





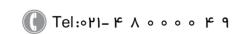
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K1E05-1407

Kinco[®] Automation



inco Servo System CD/FD/JD Series FD122 Series

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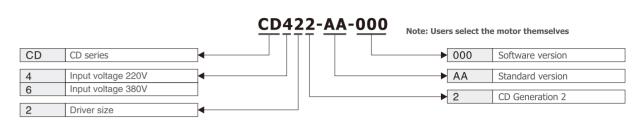
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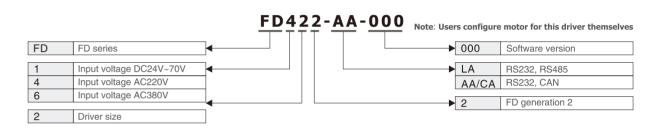
FAMCO هايپرمنعت

Model Description of Servo Drivers and Motors

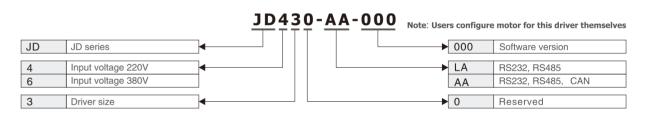
Kinco CD Series Servo Drivers



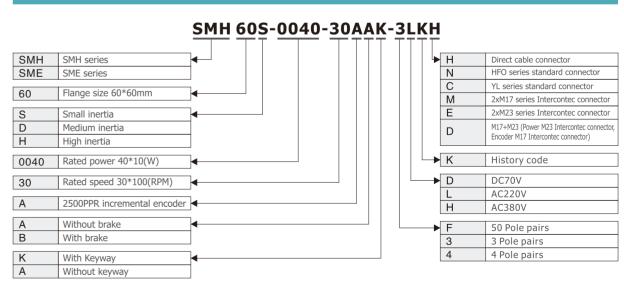
Kinco FD Series Servo Driver



Kinco JD Series Servo Driver



Kinco Servo Motors



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تهران، کیلومتر۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبـروی پالایشگاه نفت پارس، پلاک ۱۲

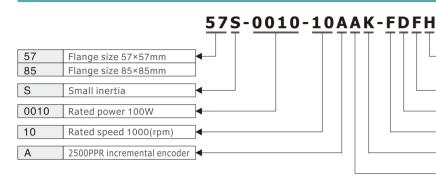
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Model Description of Servo Drivers and Motors

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CD & **CDII** Servo Driver and Motor Selection Table

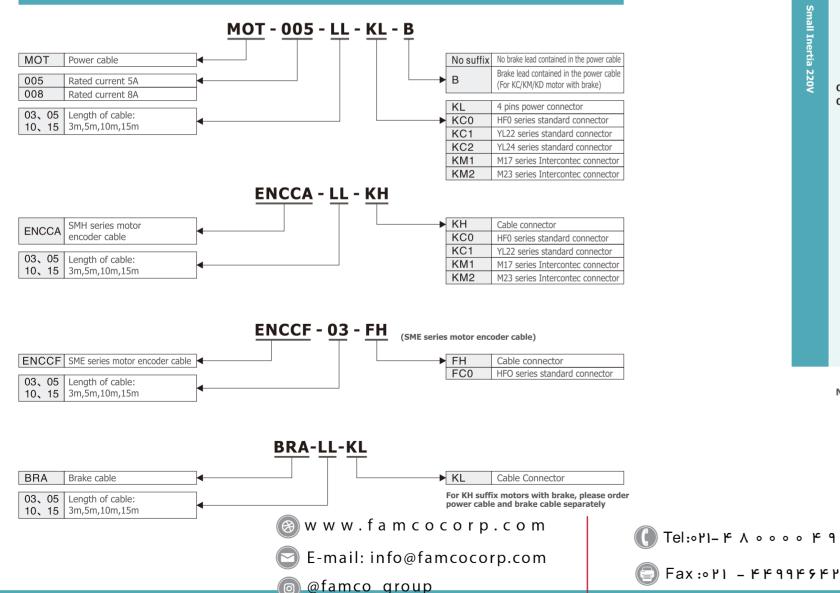
Kinco Multi-pole Servo Motor



| FDFH TTTT | |
|--------------|-------------------------------|
| H H | Direct cable connector |
| N | HFO series standard connector |
| F | History code |
| D | DC60V |
| F | 50 Pole pairs |
| K | With Keyway |
| A | Without brake |
| | |

Model Description of Cable

Power, Brake and Encoder Cable of Motors



| Catagory | Servo Driver | Servo Motor | Description | Power/brake Cable | Encoder Cable | Rated Speed/ Rated Torgue/ Rated Current | |
|----------|--------------|------------------------|----------------------------------|-------------------------|---------------|--|--|
| | | SMH40S-0005-30AAK-4LKH | Cable connector | MOT-005-LL-KL | | 3000rpm/ | |
| | CD412 AA 000 | SMH40S-0005-30ABK-4LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0.16Nm/ 0.7A | |
| | CD412-AA-000 | SMH40S-0010-30AAK-4LKH | Cable connector | MOT-005-LL-KL | ENCCA-LL-KH | 3000rpm/ | |
| | | SMH40S-0010-30ABK-4LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0.32Nm/ 1.4A | |
| | | SMH60S-0020-30AAK-3LKH | Cable connector | MOT-005-LL-KL | | | |
| | | SMH60S-0020-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0000 | |
| | | SMH60S-0020-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 3000rpm/ 0.64Nm/ 1.6A | |
| | | SMH60S-0020-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | ENCCA-LL-KM1 | 1.0A | |
| | | 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 | | |
| | | SMH60S-0040-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0000 | |
| | CD420-AA-000 | SMH60S-0040-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 3000rpm/ 1.27Nm/ 3.1A | |
| Sma | | SMH60S-0040-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | ENCCA-LL-KM1 | | |
| ll Ine | | SMH60S-0040-30ABK-3LKM | Intercontec connector with brake | MOT-005-LL-KM1-B | | | |
| ortia 🕽 | | SMH80S-0075-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCA-LL-KH | | |
| 220V | CD420-AA-000 | SMH80S-0075-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0000 | |
| | CD422-AA-000 | SMH80S-0075-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 3000rpm/ 2.39Nm/ 3.9A | |
| | | SMH80S-0075-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | ENCCA-LL-KM1 | 3.9A | |
| | | 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 | 0000 | |
| | | SME60S-0020-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ 0.64Nm/ 1.6A | |
| | | SME60S-0020-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 1.0A | |
| | | SME60S-0040-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCF-LL-FH | 2000 | |
| | | SME60S-0040-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ 1.27Nm/ 3.1A | |
| | | SME60S-0040-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 5.1A | |
| | | SME80S-0075-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCF-LL-FH | 2222 | |
| | | SME80S-0075-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ 2.39Nm/ 3.9A | |
| | | 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.

تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی پالایشگاه نفت پارس، پلاک ۱۲

CD & **CD**II Servo Driver and Motor Selection Table

FP Servo Driver and Motor Selection Table

| | | | | | | Rated Speed/ | اسرمينعت | | | | | | Rated Speed | |
|-----------------|------------------------------|-------------------------|--|-------------------|-------------------|--------------------------------|-----------|------------------------------|---|----------------------------------|----------------------------------|------------------|------------------------------|--|
| Catagory | Servo Driver | Servo Motor | Description | Power/brake Cable | Encoder Cable | Rated Torgue/ Rated Current | · · · · · | ry Servo Driver | Servo Motor | Description | Power/brake Cable | Encoder Cable | Rated Torgue Rated Curren | |
| | | SMH110D-0105-20AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | | | | SMH60S-0020-30AAK-3LKH | Cable connector | MOT-005-LL-KL | | | |
| Sma | | SMH110D-0105-20ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 2000rpm/ | | | SMH60S-0020-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | ENCCA-LL-KH | 3000rpm/ | |
| ll Ine | | SMH110D-0105-20AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | 51000 | 5Nm/ | | | SMH60S-0020-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 0.64Nm/ | |
| ertia (| | SMH110D-0105-20ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 5.9A | | | SMH60S-0020-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | | 1.6A | |
| 220V | | SMH110D-0126-20AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | 0000 | | | SMH60S-0020-30ABK-3LKM | Intercontec connector with brake | MOT-005-LL-KM1-B | ENCCA-LL-KM1 | | |
| | CD430-AA-000 | SMH110D-0126-20ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 2000rpm/ | | | SMH60S-0040-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCA-LL-KH | | |
| - | CD432-AA-000 | SMH110D-0126-20AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | ENCCA-LL-KM1 | 6Nm/ | | | SMH60S-0040-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ | |
| /lediu | | SMH110D-0126-20ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-EL-RWI | 6.2A | | | SMH60S-0040-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 1.27Nm/ | |
| | | SMH110D-0125-30AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | ENCCA-LL-KC1 | 2000 | | | SMH60S-0040-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | | 3.1A | |
| ertia | | SMH110D-0125-30ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | LINCOA-LL-ROT | 4Nm/ | | | | SMH60S-0040-30ABK-3LKM | Intercontec connector with brake | MOT-005-LL-KM1-B | ENCCA-LL-KM1 | |
| 220 | | SMH110D-0125-30AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | ENCCA-LL-KM1 | | Sma | | SMH80S-0075-30AAK-3LKH | Cable connector | MOT-005-LL-KL | | | |
| | | SMH110D-0125-30ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCOMPLETIMI | 0.5A | II Ine | FD422-LA-000 FD422-CA-000 | SMH80S-0075-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | ENCCA-LL-KH | 3000rpm | |
| | | SMH110D-0126-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | ENCCA-LL-KC1 | ICCA-LL-KC1 3000rpm/ | rtia | FD422-CA-000 FD422-AA-000 | SMH80S-0075-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 2.39Nm/ | |
| | | SMH110D-0126-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | | 220V | | SMH80S-0075-30AAK-3LKM | Intercontec connector | MOT-005-LL-KM1 | | 3.9A | |
| | | SMH110D-0126-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | ENCCA-LL-KM1 | 4Nm/ 4.3A | | | SMH80S-0075-30ABK-3LKM | Intercontec connector with brake | MOT-005-LL-KM1-B | ENCCA-LL-KM1 | | |
| - | | SMH110D-0126-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | 51000 11 1/04 | 4.5A | | | SME60S-0020-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCF-LL-FH | 3000rpm | |
| fediu | | SMH110D-0157-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | 3000rpm/ | | | SME60S-0020-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | | 0.64Nm/ | |
| n in | CD620-AA-000 | SMH110D-0157-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | | | | SME60S-0020-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 1.6A | |
| ertia | CD622-AA-000 | SMH110D-0157-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | ENCCA-LL-KM1 5.9A | 5Nm/ | | | SME60S-0040-30AAK-3LKH | Cable connector | MOT-005-LL-KL | | 3000rpm | |
| 380\ | | SMH110D-0157-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | | 5.9A | | | SME60S-0040-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | ENCCF-LL-FH | 1.27Nm/ | |
| | | SMH110D-0188-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | ENCCA-LL-KC1 | 3000rpm/ | | | SME60S-0040-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 3.1A | |
| | | SMH110D-0188-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 6Nm/ | | | SME80S-0075-30AAK-3LKH | Cable connector | MOT-005-LL-KL | ENCCF-LL-FH | 3000rpm | |
| | | SMH110D-0188-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | ENCCA-LL-KM1 | 6.2A | | | SME80S-0075-30ABK-3LKH | Cable connector and brake | MOT-005-LL-KL/BRA-LL-KL | ENCOF-LL-FH | 2.39Nm/ | |
| | | SMH110D-0188-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | | 0.2A | | | SME80S-0075-30AAK-3LKN | HFO standard connector | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 3.9A | |
| Me | | SMH130D-0105-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 5Nm/ | | Nete: 1 Licere | alast the compatible motors themes | luce | | | | |
| dium 22 | CD430-AA-000 CD432-AA-000 | SMH130D-0105-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 4.3A | | | elect the compatible motors themse series motors can adapt to temperat | | | | | |
| Iner DV | CD620-AA-000 CD622-AA-000 | SMH130D-0157-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 7.5Nm/ | | excee | ds a certain value, driver will cut of | power supply automatically. | | | | |
| irtia | | SMH130D-0157-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 6.3A | | | | | | | | |
| Me | | SMH130D-0210-20AAK-4HKC | 210–20AAK–4HKC YL24 standard connector MOT–008–LL–KC2 | | 2000rpm/ | | | | | | | | | |
| dium In 380V | CD620-AA-000 | SMH130D-0210-20ABK-4HKC | BK-4HKC YL24 standard connector and brake MOT-008-LL-KC2-B | | 10Nm/ 7.6A | | | | | | | | | |
| U (U | CD622-AA-000 | SMH150D-0230-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 11.1Nm/ | | | | | | | | |
| rtia | | SMH150D-0230-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 7.1A | | | | | | | | |

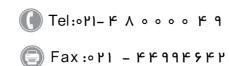
Note: 1. User select the compatible motors themselves.

2. SMH series motors can adapt to temperature sensors, when temperature

exceeds a certain value, driver will cut off power supply automatically.

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روبروی پالایشگاه نفت پارس، پلاک ۱۲

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FD Servo Driver and Motor Selection Table

| FAMCO | |
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| هابب منتعت | |

JD Servo Driver and Motor Selection Table

| | | | | | | L | انترمتنعت | 9 | | | |
|-----------------------------|------------------------------|-------------------------|-----------------------------------|-------------------|---------------|--|-----------|----------------|--------------|-------------------------|-------------------------------|
| Catagory | Servo Driver | Servo Motor | Description | Power/brake Cable | Encoder Cable | Rated Speed/ Rated Torgue/ Rated Current | | Catagory | Servo Driver | Servo Motor | Description |
| | | SMH110D-0105-20AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | | | | | SMH60S-0020-30AAK-3LKH | Cable connector |
| | | SMH110D-0105-20ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 2000rpm/ | | | | SMH60S-0020-30ABK-3LKH | Cable connector and brake |
| | | SMH110D-0105-20AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | | 5Nm/ | | | | SMH60S-0020-30AAK-3LKN | HFO standard connector |
| | | SMH110D-0105-20ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 5.9A | | | | SMH60S-0020-30AAK-3LKM | Intercontec connector |
| Medi | | SMH110D-0126-20AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | | | | | SMH60S-0020-30ABK-3LKM | Intercontec connector with be |
| Medium Inertia 220V | FD432-LA-000 | SMH110D-0126-20ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 2000rpm/ | | | | SMH60S-0040-30AAK-3LKH | Cable connector |
| ıertia | FD432-CA-000 FD432-AA-000 | SMH110D-0126-20AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | | 6Nm/ | | | | SMH60S-0040-30ABK-3LKH | Cable connector and brake |
| 1 220 | | SMH110D-0126-20ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 6.2A | | | | SMH60S-0040-30AAK-3LKN | HFO standard connector |
| < | | SMH110D-0125-30AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | | | | | SMH60S-0040-30AAK-3LKM | Intercontec connector |
| | | SMH110D-0125-30ABK-4LKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | | | SMH60S-0040-30ABK-3LKM | Intercontec connector with be |
| | | SMH110D-0125-30AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | | 4Nm/ | | Sma | | SMH80S-0075-30AAK-3LKH | Cable connector |
| | | SMH110D-0125-30ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 6.5A | | Small Inertia | | SMH80S-0075-30ABK-3LKH | Cable connector and brake |
| | | SMH110D-0126-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | | | ertia | | SMH80S-0075-30AAK-3LKN | HFO standard connector |
| | | SMH110D-0126-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | 220V | | SMH80S-0075-30AAK-3LKM | Intercontec connector |
| | | SMH110D-0126-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 4Nm/ | | | | SMH80S-0075-30ABK-3LKM | Intercontec connector with b |
| - | | SMH110D-0126-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 4.3A | | | JD430-AA-000 | SME60S-0020-30AAK-3LKH | Cable connector |
| /lediu | | SMH110D-0157-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | ENCCA-LL-KC1 | 0000 / | | | | SME60S-0020-30ABK-3LKH | Cable connector and brak |
| | FD622-LA-000 | SMH110D-0157-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 3000rpm/ | | | | SME60S-0020-30AAK-3LKN | HFO standard connector |
| Medium Inertia 380V | FD622-CA-000 FD622-AA-000 | SMH110D-0157-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 5Nm/ | 5.9A | | | SME60S-0040-30AAK-3LKH | Cable connector |
| 380/ | | SMH110D-0157-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | | 5.9A | | | | SME60S-0040-30ABK-3LKH | Cable connector and brak |
| | | SMH110D-0188-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | 0000mm/ | | | | SME60S-0040-30AAK-3LKN | HFO standard connector |
| | | SMH110D-0188-30ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ 6Nm/ | | | | SME80S-0075-30AAK-3LKH | Cable connector |
| | | SMH110D-0188-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 6.2A | | | | SME80S-0075-30ABK-3LKH | Cable connector and brak |
| | | SMH110D-0188-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 0.2A | | | | SME80S-0075-30AAK-3LKN | HFO standard connector |
| Ne | FD432-LA-000 | SMH130D-0105-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 5Nm/ | | | | SMH110D-0105-20AAK-4LKC | YL22 standard connector |
| dium 20V/ | FD432-CA-000 FD432-AA-000 | SMH130D-0105-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 4.3A | | र | | SMH110D-0105-20ABK-4LKC | YL24 standard connector wit |
| ledium Inertia 220V/380V | FD622-LA-000 FD622-CA-000 | SMH130D-0157-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 7.5Nm/ | | Medium Inertia | | SMH110D-0105-20AAK-4LKD | Intercontec connector |
| / tia | FD622-AA-000 | SMH130D-0157-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 6.3A | | m In | | SMH110D-0105-20ABK-4LKD | Intercontec connector with be |
| Me | | SMH130D-0210-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | ENCCA-LL-RCT | 2000rpm/ 10Nm/ | | ertia | | SMH110D-0126-20AAK-4LKC | YL22 standard connector |
| Medium In 380V | FD622-LA-000 FD622-CA-000 | SMH130D-0210-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 7.6A | | 2200 | | SMH110D-0126-20ABK-4LKC | YL24 standard connector wit |
| (1) | FD622-AA-000 | SMH150D-0230-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ 11.1Nm/ | | | | SMH110D-0126-20AAK-4LKD | Intercontec connector |
| rtia | | SMH150D-0230-20ABK-4HKC | YL24 standard connector and brake | MOT-008-LL-KC2-B | | 7.1A | | | | SMH110D-0126-20ABK-4LKD | Intercontec connector with br |
| | | | | | | | | | | | |

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.

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Note: 1. User select the compatible motors themselves.

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| | | | Rated Speed/ |
|--------------|-------------------------|---------------|--------------------------------|
| | Power/brake Cable | Encoder Cable | Rated Torgue/ Rated Current |
| | MOT-005-LL-KL | ENCCA-LL-KH | |
| ike | MOT-005-LL-KL/BRA-LL-KL | ENGOA-LL-KH | 3000rpm/ |
| r | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 0.64Nm/ |
| | MOT-005-LL-KM1 | ENCCA-LL-KM1 | 1.6A |
| th brake | MOT-005-LL-KM1-B | | |
| | MOT-005-LL-KL | ENCCA-LL-KH | |
| ike | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ |
| ŕ | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 1.27Nm/ |
| | MOT-005-LL-KM1 | ENCCA-LL-KM1 | 3.1A |
| th brake | MOT-005-LL-KM1-B | | |
| | MOT-005-LL-KL | ENCCA-LL-KH | |
| ike | MOT-005-LL-KL/BRA-LL-KL | | 3000rpm/ |
| r | MOT-005-LL-KC0 | ENCCA-LL-KC0 | 2.39Nm/ |
| | MOT-005-LL-KM1 | ENCCA-LL-KM1 | 3.9A |
| th brake | MOT-005-LL-KM1-B | | |
| | MOT-005-LL-KL | ENCCF-LL-FH | 3000rpm/ |
| orake | MOT-005-LL-KL/BRA-LL-KL | | 0.64Nm/ |
| tor | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 1.6A |
| | MOT-005-LL-KL | ENCCF-LL-FH | 3000rpm/ |
| orake | MOT-005-LL-KL/BRA-LL-KL | | 1.27Nm/ |
| tor | MOT-005-LL-KC0 | ENCCF-LL-FC0 | 3.1A |
| | MOT-005-LL-KL | ENCCF-LL-FH | 3000rpm/ |
| orake | MOT-005-LL-KL/BRA-LL-KL | ENCCF-LL-FC0 | 2.39Nm/ |
| tor | MOT-005-LL-KC0 | ENCOF-LL-FOU | 3.9A |
| r | MOT-008-LL-KC1 | ENCCA-LL-KC1 | / |
| r with brake | MOT-008-LL-KC2-B | | 2000rpm/ |
| | MOT-008-LL-KM2 | ENCCA-LL-KM1 | 5Nm/ |
| th brake | MOT-008-LL-KM2-B | | 5.9A |
| r | MOT-008-LL-KC1 | ENCCA-LL-KC1 | 2000- |
| r with brake | MOT-008-LL-KC2-B | | 2000rpm/ |
| | MOT-008-LL-KM2 | ENCCA-LL-KM1 | 6Nm/ |
| th brake | MOT-008-LL-KM2-B | | 6.2A |

2. SMH series motors can adapt to temperature sensors, when temperature exceeds a certain value, driver will cut off power supply automatically.

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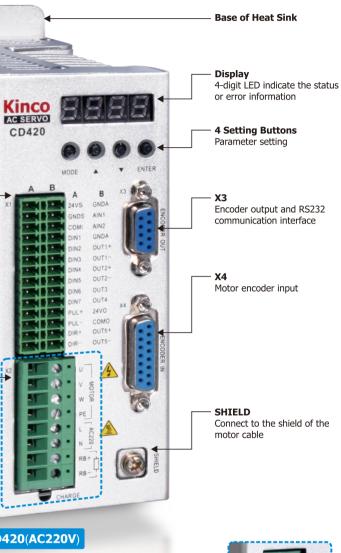
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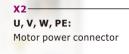
JD Servo Driver and Motor Selection Table

| | | | | | | Rated Speed/ | هابب منعت | | |
|----------------------------|--------------|---|--|---------------------------------------|---------------|--------------------------------|----------------------|---|--|
| Catagory | Servo Driver | Servo Motor | Description | Power/brake Cable | Encoder Cable | Rated Torgue/ Rated Current | ; ,, | Aluminium alloy case - | |
| Me | | SMH110D-0125-30AAK-4LKC | YL22 standard connector | MOT-008-LL-KC1 | | 2000 | | Shell of heat sink | |
| Medium Inertia 220V | | SMH110D-0125-30ABK-4LKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | X1 Column A | |
| i Ine | JD430-AA-000 | SMH110D-0125-30AAK-4LKD | Intercontec connector | MOT-008-LL-KM2 | | 4Nm/ | | X1 Column A 24VS and GNDS: | Ĩ |
| rtia | | SMH110D-0125-30ABK-4LKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 6.5A | | Power supply for control DIN17 and COMI: | Carl Contraction |
| | | SMH110D-0126-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | 2000 | | 7 Digital input channels PUL+: Pulse+/CW+ | Landing to the second |
| | | SMH110D-0126-30ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | PUL-: Pulse-/CW- DIR+: Direction+/CCW+ | and a second second |
| | | SMH110D-0126-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 4Nm/ | | DIR-: Direction-/CCW- X1 Column B | " ALL AND |
| _ | | SMH110D-0126-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 4.3A | | GNDA, AIN1, AIN2, GN | DA: |
| Mediu | | SMH110D-0157-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | 2000 | | 2 analog input channels 24VO, COMO: | |
| I m Ir | | SMH110D-0157-30ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | 24V DC power supply for (OUT1OUT5: | and the second s |
| nertia | JD620-AA-000 | SMH110D-0157-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 5Nm/ | | 5 digital outputs (OUT5 ca drive brake device directly | |
| Medium Inertia 380V | | SMH110D-0157-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 5.9A | | No. | A S B S S S S S S S S S S S S S S S S S |
| < | | SMH110D-0188-30AAK-4HKC | YL22 standard connector | MOT-008-LL-KC1 | | 2000 | | X2 U, V, W, PE: | |
| | | SMH110D-0188-30ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | ENCCA-LL-KC1 | 3000rpm/ | | Motor power connector L, N: | 22010 |
| | | SMH110D-0188-30AAK-4HKD | Intercontec connector | MOT-008-LL-KM2 | | 6Nm/ | ž | AC power supply input(AC RB+, RB-: | 220V) |
| | | SMH110D-0188-30ABK-4HKD | Intercontec connector with brake | MOT-008-LL-KM2-B | ENCCA-LL-KM1 | 6.2A | | External braking resistor | |
| z | | SMH130D-0105-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ | | | |
| ediur 220V | JD430-AA-000 | SMH130D-0105-20ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | | 5Nm/ 4.3A | | | |
| edium Inertia 220V/380V | JD620-AA-000 | SMH130D-0157-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ | | | |
| ortia | | SMH130D-0157-20ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | | 7.5Nm/ 6.3A | | GND terminal | |
| | | SMH130D-0210-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ | | | |
| | | SMH130D-0210-20ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | | 10Nm/ 7.6A | | | |
| | JD620-AA-000 | SMH150D-0230-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | | 2000rpm/ | | × 111 | CD |
| | | SMH150D-0230-20ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | | 11.1Nm/ 7.1A | | | |
| z | | SMH150D-0300-20AAK-4HKC | YL24 standard connector | MOT-008-LL-KC2 | ENCCA-LL-KC1 | 2000rpm/ | | | X2 |
| Medium Inc 380V | | SMH150D-0300-20ABK-4HKC | YL24 standard connector with brake | MOT-008-LL-KC2-B | | 14.3Nm/ 8.5A | | | U, V, W, PE: Motor power connector |
| n Ine 80V | JD630-LA-000 | SMH150D-0380-20AAK-4HKC | YL24 standard connector | MOT-015-LL-KC2 | | 2000rpm/ | | PE | |
| ertia | JD630-AA-000 | SMH150D-0380-20ABK-4HKC | YL24 standard connector with brake | MOT-015-LL-KC2-B | | 18Nm/ 9.3A | | x5 | X5 |
| | | SMH180D-0350-15AAK-4HKC | YL24 standard connector | MOT-015-LL-KC2 | | 1500rpm/ | | | R,S,T: |
| | | SMH180D-0350-15ABK-4HKC | YL24 standard connector with brake | MOT-015-LL-KC2-B | | 22Nm/ 10.3A | | . T | ☆ AC power supply input (AC220V) |
| | JD640-LA-000 | SMH180D-0440-15AAK-4HKC | | MOT-015-LL-KC2 | | 1500rpm/ | | RB- | RB+, RB-: External braking resistor |
| | JD640-AA-000 | SMH180D-0440-15ABK-4HKC | | MOT-015-LL-KC2-B | | 28Nm/ 13.3A | | RB+ | DC+,DC-: |
| | 2. SMH se | elect the compatible motors themse eries motors can adapt to temperat Is a certain value, driver will cut off | lves. ure sensors, when temperature | | | | | CD430(AC220V) | DC bus interface (DC310V±20%) Note: 1.CD420/430/620 share the same interfac 2. Suggested brake resistor: CD420 75ohn customer should choose the power of brak |
| | | | | amcocorp. nfo@famcocorp | | | ۲el:۰۲۱- ۴ ۸ ۰ ۰ ۰ ۰ | ۴۹ | شگری (جادہ مخصوص کرج) پارس ، پلاک ۱۲ |
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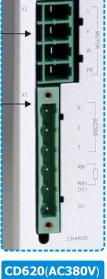
FAMCD Panel and Interface Description of CD Servo Drivers





X5 R,S,T: ☆ AC power supply input (AC380V) RB+, RB-: External braking resistor DC+,DC-: DC bus interface (DC540V±20%)

e definition except for the X2 and X5 power interfaces. is/100W, CD430 39ohms/200W, CD620 75ohms/200W. The e resister according to the actual application.



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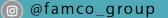
Technical Specifications of **CD** Servo Drivers

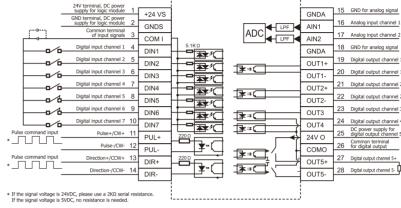
FAMCO Wiring Diagram for **CD** Servo Drivers

| | Model parameter | CD420-AA-000 | CD430-AA-000 | CD620-AA-000 |
|--------------------------|----------------------------------|---|---|--|
| | 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 |
| Power | Control circuit voltage | 18VDC~30VDC 1A | | |
| Current | Max. continuous current | 4A | 10A | 7A |
| Suneill | Peak current(PEAK) | 15A | 27. 5A | 25A |
| | Feedback signal | 2500PPR (incremental enco | oder with 5V | |
| | Brake chopper | Use an external braking res | istor according to application, mainly in occa | asion 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 | |
| | Max. frequency of input pulse | Differential signal: 500KPPS | S, Open-collector signal: 200KPPS | |
| | Pulse command mode | | , (5V, if the input is 24V, the 2K resistor is ne | eded) (do not support A+B phase) |
| | Command smoothing | | le by internal parameter setting) | / (|
| Position | | Adjustable by internal paran | , 1 6, | |
| Mode | Electronic gear ratio | , , , | -32768~32767, Gear divider: 1~32767, 1/5 | 50≤lGear factor/Gear dividerl≤50 |
| | Position loop sampling frequency | 1KHz | | |
| | Analog input voltage range | -10V~+10V(Resolution 12bi | it) | |
| | Input impedance | 200K | <i>NJ</i> | |
| | Analog input sampling frequency | 4KHz | | |
| | Command source | External analog command / | internal command | |
| Speed | Command smoothing | | le by internal parameter setting) | |
| Mode | Input voltage dead-zone setting | Adjustable by internal paran | , , ,, | |
| | Input voltage offset settiong | Adjustable by internal paran | - | |
| | | | | |
| | Speed limit | Adjustable by internal paran | · · · · · · · · · · · · · · · · · · · | atral |
| | Torque limit | | meter setting / External analog command cor | 11101 |
| | Speed loop sampling frequency | 4KHz | *** | |
| | Analog voltage input range | -10V~+10V(Resolution 12bi | it) | |
| | Input impedance | 200K | | |
| | Input sampling frequency | 4KHz | | |
| Torque | Command source | External analog command / | | |
| Mode | Command smoothing | | le by internal parameter setting) | |
| | Speed limit | Adjustable by internal paran | meter setting / External analog command cor | ntrol |
| | Input voltage dead-zone setting | Adjustable by internal paran | meter setting | |
| | Input voltage offset setting | Adjustable by internal paran | meter setting | |
| | Current sampling frequency | 16KHz | | |
| Digital | Input specification | | terminal for PNP (high level valid 12.5-30V) | · / |
| Input | Input function | proportional control, positive limi | ement, supporting following functions: Driver enable it, negetive limit, homing signal,reverse command, i op, start homing, active command, switch electronic | internal speed section control, internal |
| Digital | Output specification | 5 digital outputs,OUT1~OUT4 ct | urrent is 100mA,OUT5 current is 800mA, can drive | brake device directly |
| Digital Output | Output function | | ement, supporting following functions: Driver ready, e, motor speed reached, Z signal, maximum speed d, multi-position reached | |
| | Protection functions | | age protection,motor over-heat protection(I ² T),short-circu | it protection, drive over-heat protection.etc. |
| | Communication interface | | | ,, |
| | | RS232 (Connections with P | <u>PC: 2-5, 3-1, 5-6)</u> | |
| | Operating temperature | 0~40 ℃ | | |
| — • | Storage temperature | -10°C~70°C | | |
| Dpe | Humidity(non-condensing) | Below 90%RH | | |
| ratic | Protection class | IP20 | | |
| Operation Environment | Installation environment | | and lockable environment(such as in a electr | rical cabinet) |
| 7 | Installation mode | Vertical installation | | |
| | Altitude | No power limitation below 1 | 000m | |
| | Atmospheric pressure | 86kpa~106kpa | | |

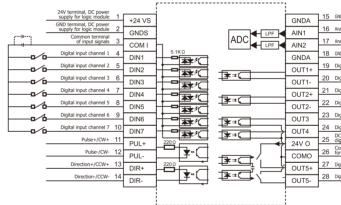
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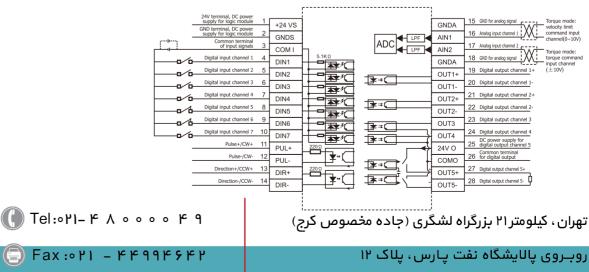




Wiring Diagram for Speed Control Mode



Wiring Diagram for Torque Control Mode



- 15 GND for analog signa 16 Analog input channel 7 Analog input channel 18 GND for analog signal
- 19 Digital output channel 1
- Digital output channel 2
- 22 Digital output channel 2
- Digital output channel
- 24 Digital output channel 25 DC power supply for digital output channel
- 27 Digital output channel 5+
- Default setting for digital inputs Din 1: Driver enable Out 1: Ready Out 2: Error Out 3: Position reached Din 2: Fault reset Din 3: Operation mod 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 followings: Beverse command Index Internal speed section control
 Internal position section control Motor brake Position limiting Start homing
- Active command
- Quick stop
- Switch electronic gear ratio Switch gain

Default setting for digital inputs

- Default setting for digital output
- Out 4: Zero velocity
- Out 5: Motor brake

o use other functions, pleas edefine the digital inputs, Other functions that can be efined are as followings:

- References found Multi-function output signal (Multi-position reached)

- 16 Analog input chann 7 Analog input channel 19 Digital output channel 1-20 Digital output channel 1 Digital output channel 2
- 22 Digital output channel 2
- 23 Digital output channel 3
- 24 Digital output channel
- 25 DC power supply for digital output channel
- 26 for digital output
- 27 Digital output channel 5
- 28 Digital output channel 5-
- Din 1: Driver enable Din 2: Fault reset Out 2: Error Din 3: Operation mod Out 3: Position reached Din 4: P control Out 4: Zero velocity Out 5: Motor brake Din 5: Positive limit Din 6: Negative limit Din 7: Home signal To use other functions inleas redefine the digital inputs, Other functions that can be defined are as followings: - Reverse command Index Internal speed section control - Position limiting - References found Internal position section control – Start homing Active comm - Quick stop – Switch electronic gear ratio – Switch gain

- Default setting for digital output Out 1: Ready

o use other functions, pleas edefine the digital inputs, Other functions that can be efined are as followings:

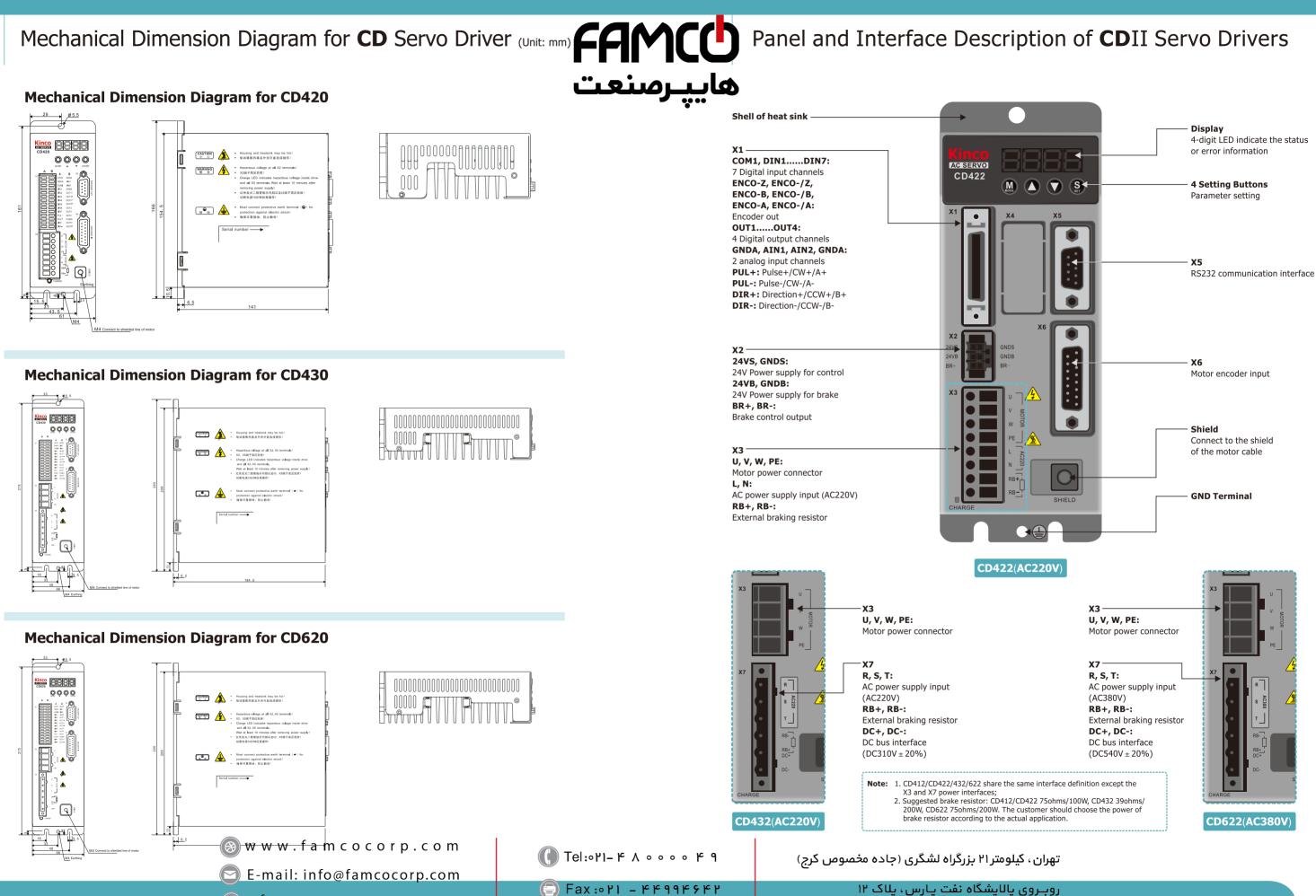
- Motor brake
- Multi-function output signal (Multi-position reached)

- Default setting for digital input 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, pleas redefine the digital inputs. Other functions that can be defined are as followings: - Reverse command Internal speed section control Internal position section control
 Start homing Active comman
- 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

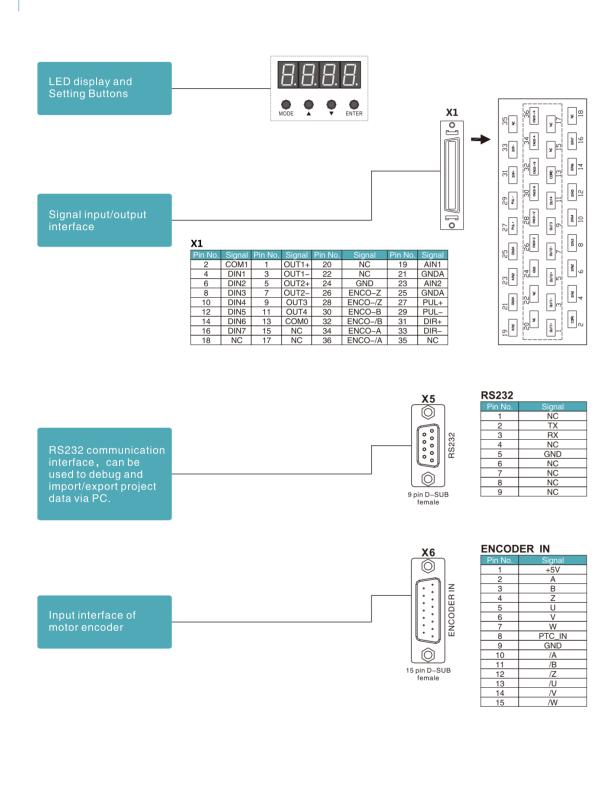
o use other functions inlease edefine the digital inputs, Other functions that can be fined are as followings:

- Index
- Motor brake
- Position limiting References found Multi-function output signal
- (Multi-position reached)



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Port Description of **CD**II Servo Drivers



Technical Specifications of **CD**II Servo Drivers

| | Model parameter | CD412-AA-000 | CD422-AA-000 | CD432-AA-000 | CD622-AA-000 | | | | |
|-------------------|----------------------------------|---|---|--|--|--|--|--|--|
| | Main supply voltage | Single-phase AC220V | | Single-phase or 3-phase | 3-phase AC380V | | | | |
| Power | | -20/+15% 47~63Hz AC220V -20/+15% 47~63Hz -20/+15% 47~63Hz | | | | | | | |
| | Control circuit voltage | 18VDC~30VDC 1A | | | | | | | |
| Current | Max. continuous current | 2A | 4A | 10A | 7A | | | | |
| | Peak current(PEAK) | 12A | 15A | 27.5A | 25A | | | | |
| | Feedback signal | 2500PPR (incremental | | | | | | | |
| | Brake chopper | | g resistor according to appli | cation, mainly in occasion of c | | | | | |
| | 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 | | | | | |
| - | Max. frequency of input pulse | - | PPS, Open-collector signal: 2 | 200KPPS | | | | | |
| | Pulse command mode | Pulse+direction, CCW+C | W, A+B phase(5V–24V) | | | | | | |
| Position | Command smoothing | | table by internal parameter se | etting) | | | | | |
| Mode | Feedforward gain | Adjustable by internal pa | rameter setting | | | | | | |
| | Electronic gear ratio | | or: -32768~32767, Gear divid | der: 1~32767, 1/50≤lGear facto | or/Gear dividerl≤50 | | | | |
| | Position loop sampling frequency | 1KHz | | | | | | | |
| | Analog input voltage range | -10V~+10V(Resolution | 12bit) | | | | | | |
| | Input impedance | 200K | | | | | | | |
| | Analog input sampling frequency | 4KHz | | | | | | | |
| Speed | Command source | External analog command / internal command | | | | | | | |
| Mode | Command smoothing | Low-pass filtering(Adjust | table by internal parameter se | etting) | | | | | |
| ivioue | Input voltage dead-zone setting | Adjustable by internal pa | rameter setting | | | | | | |
| | Input voltage offset settiong | Adjustable by internal parameter setting | | | | | | | |
| | Speed limit | Adjustable by internal parameter setting | | | | | | | |
| | Torque limit | Adjustable by internal pa | rameter setting / External ana | alog command control | | | | | |
| | Speed loop sampling frequency | 4KHz | | | | | | | |
| | Analog voltage input range | -10V~+10V(Resolution | 12bit) | | | | | | |
| [| Input impedance | 200K | | | | | | | |
| | Input sampling frequency | 4KHz | | | | | | | |
| - | Command source | External analog command / internal command | | | | | | | |
| Torque | Command smoothing | Low-pass filtering(Adjust | table by internal parameter se | etting) | | | | | |
| Mode | Speed limit | Adjustable by internal pa | rameter setting / External ana | alog command control | | | | | |
| ĺ | Input voltage dead-zone setting | Adjustable by internal pa | rameter setting | | | | | | |
| | Input voltage offset setting | Adjustable by internal pa | rameter setting | | | | | | |
| | Current sampling frequency | 16KHz | | | | | | | |
| | Input specification | 7 digital inputs, with CON | I terminal for PNP (high leve | l valid 12.5–30V) or NPN (low le | evel valid) connection. | | | | |
| Digital Input | Input function | Define freely according to r proportional control, positiv | equirement, supporting followin e limit, negetive limit, homing si | g functions: Driver enable, driver fa gnal, reverse command, internal sp mmand, switch electronic gear ratio | ult reset,driver mode contr eed section control, intern | | | | |
| | Output specification | 5 digital outputs,OUT1~OU | T4 current is 100mA,OUT5 curr | rent is 800mA, can drive brake dev | ice directly | | | | |
| Digital Output | Output function | motor at zero speed, motor | | g functions: Driver ready, driver fau signal, maximum speed obtained i | | | | | |
| | Protection functions | Over-voltage protection, under | -voltage protection,motor over-he | at protection(I ² T),short-circuit protectio | n,drive over-heat protection, | | | | |
| | Communication interface | RS232 (Connections w | ith PC: 2–2, 3–3, 5–5) | | | | | | |
| | Operating temperature | 0~40℃ | | | | | | | |
| | Storage temperature | −10°C~70°C | | | | | | | |
| 10 | Humidity(non-condensing) | Below 90%RH | | | | | | | |
| pera | Protection class | IP20 | | | | | | | |
| ation | Installation environment | | dry and lockable environme | ent(such as in a electrical cabi | net) | | | | |
| Operation | Installation mode | Vertical installation | , | , | , | | | | |
| | Altitude | No power limitation belo | ow 1000m | | | | | | |
| | | | | | | | | | |

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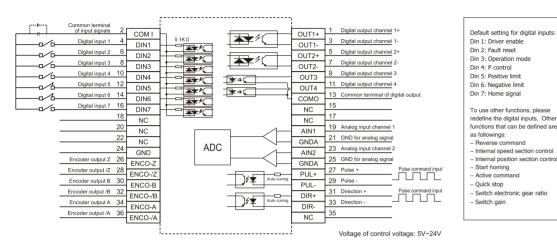
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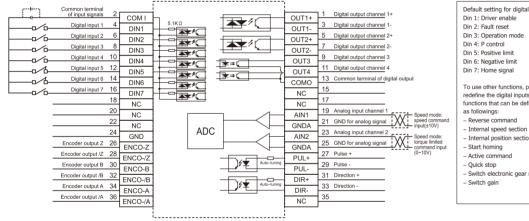
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Wiring Diagram for **CD**II Servo Drivers

Wiring Diagram for Position Control Mode



Wiring Diagram for Speed Control Mode



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

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Default setting for digital output:

use other functions, pleas

edefine the digital inputs.

Other functions that can be

fined are as followings:

Multi-function output signal

(Multi-position reached)

Motor brake Position limiting

References found

Out 1: Ready Out 2: Error

Index

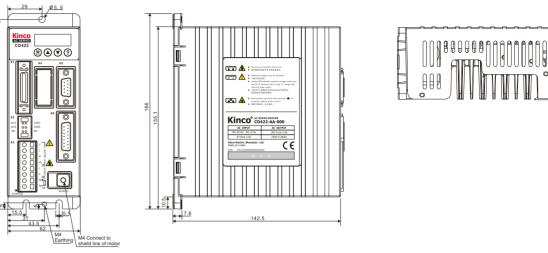
Out 3: Position reached

Out 4: Zero velocity

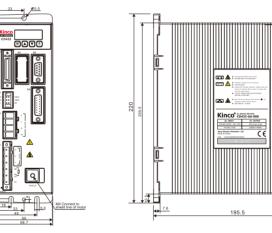
Out 5: Motor brake

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

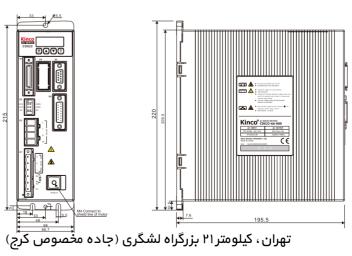
Mechanical Dimension Diagram for CD412/CD422



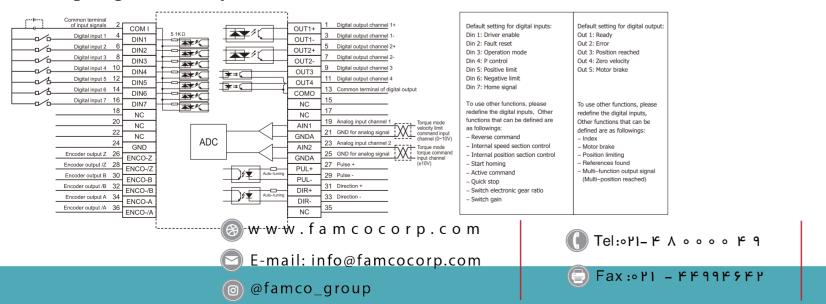
Mechanical Dimension Diagram for CD432



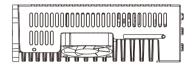
Mechanical Dimension Diagram for CD622



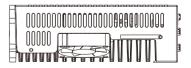
Wiring Diagram for Torque Control Mode

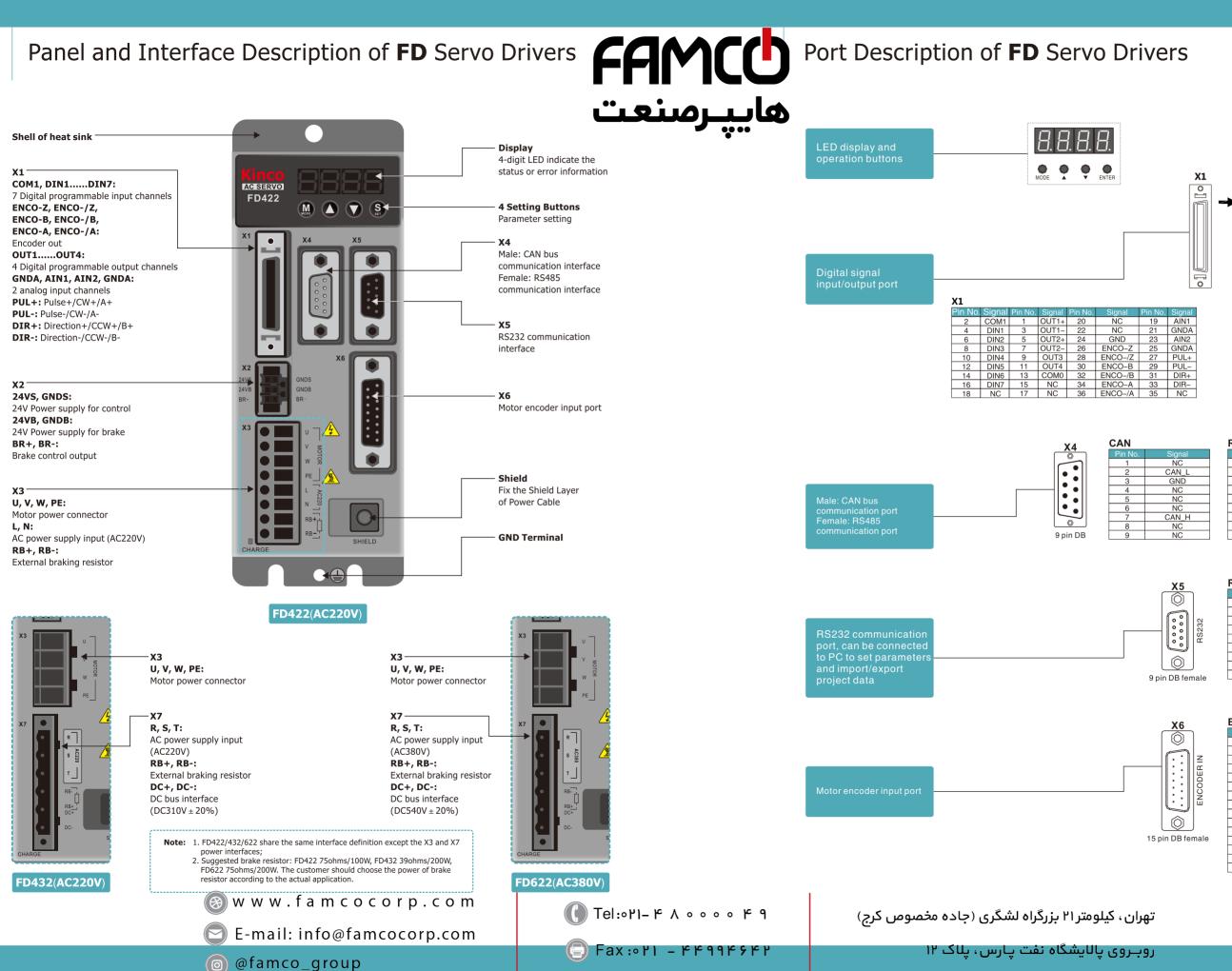












| IN1 NDA |
|------------|
| NDA |
| |
| IN2 |
| NDA |
| UL+ |
| UL- |
|)IR+ |
| NR- |
| NC |
| |

| 19 19 19 | 36 36 | 17 | 18 |
|----------------|--------------|--|---------------|
| 33 BIR- | 34 then-A | | 16 |
| 31 | 32 | 13 | 01M6 14 |
| -14 | 30 | 11 | 12 12 |
| 57 | 28 | 6 6 | 10 |
| SS MBM | 26 ever-z | | ENIG 8 |
| 23 Alk | 24 649 | 5 | 91 1 5 |
| 21 ava | ¥ S | in the second se | 4 |
| 19 MM | 202 - | ia, | ₹ N |

| 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 |

| Signal |
|--------|
| NC |
| TX |
| RX |
| NC |
| GND |
| NC |
| NC |
| NC |
| NC |
| |

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

Technical Specifications of **FD** Servo Drivers

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

Mechanical Dimension Diagram for FD422

| Model Par | rameter | 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 |
| | Rated current(RMS) | 4A | 10A | 7A |
| Current | 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 i | n 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 |
| | Digital input specification | 7 digital inputs, with COMI terminal | for PNP (high level valid 12.5–30V) o | or NPN (low level valid) connection. |
| | Digital input function Define freely according to requirement, supporting following functions: Dri reset, driver mode control, proportional control, positive limit, negetive limit command, internal speed section control, internal positive section control, active command, switch electronic gear ratio, switch gain | | tive limit, homing signal, reverse | |
| | General Digital output function position reached, motor at zero speed, moto | | e control ourtput) current is | |
| General Functions | | 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. | | |
| T UNOLIONS | Analog input | 2 analog input, can be used to c | control speed and torque, the inpu | t range is -10V~10V. |
| | Encoder signal output function | Output encoder signal is optiona output frequency is 2MHz. | al, can be used in the multiple axis | ses synchronization, the max. |
| | RS232 | The max. baudrate is 115.2KHz protocol to communicate with co | , use JD–PC software to commun ontroller. | icate with PC, or via free |
| | Protection functions | Over-voltage protection, under- protection, drive over-heat prote | voltage protection,motor over-hea | at protection(I←T),short-circuit |
| | RS485 | The max. baudrate is 115.2KHz | , use Modbus RTU protocol to cor | mmunicate with controller. |
| | CAN BUS | The max. baudrate is 1MHz, use | e CANopen protocol to communic | ate with controller. |
| | Operating temperature | 0~40℃ | | |
| Operation | Storage temperature | -10°C~70°C | | |
| | Humidity(non-condensing) | Below 90%RH | | |
| | Protection class | IP20 | | |
| Environment | 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 | | |

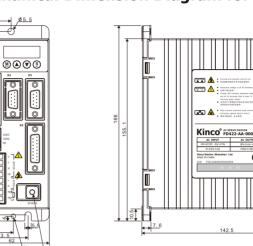
Note: □=L: Communication port RS232, RS485.

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

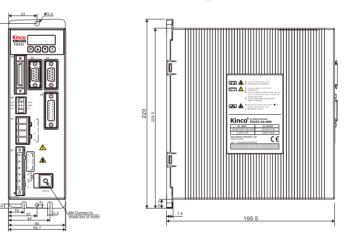
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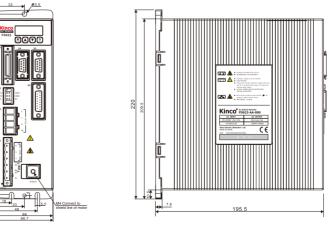
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Mechanical Dimension Diagram for FD432



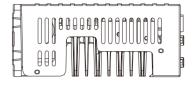
Mechanical Dimension Diagram for FD622

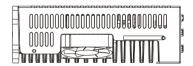


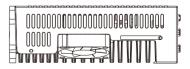
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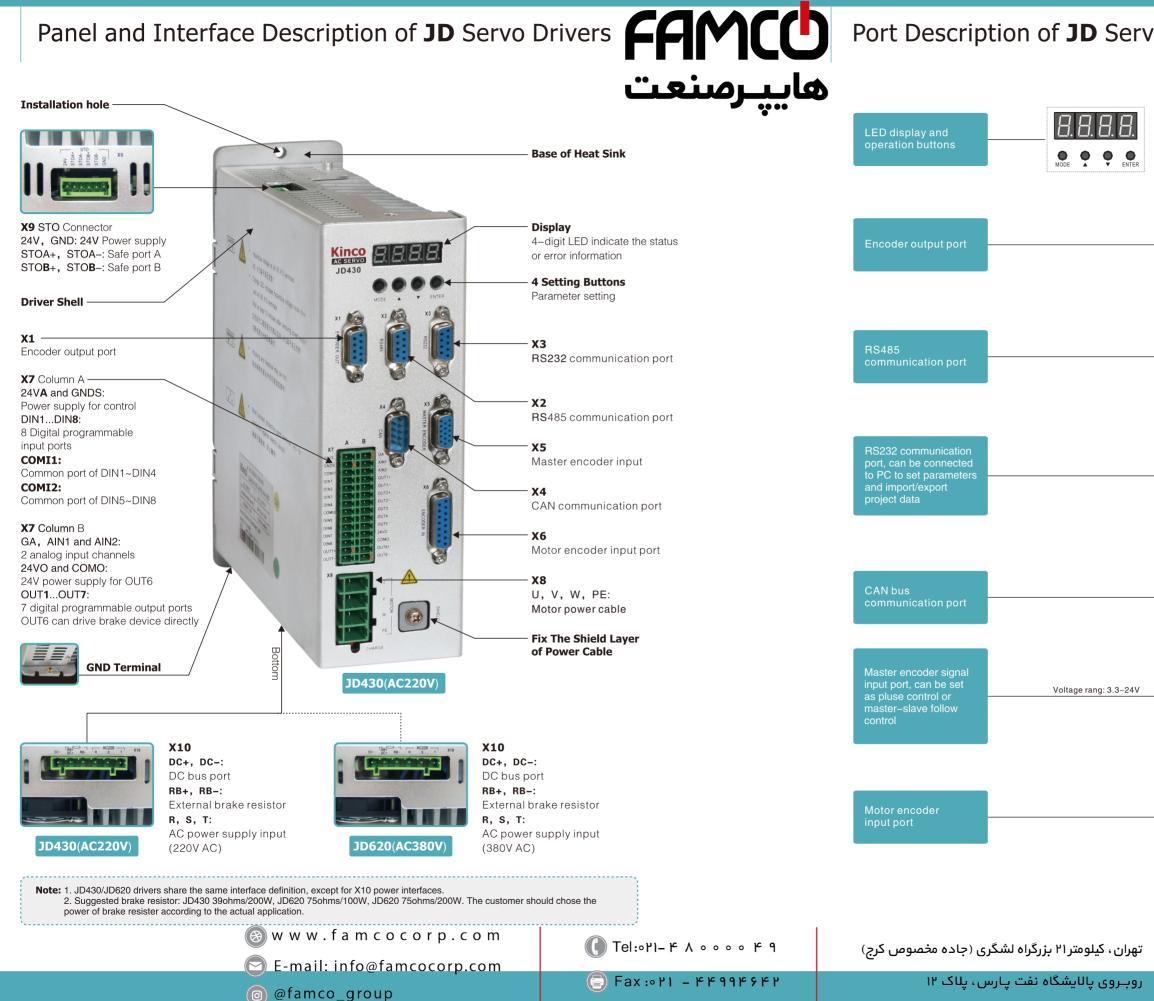


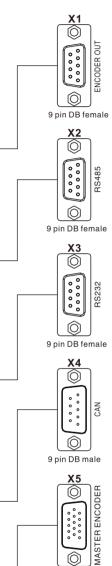




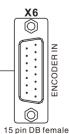


Port Description of **JD** Servo Drivers





15 pin DB female



ENCODER OUT

| Pin No. | Signal |
|---------|--------|
| 1 | +5V |
| 2 | A |
| 3 | В |
| 4 | Z |
| 5 | Z2+ |
| 6 | GND |
| 7 | /A |
| 8 | /B |
| 9 | /Z |

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 |

CAN

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

MASTER ENC

| Pin No. | Signal |
|---------|---------------|
| 1 | +5V |
| 2 | GND |
| 3 | NC |
| 4 | Pul+/A1+/CW+ |
| 5 | Pul-/A1-/CW- |
| 6 | Z |
| 7 | В |
| 8 | A |
| 9 | Z1+ |
| 10 | Dir+/B1+/CCW+ |
| 11 | /Z |
| 12 | /B |
| 13 | /A |
| 14 | Z1– |
| 15 | Dir-/B1-/CCW- |

ENCODER IN

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

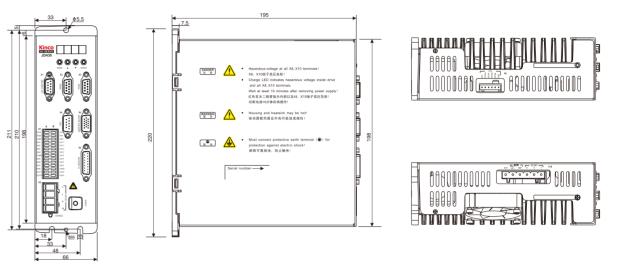
| NC | |
|------|--|
| NC | |
| | |
| ODER | |
| ODER | |

Technical Specifications of **JD** Servo Drivers

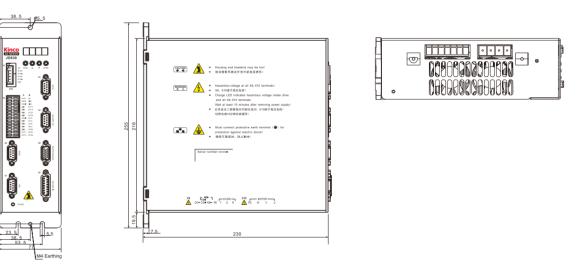
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| Model Par | ameter | JD430-AA-000 JD620-AA-000 | | JD630-□A-000 | JD640-□A-000 | | | | |
|--|---------------------------------|--|------------------------------------|------------------------------------|------------------------------------|--|--|--|--|
| 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 | | | | |
| Guilent | Peak current(PEAK) | 27.5A | 25A | 35A | 45A | | | | |
| | Brake chopper threshold | DC380V ± 5V | DC680V ± 5V | DC680V ± 5V | $DC680V \pm 5V$ | | | | |
| | Over-voltage alarming threshold | DC400V ± 5V | DC700V ± 5V | DC700V ± 5V | DC700V ± 5V | | | | |
| Under-voltage alarming threshold Cooling method | | DC200V ± 5V | DC400V ± 5V | DC400V ± 5V | DC400V ± 5V | | | | |
| | | Forced air cooling | | Forced air cooling | | | | | |
| | Weight(Kg) | 2.51 | | 3.62 | | | | | |
| | Size(width*hight*thicker) | 220 × 195 × 66 mm | | 255 × 230 × 77 mm | | | | | |
| | Digital operation panel | 4 buttons and 4 LED di | splay. | | | | | | |
| | External I/O | 7 digital outputs(OUT1, OUT2, OUT7 are 0.1A and OUT3~OUT6 are 0.5A, can define driver read 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 axises synchronization, the max. output frequency is 2MHz. | | | | | | | |
| General Functions | 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 1 | 15.2KHz, use Modbus R | TU protocol to communica | te with controller. | | | | |
| | CAN BUS | The max. baudrate is 1 | MHz, use CANopen proto | ocol to communicate with | controller. | | | | |
| | STO function | STO port can be conne | ected to safe controller, s | witch, and sensor to prote | ct the system. | | | | |
| | Operating temperature | 0~40℃ | | | | | | | |
| | Storage temperature | –10℃~70℃ | | | | | | | |
| | Humidity(non-condensing) | Below 90%RH | | | | | | | |
| Operation | Protection class | IP20 | | | | | | | |
| Environment | Installation environment | Installed in a dust-free | dry and lockable environ | ment(such as in a electric | al cabinet) | | | | |
| | Installation mode | Vertical installation | | | | | | | |
| | Height | No power limitation bel | ow 1000m | | | | | | |
| | Atmospheric pressure | 86kpa~106kpa | | | | | | | |

Mechanical Dimension Diagram of JD430/JD620



Mechanical Dimension Diagram of JD630/JD640



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

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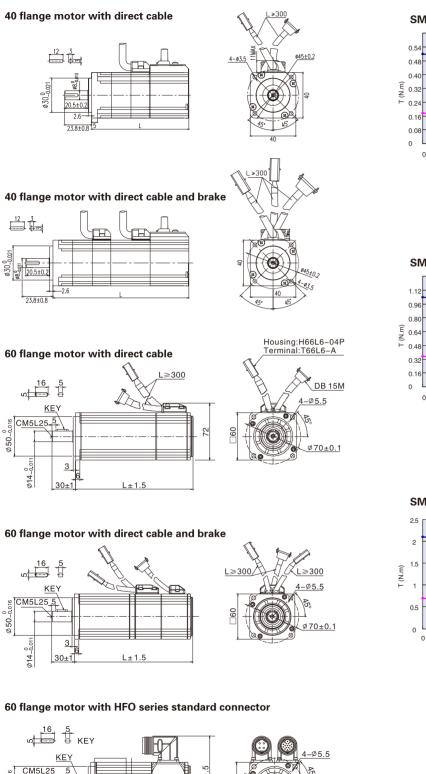
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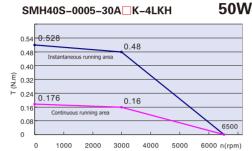
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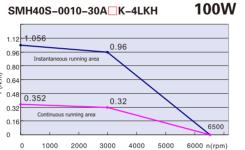
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روبروی پالایشگاه نفت پارس، پلاک ۱۲

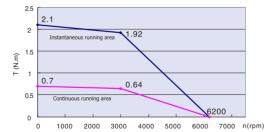
Dimensions/Torque curve of Servo Motors (40/60 flange) **FAMCO** هايپرمنعت

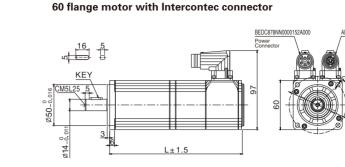


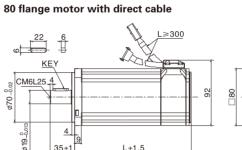




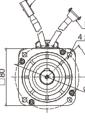






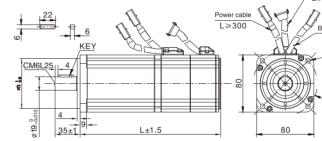


L±1.5

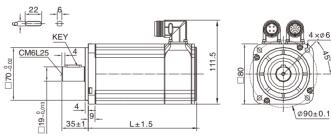


80 flange motor with direct cable and brake

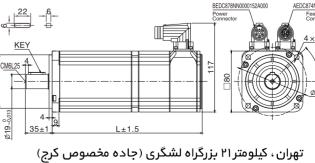
35±1



80 flange motor with HFO series standard connector



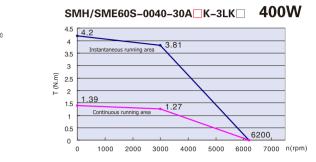
80 flange motor with Intercontec connector

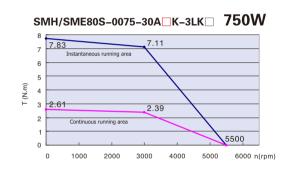




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Dimensions/Torque curve of Servo Motors (60/80 flange)





Feedback

Ø70±0.1

Housing:H66L6-04P Terminal:T66L6-A

DB 15M 4×¢6.5

Ø90±0.1

Feedback cable / L≥300

> Brake cable L≥300

4×¢6.5

∠ø90±0.[•]

Ø90±0.1

Technical Specifications of SMH40/60/80 Motors

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| | | SMH Series Motor | | | | | | | |
|------------------------|---|-----------------------------------|----------------------------|--|----------------------------|--------------------------------|--|--|--|
| Motor series | | Small inertia fla | inge size 40mm | Small inertia fla | nge size 60mm | Small inertia flange size 80mm | | | |
| Model | Model | | SMH40S-0010- 30ACK-4LKH | SMH60S-0020- 30A_K-3LK_ | SMH60S-0040- 30A_K-3LK | SMH80S-0075- 30A_K-3LK | | | |
| DC link voltage | DC link voltage UDC | | 300 | 300 | 300 | 300 | | | |
| | Rated power P _N (W) | 50 | 100 | 200 | 400 | 750 | | | |
| Continuous | Rated torque T _N (Nm) | 0.16 | 0.32 | 0.64 | 1.27 | 2.39 | | | |
| performance | Rated speed n _N (rpm) | 3000 | 3000 | 3000 | 3000 | 3000 | | | |
| | Rated current IN (A) | 0.7 | 1.4 | 1.6 | 3.1 | 3.9 | | | |
| Maximum torqu | e T _m (Nm) | 0.48 | 0.96 | 1.92 | 3.82 | 7.17 | | | |
| Maximum curre | nt I _∞ (A) | 2.1 | 4.2 | 4.8 | 9.3 | 11.7 | | | |
| Standstill torque | e T₅ (Nm) | 0.176 | 0.352 | 0.7 | 1.39 | 2.63 | | | |
| Standstill currer | nt IS (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 c | constant τ e (ms) | 0.84 | 1.08 | 2.03 | 2.22 | 5.35 | | | |
| Mechanical time | e constant τm (ms) | 1.28 | 0.86 | 2.26 | 1.35 | 0.75 | | | |
| Reverse voltage | e constant Ke (V/krpm) | 16 | 14 | 29 | 29 | 40 | | | |
| Torque constan | t Kt (Nm/A) | 0.265 | 0.265 | 0.48 | 0.48 | 0.662 | | | |
| Determined | | 0.031 | 0.059 | 0.375 | 0.51 | 1.36 | | | |
| Rotor moment o | Rotor moment of inertia J_m (Kg · cm ²) | | 0.061 (with brake) | 0.379 (with brake) | 0.514 (with brake) | 1.385 (with brake) | | | |
| Pole pair numbe | er | 4 | 4 | 3 | 3 | 3 | | | |
| Maximum voltag | ge rising du/dt (KV/μs) | 8 | 8 | 8 | 8 | 8 | | | |
| Insulation class | | F | F | F | F | F | | | |
| Maximum radia | I force F (N) | 120 | 120 | 180 | 180 | 335 | | | |
| Maximum axial | force F (N) | 60 | 60 | 90 | 90 | 167.5 | | | |
| Maight | C(x) | 0.5 | 0.8 | 1.3 | 1.8 | 3.3 | | | |
| Weight | G(Kg) | 0.8 (with brake) | 1.0 (with brake) | 1.8 (with brake) | 2.3 (with brake) | 4 (with brake) | | | |
| I are able of reaction | | 85.3±1 | 110.8 ± 1 | 120 | 150 | 147 | | | |
| Length of motor | r L(mm) | 119 ± 1.5 (with brake) | 145 ± 1.5 (with brake) | 159 ± 1.5 (with brake) | 189 ± 1.5 (with brake) | 197 ± 1.5 (with brake) | | | |
| Position feedba | ck device | Incremental encode | er 2500ppr | | | | | | |
| Cooling method | | Totally enclosed, non-ventilated | | | | | | | |
| Protection level | | IP65 for body, shaft sealing IP54 | | | | | | | |
| Environmental | Temperature | –20℃ ~ 40℃ (Non- | -freezing) | | | | | | |
| conditions for | Humidity | Below 90% RH (No | on-condensing) | | | | | | |
| operation | Ambient enviroment | Away from active g | as, combustible gas | , oil drops and dust | | | | | |
| ορειαιιοι | Altitude | Maximum altitude 4 | 4000m, Rated power | er at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise | | | | | |

| | | SME Series Motor | | | | | | |
|--------------------|---|---------------------------------------|-------------------------------------|----------------------------------|--|--|--|--|
| Motor series | | Small inertia f | 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 | | | | |
| | Rated power P _N (W) | 200 | 400 | 750 | | | | |
| Continuous | Rated torque T _N (Nm) | 0.64 | 1.27 | 2.39 | | | | |
| performance | Rated speed n _N (rpm) | 3000 | 3000 | 3000 | | | | |
| | Rated current IN (A) | 1.6 | 3.1 | 3.9 | | | | |
| Maximum torqu | e T _m (Nm) | 1.92 | 3.81 | 7.17 | | | | |
| Maximum curre | ent I∞ (A) | 4.8 | 9.3 | 11.7 | | | | |
| Standstill torque | e T₅ (Nm) | 0.7 | 1.4 | 2.63 | | | | |
| Standstill currer | nt IS (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 of | constant τe (ms) | 2.44 | 2.59 | 5.4 | | | | |
| Mechanical time | e constant τm (ms) | 2.93 | 3 1.93 1.4 | | | | | |
| Reverse voltage | e constant Ke (V/krpm) | 29 | 29 | 40 | | | | |
| Torque constan | t Kt (Nm/A) | 0.48 0.48 | | 0.662 | | | | |
| | | 0.375 | 0.443 | 1.255 | | | | |
| Rotor moment of | of inertia J _m (Kg · cm ²) | 0.379 (with brake) 0.447 (with brake) | | 1.28 (with brake) | | | | |
| Pole pair numb | er | 3 3 | | 3 | | | | |
| Maximum volta | ge rising du/dt (KV/µs) | 8 | 8 | 8 | | | | |
| Insulation class | | F | F | F | | | | |
| Maximum radia | I force F (N) | 180 | 180 | 335 | | | | |
| Maximum axial | force F (N) | 90 | 90 | 167.5 | | | | |
| | 0///) | 1.3 | 1.6 | 2.9 | | | | |
| Weight | G(Kg) | 1.8 (with brake) | 2.1 (with brake) | 3.6 (with brake) | | | | |
| 1 | | 120±1.5 | 135±1.5 | 132±1.5 | | | | |
| Length of motor | r L(mm) | 159 ± 1.5 (with brake) | 174 ± 1.5 (with brake) | 182 ± 1.5 (with brake) | | | | |
| Position feedba | ck device | Incremental encoder 2500ppr | | | | | | |
| Cooling method | ł | Totally enclosed, non-ventilated | | | | | | |
| Protection level | | IP65 for body, shaft sealing IP54 | | | | | | |
| Environmental | Temperature | –20°C ∼ 40°C (Non–freezing) | | | | | | |
| conditions for | Humidity | Below 90% RH (Non-condensing) | | | | | | |
| | Ambient enviroment | Away from active gas, combustible | gas, oil drops and dust | | | | | |
| operation | Altitude | Maximum altitude 4000m, Rated po | ower at 1000m or below, Above 1000m | n: Decreasing 1.5% per 100m rise | | | | |

Note: =A: no brake =B: brake

□=H: Cable connector □=N: HFO series standard connector

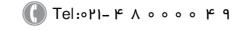
□=M: Intercontec connector

Note: =A: no brake =B: brake

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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

روبروی یالایشگاه نفت یارس، یلاک ۱۲

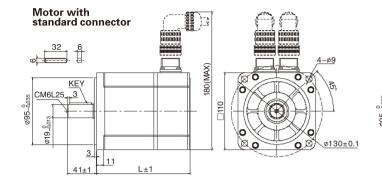
SME60/80 Motors

□=H: Cable connector

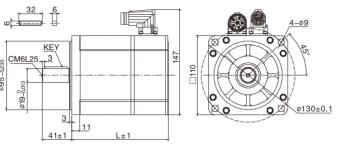
□=N: HFO series standard connector

□=M: Intercontec connector

Dimensions/Torque curve of Servo Motors (110 flange)

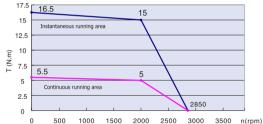


Motor with Intercontec connector

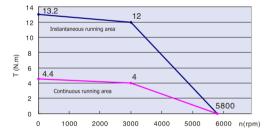


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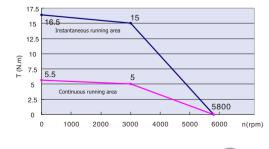






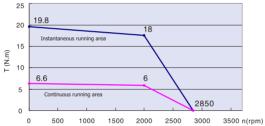


SMH110D-0157-30A K-4HK 1.57KW

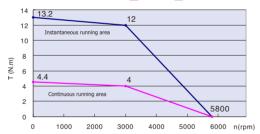


 (\mathfrak{B})

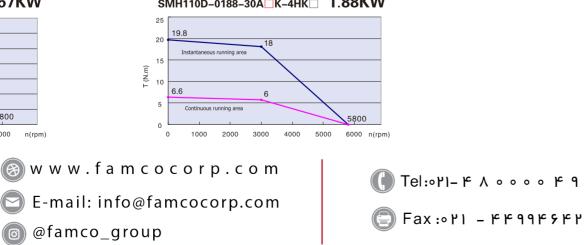




SMH110D-0126-30A_K-4HK_ 1.26KW



SMH110D-0188-30A K-4HK 1.88KW



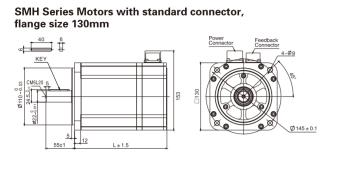
| Motor series | | Medium inertia,flange size 110mm | | | | | | | | |
|--------------------------------------|--|-----------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--|--|--|
| Model | | SMH110D-0125 -30ACK-4LK | SMH110D-0126 -30A K-4HK | SMH110D-0105 -20A_K-4LK | SMH110D-0157 -30A_K-4HK | SMH110D-0126 -20A K-4LK | SMH110D-0188 -30ACK-4HK | | | |
| DC link voltage | UDC | 300 | 560 | 300 | 560 | 300 | 560 | | | |
| | Rated power P _N (W) | 1250 | 1260 | 1050 | 1570 | 1260 | 1880 | | | |
| Continuous | Rated torque T _N (Nm) | 4.0 | 4.0 | 5.0 | 5.0 | 6.0 | 6.0 | | | |
| performance | Rated speed n _N (rpm) | 3000 | 3000 | 2000 | 3000 | 2000 | 3000 | | | |
| | Rated current IN (A) | 6.5 | 4.3 | 5.9 | 5.9 | 6.2 | 6.2 | | | |
| Maximum torqu | e T _m (Nm) | 12 | 12 | 15.0 | 15.0 | 18.0 | 18.0 | | | |
| Maximum curre | nt I _m (A) | 19.5 | 12.9 | 17.7 | 17.7 | 18.6 | 18.6 | | | |
| Standstill torque | e Ts (Nm) | 4.4 | 4.4 | 5.5 | 5.5 | 6.6 | 6.6 | | | |
| Standstill currer | nt IS (A) | 6.82 | 4.73 | 6.49 | 6.49 | 6.765 | 6.765 | | | |
| Resistance line | -line RL (Ω) | 0.8 | 1.83 | 1.03 | 1.03 | 1.258 | 1.258 | | | |
| Inductance line | -line LL (mH) | 6.4 | 13.5 | 7.8 | 7.8 | 9.62 | 9.62 | | | |
| Electrical time of | constant τ e (ms) | 7.9 | 7.37 | 7.57 | 7.57 | 7.64 | 7.64 | | | |
| Mechanical time | e constant τm (ms) | 1.4 | 1.63 | 1.55 | 1.55 | 1.55 1.65 | | | | |
| Reverse voltage constant Ke (V/krpm) | | 45 | 64 | 55 | 55 | 5 64 | | | | |
| Torque constant Kt (Nm/A) | | 0.744 | 1.058 | 0.910 | 0.910 0.910 1.058 | | 1.058 | | | |
| Rotor moment of | of inertia J_m (Kg · cm ²) | 5.8 | 5.8 | 7.2 | 7.2 | 8.5 | 8.5 | | | |
| Rotor moment o | orinenia J _m (Kg · cm) | 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 numb | er | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| Maximum voltag | ge rising du/dt (KV/µs) | 8 | 8 | 8 | 8 | 8 | 8 | | | |
| Insulation class | | F | F | F | F | F | F | | | |
| Maximum radia | I force F (N) | 630 | 630 | 630 | 630 | 630 | 630 | | | |
| Maximum axial | force F (N) | 315 | 315 | 315 | 315 | 315 | 315 | | | |
| Mainht | $O(x_{\tau})$ | 6.2 | 6.2 | 7.2 | 7.2 | 8.2 | 8.2 | | | |
| Weight | G(Kg) | 8.2(with brake) | 8.2(with brake) | 9.2(with brake) | 9.2(with brake) | 10.2(with brake) | 10.2(with brake) | | | |
| Longth of motor | · | 168 | 168 | 185 | 185 | 202 | 202 | | | |
| Length of motor | r L(mm) | 228 ± 1(with brake) | 228 ± 1(with brake) | 245 ± 1(with brake) | 245 ± 1(with brake) | 262 ± 1(with brake) | 262 ± 1(with brake) | | | |
| Position feedba | ck device | Incremental encoder 2500ppr | | | | | | | | |
| Cooling method | 1 | Totally enclosed, non-ventilated | | | | | | | | |
| Protection level | | IP65 for body, shaft sealing IP54 | | | | | | | | |
| E | Temperature | –20°C ~ 40°C (Nor | ő | | | | | | | |
| Environmental | Humidity | Below 90% RH (N | 0, | | | | | | | |
| conditions for | Ambient enviroment | | gas, combustible gas | , oil drops and dust | | | | | | |
| operation | Altitude | Maximum altitude | . . | | Above 1000m: Dee | reasing 1 E% par 10 | Om rico | | | |

Note: -A: no brake =B: brake

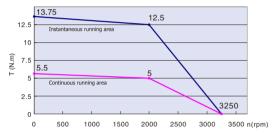
Technical Specifications of SMH110 Servo Motors

□=C: Standard connector □=D: Intercontec connector

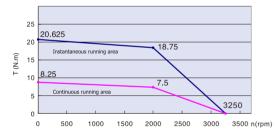
Dimensions/Torque curve of Servo Motors (130/150/180 flange)

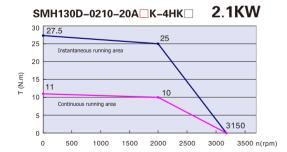


SMH130D-0105-20A_K-4HK 1.05KW

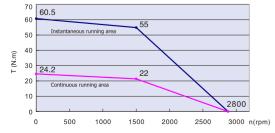


SMH130D-0157-20A K-4HK 1.57KW

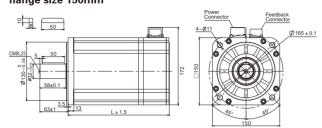


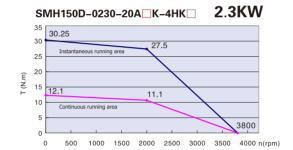


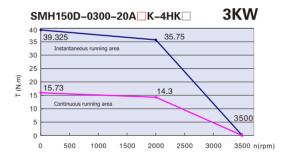


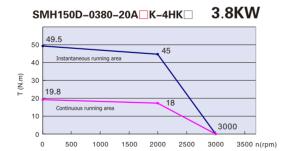


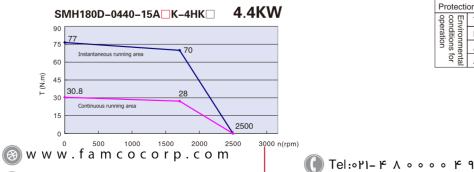










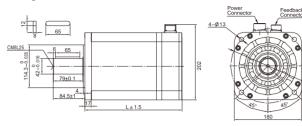




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Dimensions of Servo Motors (180 flange)

SMH Series Motors with standard connector, flange size 180mm



Technical Specification of SMH130/150/180 Motors

| Motor | series | Medium ine flange size 1 | | | 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 | | | |
| DC link | voltage UDC | 560 | 560 | 560 | 560 | 560 | 560 | 560 | 560 | | |
| pe C | Rated power P _N (W) | 1050 | 1570 | 2100 | 2300 | 3000 | 3800 | 3500 | 4400 | | |
| Continuous performance | Rated torque T _N (Nm) | 5 | 7.5 | 10 | 11.1 | 14.3 | 18 | 22 | 28 | | |
| nuou mar | Rated speed n _N (rpm) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 1500 | 1500 | | |
| lce sr | Rated current IN (A) | 4.3 | 6.3 | 7.6 | 7.1 | 8.5 | 9.3 | 10.3 | 11.9 | | |
| Maximu | Im torque T _m (Nm) | 12.5 | 18.75 | 25 | 27.5 | 35.75 | 45 | 55 | 70 | | |
| Maximu | Im current Im (A) | 10.75 | 15.75 | 19 | 17.75 | 21.25 | 23.25 | 25.75 | 29.75 | | |
| Standst | ill torque Ts (Nm) | 5.5 | 8.25 | 11 | 12.1 | 15.73 | 19.8 | 24.2 | 30.8 | | |
| Standst | ill current IS (A) | 4.73 | 6.93 | 8.36 | 7.81 | 9.35 | 10.23 | 11.33 | 13.09 | | |
| Resista | nce line-line RL (Ω) | 1.85 | 1.17 | 0.98 | 2.2 | 1.4 | 1.3 | 1.2 | 0.65 | | |
| Inducta | nce line-line LL (mH) | 23.7 | 16.2 | 14.3 | 14(AVG) | 10.6(AVG) | 10.5(AVG) | 12.7(AVG) | 8.5 | | |
| Electrica | al time constant τ e (ms) | 12.81 | 13.846 | 14.592 | 6.36 | 7.57 | 8.08 | 10.58 | 13.08 | | |
| Mechan | nical time constant τm (ms) | 2.868 | 2.529 | 2.268 | 4.68 | 3.68 | 3.32 | 3.42 | 2.16 | | |
| | e voltage constant Ke (V/krpm) | 70 | 72 | 80 | 100 | 107 | 125 | 135 | 150 | | |
| | constant Kt (Nm/A) | 1.1578 | 1.191 | 1.3232 | 1.65 | 1.77 | 2.07 | 2.23 | 2.48 | | |
| | × 7 | 12 | 17.7 | 23.4 | 33.5 | 47.6 | 63.1 | 82 | 118 | | |
| Rotor m | noment of inertia J _m (Kg · cm ²) | 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 pa | ir number | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| Maximu | im voltage rising du/dt (KV/μs | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | |
| Insulatio | | F | F | F | F | F | F | F | F | | |
| Maximu | Im radial force F (N) | 900 | 900 | 900 | 1200 | 1200 | 1200 | 1600 | 1600 | | |
| Maximu | im axial force F (N) | 450 | 450 | 450 | 600 | 600 | 600 | 800 | 800 | | |
| | | 7.5 | 9.1 | 10.7 | 12 | 15 | 18 | 22.7 | 28.6 | | |
| Weight | G(Kg) | 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) | | |
| | | 159 ± 1.5 | 179±1.5 | 199±1.5 | 226 ± 1.5 | 254 ± 1.5 | 282 ± 1.5 | 260 ± 1.5 | 298 ± 1.5 | | |
| Length | of motor L(mm) | 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 | n feedback device | Incremental enco | Incremental encoder 2500ppr | | | | | | | | |
| Cooling | method | Totally enclosed, | non-ventilated | | | | | | | | |
| Protecti | on level | IP65 for body, shaft sealing IP54 | | | | | | | | | |
| 우 응 묘 | Temperature | -20℃ ~ 40℃ (N | on-freezing) | | | | | | | | |
| Environmental conditions for operation | Humidity | Below 90% RH (| Non-condensing) | | | | | | | | |
| nme ons | Ambient enviroment | Away from active gas, combustible gas, oil drops and dust | | | | | | | | | |
| for | Altitude | Maximum altitude | Maximum altitude 4000m, Rated power at 1000m or below, Above 1000m: Decreasing 1.5% per 100m rise | | | | | | | | |
| | | Note: □=A: □=B: | | C: Standard col D: Intercontec c | | | | | | | |

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Servo Driver and Motor Selection Table

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

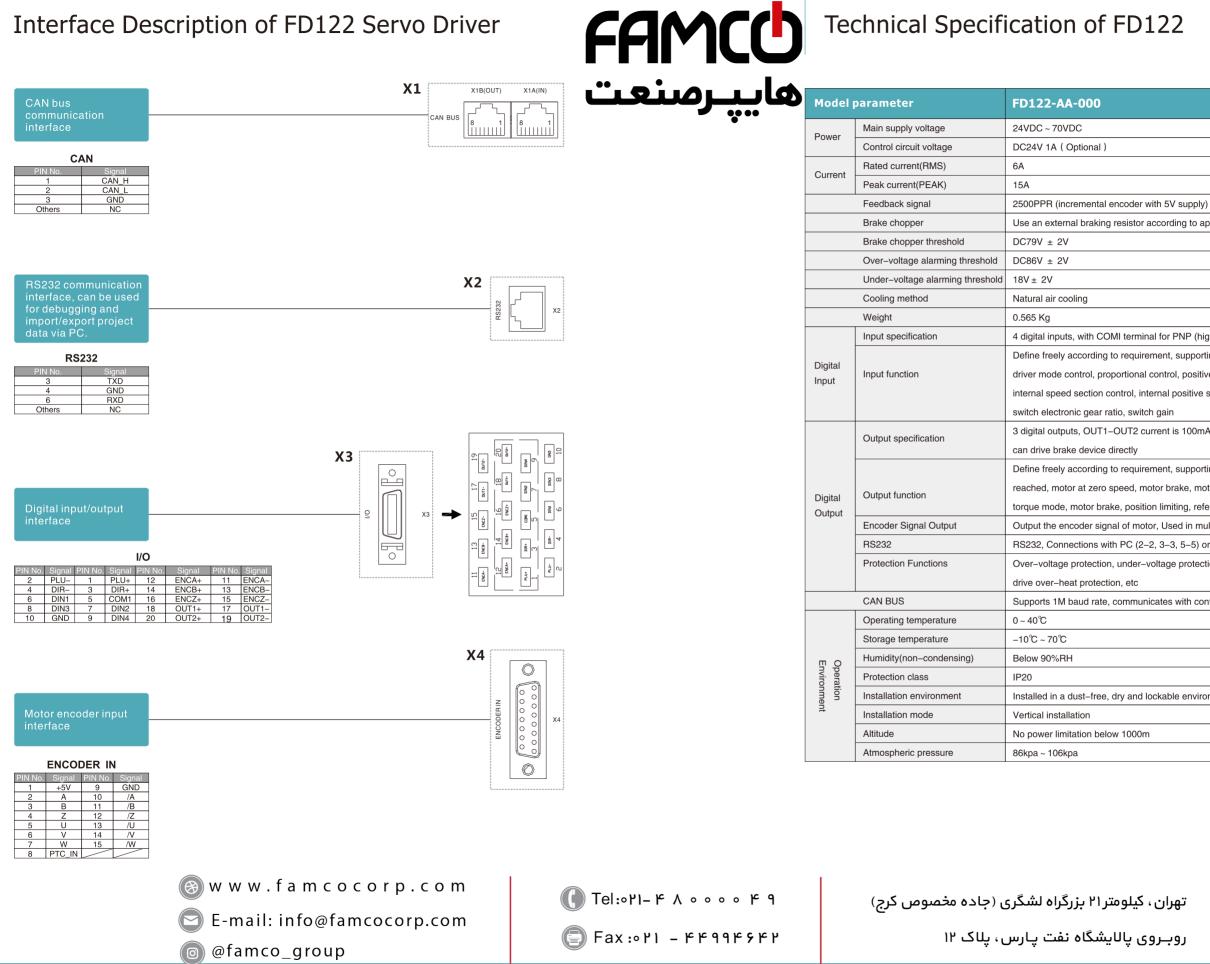
Panel and Interface Description





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Use an external braking resistor according to application, mainly in high speed start and stop application.

4 digital inputs, with COMI terminal for PNP (high level valid 12.5-30V) or NPN (low level valid) connection.

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,

3 digital outputs, OUT1-OUT2 current is 100mA, BR+/BR- (Brake control output) current is 500mA

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

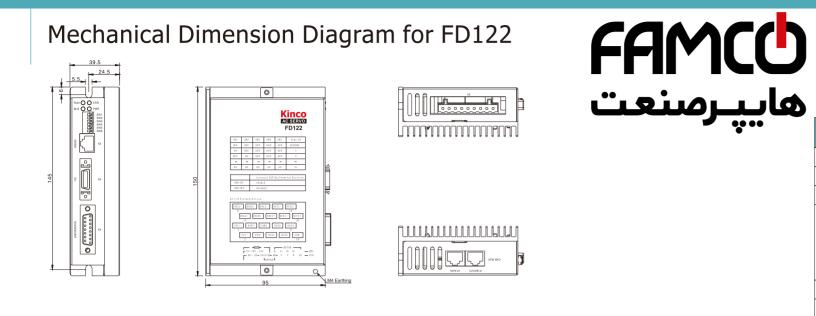
Output the encoder signal of motor, Used in multiple axis synchronous control, supports 2M at most

RS232, Connections with PC (2-2, 3-3, 5-5) or controller

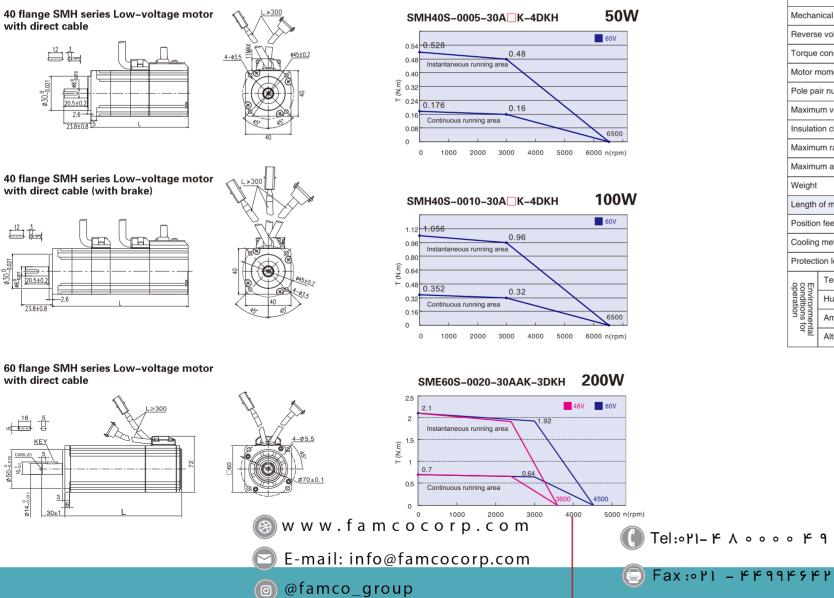
Over-voltage protection, under-voltage protection, motor over-heat protection(I²T), short-circuit protection,

Supports 1M baud rate, communicates with controller via CANopen protocol

Installed in a dust-free, dry and lockable environment(such as in a electrical cabinet

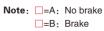


Dimensions/Torque curve of Low-voltage Servo Motor (40/60 flange)



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

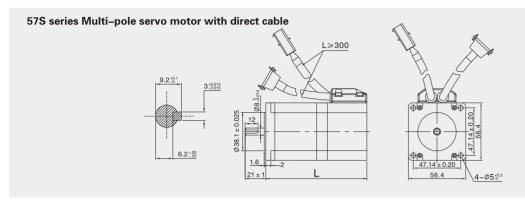
| Moto | or series | SMH Series | s, small inertia, 40 flan | SMH Series, small inertia, 60 flange | | | | | |
|--|--|---|----------------------------------|--------------------------------------|----------------------------|-------------|--|--|--|
| Model | | SMH40S-0005-30A_K-4DKH SMH40S-0010-30A_K-4DKH | | | SME60S-0020-30AAK-3DKH | | | | |
| Adapta | ble driver | FD122-AA-00 | FD122-AA-000 | | | | | | |
| DC link | voltage UDC | 60 | | 60 | | 70 | | | |
| рО | Rated power P _N (W) | 50 | | 100 | | 200 | | | |
| òontir erfori | Rated torque T _N (Nm) | 0.16 | | 0.32 | | 0.64 | | | |
| Continuous performance | Rated speed n _N (rpm) | 3000 | | 3000 | | 3000 | | | |
| | Rated current I _N (A) | 1.2 | | 2.5 | | 4.6 | | | |
| Maxim | um torque T _m (Nm) | 0.48 | | 0.96 | | 1.92 | | | |
| Maxim | um current Im (A) | 3.6 | | 7.5 | | 13.8 | | | |
| Stands | till torque T₅ (Nm) | 0.176 | | 0.352 | | 0.7 | | | |
| Stands | till current I₅ (A) | 1.32 | | 2.75 | | 5.06 | | | |
| Resista | ance line-line $R_{L}(\Omega)$ | 4.2 | | 2.1 | | 0.7 | | | |
| Inducta | ance line–line L_{L} (mH) | 3.5 | | 2.5 | | 1.55 | | | |
| Electric | cal time constant $\tau e (ms)$ | 0.84 | | 1.2 | | 2.21 | | | |
| Mecha | nical time constant Ke (V/krpm) | 1.28 | | 1.22 | | 2.05 | | | |
| Revers | se voltage constant Kt (Nm/A) | 8 | | 8 | | 9 | | | |
| Torque | e constant Kt (Nm/A) | 0.1323 | | 0.1323 | | 0.149 | | | |
| Motor r | moment of inertia J _m (Kg · cm ²) | 0.031 | 0.033 (With brake) | 0.059 | 0.061 (With brake) | 0.375 | | | |
| Pole pa | air number | 4 | | 4 | | 3 | | | |
| Maxim | um voltage rising du/dt (KV/ μ s) | 8 | | 8 | | 8 | | | |
| Insulati | ion class | F | | F | | F | | | |
| Maxim | um radial force F (N) | 120 | | 120 | | 180 | | | |
| Maxim | um axial force F (N) | 60 | | 60 | | 90 | | | |
| Weight | G(Kg) | 0.5 | 0.8 (With brake) | 0.8 | 1.0 (With brake) | 1.3 | | | |
| Length | of motor L(mm) | 85.3 ± 1 | 119 ± 1.5 (With brake) | 110.8±1 | 145 ± 1.5 (With brake) | 120 ± 1.5 | | | |
| Positio | n feedback device | Incremental encoder 2500ppr | | | | | | | |
| Cooling | g method | Totally enclosed, non-ventilated | | | | | | | |
| Protect | tion level | IP65 for body, shaft sealling IP54 | | | | | | | |
| 88 m | Temperature | –20 ~ 40℃ | | | | | | | |
| nviroi onditio oerati | Humidity | Below 90% RH | (Non-condensing) | | | | | | |
| Environmental conditions for operation | Ambient environment | Away from activ | ve gas, combustible gas, oil dro | ops and dust | | | | | |
| or | Altitude | Maximum altitu | de 4000m, rated power at 1000 |)m or below; Abo | ve 1000m:decreasing 1.5%pe | r 100m rise | | | |

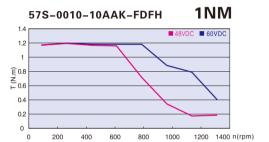


تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

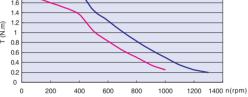
روبروی یالایشگاه نفت یارس، یلاک ۱۲

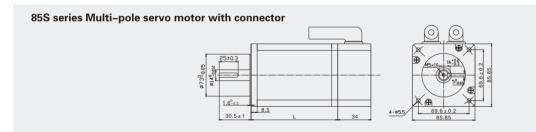
Dimensions/Torque curve of 57S/85S series Multi-pole Servo Motor



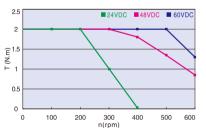




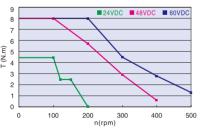


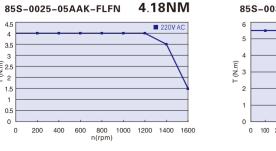


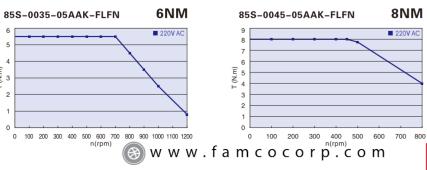




85S-0050-10AAK-FLFN-R30 8NM







E-mail: info@famcocorp.com

@famco_group



| Multi–pole servo motor | Small Inertia | a, 57 Flange | Small Inertia | a, 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 | 300 | 480 | 1400 | 2320 | 3300 | 4400 | 4400 | | |
| inertia(Kg.cm²) | | | | | | | | | |
| 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 | | 1200V AC | 1500V AC | | | 1800V AC | | |
| | 1S 5mA | | 1S 2mA | 1S 5mA | | | 1S 5mA | | |
| Feedback device accuracy | 2500p/r (Resc | olution : 10000) |) | | | | | | |
| Insulation class | В | | | | | | | | |
| Ambient temperature | -20~50°C | -20 ~ 50℃ | | | | | | | |
| Surface temperature rising | Max. 80°C | | | | | | | | |
| Insulation impedance | Min. 100MΩ , | 500V DC | | | | | | | |
| | | | | | | | | | |

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8NM

220V AC

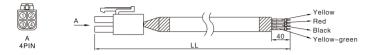
تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)

E 2.5

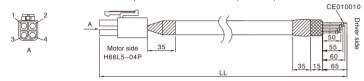
f 57S/85S series

Wiring Diagram for The Power Cable

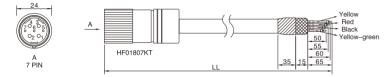
MOT-005-LL-KL-D Wire Spec.: 4 × 18AWG(41/0.167)



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



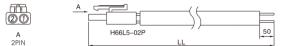
MOT-005-LL-KC0 Wire spec. 4C × 18AWG(41/0.16T)



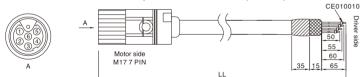
MOTE-005-LL-KC0 Wire Spec.: 4C×18AWG(41/0.16T)

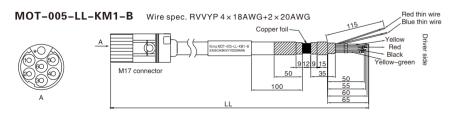


BRA-LL-KL Wire spec. 2×20AWG

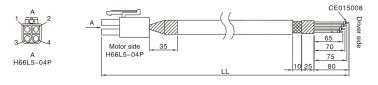


MOT-005-LL-KM1 Wire spec. UI20328 4C × 18AWG(41/0.16T) black





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



| MOT-005-LL-KL-D | | |
|-----------------|--------|------|
| Cable color | Signal | Pin# |
| Yellow | U | PIN1 |
| Red | V | PIN2 |
| Black | W | PIN3 |
| Yellow-green | PE | PIN4 |

| MOT-005-LL-KL | | |
|---------------|--------|-------|
| Cable Color | Signal | PIN # |
| Yellow | U | PIN1 |
| Red | V | PIN2 |
| Black | W | PIN3 |
| Yellow-green | PE | PIN4 |

| MOT-005-LL-KC0 | | |
|----------------|--------|--------------|
| 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 | | |
|-----------------|--------|--------------|
| 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 | | |
|-------------|--------|------|
| Cable color | Signal | Pin# |
| Red | break+ | PIN1 |
| Blue | break- | PIN2 |

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

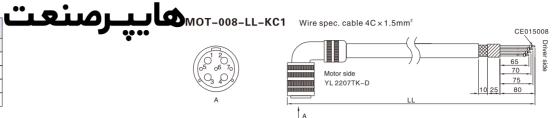
| MOT-005-LL-KM1-B | | | |
|-----------------------------|--------|------------|--|
| Cable Color Signal M17 7PIN | | | |
| Yellow | U | PIN1 | |
| Red | V | PIN2 | |
| Black | W | PIN3 | |
| Yellow-green | PE | ÷ | |
| Shield terminal | shield | metal ring | |
| Red(thin) | brake+ | PIN4 | |
| Blue(thin) | brake- | PIN5 | |

| MOT-008-LL-KL | | |
|---------------|--------|-------|
| Cable Color | Signal | PIN # |
| 1 | U | PIN1 |
| 2 | V | PIN2 |
| 3 | W | PIN3 |
| Yellow-green | PE | PIN4 |
| | | |

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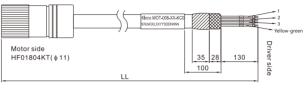
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FAMCO Wiring Diagram for The Power Cable

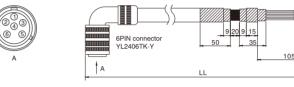


MOT-008-LL-KC0 Wire Spec.; ECHU H05VVC4V5-K4×1.5mm² BLACK

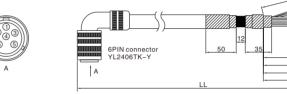




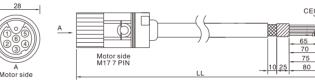
MOT-008-LL-KC2 Power cable O-2395 4C × 1.5mm²(30/0.25B)



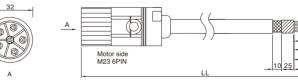
MOT-008-LL-KC2-B Wire spec. ECHU RVVYP 4×1.5+2×0.5

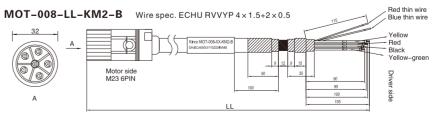


MOT-008-LL-KM1 Wire Spec.cable 4C × 1.5mm²



MOT-008-LL-KM2 Wire spec. cable 4C×1.5mm



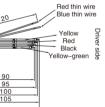


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تهران، کیلومتر ۲۱ بزرگراه لشگری (جاده مخصوص کرج)









| MOT-008-LL-KC1 | | |
|----------------|--------|-------|
| Cable Color | Signal | PIN # |
| 1 | U | PIN2 |
| 2 | V | PIN3 |
| 3 | W | PIN4 |
| Yellow-green | PE | PIN1 |
| | | |

| MOT-008-LL-KC0 | | | |
|----------------|--------|--------|--|
| 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 | | | |
|----------------|--------|------------|--|
| Cable Color | Signal | YL2406TK-Y | |
| Yellow | U | PIN1 | |
| Red | V | PIN2 | |
| Black | W | PIN3 | |
| Yellow-green | PE | PIN4 | |

| MOT-008-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 terminal | Shield | metal ring | |

| MOT-008-LL-KM1 | | | | |
|----------------|--------|----------|--|--|
| Cable color | Signal | M17 7Pin | | |
| 1 | U | PIN1 | | |
| 2 | V | PIN2 | | |
| 3 | W | PIN3 | | |
| Yellow-green | PE | ÷ | | |

| MOT-008-LL-KM2 | | | | |
|----------------|--------|-------|--|--|
| Cable Color | Signal | PIN # | | |
| 1 | U | PIN1 | | |
| 2 | V | PIN2 | | |
| 3 | W | PIN4 | | |
| Yellow-green | PE | PIN3 | | |

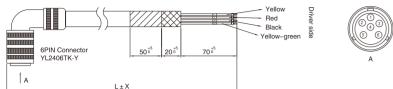
| MOT-008-LL-KM2-B | | | | | |
|------------------|--------|------------|--|--|--|
| Cable Color | Signal | M23 6PIN | | | |
| Yellow | U | PIN1 | | | |
| Red | V | PIN2 | | | |
| Black | W | PIN4 | | | |
| Yellow-green | PE | PIN3 | | | |
| Shield terminal | Shield | metal ring | | | |
| Red(thin) | brake+ | PIN5 | | | |
| Blue(thin) | brake- | PIN6 | | | |

| 1 | 4 |
|---|----|
| t | Η. |

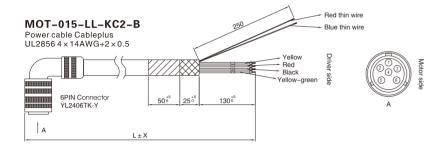
Wiring Diagram for The Power Cable

MOT-015-LL-KC2

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



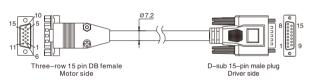
| MOT-015-LL-KC2 | | | | | |
|----------------|--------|------------|--|--|--|
| Cable color | Signal | YL2406TK-Y | | | |
| Yellow | U | PIN1 | | | |
| Red | V | PIN2 | | | |
| Black | W | PIN3 | | | |
| Yellow-green | PE | PIN4 | | | |
| Shield | Shield | Metal ring | | | |



| MOT-015-LL-KC2-B | | | | | |
|------------------|--------|------------|--|--|--|
| 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 | | | |

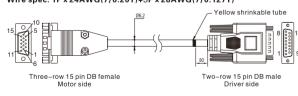
Wiring Diagram for The Encoder Cable

ENCCA-LL-KH Wire spec. 1P × 24AWG(7/0.20T)+7P × 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 | В | 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 × 24AWG(7/0.20T)+3P × 28AWG(7/0.127T)

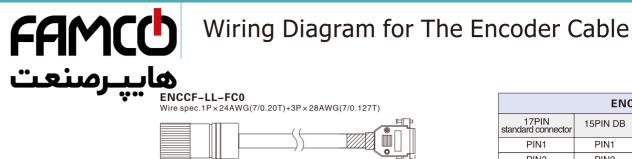


| | ENCCF-LL-FH | | | | | |
|------------------------|----------------------|-----------|--------------|---------------------|--|--|
| Three-row 15 pin DB | Two–row 15 pin DB | Signal | Wire color | Motor wire color | | |
| PIN1 | PIN1 | +5V | Red(thick) | Red | | |
| PIN8 | PIN2 | A | Brown | Blue-black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

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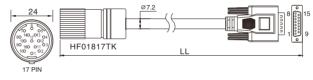




ENCCA-LL-KC0

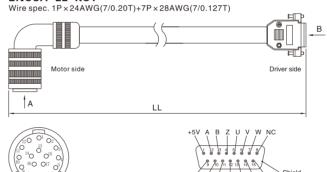
17PIN

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



15PIN DB

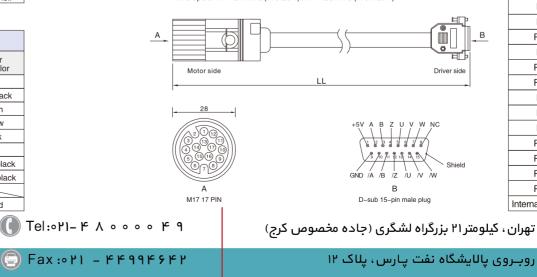
ENCCA-LL-KC1





ENCCA-LL-KM1 Wire spec. 1P × 24AWG(7/0.20T)+7P × 28AWG(7/0.127T)

YL 2217TK



| 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 | В | Yellow | Green | |
| PIN14 | PIN4 | Z | Green | Yellow | |
| PIN2 | PIN9 | GND | Black(thick) | Black | |
| PIN4 | PIN10 | /A | Brown-white | Blue | |
| PIN6 | PIN11 | /B | Yellow-white | Green-black | |
| PIN15 | PIN12 | /Z | Green-white | Yellow-black | |
| Other pins empty | Other pins empty | \sum | | | |
| Metal coil | Shell | Shield | Shield | Shield | |

| ENCCA-LL-KC0/ENCCA-LL-KC1 | | | | | |
|---------------------------|----------------|--------|-------------------------|----------------------|--|
| 17PIN | 15PIN DB | Signal | External wire colour | Motor wire colour | |
| PIN1 | PIN1 | +5V | Red(thick) | Red | |
| PIN3 | PIN2 | А | Orange | Blue | |
| PIN5 | PIN3 | В | 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 | | | | | |
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| PIN15 | PIN12 | /Z | Green-white | Yellow-black | |
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| PIN17 | PIN15 | /W | Blue-white | White-black | |
| Internal metal ring | DB metal shell | Shield | Shield | Shield | |