicate with PC, or via free protocol to communicate with controller.			
	RS485	The max. baudrate is 115.2KHz, use Modbus RTU protocol to communicate with controller.			
	CAN BUS	The max. baudrate is 1MHz, use CANopen protocol to communicate with controller.			
	STO function	STO port can be connected to safe controller, switch, and sensor to protect the system.			
Operation Environment	Operating temperature	0~40℃			
	Storage temperature	-10℃~70℃			
	Humidity(non-condensing)	Below 90%RH			
	Protection class	IP20			
	Installation environment	Installed in a dust-free, dry and lockable environment(such as in a electrical cabinet)			
	Installation mode	Vertical installation			
	Height	No power limitation below 1000m			
Atmospheric pressure	86kpa~106kpa				

Note: □=L: Communication port RS232, RS485.
□=A: Communication port RS232, RS485, CANopen.

Mechanical Dimension Diagram of JD430/JD620



Mechanical Dimension Diagram of JD630/JD640



www.famcocorp.com
E-mail: info@famcocorp.com
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

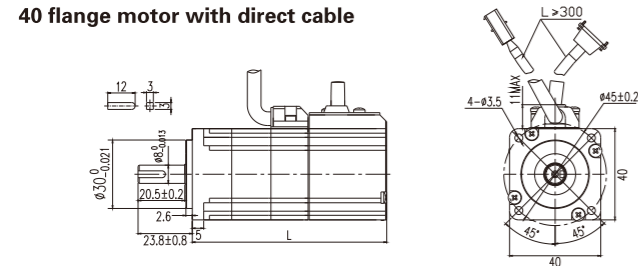
تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Dimensions/Torque curve of Servo Motors (40/60 flange)

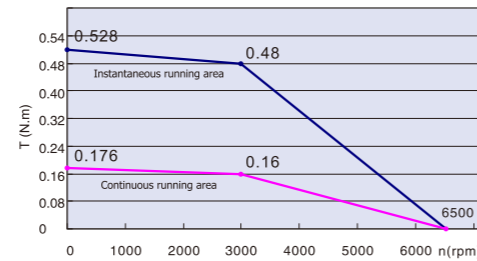


Dimensions/Torque curve of Servo Motors (60/80 flange)

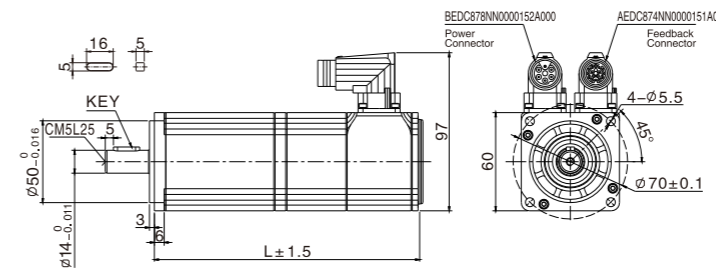
40 flange motor with direct cable



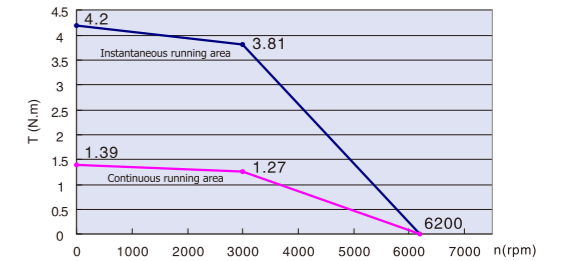
SMH40S-0005-30A K-4LKH 50W



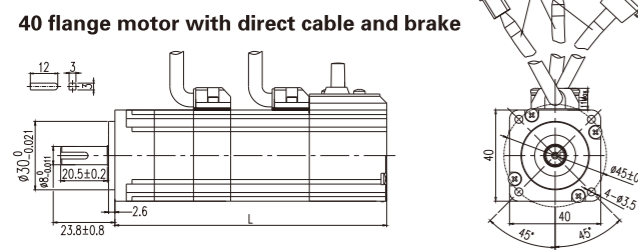
60 flange motor with Intercontec connector



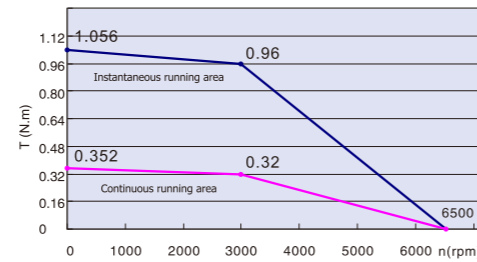
SMH/SME60S-0040-30A K-3LK 400W



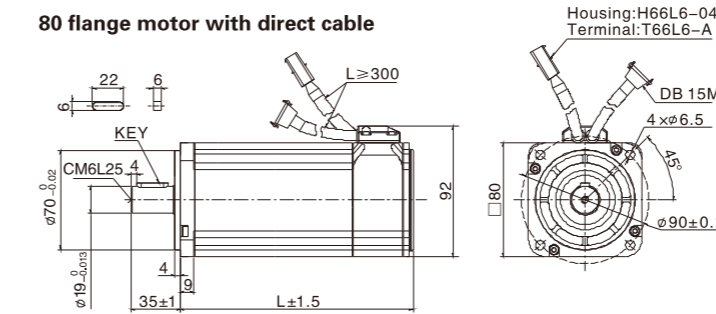
40 flange motor with direct cable and brake



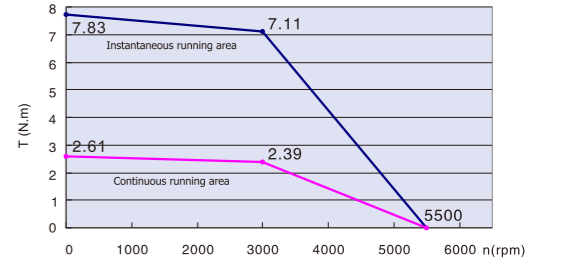
SMH40S-0010-30A K-4LKH 100W



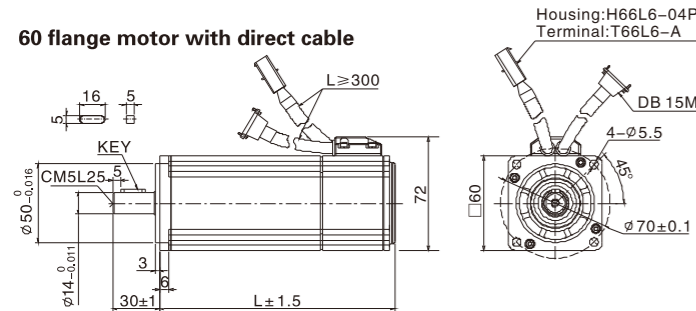
80 flange motor with direct cable



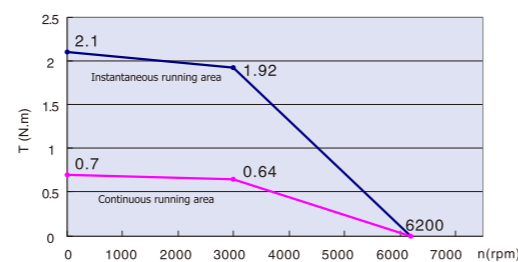
SMH/SME80S-0075-30A K-3LK 750W



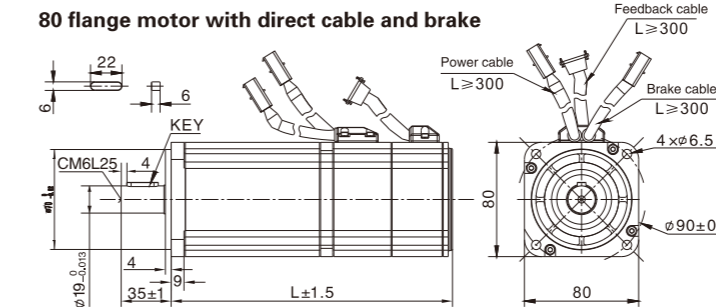
60 flange motor with direct cable



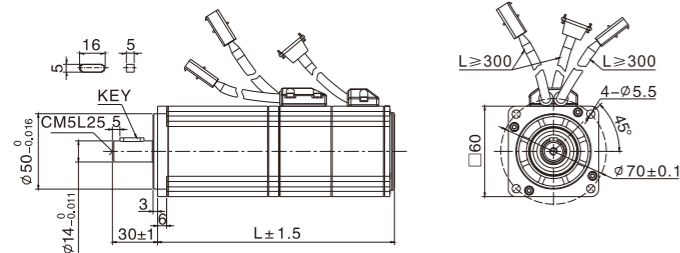
SMH/SME60S-0020-30A K-3LK 200W



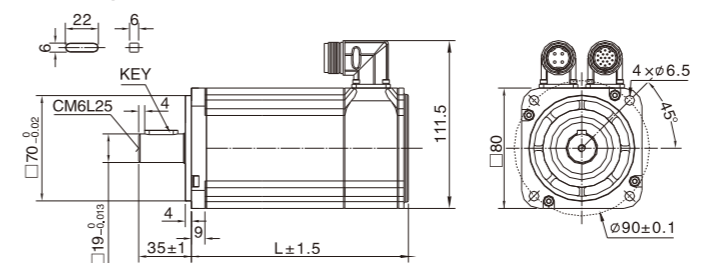
80 flange motor with direct cable and brake



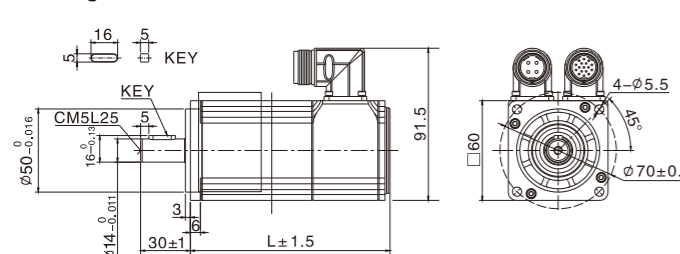
60 flange motor with direct cable and brake



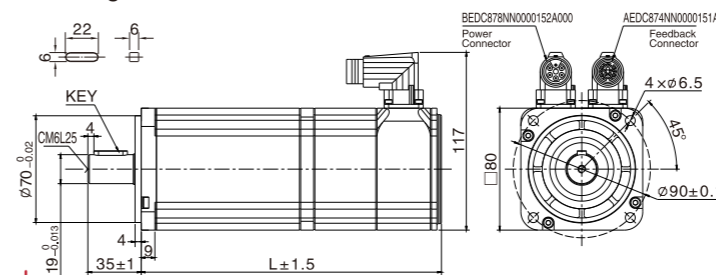
80 flange motor with HFO series standard connector



60 flange motor with HFO series standard connector



80 flange motor with Intercontec connector



Technical Specifications of SMH40/60/80 Motors



Technical Specifications of SME60/80 Motors

Motor series		SMH Series Motor				
		Small inertia flange size 40mm		Small inertia flange size 60mm		Small inertia flange size 80mm
Model		SMH40S-0005-30A□K-4LKH	SMH40S-0010-30A□K-4LKH	SMH60S-0020-30A□K-3LK□	SMH60S-0040-30A□K-3LK□	SMH80S-0075-30A□K-3LK□
DC link voltage UDC		300	300	300	300	300
Continuous performance	Rated power P_n (W)	50	100	200	400	750
	Rated torque T_n (Nm)	0.16	0.32	0.64	1.27	2.39
	Rated speed n_n (rpm)	3000	3000	3000	3000	3000
	Rated current I_N (A)	0.7	1.4	1.6	3.1	3.9
Maximum torque T_m (Nm)		0.48	0.96	1.92	3.82	7.17
Maximum current I_m (A)		2.1	4.2	4.8	9.3	11.7
Standstill torque T_s (Nm)		0.176	0.352	0.7	1.39	2.63
Standstill current I_S (A)		0.77	1.54	1.79	3.38	4.4
Resistance line-line RL (Ω)		16.6	5.53	8.02	3.52	1.4
Inductance line-line LL (mH)		14	6	16.3	7.8	7.5
Electrical time constant τ_e (ms)		0.84	1.08	2.03	2.22	5.35
Mechanical time constant τ_m (ms)		1.28	0.86	2.26	1.35	0.75
Reverse voltage constant K_e (V/krpm)		16	14	29	29	40
Torque constant K_t (Nm/A)		0.265	0.265	0.48	0.48	0.662
Rotor moment of inertia J_m (Kg · cm ²)		0.031	0.059	0.375	0.51	1.36
		0.031 (with brake)	0.061 (with brake)	0.379 (with brake)	0.514 (with brake)	1.385 (with brake)
Pole pair number		4	4	3	3	3
Maximum voltage rising du/dt (KV/ μ s)		8	8	8	8	8
Insulation class		F	F	F	F	F
Maximum radial force F (N)		120	120	180	180	335
Maximum axial force F (N)		60	60	90	90	167.5
Weight G (Kg)		0.5	0.8	1.3	1.8	3.3
		0.8 (with brake)	1.0 (with brake)	1.8 (with brake)	2.3 (with brake)	4 (with brake)
Length of motor L (mm)		85.3±1	110.8 ± 1	120	150	147
		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)
Position feedback device		Incremental encoder 2500ppr				
Cooling method		Totally enclosed, non-ventilated				
Protection level		IP65 for body, shaft sealing IP54				
Environmental conditions for operation	Temperature	-20°C ~ 40°C (Non-freezing)				
	Humidity	Below 90% RH (Non-condensing)				
	Ambient environment	Away from active gas, combustible gas, oil drops and dust				
	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise				

Note: □=A: no brake □=H: Cable connector
 □=B: brake □=N: HFO series standard connector
 □=M: Intercontec connector

Motor series		SME Series Motor		
		Small inertia flange size 60mm		Small inertia flange size 80mm
Model		SME60S-0020-30A□K-3LK□	SME60S-0040-30A□K-3LK□	SME80S-0075-30A□K-3LK□
DC link voltage UDC		300	300	300
Continuous performance	Rated power P_n (W)	200	400	750
	Rated torque T_n (Nm)	0.64	1.27	2.39
	Rated speed n_n (rpm)	3000	3000	3000
	Rated current I_N (A)	1.6	3.1	3.9
Maximum torque T_m (Nm)		1.92	3.81	7.17
Maximum current I_m (A)		4.8	9.3	11.7
Standstill torque T_s (Nm)		0.7	1.4	2.63
Standstill current I_S (A)		1.76	3.41	4.29
Resistance line-line RL (Ω)		10.4	5.8	3
Inductance line-line LL (mH)		25.4	15	16.2
Electrical time constant τ_e (ms)		2.44	2.59	5.4
Mechanical time constant τ_m (ms)		2.93	1.93	1.49
Reverse voltage constant K_e (V/krpm)		29	29	40
Torque constant K_t (Nm/A)		0.48	0.48	0.662
Rotor moment of inertia J_m (Kg · cm ²)		0.375	0.443	1.255
		0.379 (with brake)	0.447 (with brake)	1.28 (with brake)
Pole pair number		3	3	3
Maximum voltage rising du/dt (KV/ μ s)		8	8	8
Insulation class		F	F	F
Maximum radial force F (N)		180	180	335
Maximum axial force F (N)		90	90	167.5
Weight G (Kg)		1.3	1.6	2.9
		1.8 (with brake)	2.1 (with brake)	3.6 (with brake)
Length of motor L (mm)		120±1.5	135±1.5	132±1.5
		159 ± 1.5 (with brake)	174 ± 1.5 (with brake)	182 ± 1.5 (with brake)
Position feedback device		Incremental encoder 2500ppr		
Cooling method		Totally enclosed, non-ventilated		
Protection level		IP65 for body, shaft sealing IP54		
Environmental conditions for operation	Temperature	-20°C ~ 40°C (Non-freezing)		
	Humidity	Below 90% RH (Non-condensing)		
	Ambient environment	Away from active gas, combustible gas, oil drops and dust		
	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise		

Note: □=A: no brake □=H: Cable connector
 □=B: brake □=N: HFO series standard connector
 □=M: Intercontec connector

www.famcocorp.com
 E-mail: info@famcocorp.com
 @famco_group

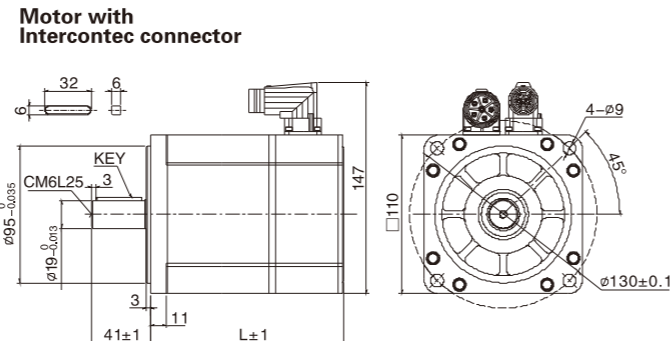
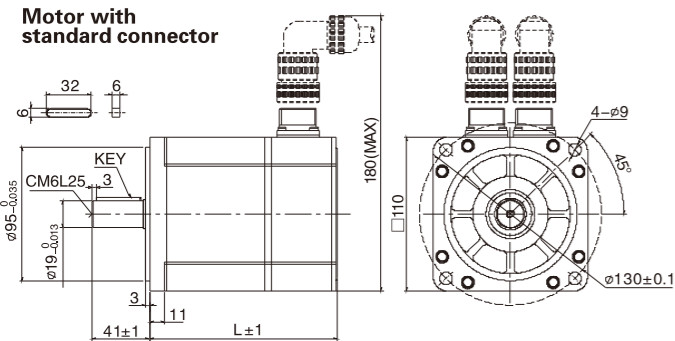
Tel: ۰۲۱-۴۸۰۰۰۰۴۹
 Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
 روبروی پالایشگاه نفت پارس، پلاک ۱۲

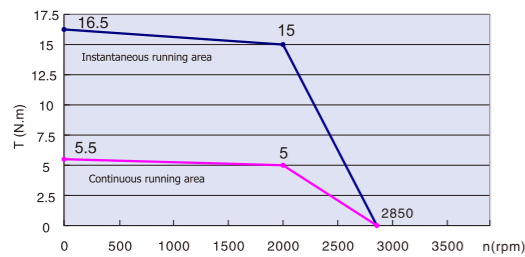
Dimensions/Torque curve of Servo Motors (110 flange)



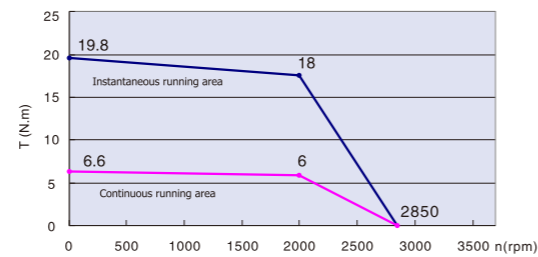
Technical Specifications of SMH110 Servo Motors



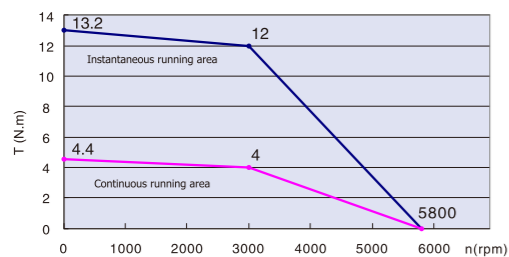
SMH110D-0105-20A□K-4LK□ 1.05KW



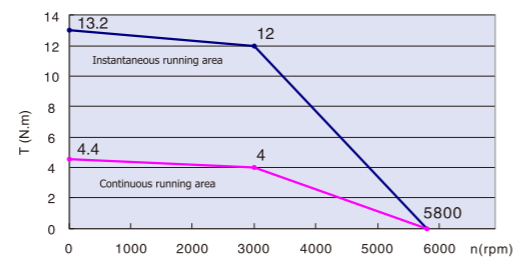
SMH110D-0126-20A□K-4LK□ 1.26KW



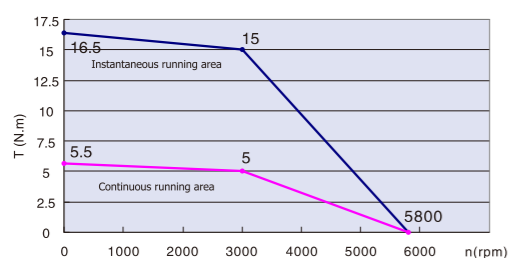
SMH110D-0125-30A□K-4LK□ 1.25KW



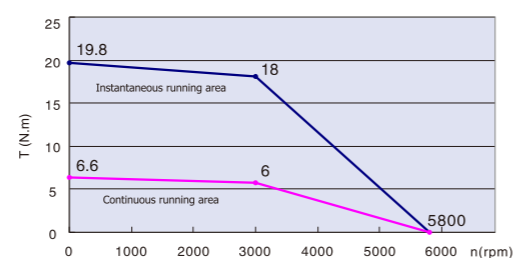
SMH110D-0126-30A□K-4HK□ 1.26KW



SMH110D-0157-30A□K-4HK□ 1.57KW



SMH110D-0188-30A□K-4HK□ 1.88KW



Motor series	Medium inertia, flange size 110mm						
Model	SMH110D-0125-30A□K-4LK□	SMH110D-0126-30A□K-4HK□	SMH110D-0105-20A□K-4LK□	SMH110D-0157-30A□K-4HK□	SMH110D-0126-20A□K-4LK□	SMH110D-0188-30A□K-4HK□	
DC link voltage UDC	300	560	300	560	300	560	
Continuous performance	Rated power P_N (W)	1250	1260	1050	1570	1260	1880
	Rated torque T_N (Nm)	4.0	4.0	5.0	5.0	6.0	6.0
	Rated speed n_N (rpm)	3000	3000	2000	3000	2000	3000
	Rated current I_N (A)	6.5	4.3	5.9	5.9	6.2	6.2
Maximum torque T_m (Nm)	12	12	15.0	15.0	18.0	18.0	
Maximum current I_m (A)	19.5	12.9	17.7	17.7	18.6	18.6	
Standstill torque T_s (Nm)	4.4	4.4	5.5	5.5	6.6	6.6	
Standstill current I_s (A)	6.82	4.73	6.49	6.49	6.765	6.765	
Resistance line-line R_L (Ω)	0.8	1.83	1.03	1.03	1.258	1.258	
Inductance line-line L_L (mH)	6.4	13.5	7.8	7.8	9.62	9.62	
Electrical time constant τ_e (ms)	7.9	7.37	7.57	7.57	7.64	7.64	
Mechanical time constant τ_m (ms)	1.4	1.63	1.55	1.55	1.65	1.65	
Reverse voltage constant K_e (V/krpm)	45	64	55	55	64	64	
Torque constant K_t (Nm/A)	0.744	1.058	0.910	0.910	1.058	1.058	
Rotor moment of inertia J_m ($\text{Kg} \cdot \text{cm}^2$)	5.8	5.8	7.2	7.2	8.5	8.5	
	5.85 (with brake)	5.85 (with brake)	7.25 (with brake)	7.25 (with brake)	8.55 (with brake)	8.55 (with brake)	
Pole pair number	4	4	4	4	4	4	
Maximum voltage rising du/dt (KV/ μ s)	8	8	8	8	8	8	
Insulation class	F	F	F	F	F	F	
Maximum radial force F (N)	630	630	630	630	630	630	
Maximum axial force F (N)	315	315	315	315	315	315	
Weight G (Kg)	6.2	6.2	7.2	7.2	8.2	8.2	
	8.2(with brake)	8.2(with brake)	9.2(with brake)	9.2(with brake)	10.2(with brake)	10.2(with brake)	
Length of motor L (mm)	168	168	185	185	202	202	
	228 \pm 1 (with brake)	228 \pm 1 (with brake)	245 \pm 1 (with brake)	245 \pm 1 (with brake)	262 \pm 1 (with brake)	262 \pm 1 (with brake)	
Position feedback device	Incremental encoder 2500ppr						
Cooling method	Totally enclosed, non-ventilated						
Protection level	IP65 for body, shaft sealing IP54						
Environmental conditions for operation	Temperature	-20°C ~ 40°C (Non-freezing)					
	Humidity	Below 90% RH (Non-condensing)					
	Ambient environment	Away from active gas, combustible gas, oil drops and dust					
	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise					

Note: □=A: no brake □=C: Standard connector
□=B: brake □=D: Intercontec connector

www.famcocorp.com
E-mail: info@famcocorp.com
@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹
Fax: ۰۲۱-۴۴۹۹۴۶۴۲

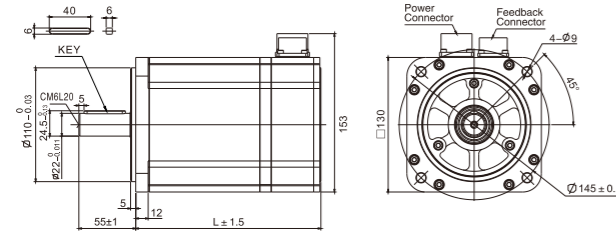
تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Dimensions/Torque curve of Servo Motors (130/150/180 flange)

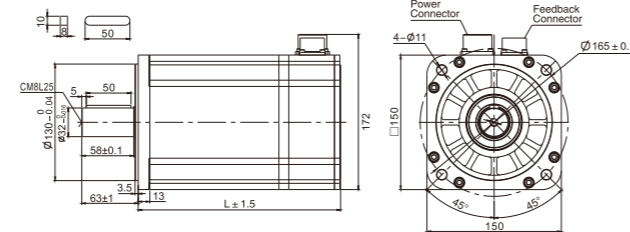


Dimensions of Servo Motors (180 flange)

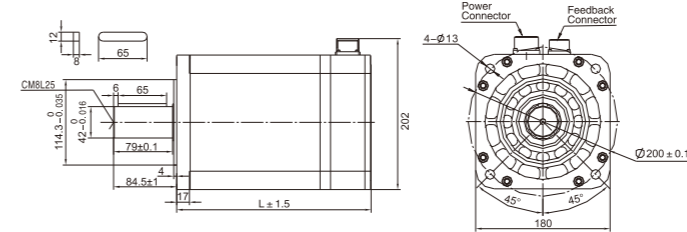
SMH Series Motors with standard connector, flange size 130mm



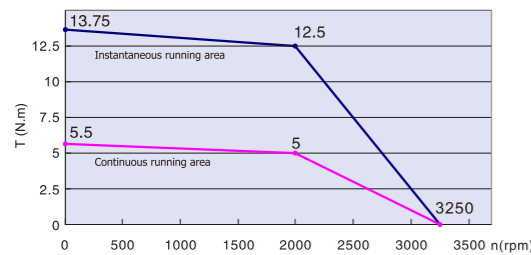
SMH Series Motors with standard connector, flange size 150mm



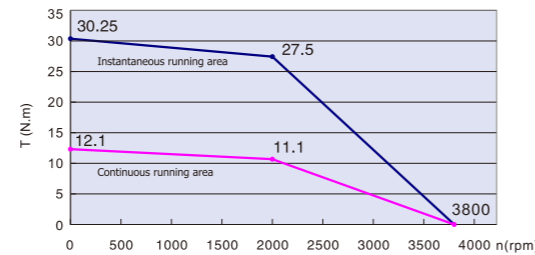
SMH Series Motors with standard connector, flange size 180mm



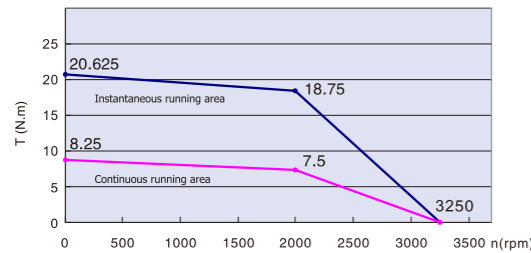
SMH130D-0105-20A□K-4HK□ 1.05KW



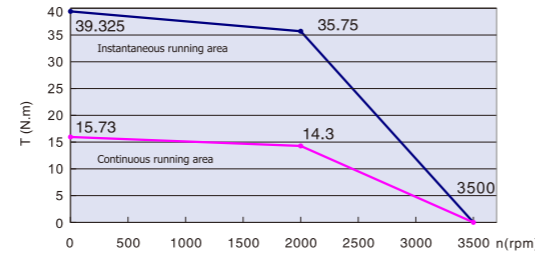
SMH150D-0230-20A□K-4HK□ 2.3KW



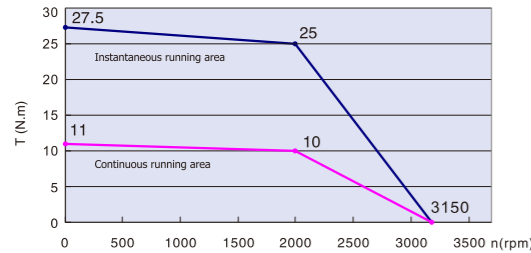
SMH130D-0157-20A□K-4HK□ 1.57KW



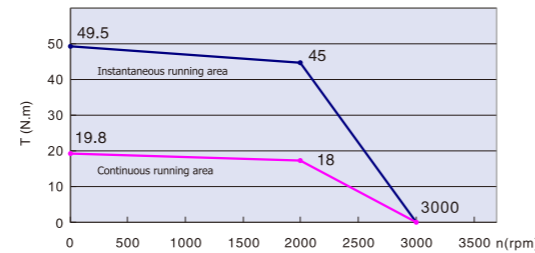
SMH150D-0300-20A□K-4HK□ 3KW



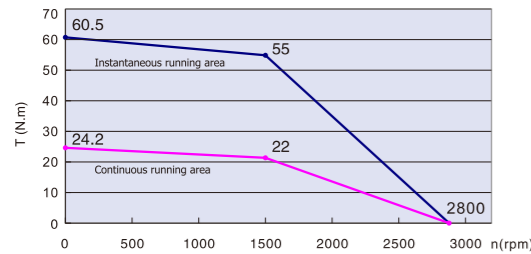
SMH130D-0210-20A□K-4HK□ 2.1KW



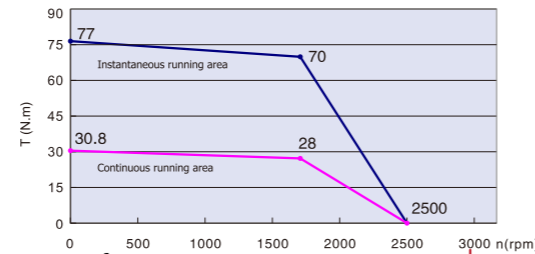
SMH150D-0380-20A□K-4HK□ 3.8KW



SMH180D-0350-15A□K-4HK□ 3.5KW



SMH180D-0440-15A□K-4HK□ 4.4KW



Technical Specification of SMH130/150/180 Motors

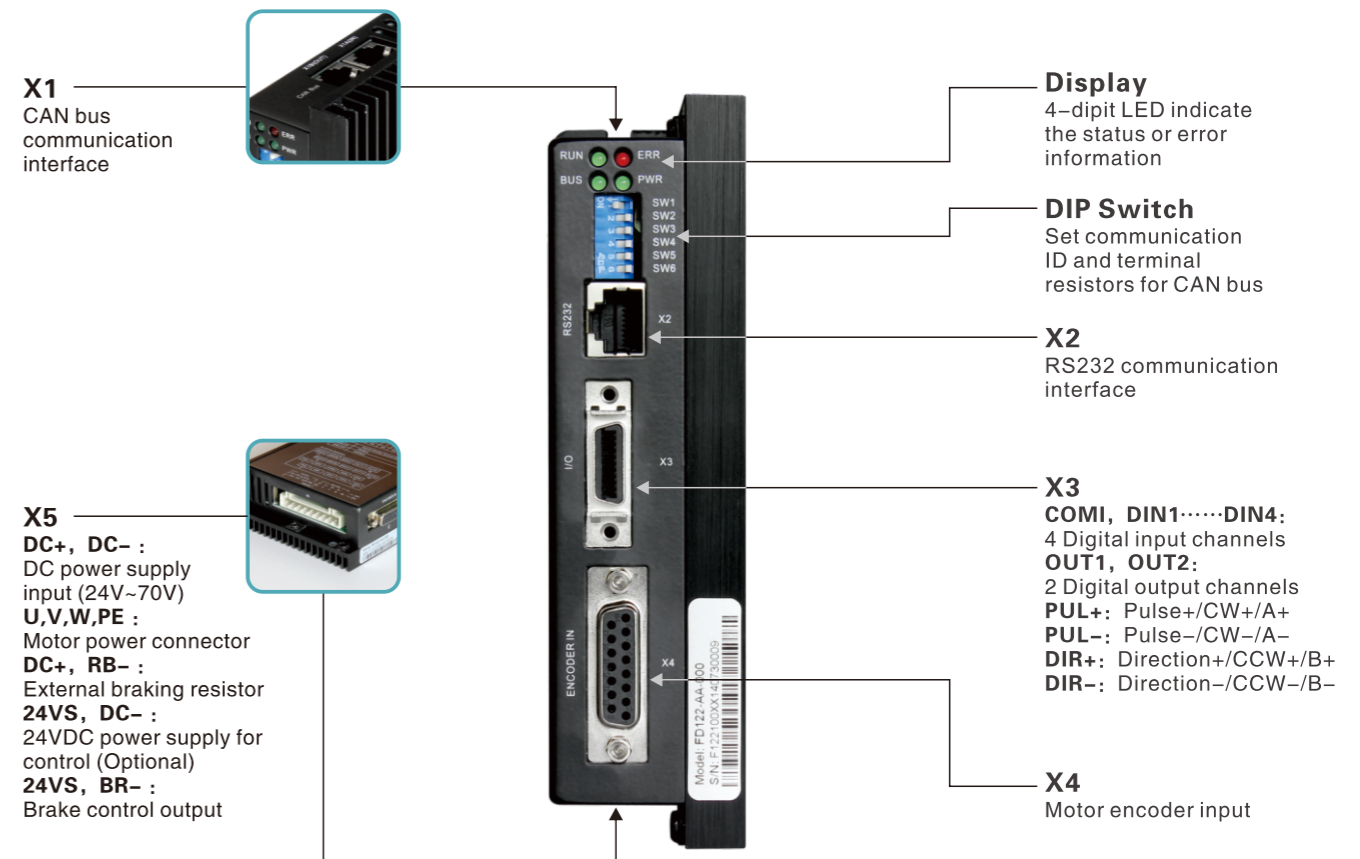
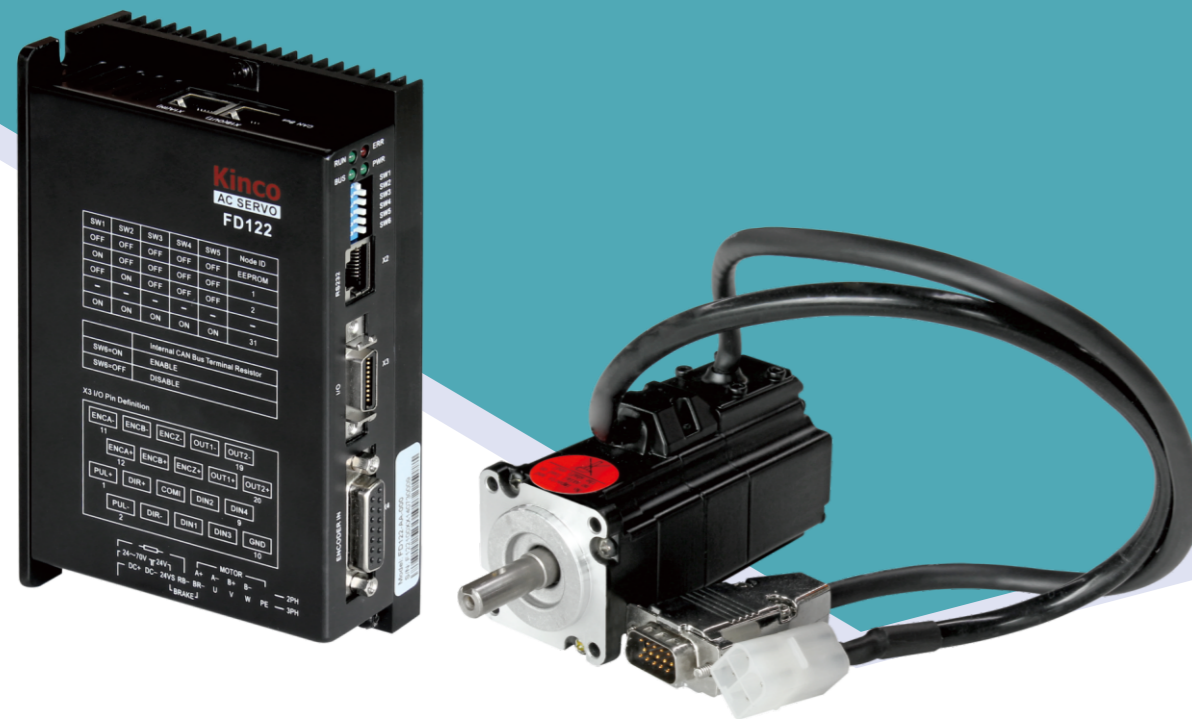
Motor series	Medium inertia, flange size 130mm			Medium inertia, flange size 150mm			Medium inertia, flange size 150mm	
Model	SMH130D-0105-20A□K-4HK□	SMH130D-0157-20A□K-4HK□	SMH130D-0210-20A□K-4HK□	SMH150D-0230-20A□K-4HK□	SMH150D-0300-20A□K-4HK□	SMH150D-0380-20A□K-4HK□	SMH180D-0350-15A□K-4HK□	SMH180D-0440-15A□K-4HK□
DC link voltage UDC	560	560	560	560	560	560	560	560
Continuous performance	Rated power P _N (W)	1050	1570	2100	2300	3000	3800	4400
	Rated torque T _N (Nm)	5	7.5	10	11.1	14.3	18	22
	Rated speed n _N (rpm)	2000	2000	2000	2000	2000	2000	1500
	Rated current I _N (A)	4.3	6.3	7.6	7.1	8.5	9.3	10.3
Maximum torque T _m (Nm)	12.5	18.75	25	27.5	35.75	45	55	70
Maximum current I _m (A)	10.75	15.75	19	17.75	21.25	23.25	25.75	29.75
Standstill torque T _s (Nm)	5.5	8.25	11	12.1	15.73	19.8	24.2	30.8
Standstill current I _S (A)	4.73	6.93	8.36	7.81	9.35	10.23	11.33	13.09
Resistance line-line R _L (Ω)	1.85	1.17	0.98	2.2	1.4	1.3	1.2	0.65
Inductance line-line L _L (mH)	23.7	16.2	14.3	14(AVG)	10.6(AVG)	10.5(AVG)	12.7(AVG)	8.5
Electrical time constant τ _e (ms)	12.81	13.846	14.592	6.36	7.57	8.08	10.58	13.08
Mechanical time constant τ _m (ms)	2.868	2.529	2.268	4.68	3.68	3.32	3.42	2.16
Reverse voltage constant K _e (V/rpm)	70	72	80	100	107	125	135	150
Torque constant K _t (Nm/A)	1.1578	1.191	1.3232	1.65	1.77	2.07	2.23	2.48
Rotor moment of inertia J _m (Kg · cm ²)	12	17.7	23.4	33.5	47.6	63.1	82	118
	12.04 (With brake)	17.74 (With brake)	23.44 (With brake)	33.6 (With brake)	47.7 (With brake)	63.2 (With brake)	82.2 (With brake)	118.2 (With brake)
Pole pair number	4	4	4	4	4	4	4	4
Maximum voltage rising du/dt (KV/μs)	8	8	8	8	8	8	8	8
Insulation class	F	F	F	F	F	F	F	F
Maximum radial force F (N)	900	900	900	1200	1200	1200	1600	1600
Maximum axial force F (N)	450	450	450	600	600	600	800	800
Weight G (Kg)	7.5	9.1	10.7	12	15	18	22.7	28.6
	9.7 (With brake)	11.3 (With brake)	12.9 (With brake)	15.5 (With brake)	18.5 (With brake)	22.5 (With brake)	27.9 (With brake)	33.8 (With brake)
Length of motor L (mm)	159 ± 1.5	179 ± 1.5	199 ± 1.5	226 ± 1.5	254 ± 1.5	282 ± 1.5	260 ± 1.5	298 ± 1.5
	220 ± 1.5 (With brake)	240 ± 1.5 (With brake)	260 ± 1.5 (With brake)	292 ± 1.5 (With brake)	320 ± 1.5 (With brake)	352 ± 1.5 (With brake)	332 ± 1.5 (With brake)	370 ± 1.5 (With brake)
Position feedback device	Incremental encoder 2500ppr							
Cooling method	Totally enclosed, non-ventilated							
Protection level	IP65 for body, shaft sealing IP54							
Environmental conditions for operation	Temperature	-20°C ~ 40°C (Non-freezing)						
	Humidity	Below 90% RH (Non-condensing)						
	Ambient environment	Away from active gas, combustible gas, oil drops and dust						
	Altitude	Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise						

Note: □=A: No brake □=C: Standard connector
□=B: Brake □=D: Intercontec connector

Servo Driver and Motor Selection Table

Catagory	Servo Driver	Servo Motor	Description	Power/brake Cable	Encoder Cable	Rated Speed/ Rated Torque/ Rated Current
Small Inertia DC60V	FD122-AA-000	SMH40S-0005-30AAK-4DKH	Cable connector	MOT-005-LL-KL-D	ENCCA-LL-KH	3000rpm/ 0.16Nm/1.2A
		SMH40S-0005-30ABK-4DKH	Cable connector and brake	MOT-005-LL-KL-D/BRA-LL-KL		3000rpm/ 0.32Nm/2.5A
		SMH40S-0010-30AAK-4DKH	Cable connector	MOT-005-LL-KL-D	ENCCF-LL-FH	3000rpm/ 0.64Nm/4.6A
		SMH40S-0010-30ABK-4DKH	Cable connector and brake	MOT-005-LL-KL-D/BRA-LL-KL		1000rpm/ 1Nm/6.5A
		SME60S-0020-30AAK-3DKH	Cable connector	MOT-005-LL-KL-D	800rpm/ 1.5Nm/5.8A	
		57S-0010-10AAK-FDFH	Cable connector	MOT-005-LL-KL-D	ENCCF-LL-FC0	500rpm/ 2Nm/6A
		57S-0015-08AAK-FDFH	Cable connector	MOT-005-LL-KL-D		
		85S-0020-05AAK-FLFN	HFO standard connector	MOTE-005-LL-KC0		

Panel and Interface Description



FD Series Low-voltage Servo System

www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

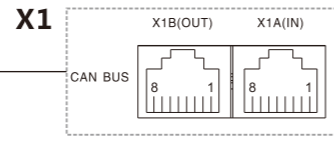
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Interface Description of FD122 Servo Driver



Technical Specification of FD122

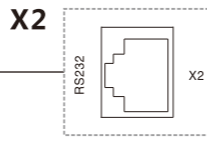
CAN bus communication interface



CAN

PIN No.	Signal
1	CAN_H
2	CAN_L
3	GND
Others	NC

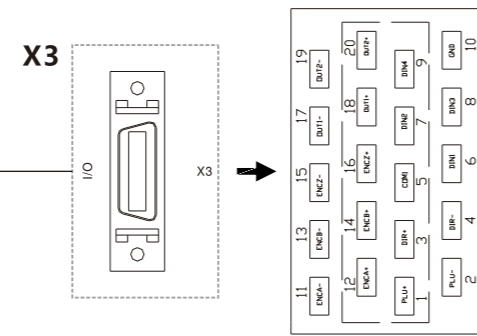
RS232 communication interface, can be used for debugging and import/export project data via PC.



RS232

PIN No.	Signal
3	TXD
4	GND
6	RXD
Others	NC

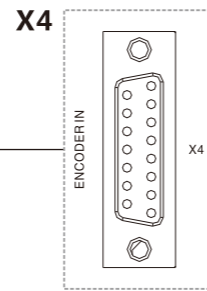
Digital input/output interface



I/O

PIN No.	Signal	PIN No.	Signal	PIN No.	Signal	PIN No.	Signal
2	PLU-	1	PLU+	12	ENCA+	11	ENCA-
4	DIR-	3	DIR+	14	ENCB+	13	ENCB-
6	DIN1	5	COM1	16	ENCZ+	15	ENCZ-
8	DIN3	7	DIN2	18	OUT1+	17	OUT1-
10	GND	9	DIN4	20	OUT2+	19	OUT2-

Motor encoder input interface



ENCODER IN

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

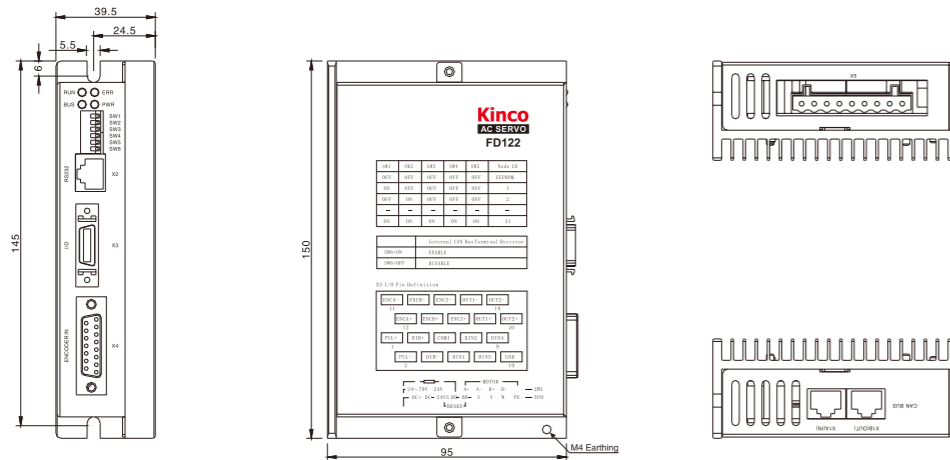
Model parameter	FD122-AA-000	
Power	Main supply voltage	24VDC ~ 70VDC
	Control circuit voltage	DC24V 1A (Optional)
Current	Rated current(RMS)	6A
	Peak current(PEAK)	15A
Feedback signal	2500PPR (incremental encoder with 5V supply)	
Brake chopper	Use an external braking resistor according to application, mainly in high speed start and stop application.	
Brake chopper threshold	DC79V ± 2V	
Over-voltage alarming threshold	DC86V ± 2V	
Under-voltage alarming threshold	18V ± 2V	
Cooling method	Natural air cooling	
Weight	0.565 Kg	
Digital Input	Input specification	4 digital inputs, with COMI terminal for PNP (high level valid 12.5~30V) or NPN (low level valid) connection.
	Input function	Define freely according to requirement, supporting following functions: Driver enable, driver fault reset, driver mode control, proportional control, positive limit, negative limit, homing signal, reverse command, internal speed section control, internal positive section control, quick stop, start homing, active command, switch electronic gear ratio, switch gain
Digital Output	Output specification	3 digital outputs, OUT1-OUT2 current is 100mA, BR+/BR- (Brake control output) current is 500mA, can drive brake device directly
	Output function	Define freely according to requirement, supporting following functions: Driver ready, driver fault, position reached, motor at zero speed, motor brake, motor speed reached, N signal, maximum speed obtained in 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 2M at most
	RS232	RS232, Connections with PC (2-2, 3-3, 5-5) or controller
Protection Functions	Over-voltage protection, under-voltage protection, motor over-heat protection(I ² T), short-circuit protection, drive over-heat protection, etc	
CAN BUS	Supports 1M baud rate, communicates with controller via CANopen protocol	
Operation Environment	Operating temperature	0 ~ 40°C
	Storage temperature	-10°C ~ 70°C
	Humidity(non-condensing)	Below 90%RH
	Protection class	IP20
	Installation environment	Installed in a dust-free, dry and lockable environment(such as in a electrical cabinet)
	Installation mode	Vertical installation
Altitude	No power limitation below 1000m	
Atmospheric pressure	86kpa ~ 106kpa	

www.famcocorp.com
 E-mail: info@famcocorp.com
 @famco_group

Tel: ۰۲۱- ۴ ۸ ۰ ۰ ۰ ۰ ۴ ۹
 Fax : ۰۲۱ - ۴ ۴ ۹ ۹ ۴ ۶ ۴ ۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)
 روبروی پالایشگاه نفت پارس، پلاک ۱۲

Mechanical Dimension Diagram for FD122

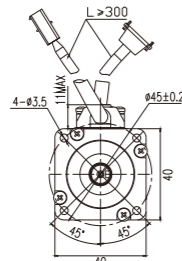
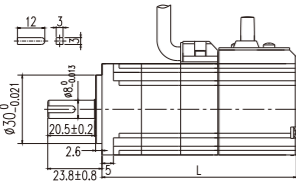


Technical Specifications of SMH40/60 Series Low-voltage Servo Motor

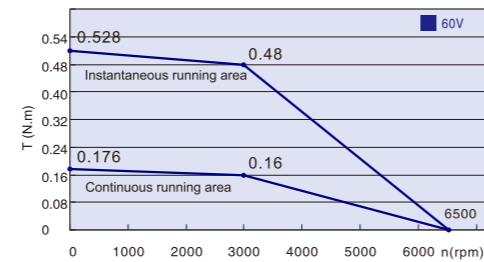
Motor series	SMH Series, small inertia, 40 flange		SMH Series, small inertia, 60 flange		
Model	SMH40S-0005-30A□K-4DKH	SMH40S-0010-30A□K-4DKH	SME60S-0020-30AAK-3DKH		
Adaptable driver	FD122-AA-000				
DC link voltage UDC	60	60	70		
Continuous performance	Rated power P _n (W)	50	100	200	
	Rated torque T _n (Nm)	0.16	0.32	0.64	
	Rated speed n _n (rpm)	3000	3000	3000	
	Rated current I _n (A)	1.2	2.5	4.6	
Maximum torque T _m (Nm)	0.48	0.96	1.92		
Maximum current I _m (A)	3.6	7.5	13.8		
Standstill torque T _s (Nm)	0.176	0.352	0.7		
Standstill current I _s (A)	1.32	2.75	5.06		
Resistance line-line R _L (Ω)	4.2	2.1	0.7		
Inductance line-line L _L (mH)	3.5	2.5	1.55		
Electrical time constant τ _e (ms)	0.84	1.2	2.21		
Mechanical time constant K _v (V/rpm)	1.28	1.22	2.05		
Reverse voltage constant K _r (Nm/A)	8	8	9		
Torque constant K _t (Nm/A)	0.1323		0.1323	0.149	
Motor moment of inertia J _m (Kg · cm ²)	0.031	0.033 (With brake)	0.059	0.061 (With brake)	
Pole pair number	4	4	3		
Maximum voltage rising du/dt (KV/μs)	8	8	8		
Insulation class	F	F	F		
Maximum radial force F (N)	120	120	180		
Maximum axial force F (N)	60	60	90		
Weight G(Kg)	0.5	0.8 (With brake)	0.8	1.0 (With brake)	
Length of motor L(mm)	85.3 ± 1	119 ± 1.5 (With brake)	110.8 ± 1	145 ± 1.5 (With brake)	
Position feedback device	Incremental encoder 2500ppr				
Cooling method	Totally enclosed, non-ventilated				
Protection level	IP65 for body, shaft sealing IP54				
Environmental conditions for operation	Temperature	-20 ~ 40°C			
	Humidity	Below 90% RH (Non-condensing)			
	Ambient environment	Away from active gas, combustible gas, oil drops and dust			
	Altitude	Maximum altitude 4000m, rated power at 1000m or below; Above 1000m:decreasing 1.5%/per 100m rise			

Dimensions/Torque curve of Low-voltage Servo Motor (40/60 flange)

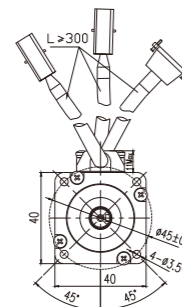
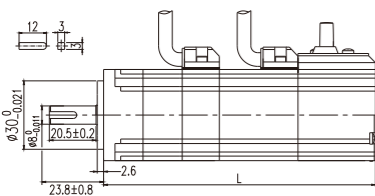
40 flange SMH series Low-voltage motor with direct cable



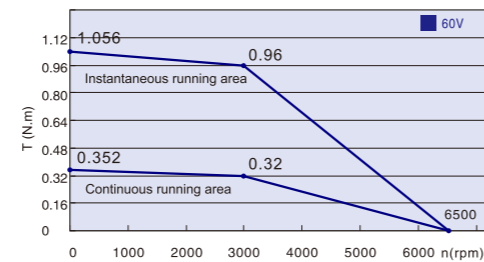
SMH40S-0005-30A□K-4DKH 50W



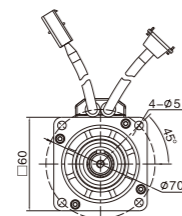
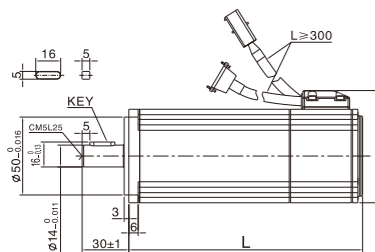
40 flange SMH series Low-voltage motor with direct cable (with brake)



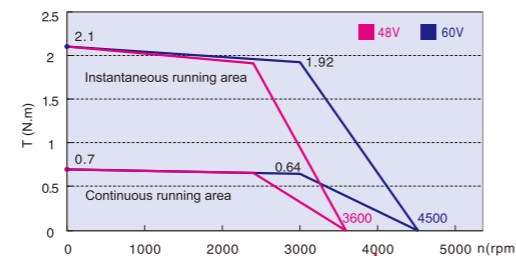
SMH40S-0010-30A□K-4DKH 100W



60 flange SMH series Low-voltage motor with direct cable



SME60S-0020-30AAK-3DKH 200W



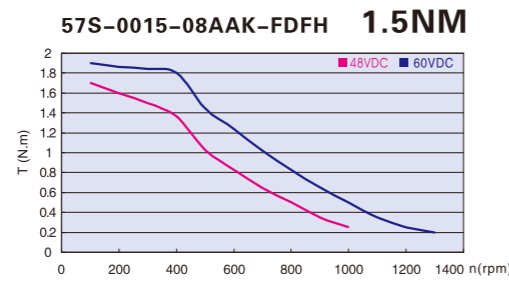
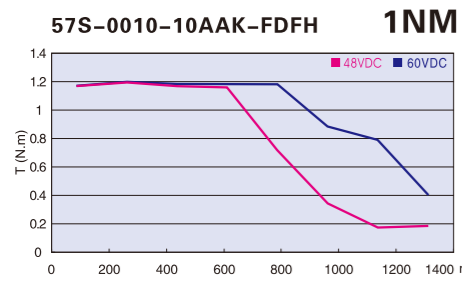
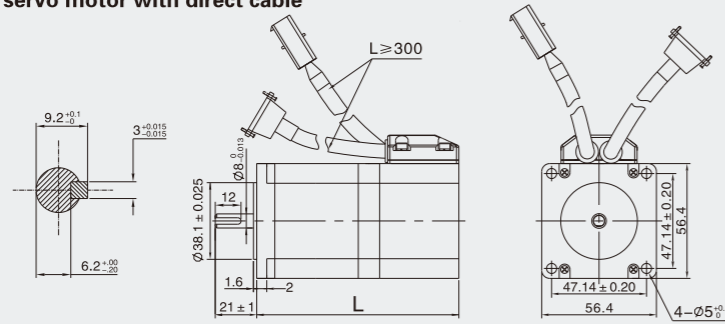
Note: □=A: No brake
□=B: Brake

Dimensions/Torque curve of 57S/85S series Multi-pole Servo Motor

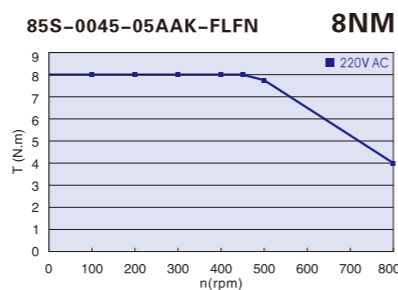
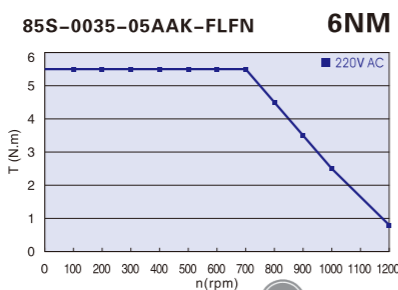
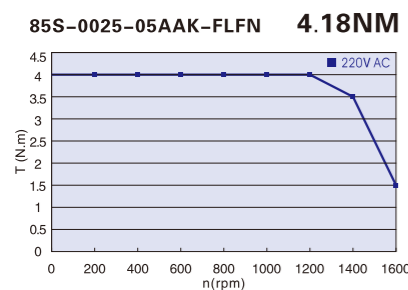
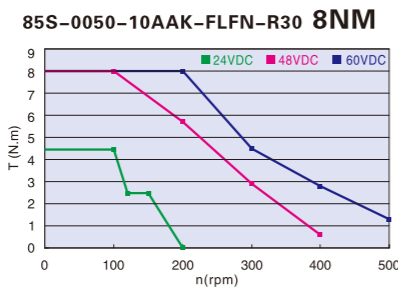
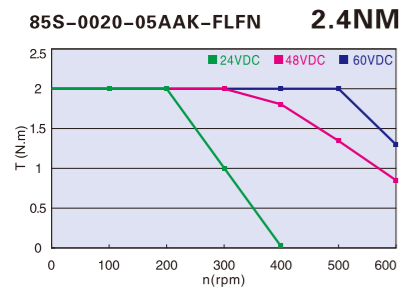
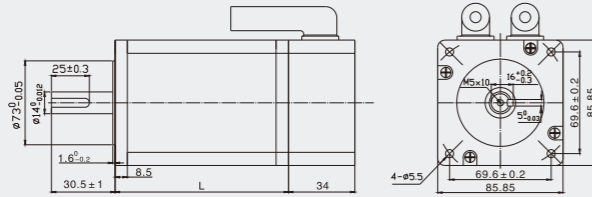


Technical Specifications of 57S/85S series Multi-pole Servo Motor

57S series Multi-pole servo motor with direct cable



85S series Multi-pole servo motor with connector



Multi-pole servo motor	Small Inertia, 57 Flange		Small Inertia, 85 Flange				
Model	57S-0010-10AAK-FDFH	57S-0015-08AAK-FDFH	85S-0020-05AAK-FLFN	85S-0025-05AAK-FLFN	85S-0035-05AAK-FLFN	85S-0045-05AAK-FLFN	85S-0050-10AAK-FLFN-R30
Rated phase current (A)	6.5	5.8	6	4	4	4	8.5
Holding torque (Nm)	1	1.5	2.4	4.18	6	8	8
Damping torque (Nm)	0.04	0.068	0.25	0.3	0.4	0.45	0.45
Resistance line-line (Ω)	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.cm ²)	300	480	1400	2320	3300	4400	4400
Length L (mm)	90 ± 1.5	113 ± 1.5	80 ± 1	97 ± 1	127 ± 1	157 ± 1	157 ± 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		1200V AC 1S 2mA	1500V AC 1S 5mA		1800V AC 1S 5mA	
Feedback device accuracy	2500p/r (Resolution : 10000)						
Insulation class	B						
Ambient temperature	-20 ~ 50°C						
Surface temperature rising	Max. 80°C						
Insulation impedance	Min. 100MΩ , 500V DC						

www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: ۰۲۱-۴۸۰۰۰۰۴۹

Fax: ۰۲۱-۴۴۹۹۴۶۴۲

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

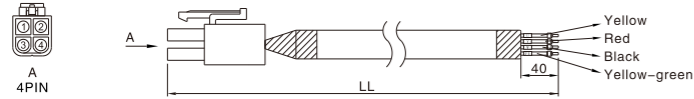
روبروی پالایشگاه نفت پارس، پلاک ۱۲

Wiring Diagram for The Power Cable



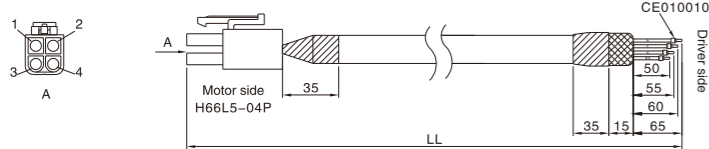
Wiring Diagram for The Power Cable

MOT-005-LL-KL-D Wire Spec.: 4 x 18AWG(41/0.167)



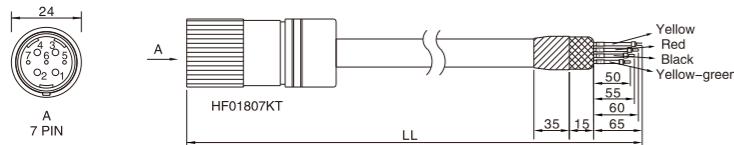
Cable color	Signal	Pin#
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	PIN4

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



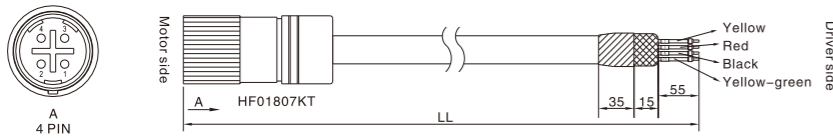
Cable Color	Signal	PIN #
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	PIN4

MOT-005-LL-KC0 Wire spec. 4C x 18AWG(41/0.16T)



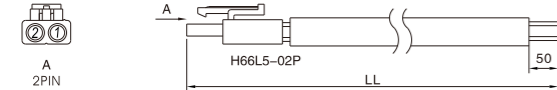
Cable color	Signal	Pin#
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow-green	PE	PIN1
metal ring	Shield	Shield cable

MOTE-005-LL-KC0 Wire Spec.: 4C x 18AWG(41/0.16T)



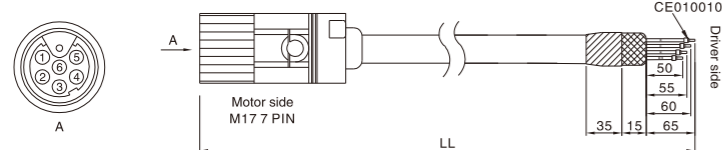
Cable color	Signal	Pin#
Yellow	U	PIN2
Red	V	PIN3
Black	W	PIN4
Yellow-green	PE	PIN1
metal ring	Shield	Shield cable

BRA-LL-KL Wire spec. 2 x 20AWG



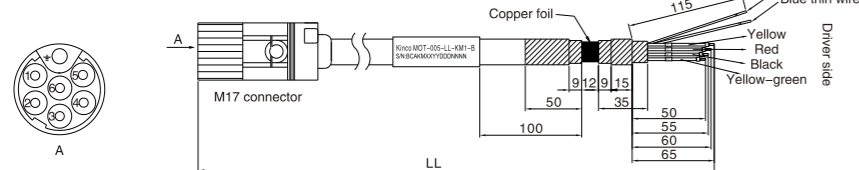
Cable color	Signal	Pin#
Red	break+	PIN1
Blue	break-	PIN2

MOT-005-LL-KM1 Wire spec. UI20328 4C x 18AWG(41/0.16T) black



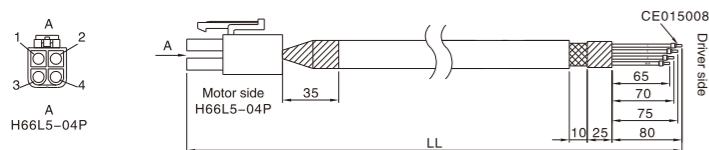
Cable Color	Signal	PIN #
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	⊥

MOT-005-LL-KM1-B Wire spec. RVVYP 4 x 18AWG+2 x 20AWG



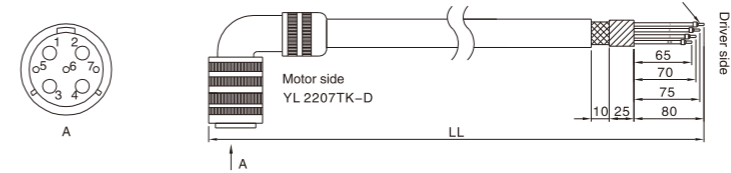
Cable Color	Signal	M17 7PIN
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	⊥
Shield terminal	shield	metal ring
Red(thin)	brake+	PIN4
Blue(thin)	brake-	PIN5

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



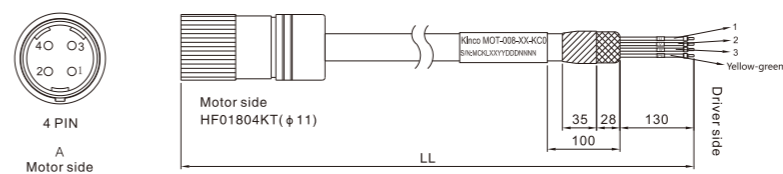
Cable Color	Signal	PIN #
1	U	PIN1
2	V	PIN2
3	W	PIN3
Yellow-green	PE	PIN4

MOT-008-LL-KC1 Wire spec. cable 4C x 1.5mm²



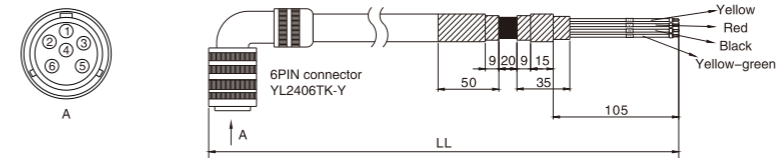
Cable Color	Signal	PIN #
1	U	PIN2
2	V	PIN3
3	W	PIN4
Yellow-green	PE	PIN1

MOT-008-LL-KC0 Wire Spec.: ECHU H05VVVC4V5-K 4 x 1.5mm² BLACK



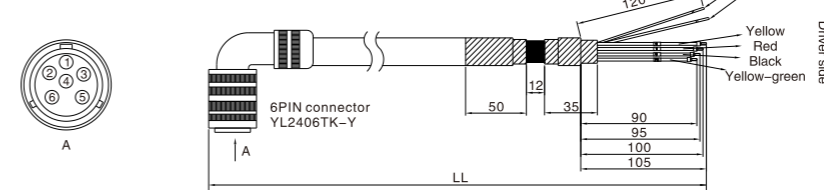
Cable color	Signal	Pin#
1	U	PIN2
2	V	PIN3
3	W	PIN4
Yellow-green	PE	PIN1
metal ring	Shield	Shield

MOT-008-LL-KC2 Power cable O-2395 4C x 1.5mm²(30/0.25B)



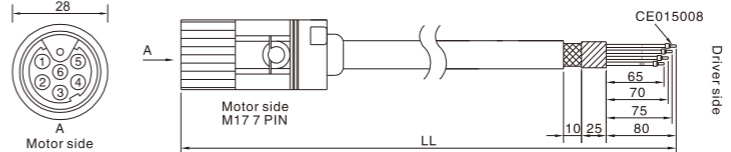
Cable Color	Signal	YL2406TK-Y
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	PIN4

MOT-008-LL-KC2-B Wire spec. ECHU RVVYP 4 x 1.5+2 x 0.5



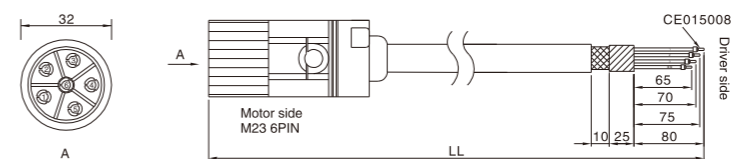
Cable Color	Signal	YL2406TK-Y
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	PIN4
Red(thin)	brake+	PIN5
Blue(thin)	brake-	PIN6
Shield terminal	Shield	metal ring

MOT-008-LL-KM1 Wire Spec.cable 4C x 1.5mm²



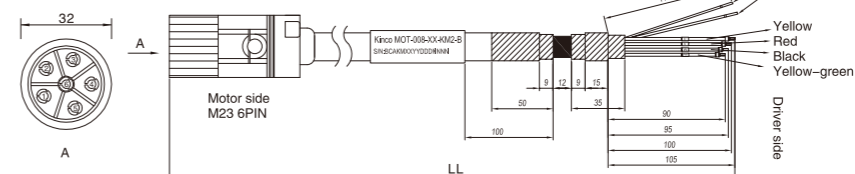
Cable color	Signal	M17 7Pin
1	U	PIN1
2	V	PIN2
3	W	PIN3
Yellow-green	PE	⊥

MOT-008-LL-KM2 Wire spec. cable 4C x 1.5mm²



Cable Color	Signal	PIN #
1	U	PIN1
2	V	PIN2
3	W	PIN4
Yellow-green	PE	PIN3

MOT-008-LL-KM2-B Wire spec. ECHU RVVYP 4 x 1.5+2 x 0.5

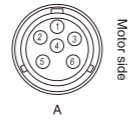
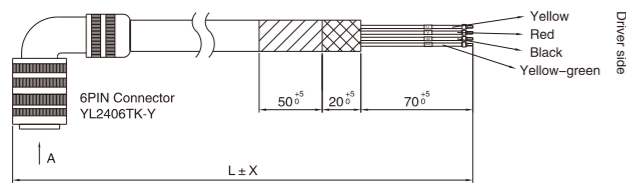


Cable Color	Signal	M23 6PIN
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN4
Yellow-green	PE	PIN3
Shield terminal	Shield	metal ring
Red(thin)	brake+	PIN5
Blue(thin)	brake-	PIN6

Wiring Diagram for The Power Cable

MOT-015-LL-KC2

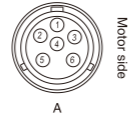
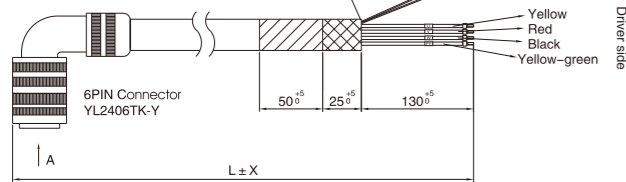
Power cable Cableplus UL2856 4 x 14AWG(50/0.25T)



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

MOT-015-LL-KC2-B

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



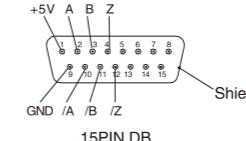
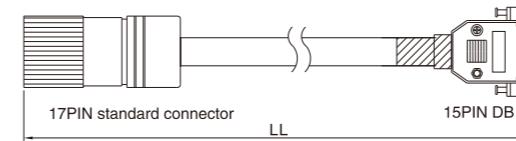
MOT-015-LL-KC2-B		
Cable color	Signal	YL2406TK-Y
Yellow	U	PIN1
Red	V	PIN2
Black	W	PIN3
Yellow-green	PE	PIN4
Red(thin)	brake+	PIN5
Blue(thin)	brake-	PIN6
Shield	Shield	Metal ring



Wiring Diagram for The Encoder Cable

ENCCF-LL-FC0

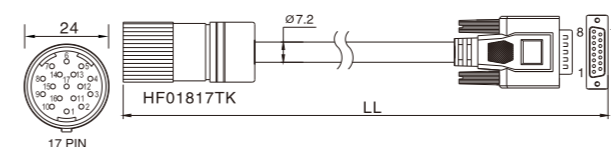
Wire spec. 1P x 24AWG(7/0.20T)+3P x 28AWG(7/0.127T)



ENCCF-LL-FC0				
17PIN standard connector	15PIN DB	Signal	External wire colour	Motor wire colour
PIN1	PIN1	+5V	Red(thick)	Red
PIN3	PIN2	A	Brown	Blue-black
PIN5	PIN3	B	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

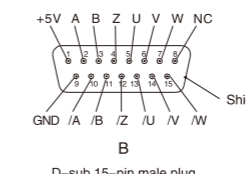
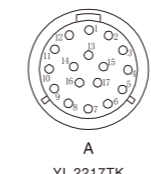
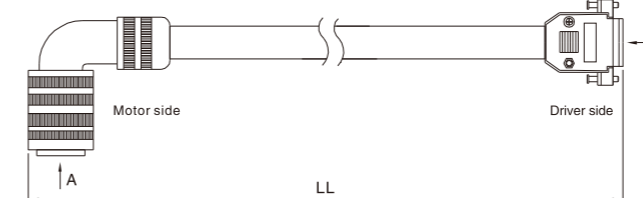
ENCCA-LL-KC0

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



ENCCA-LL-KC1

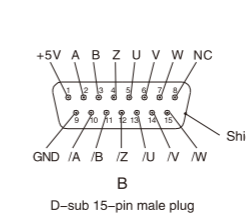
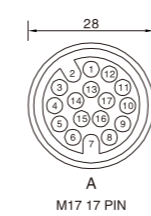
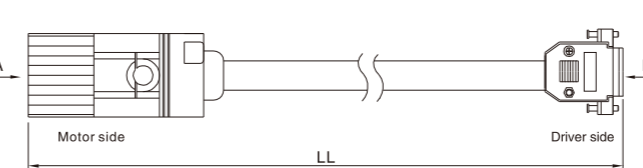
Wire spec. 1P x 24AWG(7/0.20T)+7P x 28AWG(7/0.127T)



ENCCA-LL-KC0/ENCCA-LL-KC1				
17PIN	15PIN DB	Signal	External wire colour	Motor wire colour
PIN1	PIN1	+5V	Red(thick)	Red
PIN3	PIN2	A	Orange	Blue
PIN5	PIN3	B	Yellow	Green
PIN14	PIN4	Z	Green	Yellow
PIN9	PIN5	U	Brown	Brown
PIN11	PIN6	V	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

ENCCA-LL-KM1

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

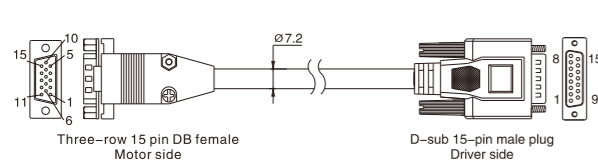


ENCCA-LL-KM1				
17PIN	15PIN DB	Signal	External wire colour	Motor wire colour
PIN1	PIN1	+5V	Red(thick)	Red
PIN3	PIN2	A	Orange	Blue
PIN5	PIN3	B	Yellow	Green
PIN14	PIN4	Z	Green	Yellow
PIN9	PIN5	U	Brown	Brown
PIN11	PIN6	V	Purple	Gray
PIN16	PIN7	W	Blue	White
PIN2	PIN9	GND	Black(thick)	Black
PIN4	PIN10	/A	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

Wiring Diagram for The Encoder Cable

ENCCA-LL-KH

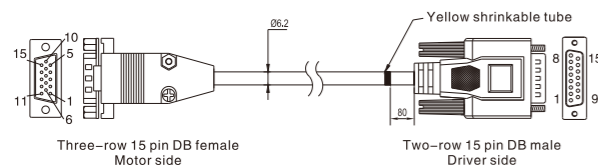
Wire spec. 1P x 24AWG(7/0.20T)+7P x 28AWG(7/0.127T)



ENCCA-LL-KH				
Three-row 15 pin DB	Two-row 15 pin DB	Signal	External wire color	Motor wire color
PIN1	PIN1	+5V	Red(thick)	Red
PIN8	PIN2	A	Orange	Blue-black
PIN7	PIN3	B	Yellow	Green
PIN6	PIN4	Z	Green	Yellow
PIN4	PIN5	U	Brown	Brown-black
PIN10	PIN6	V	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

Wire spec. 1P x 24AWG(7/0.20T)+3P x 28AWG(7/0.127T)



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	A	Brown	Blue-black
PIN7	PIN3	B	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

www.famcocorp.com

E-mail: info@famcocorp.com

@famco_group

Tel: 021-48000049

Fax: 021-44994642

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲