

Ezi-SPEED[®]

BLDC Motor Speed Control System

- AC Input **BLDC Motor Speed Control System**
- Wide Speed Control Range(**50~4000 [rpm]**)
- **Stable Speed Control** by Vector Control(**Speed Regulation 0.2%**)
- A Stable **Low Speed(50 [rpm])** by Velocity Observer
- Product Line-Up : **30, 60, 120, 200, 400W**
- **Energy-Saving** by Low Heat
- Easy Speed Control, Easy Wiring and Connecting(Front Panel and I/O)

Full Digital



CE

FASTECH

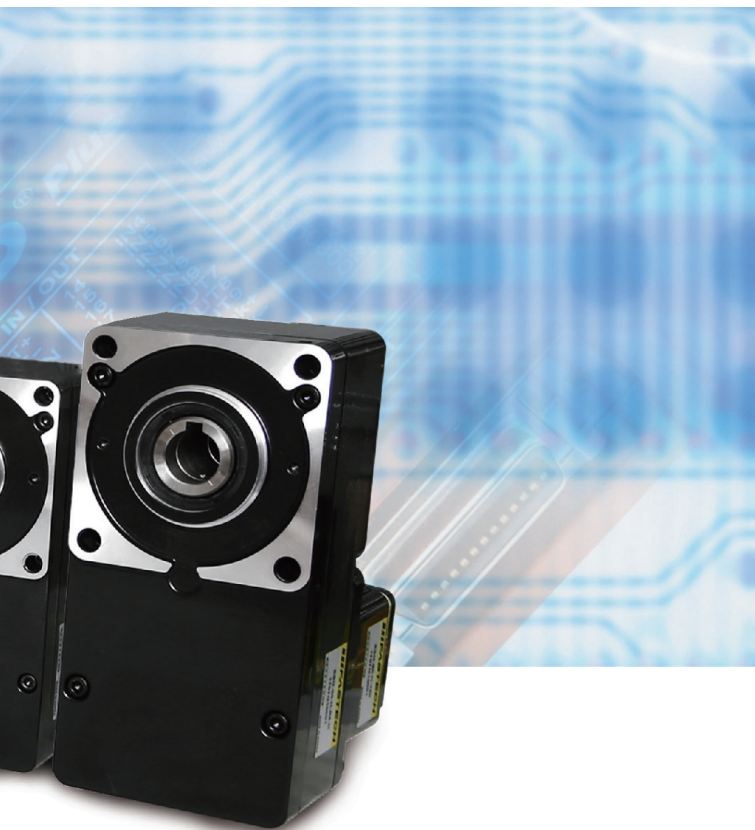
Fast, Accurate, Smooth Motion



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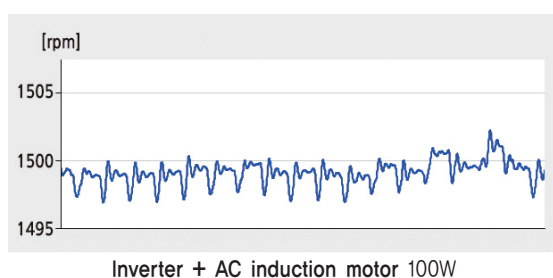
1 Stable Speed Control

(Speed Regulation 0.2%)

Ezi-SPEED compare the setting speed with the speed feedback signals from the motor at all time, and adjusts the motor's applied current. So, even if the load changes, stable rotation is performed from low speed to high speed. Inverter controlled AC induction motor do not perform feedback signals, so the speed will reduce significantly when load increases. Ezi-SPEED is recommended for application that require speed stable.

* Load factor: 95% * Setting speed: 1,500 [rpm]
* Speed regulation measuring with encoder: 32,000 [ppr]

— Speed measuring value



2 Wide Speed Control Range

(Speed Ratio: 1:80)

Ezi-SPEED has a broader speed control range compared to AC induction motor using inverter. And the torque is not restricted at low speed, Ezi-SPEED is recommended for application that require torque stable.

Speed range of Ezi-SPEED: 50~4,000 [rpm]

Speed range of Inverter + AC induction motor:

200~2,400 [rpm]

* Speed range of Inverter + AC induction motor is depends on models.

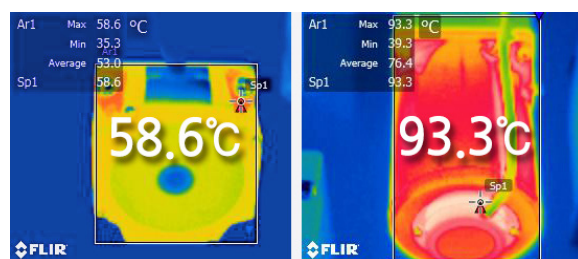
| Product | Speed Control Range | Speed Ratio |
|-------------------------------|---------------------|-------------|
| Ezi-SPEED | 50~4,000 [rpm] | 1:80 |
| Inverter + AC induction motor | 200~2,400 [rpm] | 1:12 |

3 High Efficiency

(Energy Savings)

Brushless motors used permanent magnets in the rotor. It is prevent little secondary loss from rotor. Therefore, BLDC motor is more high efficiency than inverter controlled AC induction motor. So customer can save energy.

- Load factor: 100%, Setting speed: 1,500 [rpm]
- Comparison of motor temperature after 4 hours continuous operation.



4 Compact, Light Weight, High Power

(Compared to AC induction motor)

BLDC motor have compact design, light weight and provide high power by the permanent magnets being used in the rotor. So BLDC motor can power-up compared to AC induction motor.



5 Easy Wiring

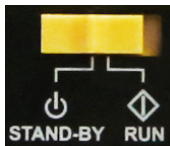
The motor connector and sensor connector can be easily connected to drive. Also there is no need for soldering or special tools when connecting the power and I/O connectors, just insert the lead wire to power connector and use driver also just insert the lead wire while pushing the orange button of I/O connector.



Motor Connector Wiring

6 Easy Use

(Front Panel)



• Control of Operation and Stop

The motor starts when switch is set to the "RUN" position, it set to the "STAND-BY" position, the motor decelerates to a stop. The motor can be operated with only one switch.



• Control of rotation direction

Changing the rotation direction is possible with the rotation direction switch. It is possible to change the motor direction even when this motor is in operation.



• Control of Speed

The speed control buttons allow you to use simple speed control and many functions. Pushing button increases the speed and pushing button reduces the speed. When the desired speed is reached, simply push the button to set the speed value.

7 Operation by External I/O

(ex. PLC, I/F etc)

Ezi-SPEED is possible Start/Stop, Changing the rotation direction and Multi speed operation by external I/O.



Ezi-SPEED

I/O operation



PLC

8 Display Load Factor and Actual Speed

With the rated torque of the motor at 100%, the load factor can be expressed as a percentage. Users can check load factor during use of application. So it is possible to keep the application in optimum condition because the load can be changed by aging. The actual speed of motor can be display. (Motor speed, Gearbox speed, Linear speed)



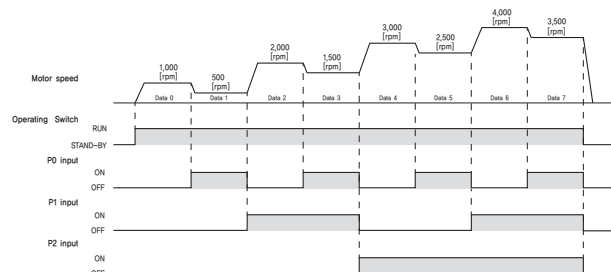
Indication at load factor of 100%



Actual speed at setting speed of 1,500 [rpm]

9 8-Speed Settings



Operation is possible by setting the data to operating data No.0~No.7 and switching the input of the P0, P1 and P2 inputs. 8-Speed operations is possible only with Ezi-SPEED without a separate control device.



10 Various Functions can be Set on the Drive

- Motor Start/Stop
- Setting the operation speed
- Changing the rotation direction
- Changing the indication
- Operation speed indication when the speed reduction or speed increasing ratio is set
- Setting the acceleration/deceleration time
- Button operation lock
- Speed setting for 8-speed operation
- Speed limits setting
- Validating the external operation signals
- External I/O signal allocation
- Setting the overload alarm detection time

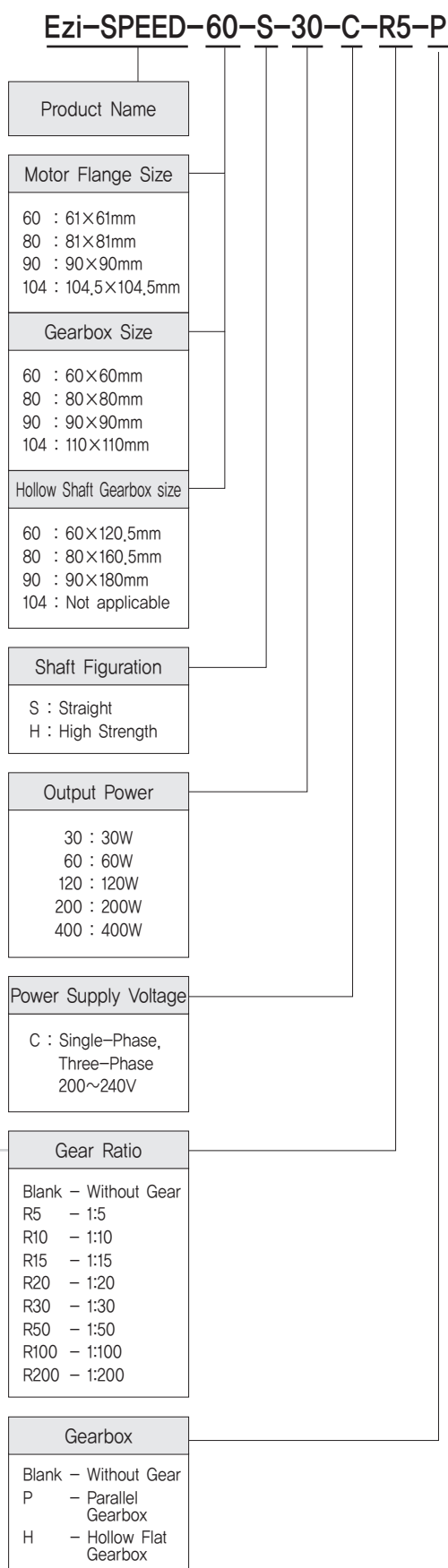
11 Lock the Setting and Operation

- Ezi-SPEED provides a lock function to prevent the undesired changes in the speed and the changes or protection of data with operation of the button.
- **Setting the lock function**
Press the  button for 5 seconds or more when "STAND-BY" mode.
When "LOCK" appears, the lock function is activated.
- **Cancelling the lock function**
Press the  button for 5 seconds or more.
When "UnLk" appears, the lock function has been cancelled.

12 Protective Function

- Ezi-SPEED has the ability to detect abnormal condition like overload, over voltage etc.
If abnormality is detected, the operation is stopped and an alarm is indicated.
- A regenerative resistor can be used when the deceleration time is short or when the large inertia is driven by providing a regenerative resistor contact terminal. Also the protection function has been strengthened for the external force acting on the motor shaft.

● Ezi-SPEED Part Numbering



● Standard Combination

| Output Power | Unit Part Number | Motor Model Number | Drive Model Number |
|--------------|-----------------------|--------------------|--------------------|
| 30W | Ezi-SPEED-60-S-30-C | ESM-60-S-30 | ESD-30-C |
| 60W | Ezi-SPEED-80-S-60-C | ESM-80-S-60 | ESD-60-C |
| 120W | Ezi-SPEED-90-S-120-C | ESM-90-S-120 | ESD-120-C |
| 200W | Ezi-SPEED-104-S-200-C | ESM-104-S-200 | ESD-200-C |
| 400W | Ezi-SPEED-104-S-400-C | ESM-104-S-400 | ESD-400-C |

● Combination with Gearbox

| Out-put Power | Unit Part Number | Motor Model Number | Drive Model Number | Gearbox Model Number | Gear Ratio |
|---------------|-----------------------------|--------------------|--------------------|----------------------|------------|
| 30W | Ezi-SPEED-60-H-30-C-R5-P | ESM-60-H-30 | ESD-30-C | ESG-60-H-R5-P | 1:5 |
| | Ezi-SPEED-60-H-30-C-R5-H | | | ESG-60-H-R5-H | |
| | Ezi-SPEED-60-H-30-C-R10-P | | | ESG-60-H-R10-P | 1:10 |
| | Ezi-SPEED-60-H-30-C-R10-H | | | ESG-60-H-R10-H | |
| | Ezi-SPEED-60-H-30-C-R15-P | | | ESG-60-H-R15-P | 1:15 |
| | Ezi-SPEED-60-H-30-C-R15-H | | | ESG-60-H-R15-H | |
| | Ezi-SPEED-60-H-30-C-R20-P | | | ESG-60-H-R20-P | 1:20 |
| | Ezi-SPEED-60-H-30-C-R20-H | | | ESG-60-H-R20-H | |
| | Ezi-SPEED-60-H-30-C-R30-P | | | ESG-60-H-R30-P | 1:30 |
| | Ezi-SPEED-60-H-30-C-R30-H | | | ESG-60-H-R30-H | |
| | Ezi-SPEED-60-H-30-C-R50-P | | | ESG-60-H-R50-P | 1:50 |
| | Ezi-SPEED-60-H-30-C-R50-H | | | ESG-60-H-R50-H | |
| | Ezi-SPEED-60-H-30-C-R100-P | | | ESG-60-H-R100-P | 1:100 |
| | Ezi-SPEED-60-H-30-C-R100-H | | | ESG-60-H-R100-H | |
| 60W | Ezi-SPEED-60-H-30-C-R200-P | | | ESG-60-H-R200-P | 1:200 |
| | Ezi-SPEED-60-H-30-C-R200-H | | | ESG-60-H-R200-H | |
| | Ezi-SPEED-80-H-60-C-R5-P | ESM-80-H-60 | ESD-60-C | ESG-80-H-R5-P | 1:5 |
| | Ezi-SPEED-80-H-60-C-R5-H | | | ESG-80-H-R5-H | |
| | Ezi-SPEED-80-H-60-C-R10-P | | | ESG-80-H-R10-P | 1:10 |
| | Ezi-SPEED-80-H-60-C-R10-H | | | ESG-80-H-R10-H | |
| | Ezi-SPEED-80-H-60-C-R15-P | | | ESG-80-H-R15-P | 1:15 |
| | Ezi-SPEED-80-H-60-C-R15-H | | | ESG-80-H-R15-H | |
| | Ezi-SPEED-80-H-60-C-R20-P | | | ESG-80-H-R20-P | 1:20 |
| | Ezi-SPEED-80-H-60-C-R20-H | | | ESG-80-H-R20-H | |
| | Ezi-SPEED-80-H-60-C-R30-P | | | ESG-80-H-R30-P | 1:30 |
| | Ezi-SPEED-80-H-60-C-R30-H | | | ESG-80-H-R30-H | |
| | Ezi-SPEED-80-H-60-C-R50-P | | | ESG-80-H-R50-P | 1:50 |
| | Ezi-SPEED-80-H-60-C-R50-H | | | ESG-80-H-R50-H | |
| | Ezi-SPEED-80-H-60-C-R100-P | | | ESG-80-H-R100-P | 1:100 |
| | Ezi-SPEED-80-H-60-C-R100-H | | | ESG-80-H-R100-H | |
| 120W | Ezi-SPEED-80-H-60-C-R200-P | | | ESG-80-H-R200-P | 1:200 |
| | Ezi-SPEED-80-H-60-C-R200-H | | | ESG-80-H-R200-H | |
| | Ezi-SPEED-90-H-120-C-R5-P | ESM-90-H-120 | ESD-120-C | ESG-90-H-R5-P | 1:5 |
| | Ezi-SPEED-90-H-120-C-R5-H | | | ESG-90-H-R5-H | |
| | Ezi-SPEED-90-H-120-C-R10-P | | | ESG-90-H-R10-P | 1:10 |
| | Ezi-SPEED-90-H-120-C-R10-H | | | ESG-90-H-R10-H | |
| | Ezi-SPEED-90-H-120-C-R15-P | | | ESG-90-H-R15-P | 1:15 |
| | Ezi-SPEED-90-H-120-C-R15-H | | | ESG-90-H-R15-H | |
| | Ezi-SPEED-90-H-120-C-R20-P | | | ESG-90-H-R20-P | 1:20 |
| | Ezi-SPEED-90-H-120-C-R20-H | | | ESG-90-H-R20-H | |
| | Ezi-SPEED-90-H-120-C-R30-P | | | ESG-90-H-R30-P | 1:30 |
| | Ezi-SPEED-90-H-120-C-R30-H | | | ESG-90-H-R30-H | |
| | Ezi-SPEED-90-H-120-C-R50-P | | | ESG-90-H-R50-P | 1:50 |
| | Ezi-SPEED-90-H-120-C-R50-H | | | ESG-90-H-R50-H | |
| | Ezi-SPEED-90-H-120-C-R100-P | | | ESG-90-H-R100-P | 1:100 |
| | Ezi-SPEED-90-H-120-C-R100-H | | | ESG-90-H-R100-H | |
| | Ezi-SPEED-90-H-120-C-R200-P | | | ESG-90-H-R200-P | 1:200 |
| | Ezi-SPEED-90-H-120-C-R200-H | | | ESG-90-H-R200-H | |

● Combination with Gearbox

| Out-put Power | Unit Part Number | Motor Model Number | Drive Model Number | Gearbox Model Number | Gear Ratio |
|---------------|------------------------------|--------------------|--------------------|----------------------|------------|
| 200W | Ezi-SPEED-104-H-200-C-R5-P | ESM-104-H-200 | ESD-200-C | ESG-104-H-R5-P | 1:5 |
| | Ezi-SPEED-104-H-200-C-R10-P | | | ESG-104-H-R10-P | 1:10 |
| | Ezi-SPEED-104-H-200-C-R15-P | | | ESG-104-H-R15-P | 1:15 |
| | Ezi-SPEED-104-H-200-C-R20-P | | | ESG-104-H-R20-P | 1:20 |
| | Ezi-SPEED-104-H-200-C-R30-P | | | ESG-104-H-R30-P | 1:30 |
| | Ezi-SPEED-104-H-200-C-R50-P | | | ESG-104-H-R50-P | 1:50 |
| | Ezi-SPEED-104-H-200-C-R100-P | | | ESG-104-H-R100-P | 1:100 |
| | Ezi-SPEED-104-H-200-C-R200-P | | | ESG-104-H-R200-P | 1:200 |

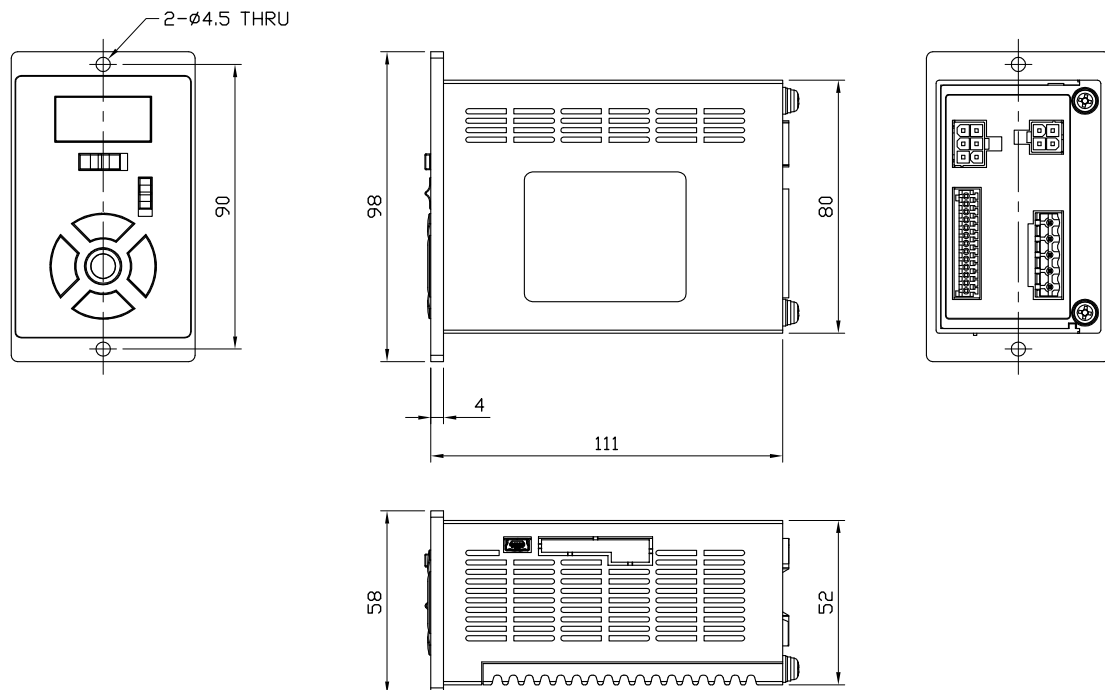
| Out-put Power | Unit Part Number | Motor Model Number | Drive Model Number | Gearbox Model Number | Gear Ratio |
|---------------|------------------------------|--------------------|--------------------|----------------------|------------|
| 400W | Ezi-SPEED-104-H-400-C-R5-P | ESM-104-H-400 | ESD-400-C | ESG-104-H-R5-P | 1:5 |
| | Ezi-SPEED-104-H-400-C-R10-P | | | ESG-104-H-R10-P | 1:10 |
| | Ezi-SPEED-104-H-400-C-R15-P | | | ESG-104-H-R15-P | 1:15 |
| | Ezi-SPEED-104-H-400-C-R20-P | | | ESG-104-H-R20-P | 1:20 |
| | Ezi-SPEED-104-H-400-C-R30-P | | | ESG-104-H-R30-P | 1:30 |
| | Ezi-SPEED-104-H-400-C-R50-P | | | ESG-104-H-R50-P | 1:50 |
| | Ezi-SPEED-104-H-400-C-R100-P | | | ESG-104-H-R100-P | 1:100 |
| | Ezi-SPEED-104-H-400-C-R200-P | | | ESG-104-H-R200-P | 1:200 |

● Specifications of Drive

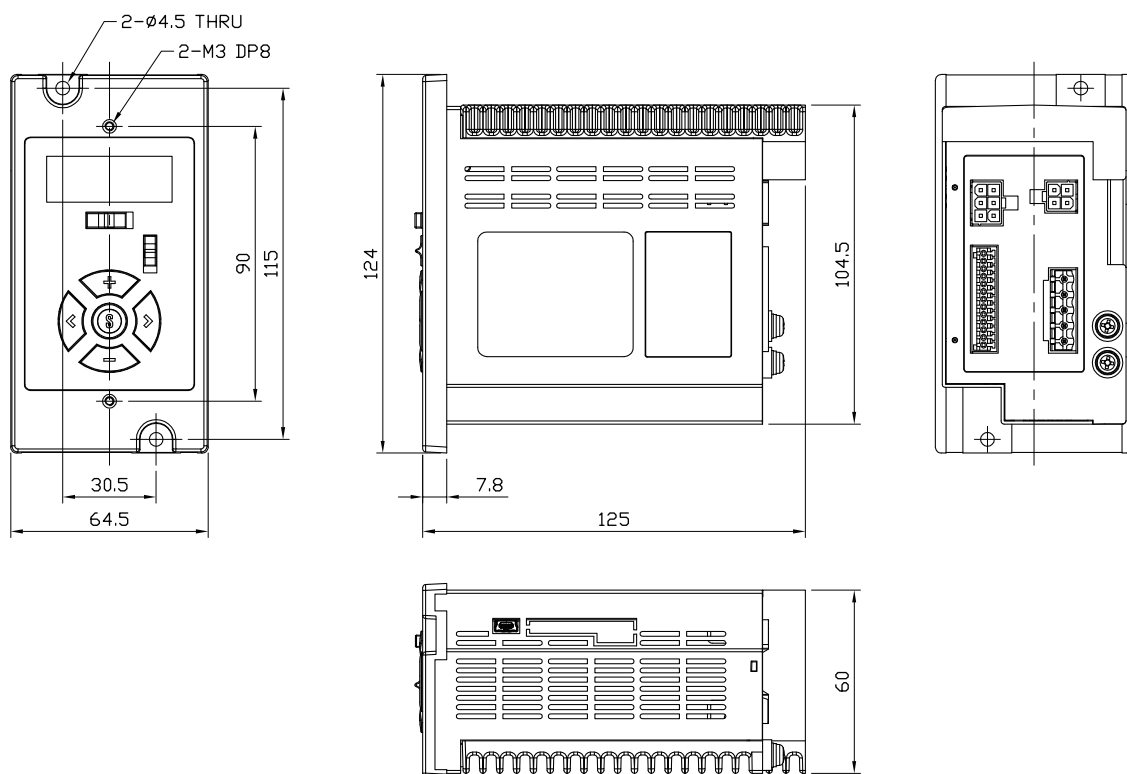
| Unit Part Number | | ESD-30-C | ESD-60-C | ESD-120-C | ESD-200-C | ESD-400-C |
|------------------------------|-----------------------------|---|---|---|---|---|
| Rated Output Power | | 30W | 60W | 120W | 200W | 400W |
| Power Supply Input | Rated Voltage | Single-Phase 200~240V / Three-Phase 200~240V | | | | |
| | Frequency | 50/60Hz | | | | |
| | Permissible Frequency Range | ±5% | | | | |
| | Rated Input Current | Single-Phase: 0.88A Three-Phase: 0.51A | Single-Phase: 1.55A Three-Phase: 0.90A | Single-Phase: 2.43A Three-Phase: 1.41A | Single-Phase: 3.42A Three-Phase: 1.97A | Single-Phase: 5.64A Three-Phase: 3.26A |
| | Maximum Input Current | Single-Phase: 1.9A Three-Phase: 1.1A | Single-Phase: 2.8A Three-Phase: 1.7A | Single-Phase: 4.5A Three-Phase: 2.6A | Single-Phase: 5.47A Three-Phase: 3.16A | Single-Phase: 7.85A Three-Phase: 4.53A |
| Rated Output Current | | 0.17A | 0.43A | 0.89A | 1.60A | 2.31A |
| Rated Torque | | 0.096N·m | 0.191N·m | 0.382N·m | 0.637N·m | 1.27N·m |
| Maximum instantaneous Torque | | 0.144N·m | 0.287N·m | 0.573N·m | 1.15N·m | 1.91N·m |
| Rated Speed | | 3,000 [rpm] | | | | |
| Speed Control Range | | 50~4,000 [rpm] | | | | |
| Speed Regulation | | 0.2% or less / Conditions: 0~Rated Torque, Rated Speed, Rated Voltage, no load normal Temperature | | | | |
| Environment | Temperature | · In Use: 0~40℃ · In Storage: -20~70℃ | | | | |
| | Humidity | · In Use: 35~85% RH (Non-Condensing) · In Storage: 10~90% RH (Non-Condensing) | | | | |
| | Vibration resistant | 0.5g | | | | |
| I/O Signal | Input Signal Function | 5 user inputs (Photocoupler) | | | | |
| | Output Signal Function | 3 user outputs (Photocoupler) | | | | |

● Dimensions of Drive [mm]

1. 30, 60, 120W Drive



2. 200, 400W Drive

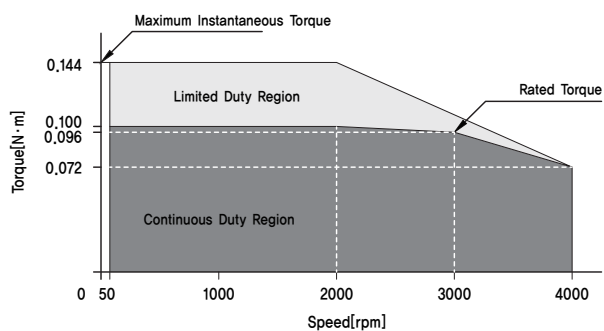


● Specifications of Motor

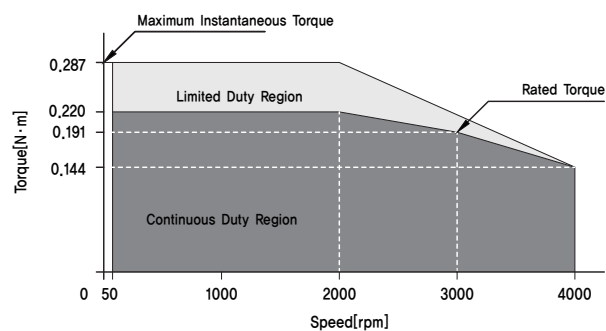
| MODEL | UNIT | ESM- 60-S-30 | ESM- 80-S-60 | ESM- 90-S-120 | ESM- 104-S-200 | ESM- 104-S-400 |
|------------------------------------|-------------------------------------|-----------------|-----------------|------------------|-------------------|-------------------|
| | | | | | | |
| RATED OUTPUT POWER (CONTINUOUS) | W | 30 | 60 | 120 | 200 | 400 |
| RATED TORQUE | N·m | 0,096 | 0,191 | 0,382 | 0,637 | 1,27 |
| RATED OUTPUT CURRENT | A | 0,17 | 0,43 | 0,89 | 1,65 | 2,57 |
| RATED SPEED | rpm | 3,000 | | | | |
| PERMISSIBLE LOAD INERTIA MOMENT | $10^{-4}\text{kg} \cdot \text{m}^2$ | 0,5 | 1,8 | 5,8 | 5,8 | 8,75 |
| INERTIA MOMENT | $10^{-4}\text{kg} \cdot \text{m}^2$ | 0,086 | 0,234 | 0,61 | 0,61 | 0,66 |
| PHASE RESISTANCE | Ω | 44 | 16 | 3,6 | 3,6 | 2,3 |
| PHASE BACK EMF CONSTANT | mV/min | 22,2 | 24,8 | 19 | 30 | 23 |
| TORQUE CONSTANT | N·m/Arms | 0,26 | 0,34 | 0,23 | 0,26 | 0,65 |
| WEIGHTS | kg | 0,5 | 0,8 | 1,3 | 2,4 | 2,4 |
| LENGTH(L) | mm | 62 | 74 | 94 | 156 | 156 |
| PERMISSIBLE OVERHUNG LOAD | 10mm from shaft end [N] | 70 | 120 | 160 | 160 | 160 |
| | 20mm from shaft end [N] | 100 | 140 | 170 | 170 | 170 |

● Torque Characteristics of Motor

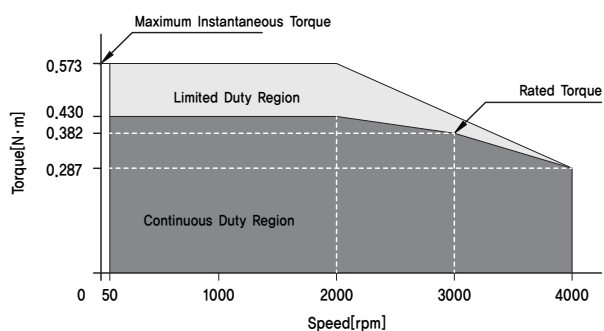
Ezi-SPEED-30W



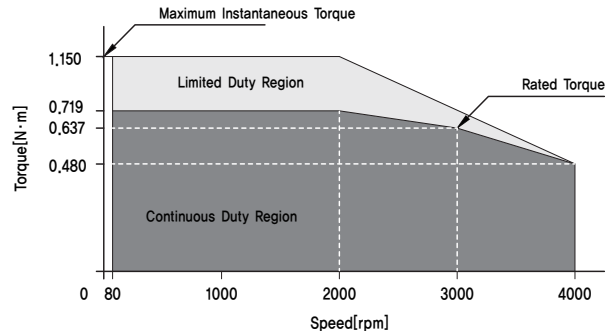
Ezi-SPEED-60W



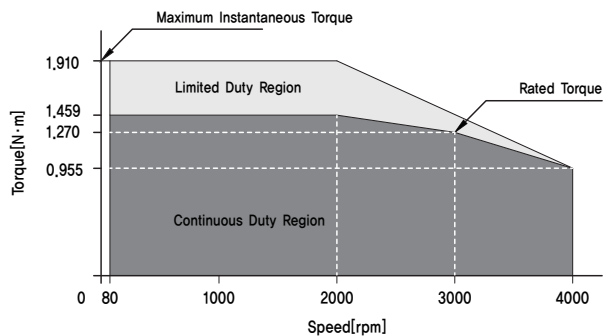
Ezi-SPEED-120W



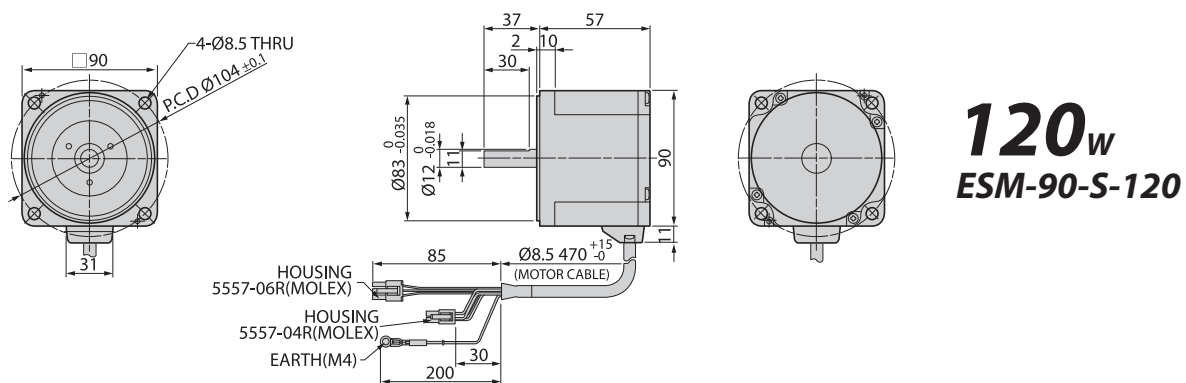
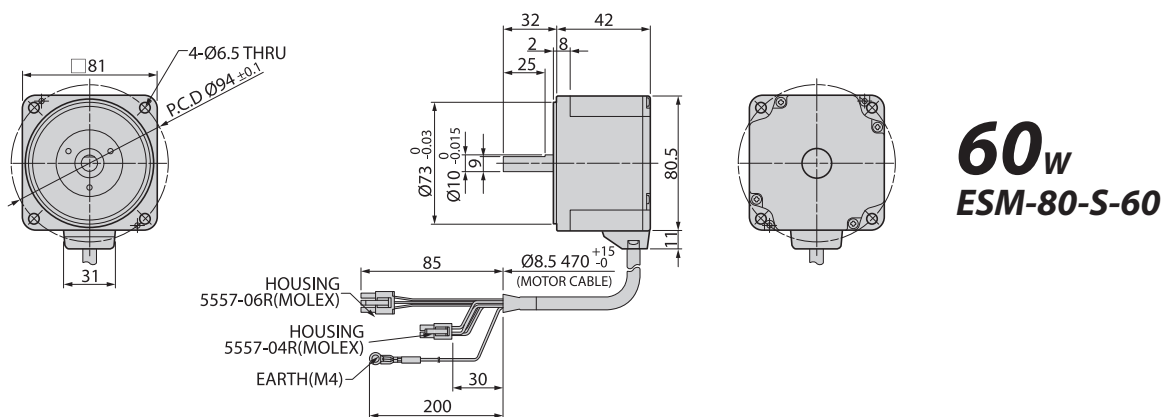
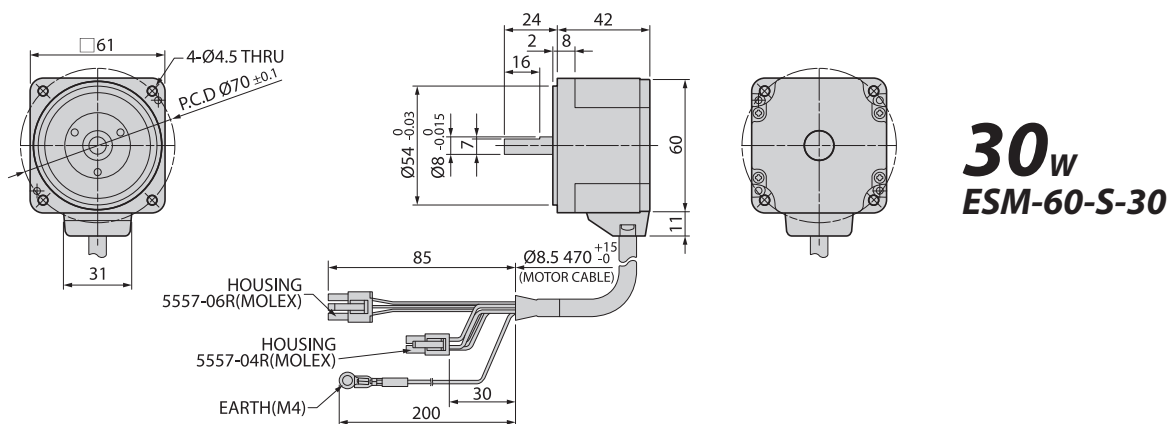
Ezi-SPEED-200W



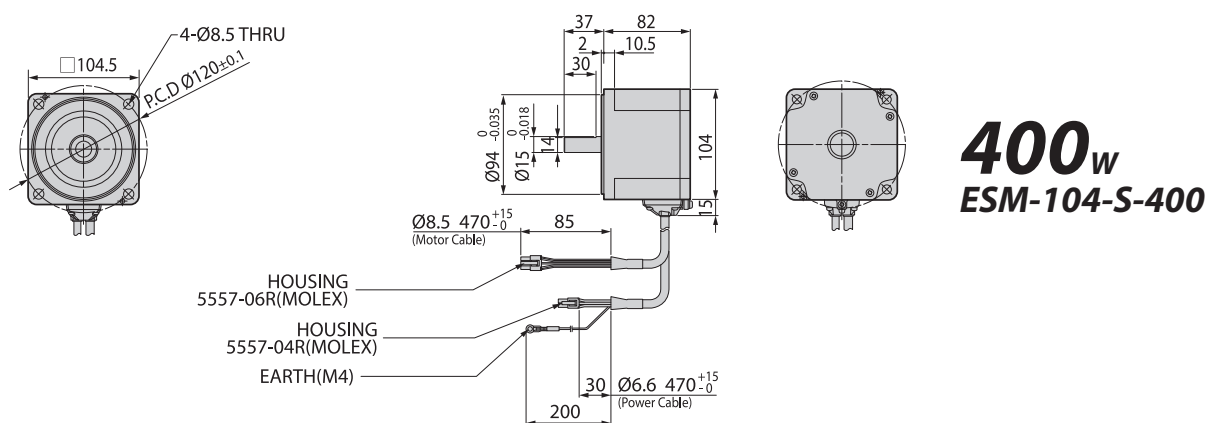
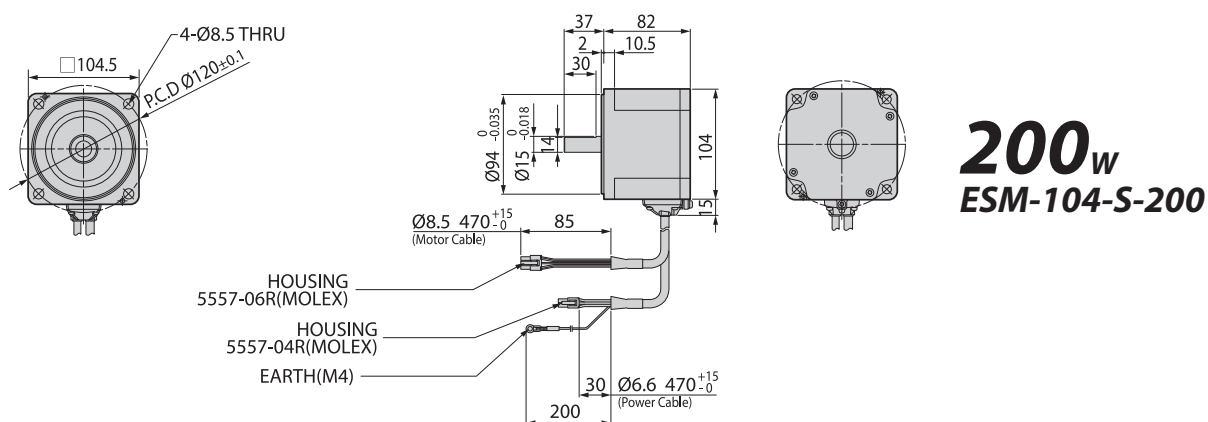
Ezi-SPEED-400W



● Dimensions of Motor [mm]



● Dimensions of Motor [mm]



● Specifications of Motor with Gearbox

30_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|----------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-60-H-30-C-R5-P | 5 | 0,45 | 0,34 | 20~400 | 0,9 | 100 | 150 | 40 |
| Ezi-SPEED-60-H-30-C-R10-P | 10 | 0,9 | 0,68 | 10~200 | | 150 | 200 | |
| Ezi-SPEED-60-H-30-C-R15-P | 15 | 1,35 | 1 | 6,7~133 | | | | |
| Ezi-SPEED-60-H-30-C-R20-P | 20 | 1,8 | 1,4 | 5~100 | | 200 | 300 | |
| Ezi-SPEED-60-H-30-C-R30-P | 30 | 2,6 | 1,9 | 3,3~67 | | | | |
| Ezi-SPEED-60-H-30-C-R50-P | 50 | 4,3 | 3,2 | 2~40 | | | | |
| Ezi-SPEED-60-H-30-C-R100-P | 100 | 6 | 5,4 | 1~20 | | | | |
| Ezi-SPEED-60-H-30-C-R200-P | 200 | 6 | 5,4 | 0,5~10 | | | | |

60_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|----------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-80-H-60-C-R5-P | 5 | 0,9 | 0,68 | 20~400 | 1,6 | 200 | 250 | 100 |
| Ezi-SPEED-80-H-60-C-R10-P | 10 | 1,8 | 1,4 | 10~200 | | 300 | 350 | |
| Ezi-SPEED-80-H-60-C-R15-P | 15 | 2,7 | 2 | 6,7~133 | | | | |
| Ezi-SPEED-80-H-60-C-R20-P | 20 | 3,6 | 2,7 | 5~100 | | 150 | 550 | |
| Ezi-SPEED-80-H-60-C-R30-P | 30 | 5,2 | 3,9 | 3,3~67 | | | | |
| Ezi-SPEED-80-H-60-C-R50-P | 50 | 8,6 | 6,5 | 2~40 | | | | |
| Ezi-SPEED-80-H-60-C-R100-P | 100 | 16 | 12,9 | 1~20 | | | | |
| Ezi-SPEED-80-H-60-C-R200-P | 200 | 16 | 14 | 0,5~10 | | | | |

120_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|-----------------------------|------------|------------------------|-------------|-----------------------------|------------------|-----------------------------|---------------------|---------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-90-H-120-C-R5-P | 5 | 1,8 | 1,4 | 20~400 | 2,7 | 300 | 400 | 150 |
| Ezi-SPEED-90-H-120-C-R10-P | 10 | 3,6 | 2,7 | 10~200 | | 400 | 500 | |
| Ezi-SPEED-90-H-120-C-R15-P | 15 | 5,4 | 4,1 | 6,7~133 | | | | |
| Ezi-SPEED-90-H-120-C-R20-P | 20 | 7,2 | 5,4 | 5~100 | | 500 | 650 | |
| Ezi-SPEED-90-H-120-C-R30-P | 30 | 10,3 | 7,7 | 3,3~67 | | | | |
| Ezi-SPEED-90-H-120-C-R50-P | 50 | 17,2 | 12,9 | 2~40 | | | | |
| Ezi-SPEED-90-H-120-C-R100-P | 100 | 30 | 25,8 | 1~20 | | | | |
| Ezi-SPEED-90-H-120-C-R200-P | 200 | 30 | 27 | 0,5~10 | | | | |

● Specifications of Motor with Gearbox

200_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|------------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-104-H-200-C-R5-P | 5 | 2,9 | 2 | 20~400 | 4,2 | 300 | 400 | 150 |
| Ezi-SPEED-104-H-200-C-R10-P | 10 | 5,9 | 4,1 | 10~200 | | 400 | 500 | |
| Ezi-SPEED-104-H-200-C-R15-P | 15 | 8,8 | 6,1 | 6,7~133 | | | | |
| Ezi-SPEED-104-H-200-C-R20-P | 20 | 11,7 | 8,1 | 5~100 | | | | |
| Ezi-SPEED-104-H-200-C-R30-P | 30 | 16,8 | 11,6 | 3,3~67 | | 500 | 650 | |
| Ezi-SPEED-104-H-200-C-R50-P | 50 | 28 | 19,4 | 2~40 | | | | |
| Ezi-SPEED-104-H-200-C-R100-P | 100 | 52,7 | 36,5 | 1~20 | | | | |
| Ezi-SPEED-104-H-200-C-R200-P | 200 | 70 | 63 | 0,5~10 | | | | |

400_w

| Unit Part Number | Gear Ratio | Permitted Torque [N・m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|------------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-104-H-400-C-R5-P | 5 | 5,9 | 4,3 | 20~400 | 4,2 | 300 | 400 | 150 |
| Ezi-SPEED-104-H-400-C-R10-P | 10 | 11,7 | 8,6 | 10~200 | | 400 | 500 | |
| Ezi-SPEED-104-H-400-C-R15-P | 15 | 17,6 | 12,8 | 6,7~133 | | | | |
| Ezi-SPEED-104-H-400-C-R20-P | 20 | 23,4 | 17,1 | 5~100 | | | | |
| Ezi-SPEED-104-H-400-C-R30-P | 30 | 33,5 | 24,5 | 3,3~67 | | 500 | 650 | |
| Ezi-SPEED-104-H-400-C-R50-P | 50 | 55,9 | 40,9 | 2~40 | | | | |
| Ezi-SPEED-104-H-400-C-R100-P | 100 | 70 | 63 | 1~20 | | | | |
| Ezi-SPEED-104-H-400-C-R200-P | 200 | 70 | 63 | 0,5~10 | | | | |

● Specifications of Motor with Hollow Shaft Gearbox

30_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|----------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-60-H-30-C-R5-H | 5 | 0,4 | 0,3 | 20~400 | 1,2 | 450 | 370 | 200 |
| Ezi-SPEED-60-H-30-C-R10-H | 10 | 0,85 | 0,64 | 10~200 | | 500 | 400 | |
| Ezi-SPEED-60-H-30-C-R15-H | 15 | 1,3 | 0,96 | 6,7~133 | | | | |
| Ezi-SPEED-60-H-30-C-R20-H | 20 | 1,7 | 1,3 | 5~100 | | | | |
| Ezi-SPEED-60-H-30-C-R30-H | 30 | 2,6 | 1,9 | 3,3~67 | | | | |
| Ezi-SPEED-60-H-30-C-R50-H | 50 | 4,3 | 3,2 | 2~40 | | | | |
| Ezi-SPEED-60-H-30-C-R100-H | 100 | 8,5 | 6,4 | 1~20 | | | | |
| Ezi-SPEED-60-H-30-C-R200-H | 200 | 17 | 12,8 | 0,5~10 | | | | |

60_w

| Unit Part Number | Gear Ratio | Permitted Torque [N·m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|----------------------------|------------|---------------------------|----------------|--------------------------------|---------------------|-----------------------------|---------------------|------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-80-H-60-C-R5-H | 5 | 0,85 | 0,64 | 20~400 | 2,2 | 800 | 660 | 400 |
| Ezi-SPEED-80-H-60-C-R10-H | 10 | 1,7 | 1,3 | 10~200 | | 1,200 | 1,000 | |
| Ezi-SPEED-80-H-60-C-R15-H | 15 | 2,6 | 1,9 | 6,7~133 | | | | |
| Ezi-SPEED-80-H-60-C-R20-H | 20 | 3,4 | 2,6 | 5~100 | | | | |
| Ezi-SPEED-80-H-60-C-R30-H | 30 | 5,1 | 3,8 | 3,3~67 | | | | |
| Ezi-SPEED-80-H-60-C-R50-H | 50 | 8,5 | 6,4 | 2~40 | | | | |
| Ezi-SPEED-80-H-60-C-R100-H | 100 | 17 | 12,8 | 1~20 | | | | |
| Ezi-SPEED-80-H-60-C-R200-H | 200 | 34 | 25 | 0,5~10 | | | | |

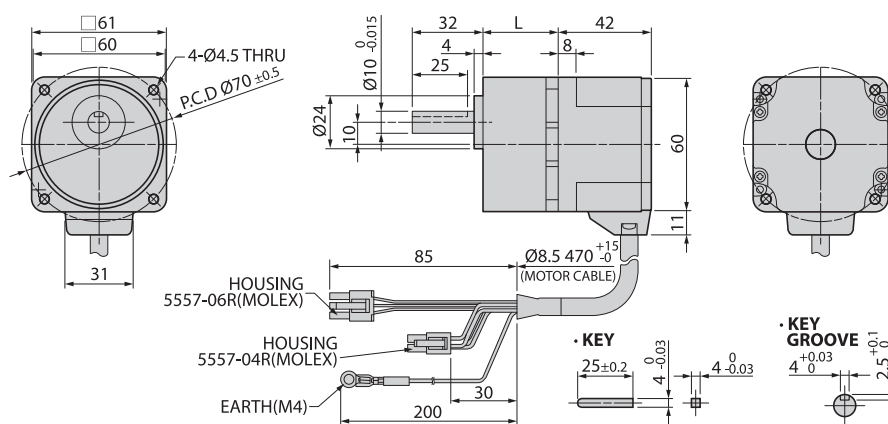
120_w

| Unit Part Number | Gear Ratio | Permitted Torque [N・m] | | Permitted Speed Range [rpm] | Unit Weight [kg] | Permitted Overhung Load [N] | | Permitted Thrust Load [N] |
|-----------------------------|---------------|---------------------------|----------------|-----------------------------------|------------------------|--------------------------------|------------------------|------------------------------------|
| | | 100~3,000 [rpm] | 4,000 [rpm] | | | 10mm from shaft end | 20mm from shaft end | |
| Ezi-SPEED-90-H-120-C-R5-H | 5 | 1,7 | 1,3 | 20~400 | 3,3 | 900 | 770 | 500 |
| Ezi-SPEED-90-H-120-C-R10-H | 10 | 3,4 | 2,6 | 10~200 | | 1,300 | 1,110 | |
| Ezi-SPEED-90-H-120-C-R15-H | 15 | 5,1 | 3,8 | 6,7~133 | | | | |
| Ezi-SPEED-90-H-120-C-R20-H | 20 | 6,8 | 5,1 | 5~100 | | 1,500 | 1,280 | |
| Ezi-SPEED-90-H-120-C-R30-H | 30 | 10,2 | 7,7 | 3,3~67 | | | | |
| Ezi-SPEED-90-H-120-C-R50-H | 50 | 17 | 12,8 | 2~40 | | | | |
| Ezi-SPEED-90-H-120-C-R100-H | 100 | 34 | 25,5 | 1~20 | | | | |
| Ezi-SPEED-90-H-120-C-R200-H | 200 | 68 | 51 | 0,5~10 | | | | |

● Dimensions of Motor with Gearbox [mm]

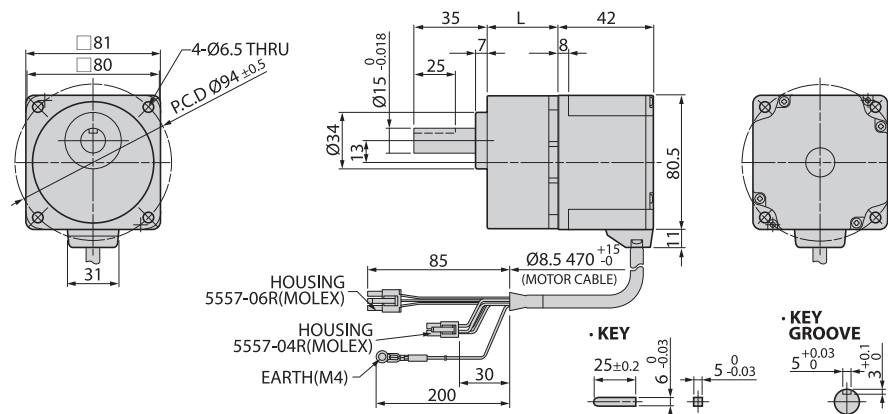
30_w

| Unit Part Number | Gearbox Part Number | Reduction Gear Ratio | Mounting Bolt | L Length [mm] |
|--------------------------|---------------------|----------------------|---------------|---------------|
| Ezi-SPEED-60-H-30-C-R□-P | ESG-60-H-R□-P | 5, 10, 15, 20 | M4 P 0.7 · 50 | 34 |
| | | 30, 50, 100 | M4 P 0.7 · 55 | 38 |
| | | 200 | M4 P 0.7 · 60 | 43 |



60_w

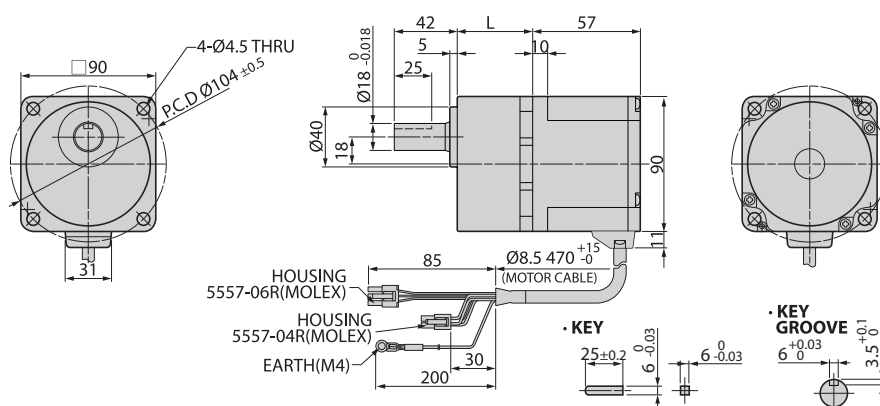
| Unit Part Number | Gearbox Part Number | Reduction Gear Ratio | Mounting Bolt | L Length [mm] |
|--------------------------|---------------------|----------------------|---------------|---------------|
| Ezi-SPEED-80-H-60-C-R□-P | ESG-80-H-R□-P | 5, 10, 15, 20 | M4 P 1.0 · 65 | 41 |
| | | 30, 50, 100 | M4 P 1.0 · 70 | 46 |
| | | 200 | M4 P 1.0 · 75 | 51 |



● Dimensions of Motor with Gearbox [mm]

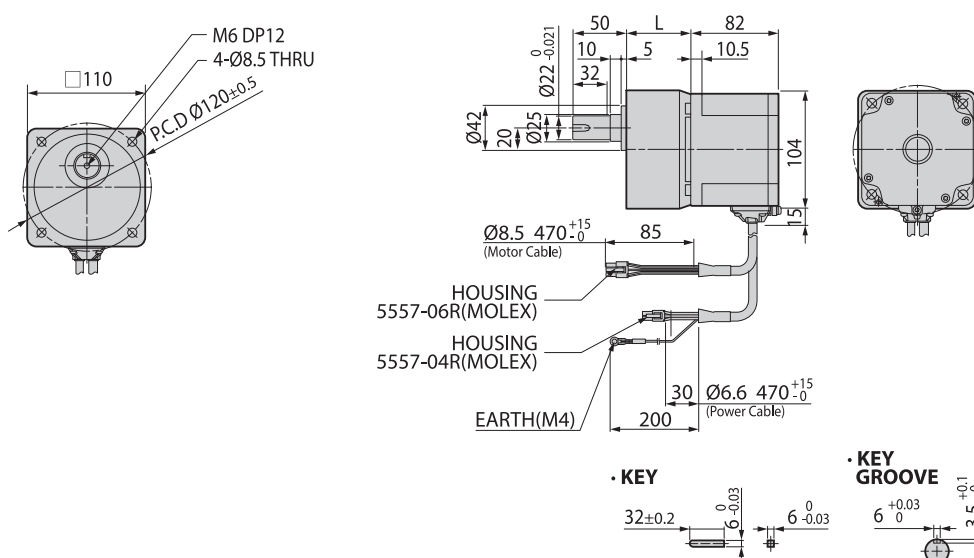
120_w

| Unit Part Number | Gearbox Part Number | Reduction Gear Ratio | Mounting Bolt | L Length [mm] |
|---------------------------|---------------------|----------------------|----------------|---------------|
| Ezi-SPEED-90-H-120-C-R□-P | ESG-90-H-R□-P | 5, 10, 15, 20 | M8 P 1,25 · 75 | 45 |
| | | 30, 50, 100 | M8 P 1,25 · 90 | 58 |
| | | 200 | M8 P 1,25 · 95 | 64 |



200_w

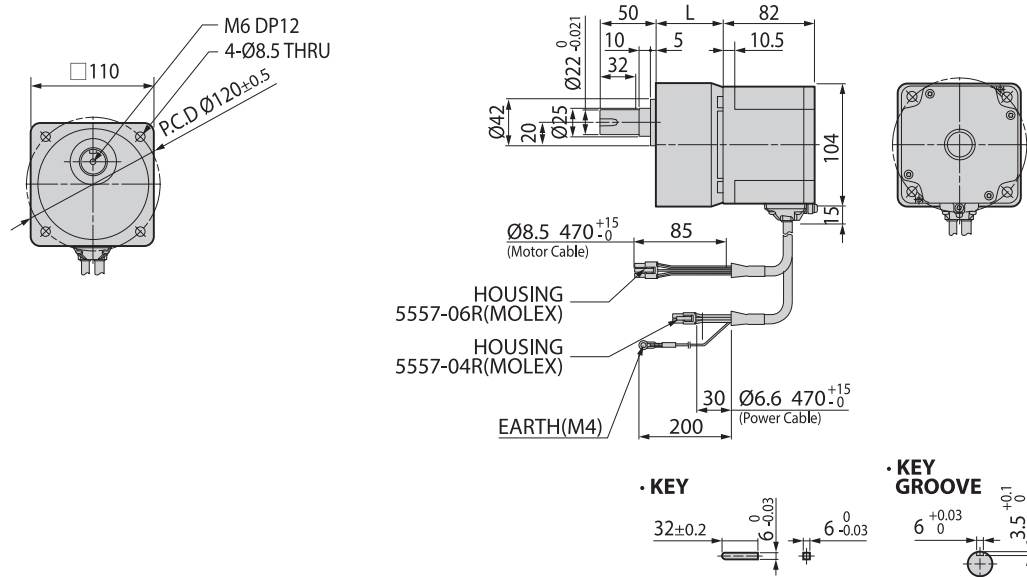
| Unit Part Number | Gearbox Part Number | Reduction Gear Ratio | Mounting Bolt | L Length [mm] |
|----------------------------|---------------------|----------------------|-----------------|---------------|
| Ezi-SPEED-104-H-200-C-R□-P | ESG-104-H-R□-P | 5, 10, 15, 20 | M8 P 1,25 · 95 | 60 |
| | | 30, 50, 100 | M8 P 1,25 · 110 | 72 |
| | | 200 | M8 P 1,25 · 120 | 86 |



● Dimensions of Motor with Gearbox [mm]

400_w

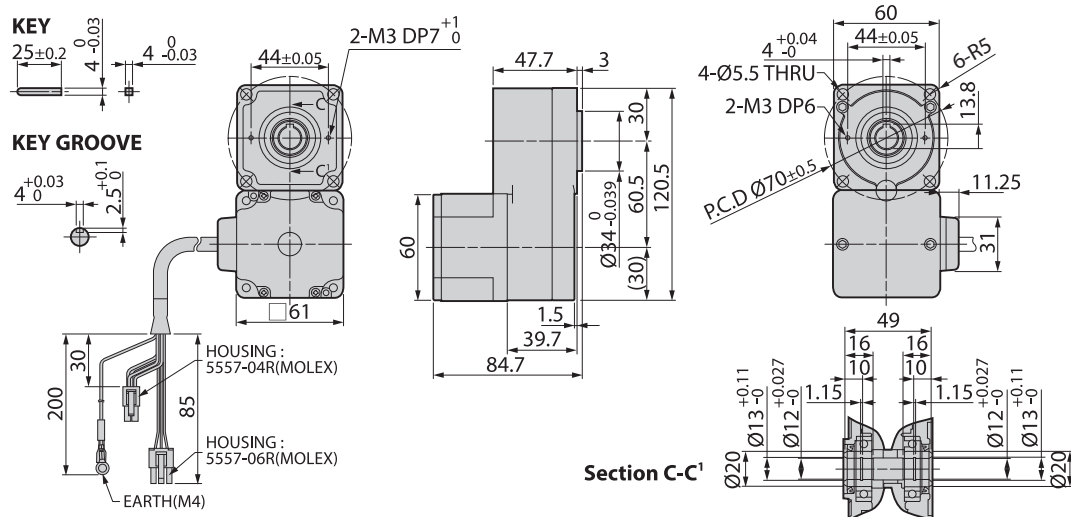
| Unit Part Number | Gearbox Part Number | □ Reduction Gear Ratio | Mounting Bolt | L Length [mm] |
|----------------------------|---------------------|------------------------|-----------------|---------------|
| Ezi-SPEED-104-H-400-C-R□-P | ESG-104-H-R□-P | 5, 10, 15, 20 | M8 P 1,25 · 95 | 60 |
| | | 30, 50, 100 | M8 P 1,25 · 110 | 72 |
| | | 200 | M8 P 1,25 · 120 | 86 |



● Dimensions of Motor with Hollow shaft Gearbox [mm]

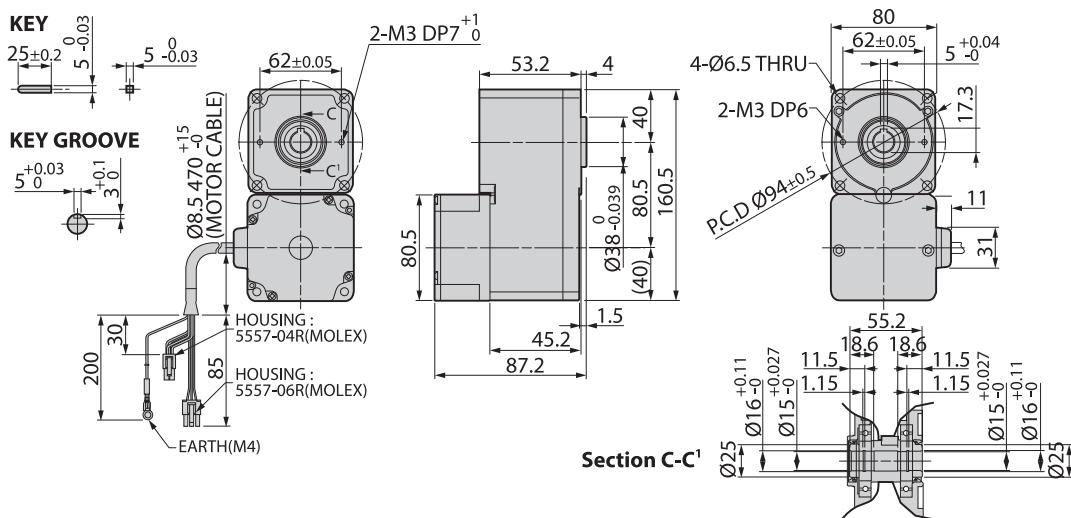
30_w

| Unit Part Number | Gearbox Part Number | □ Reduction Gear Ratio | Mounting Bolt |
|--------------------------|---------------------|---------------------------------|---------------|
| Ezi-SPEED-60-H-30-C-R□-H | ESG-60-H-R□-H | 5, 10, 15, 20, 30, 50, 100, 200 | M5 P 0.8 · 65 |



60_w

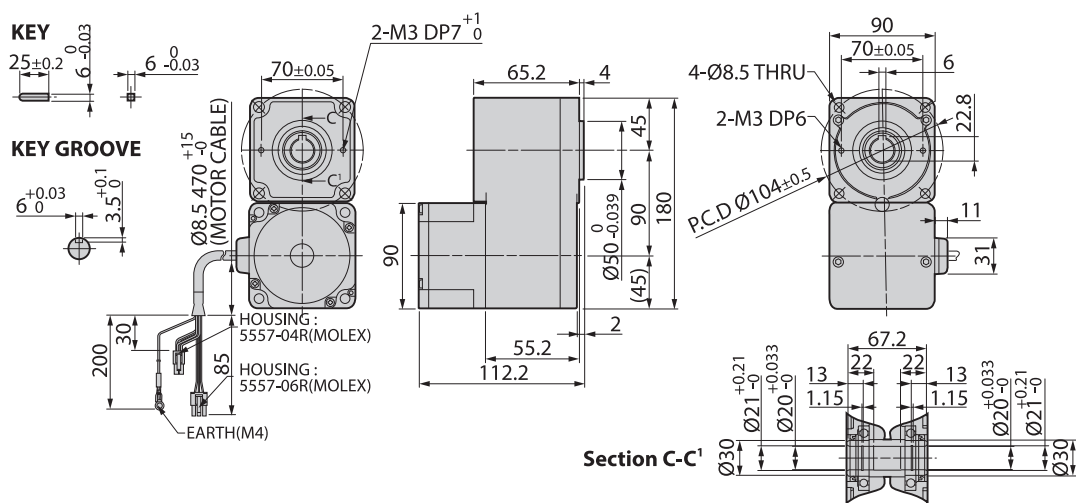
| Unit Part Number | Gearbox Part Number | □ Reduction Gear Ratio | Mounting Bolt |
|--------------------------|---------------------|---------------------------------|---------------|
| Ezi-SPEED-80-H-60-C-R□-H | ESG-80-H-R□-H | 5, 10, 15, 20, 30, 50, 100, 200 | M6 P 1.0 · 70 |



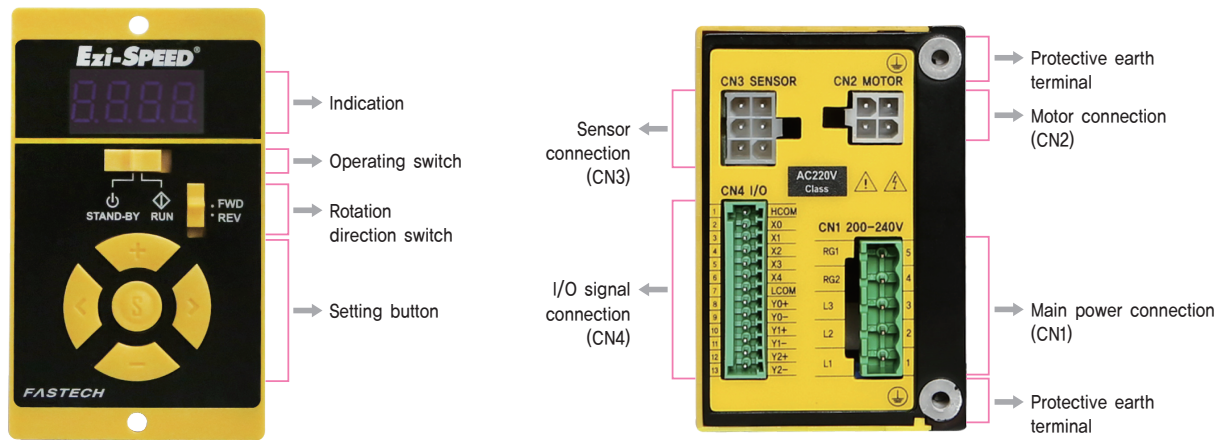
● Dimensions of Motor with Hollow shaft Gearbox [mm]

120_w

| Unit Part Number | Gearbox Part Number | □ Reduction Gear Ratio | Mounting Bolt |
|---------------------------|---------------------|---------------------------------|----------------|
| Ezi-SPEED-90-H-120-C-R□-H | ESG-90-H-R□-H | 5, 10, 15, 20, 30, 50, 100, 200 | M8 P 1,25 · 90 |



● Settings and Operation



1. Setting

| Indication | Conditions |
|-----------------------------|--|
| Indication | Display the monitor, parameter, alarm, warning, etc |
| Operating Switch | The motor is started by setting it to the "RUN" position Setting it to the "STAND-BY" position stop the motor |
| Rotation Direction Switch | Change the rotation direction of the motor with rotation direction switch |
| Setting Button | Changes the speed and parameters The value is set when the "S" button is pressed after changes are made |
| Protective Earth Terminal | Ground either one of the protective earth terminals |
| Sensor Connection (CN3) | Connects to the signal Connection of the motor |
| Motor Connection (CN2) | Connects to the power Connection of the motor |
| I/O Signal Connection (CN4) | Connects with the I/O signals |
| Main Power Connection (CN1) | Connects to the main power supply and regenerative resistor |

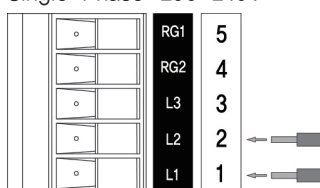
● Extended Functions

Ezi-SPEED can be perform various setting by operation button

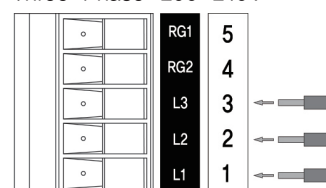
| Operating Mode | Conditions |
|-----------------|---|
| Monitor Mode | Speed, Actual speed, Load factor, Alarm record and reset, Warning record and reset, Operating data number, I/O monitor |
| Data Mode | Data 8 points, Operating speed, Acceleration time, Deceleration time, Operating data reset |
| Parameter Mode | The acceleration/deceleration time, The overload alarm detection time, The speed upper limit and lower limit, Speed reduction ratio, Speed increasing ratio, Panel initial view, Alarm of "Run" condition at power on, External operation signal input, External input function, External output function, Speed attainment width, Parameter mode reset |
| NVM Saving Mode | Parameter save to NVM |

● Main Power Connection(CN1)

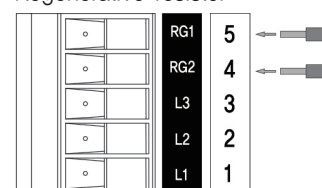
Single-Phase: 200~240V



Three-Phase: 200~240V



Regenerative resistor

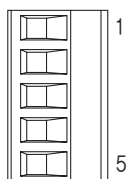


● Applicable Lead Wire Size

AWG18~14 (0.75~2.0mm²)

2. Main Power Connector(CN1)

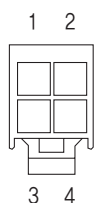
| NO. | Function | I/O |
|-----|----------|-------|
| 1 | L1 | Input |
| 2 | L2 | Input |
| 3 | L3 | Input |
| 4 | RG2 | Input |
| 5 | RG1 | Input |



* Connecting to RG1, RG2 terminals when use a regenerative resistor.
A regenerative resistor can be used when the deceleration time is short or when the large inertia is driven by providing a regenerative resistor contact terminal.

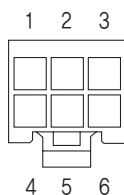
3. Motor Connector(CN2)

| NO. | Function | I/O |
|-----|----------|--------|
| 1 | — | — |
| 2 | BLDC_U | Output |
| 3 | BLDC_W | Output |
| 4 | BLDC_V | Output |



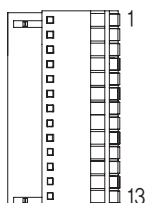
4. Sensor Connector(CN3)

| NO. | Function | I/O |
|-----|----------|--------|
| 1 | 5VDC | Output |
| 2 | GND | — |
| 3 | GND | Output |
| 4 | HALL_U | Input |
| 5 | HALL_V | Input |
| 6 | HALL_W | Input |



5. I/O Signal Connector(CN4)

| NO. | Function | I/O |
|-----|----------|--------|
| 1 | HCOM | Common |
| 2 | X0 | Input |
| 3 | X1 | Input |
| 4 | X2 | Input |
| 5 | X3 | Input |
| 6 | X4 | Input |
| 7 | LCOM | Common |
| 8 | Y0+ | Output |
| 9 | Y0— | Output |
| 10 | Y1+ | Output |
| 11 | Y1— | Output |
| 12 | Y2+ | Output |
| 13 | Y2— | Output |




6. Operating with Drive

• Running the motor

Set the operation switch to the “RUN”, the motor to start rotating.


• Adjust the speed

Pressing the  button, the speed increase by 1 [rpm]


Pressing the  button, the speed decrease by 1 [rpm]

• Determining the speed

• Set

Pressing the  button, the rotation speed is determined.
When the display is blinking, the rotation speed has not set.

• Confirmation

Prevents the undesired changes in the speed, Press the  button for 5 seconds or more when STAND-BY mode when “LOCK” appears, the lock function is activated.

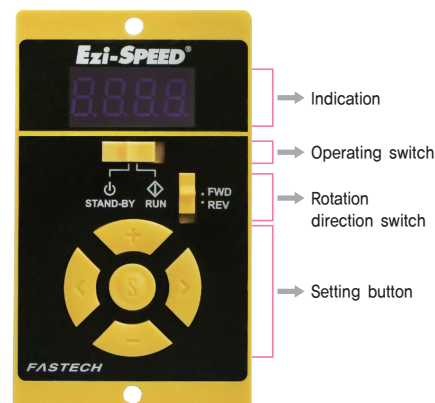
• Stopping the motor

Setting the operation switch to the “STAND-BY” side causes the motor to decelerate to a stop.

Setting the operation switch again to the “RUN” side causes the motor to start rotating at the set rotation speed.

• Changing the rotation direction

Change the rotation direction of the motor (gearbox) using the rotation direction switch. The rotation direction can be changed while operating. With the combination type, the rotation direction of the gearbox output shaft varies depending on the rear ratio of the gearbox.



7. Operation by I/O Signals

• Operation Method

- Using the built-in power supply in the driver, the motor is operated through external signals.
- Connect Pins the I/O signal connector as in the figure of the right.
- When operating using external signals, change the parameter setting in the “external operation signal input” to “on”. Refer to Manual.
- Using the external I/O signals, the motor can be operated 8-Speeds data.

| Pin No. | Terminal Name | Input/Output | Signal Name | Description |
|---------|---------------|--------------|-------------|--|
| 1 | HCOM | Common | — | Input signal common: Sink Logic +24V, Source Logic 0V(GND) |
| 2 | X0 | Input | [Fwd] | The motor rotates is FWD direction during signal “ON” |
| 3 | X1 | Input | [rEv] | The motor rotates is REV direction during signal “ON” |
| 4 | X2 | Input | [P0] | Select the operating data |
| 5 | X3 | Input | [P1] | Select the operating data |
| 6 | X4 | Input | [A,rSt] | Reset the alarm |
| 7 | LCOM | Common | — | Input signal common |
| 8 | Y0+ | Output | [SPd] | For every rotation of the motor, 30 pulses are output |
| 9 | Y0- | Output | | |
| 10 | Y1+ | Output | [AL,on] | It turns off when an alarm is generated (Normally closed) |
| 11 | Y1- | Output | | |
| 12 | Y2+ | Output | [MovE] | It turns on when the motor is operated (Normally opened) |
| 13 | Y2- | Output | | |

※ [] Function in [] is assigned at shipment

※ Can be assigned required functions to 5 input signals (X0~X4) and 3 output signals (Y0~Y2)

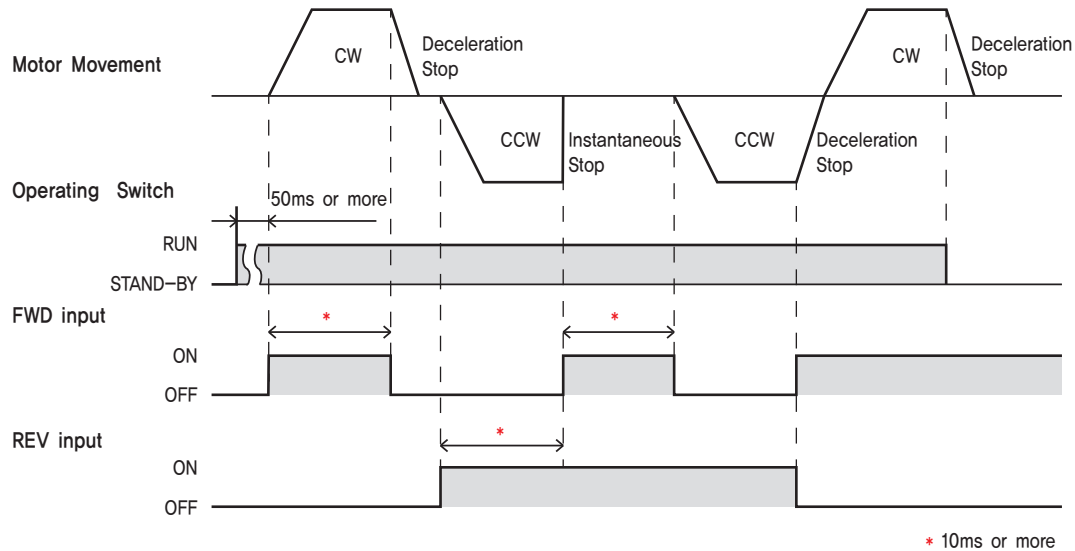
- Input signals: Can be used 5 functions out of Fwd (CW rotation), rEv (CCW rotation), P0 (Operation data 1), P1 (Operation data 2), P2 (Operation data 2), A,rst (Alarm reset), E,Err (External alarm), H-Fr (Motor activation/deactivation)
- Output signals: Can be used 3 functions out of SPd (Speed output), AL,on (Alarm output), AL,ov (Overvoltage alarm output), OvLd (Overload alarm output), Mov (Motor operation output), vA (Speed attainment alarm), WnG (Warning alarm)

• Applicable Lead Wire Size

AWG26~20 (0.14~0.5mm²)

• Timing Chart

In case of parameter “external operation signal input” to “on” and the rotation direction switch is set to “FWD”.

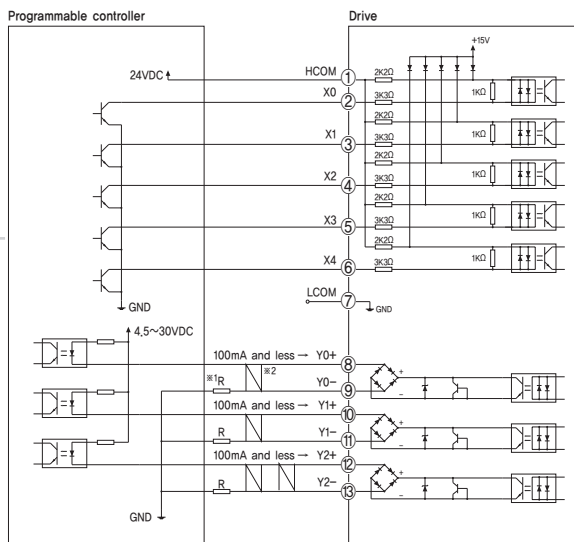


- The motor rotates when either FWD input or REV input is set to “ON”.
- The motor instantaneous stop when FWD input and REV input is set to “ON” at the same time.

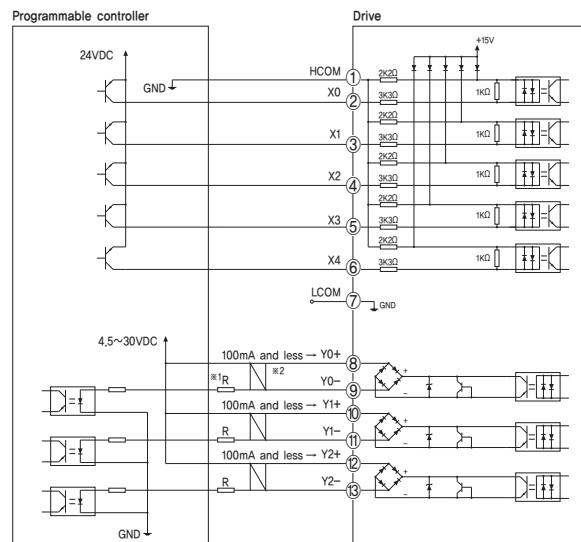
• Connection example for I/O signals and programmable controller

This is connection example when the motor is operated using a transistor output type programmable controller.

SINK LOGIC



SOURCE LOGIC



※1) Limited resistance

In the case of 24VDC : 680Ω~2.7kΩ(2W)

In the case of 5VDC : 150Ω~560Ω(0.5W)

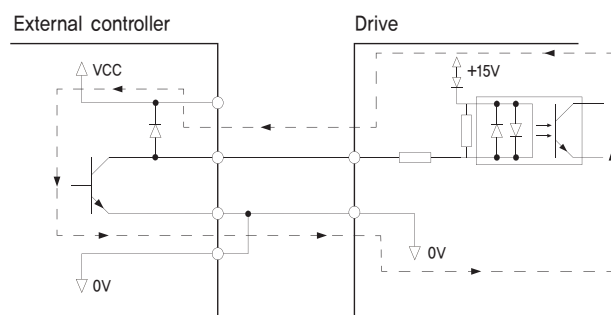
※2) Twisted Pair Shield Cable

⚠ Warning

For the Y0, Y1 and Y2, be sure to keep the current value at 100mA or less. If the current exceeds this value, connect the limiting resistor R.

• In the case of using a external controller with a built-in clamp diode

If a external controller with a built-in clamp diode is used, a leakage path may form and cause the motor to operate even when the external controller power is off, as long as the drive power is on. Since the power capacity of the controller is different from that of the drive, the motor may operate when the external controller and drive powers ate turned on or off simultaneously. When power off, turn off the drive power first, followed by the external controller power. When power on, turn off the external controller power first, followed by the drive power.



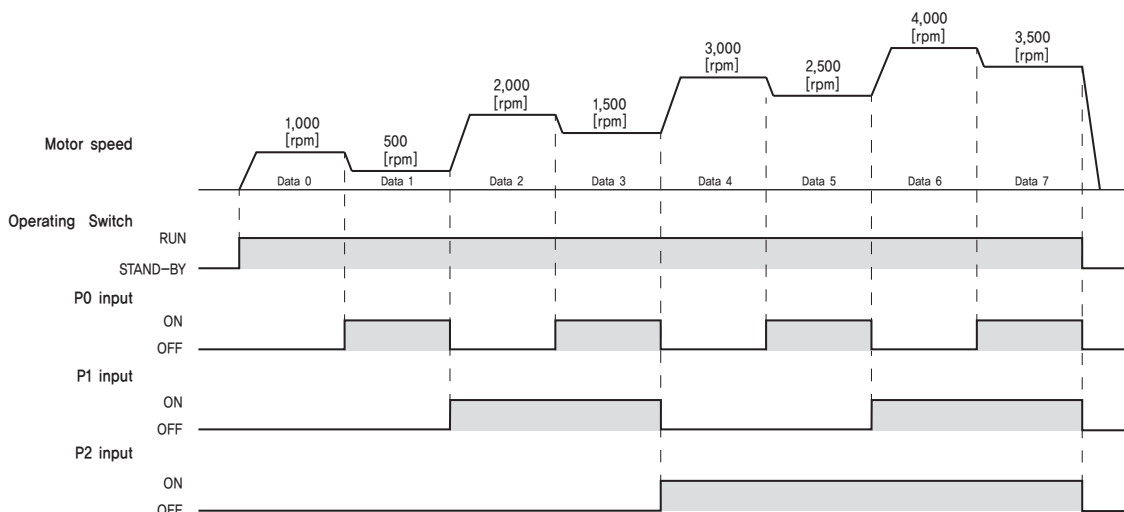
• 8-Speed Operation(In the case of the “external operation signal input” parameter is set to “ON”)

1. Set the operation switch to the “RUN” side.
2. Select the operation data number using the P0, P1 and P2 inputs.
3. When either of the FWD input or REV input is turned ON, the motor will rotate.
4. Switch the operation data number using the P0, P1 and P2 inputs.
5. When the FWD input or REV input which has been turned ON is turned OFF, the motor will stop.

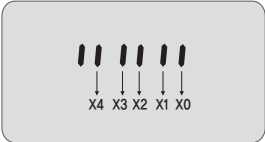
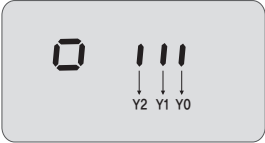
| Operation data No. | P0 | P1 | P2 | Rotation speed [rpm] |
|--------------------|-----|-----|-----|----------------------|
| Data 0 | OFF | OFF | OFF | 1,000 |
| Data 1 | ON | OFF | OFF | 500 |
| Data 2 | OFF | ON | OFF | 2,000 |
| Data 3 | ON | ON | OFF | 1,500 |
| Data 4 | OFF | OFF | ON | 3,000 |
| Data 5 | ON | OFF | ON | 2,500 |
| Data 6 | OFF | ON | ON | 4,000 |
| Data 7 | ON | ON | ON | 3,500 |

* Setting speed value is example, can change to need speed.

When changing from the present speed to the new speed, the acceleration time and deceleration time set in the next operation data number are used.



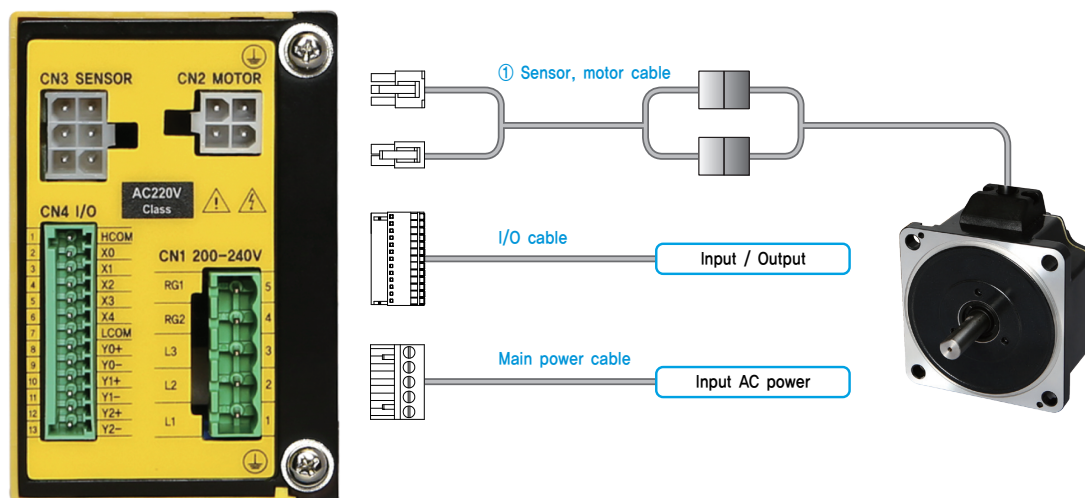
8. Monitor Mode Display

| Item | Display | Description |
|--|---------|---|
| Setting speed display and speed adjustment [rpm] | 50 | Display of setting motor speed |
| Actual speed [rpm] | 0 | Monitors the actual speed of motor. Monitors the rotation speed of gear output shaft or conveyor transfer speed when the "speed reduction ratio" parameter is set. When the "speed increasing ratio" parameter is set, the rotation speed being increased by external mechanism is displayed. |
| Load factor [%] | L. 0 | Monitors the current load factor based on the rated torque being 100%. Monitor is load factor of motor shaft, No gearbox type. In case of gearbox mounted motor type, permissible torque is different by reduction ratio of gearbox. Please use checking permissible torque limit of gearbox. |
| Alarm record display and record reset | AL.rc | Monitors the alarm record. You can check alarm record and delete alarm record. |
| Warning record display and record reset | Wn.rc | Monitors the warning record. You can check warning record and delete warning record. |
| Operation data number | oP,d- | Monitors the operation data No. current selected. |
| I/O monitor | io | <p>You can check the ON/OFF status of I/O signal of drive. If the signal is ON, the corresponding LED is ON. if the signal is OFF, the LED is OFF.</p> <p>Input signals</p>  <p>Output signals</p>  |

9. Protection functions and LED display

| Alarm Code | Alarm type | Cause | Remedial action | Alarm reset |
|------------|---|---|---|-------------|
| [AL.--] | Alarm record delete | — | — | — |
| [AL.UV.] | Under voltage | The power supply voltage became lower than approximately 60% of the rated voltage | 1. Check the power supply voltage 2. Check the wiring of the power supply cable | Possible |
| [AL.oV.] | Over voltage | 1. The power supply voltage exceeded approximately 120% of the rated voltage. 2. Vertical drive(gravitational operation) was performed or a load exceeding the permissible load inertia was driven, | 1. Check the power supply voltage 2. If this alarm occurs during operation, reduce the load or make the acceleration/deceleration time longer. | Possible |
| [AL.oT.] | Over heat | The temperature inside drive exceeded the alarm detection temperature. | Review the ambient temperature | Possible |
| [AL.oC] | Over current | Excessive current has flown through the drive due to ground fault, etc | Check the wiring between the drive and motor foramage | Impossible |
| [AL.SF] | Speed feedback | Actual speed and set speed are different. | 1. Check the power supply voltage 2. Check the load | Possible |
| [AL.SS] | Sensor error (Hall sensor) | The motor sensor signal line experienced an open circuit during operation or the motor signal connector came off. | Check the wiring between the drive and motor. | Possible |
| [AL.oS] | Over speed | The rotation speed of the motor output shaft exceeded approximately 4,800 [rpm] | 1. Reduce the load 2. Review the operation pattern such as acceleration/ deceleration time. | Possible |
| [AL.oL] | Over load | 1. A load exceeding the continuous duty region was applied to the motor for the time exceeded the value set in the "The overload alarm detection time" parameter. 2. The motor was started running under the state that the motor temperature was low. | | Possible |
| [AL.oP] | Operation at power-on | When the "external operation signal input" parameter was set to "OFF" , while the operation switch was set to the "RUN" side, the power was turned on again. | Set the operation switch to the "STAND-BY" side from the "RUN" side. Next press "S" button. | Possible |
| | | When the "external operation signal input" parameter was set to "ON" , while the FWD input or REV input was turned ON, the power was turned on again. | 1. Set the operation switch to the "STAND-BY" side from the "RUN" side. 2. Turn the FWD input or REV input from ON to OFF. | |
| [AL.Et] | External Error (From external input signal) | The motor instantaneous stop when EXT-ERROR(Stop) input, | 1. Check the EXT-ERROR input. 2. Change status from activated to deactivated. | Possible |

● System Configuration [30, 60, 120W]



| Type | I/O Cable | Sensor Cable | Motor Cable | Main Power Cable |
|-----------------|-----------|--------------|-------------|------------------|
| Length supplied | — | 50cm | 50cm | — |
| Max. Length | 20m | 10m | 10m | 3m |

1. Options

Sensor, Motor Cable of 30, 60, 120W

This cable is used connect the wiring between the motor (30W, 60W and 120W) and drive. This cable is one cable with the motor relay cable and sensor relay cable.

① Sensor, Motor Cable

| Item | Length [m] | Remark |
|-------------|-------------------|--------------|
| CSPD-A-□□□F | 1, 2, 3, 5, 7, 10 | Normal Cable |

□ is for Cable Length, The unit is 1m and Max. 10m length.

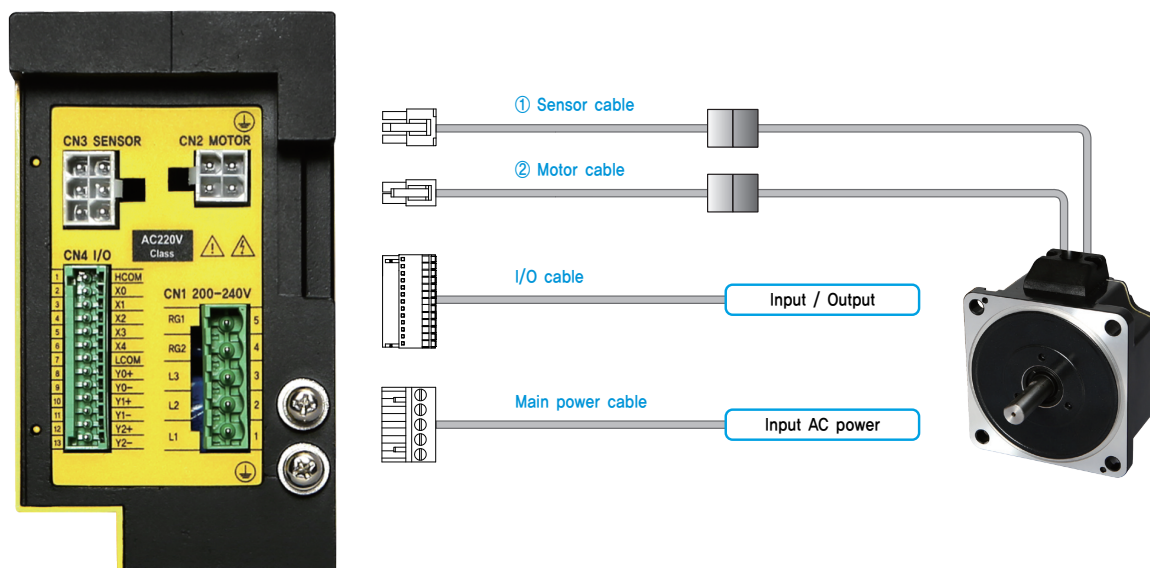
2. Connector Specifications

Connector specifications for cabling to drive.

| Purpose | | Item | Part Number | Manufacturer |
|--------------|------------------|------------------|-------------------|--------------|
| Power (CN1) | | Terminal Block | CPF5,08-05P | STELVIO |
| Motor (CN2) | Drive side (CN2) | Housing Terminal | 5557-04R 5556T | MOLEX |
| | Motor side | Housing Terminal | 5559-04P 5558T | |
| Sensor (CN3) | Drive side (CN3) | Housing Terminal | 5557-06R 5556T | MOLEX |
| | Sensor side | Housing Terminal | 5559-06P 5558T | |
| I/O (CN4) | | Terminal Block | 15EDGKD-13P | DEGSON |

※ Above connector is the most suitable product for the drive applied. Another equivalent connector can be used.

● System Configuration [200, 400W]



| Type | I/O Cable | Sensor Cable | Motor Cable | Main Power Cable |
|-----------------|-----------|--------------|-------------|------------------|
| Length supplied | — | 50cm | 50cm | — |
| Max. Length | 20m | 10m | 10m | 3m |

1. Options

Sensor, Motor Cable of 200, 400W

This cable is used connect the wiring between the motor (200W, 400W) and drive.
This cable is each cable (Two line) with the motor relay cable and sensor relay cable.

① Sensor Cable

| Item | Length [m] | Remark |
|-------------|-------------------|--------------|
| CSPD-S-□□□F | 1, 2, 3, 5, 7, 10 | Normal Cable |

□ is for Cable Length. The unit is 1m and Max, 10m length.

② Motor Cable

| Item | Length [m] | Remark |
|-------------|-------------------|--------------|
| CSPD-M-□□□F | 1, 2, 3, 5, 7, 10 | Normal Cable |

□ is for Cable Length. The unit is 1m and Max, 10m length.

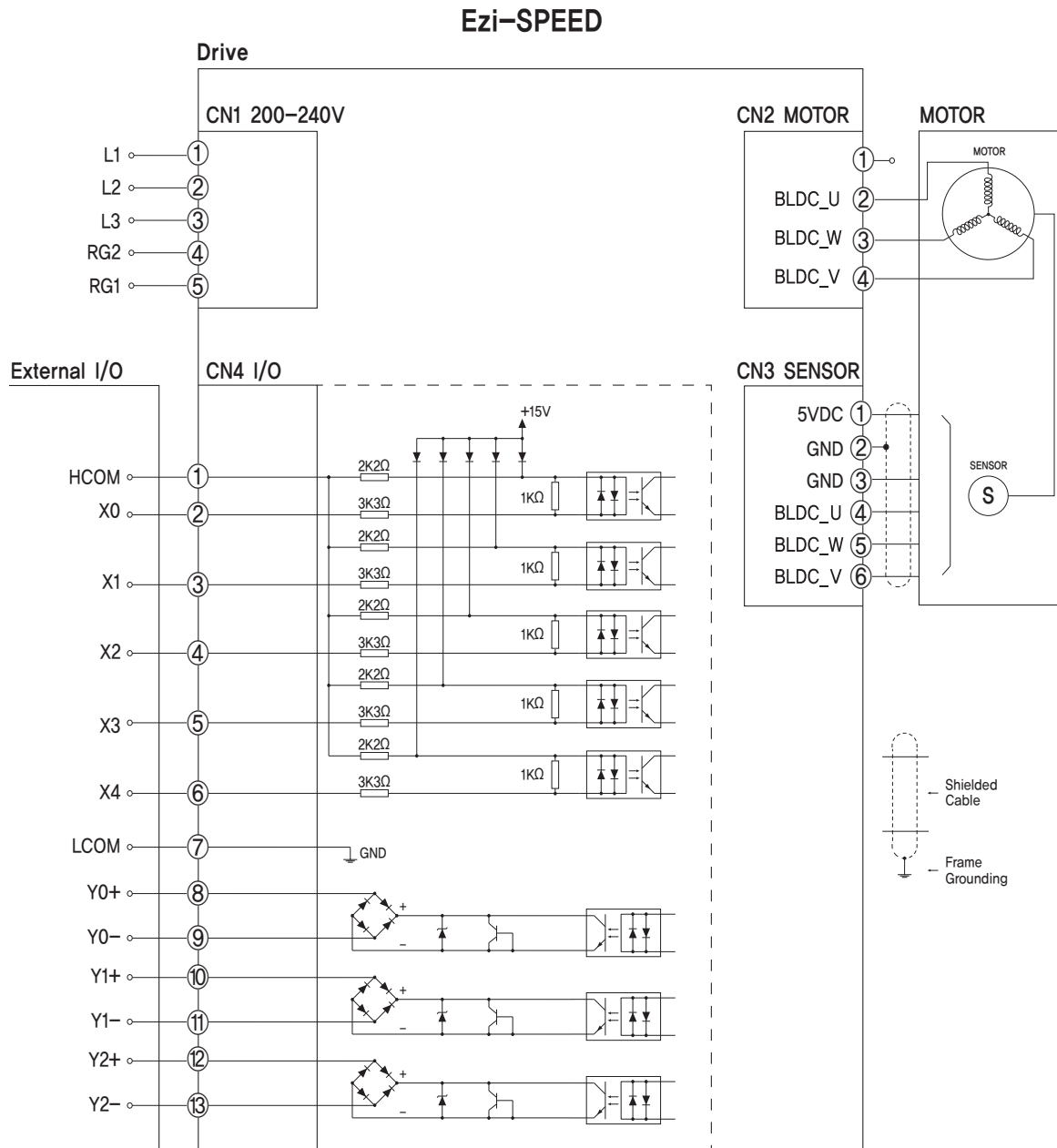
2. Connector Specifications

Connector specifications for cabling to drive.

| Purpose | | Item | Part Number | Manufacturer |
|--------------|------------------|------------------|-------------------|--------------|
| Power (CN1) | | Terminal Block | CPF5,08-05P | STELVIO |
| Motor (CN2) | Drive side (CN2) | Housing Terminal | 5557-04R 5556T | MOLEX |
| | Motor side | Housing Terminal | 5559-04P 5558T | MOLEX |
| Sensor (CN3) | Drive side (CN3) | Housing Terminal | 5557-06R 5556T | MOLEX |
| | Sensor side | Housing Terminal | 5559-06P 5558T | MOLEX |
| I/O (CN4) | | Terminal Block | 15EDGKD-13P | DEGSON |

※ Above connector is the most suitable product for the drive applied. Another equivalent connector can be used.

● External Wiring Diagram



※ When connects I/O cable between controller and drive, please turn off the power of both controller and drive, in order to protect the drive from any damage.

CAUTION

Please refer to the Manual when connects motor extension cable.
Careful connection will be required to protect the drive from any damages.

MEMO



Fast, Accurate, Smooth Motion

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