Ezi-SPEED® CC-Link IE TSN

BLDC Motor Speed Control System

- CC-Link IE TSN-compatible BLDC Motor Speed Control System
- AC Power Supply Input (200 ~ 240 V AC)
- Compact · Light Weight · High Power · High Efficiency Brushless Motor
- Wide Speed Range (50 ~ 4,000 r/min)
- Stable Speed Regulation (±0.2 %)
- BLDC Motor Line-up (30, 60, 120, 200, 400 W)



FASTECH

Fast Accurate Smooth Motion

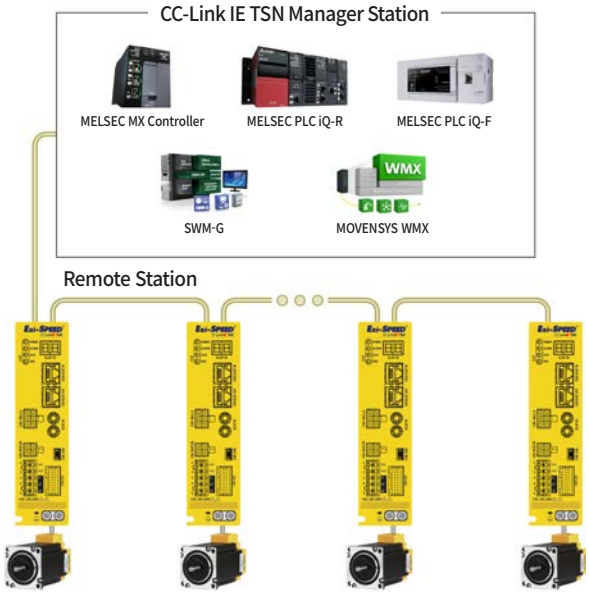
Ezi-SPEED® CC-Link IE TSN

BLDC Motor Speed Control System



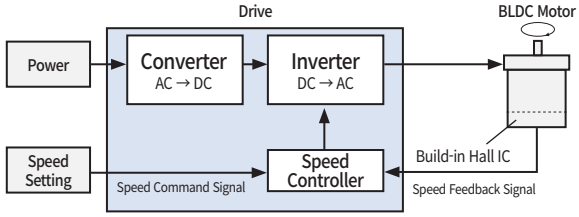
CC-Link IE TSN-compatible Speed Control

Ezi-SPEED CC-Link IE TSN is BLDC motor speed control system that supports CC-Link IE TSN, an industrial network based on high speed Ethernet (1Gbps, full-duplex communication).
Ezi-SPEED CC-Link IE TSN is a CC-Link IE TSN remote module that supports Velocity Mode that receives speed profile commands through communication and Memory Map Mode which is based on operational data.



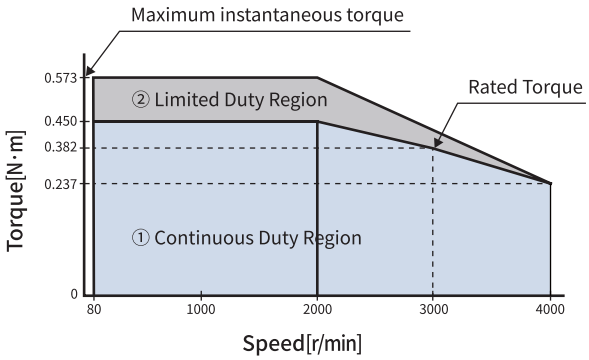
BLDC Motor Unit

A conventional DC motor rotates using brushes and a commutator, requiring regular maintenance. In contrast, a BLDC (Brushless DC) motor operates without mechanical contacts, utilizing a semiconductor-based drive circuit, resulting in a longer lifespan and reduced maintenance requirements. Embedded permanent magnets in the rotor enhance efficiency, while automatic motor current control ensures consistent torque characteristics across all speed ranges. Additionally, utilizing Hall IC for feedback control allows precise speed regulation from low to high speed.



< Control Block Diagram >

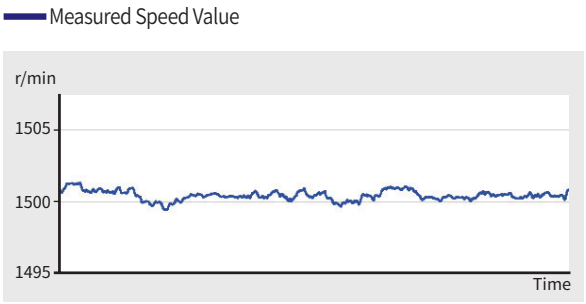
The BLDC motor can operate continuously with a constant torque from low speeds to its rated rotational speed. Within the rated torque range, it maintains a stable rotational speed even when the load varies.
BLDC motors have two operating regions: continuous duty region (①) and limited duty region (②). The limited duty region is used for acceleration torque when starting an inertial load. However, operating in this region more than 40s activates the built-in overload protection function, which automatically prevents overheating of the motor and drive.



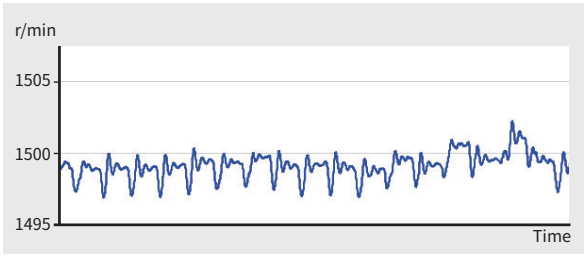
< Example of Torque Characteristics According to Speed of BLDC Motor >

High Precision Speed Control (Speed Regulation ±2%)

Ezi-SPEED compares the setting speed with the speed feedback signals from the motor at all time, and adjusts the motor current using vector control algorithm. So, even if the load changes, stable rotation is maintained from low speed to high speed. Inverter-controlled AC induction motor does not perform feedback control, so the speed will be reduced significantly when load increases.
Ezi-SPEED is recommended for applications that require stable speed.



Ezi-SPEED 120 W



Inverter + AC Induction Motor 100 W

- Load Factor: 95 %
- Setting Speed : 1,500 r/min
- Resolution of External Encoder for Measuring Velocity Ripple : 32,000 P/R

Wide Speed Control Range (Speed Ratio: 1:80)

Ezi-SPEED has wide speed control range compared to AC induction motor with inverter. Because torque is not restricted at low speed, Ezi-SPEED is recommended for application that requires stable torque over from low to high speed.

Product	Speed Control Range [r/min]	Speed Ratio
Ezi-SPEED	50 ~ 4,000	1:80
Inverter + AC Induction Motor	200 ~ 2,400	1:12

- Speed range of Inverter + AC Induction Motor varies depending on model type.

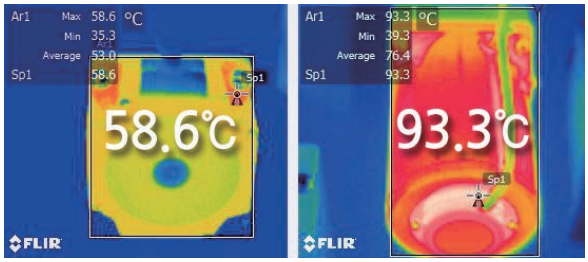
Compact / Light Weight / High Power / High Efficiency

Unlike AC induction motors, BLDC motors use permanent magnets in the rotor so that it could prevent secondary loss from rotor.
Therefore, BLDC motors has higher efficiency than inverter-controlled AC induction motor so that customers can save energy.



Ezi-SPEED 60 W AC Induction Motor 60 W

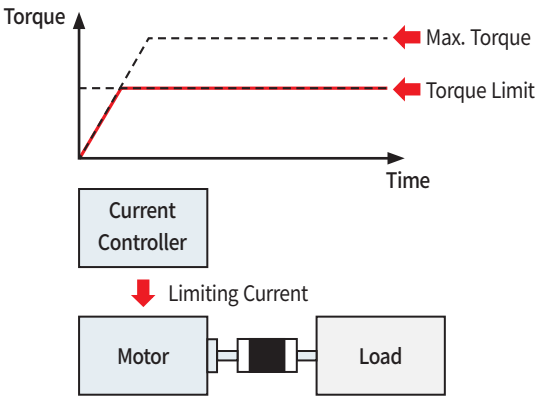
Comparison of motor temperature after 4 hours continuous operation when load factor is 100 % and Setting speed is 1,500 r/min.



Ezi-SPEED 60 W AC Induction Motor 60 W

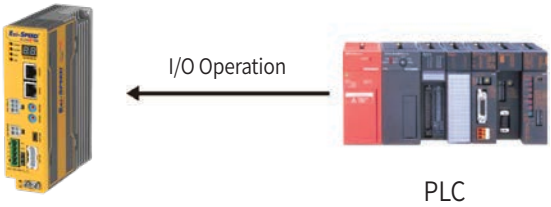
Torque Limit Function

Ezi-SPEED can control the torque limit by limiting the current flowing through the motor. Torque limit function can be used to prevent excessive force.



Operation by External I/O

By connecting the PLC controller's I/O unit or I/O switches to the external input/output terminals, operations such as run/stop control, rotation direction change, and multi-speed operation can be performed. In addition, a potentiometer can be connected externally to adjust the speed via analog input.

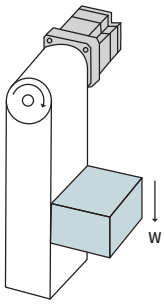


Protection Function

- Ezi-SPEED is equipped with protective functions to detect abnormal conditions such as overload and overvoltage. When a fault is detected, operation is stopped and an alarm is generated.
- Ezi-SPEED provides regenerative resistor connection terminals, helping to prevent potential issues that may occur when driving loads with short deceleration times or large inertia.

Brake-Equipped Motor Available

When using a motor equipped with an electromagnetic brake, it can be utilized for position holding at standstill and for stopping during vertical operation.
(As regenerative energy is generated during vertical operation, the use of an optional regenerative resistor is recommended.)



Separate Control Circuit Power Supply Support for Enhanced Safety

When a 24 V DC power supply is connected to the control power terminal, the drive status can be monitored via the network even when the motor power supply (220 V AC) is turned off.
(Even when only the 220 V AC motor power supply is connected without a separate control power supply, both the motor power and control power are internally supplied to ensure normal operation.)

Ezi-SPEED Part Numbering

Ezi-SPEED-CT-60-H-30-CD-R5-P-B

Product Name

Drive Series
CT: CC-Link IE TSN

Motor Flange Size
60 : 61×61 mm
80 : 81×81 mm
90 : 90×90 mm
104 : 104.5×104.5 mm

Parallel Shaft Gearbox Size
60 : 60×60 mm
80 : 80×80 mm
90 : 90×90 mm
104 : 110×110 mm

Hollow Shaft Flat Gearbox Size
60 : 60×120.5 mm
80 : 80×160.5 mm
90 : 90×180 mm
104 : 104×218 mm

Shaft Figuration
S : Straight
(For single use, D-cut shaft)
H : High Strength
(For gearbox engagement, Pinion shaft)

Output Power
30 : 30 W
60 : 60 W
120 : 120 W
200 : 200 W
400 : 400 W

Power Supply Voltage
CD : Single-Phase / Three-Phase 200 ~ 240 V AC, 24 V DC

Gear Ratio
Blank -Without Gearbox
R5 - 1:5
R10 - 1:10
R15 - 1:15
R20 - 1:20
R30 - 1:30
R50 - 1:50
R100 - 1:100
R200 - 1:200

Gear Ratio
Blank - Without Gearbox
P - Parallel Gearbox
H - Hollow Shaft Flat Gearbox

Brake
Blank: Without Brake
B: Brake

Standard Combination

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

☐ : No symbol indicates a motor without a brake; “B” indicates a motor with a brake.

Combination with Gearbox

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

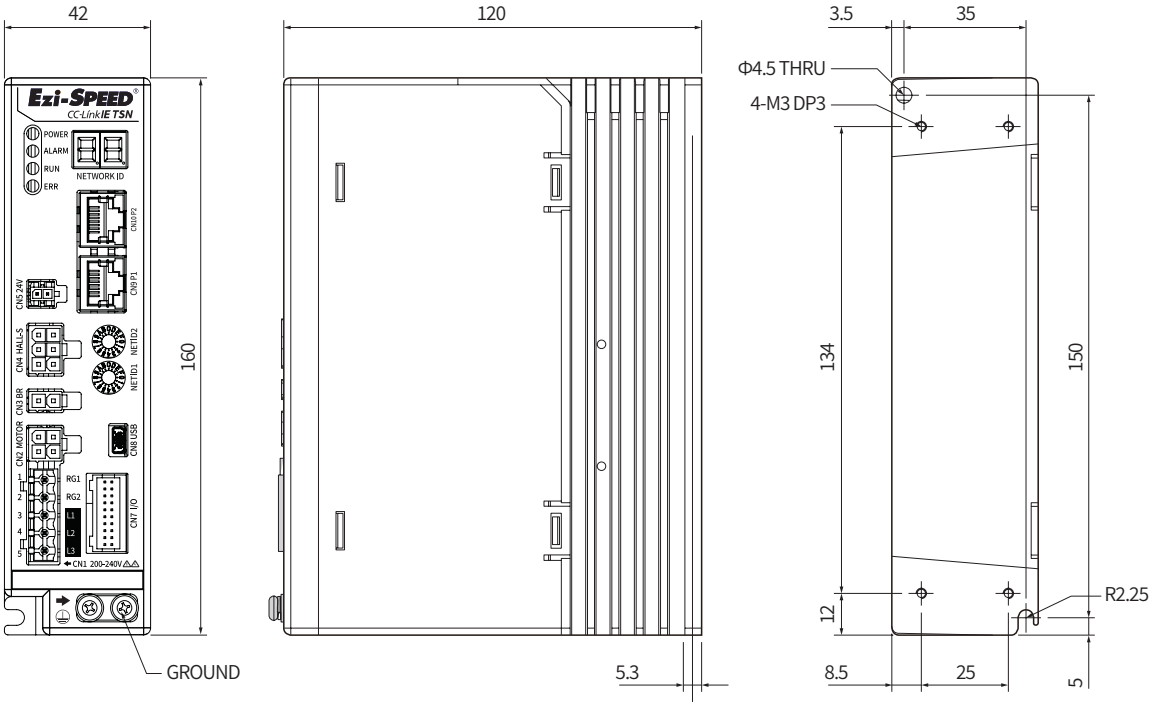
Output Power	Unit Part Number	Motor Model Number	Drive Model Number	Gearbox Model Number	Gear Ratio
200 W	Ezi-SPEED-CT-104-H-200-CD-R5-P-□	ESM-104-H-200-□	ESD-CT-CD-200	ESG-104-H-R5-P	1:5
	Ezi-SPEED-CT-104-H-200-CD-R5-H-□			ESG-104-H-R5-H	
	Ezi-SPEED-CT-104-H-200-CD-R10-P-□			ESG-104-H-R10-P	1:10
	Ezi-SPEED-CT-104-H-200-CD-R10-H-□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

□ : No symbol indicates a motor without a brake; “B” indicates a motor with a brake.

Specifications of Drive

Drive Model		Ezi-SPEED-CT-CD-30	Ezi-SPEED-CT-CD-60	Ezi-SPEED-CT-CD-120	Ezi-SPEED-CT-CD-200	Ezi-SPEED-CT-CD-400
Main Power	Input Voltage	Single-phase 200 ~ 240 V AC / Three-phase 200 ~ 240 V AC ± 10 %				
	Input Current	Maximum rated current: 8.5 A (For input current specifications by motor model, refer to the motor specification table.)				
	Frequency(AC)	50 / 60 Hz ±5 %				
Control Power (option)	Input Voltage	24 V DC ± 10 % (Even when only the main power supply is connected and no control power supply is applied, internal power is automatically supplied to ensure normal operation.)				
	Power Consumption	4W or lower				
Environment	Temperature	Operation: 0 ~ 40 °C Storage: -25 ~ 70 °C				
	Humidity	Operation: under 85 % RH (No condensation) Storage: under 85 % RH (No condensation)				
	Vibration Resistance	0.5 g				
	Altitude	Operation: 1,000 m or less, above sea level Transportation / Storage: Up to 3,000 m above sea level				
	Protection Class	IP20				
Function	Speed Range	50 ~ 4,000 r/min				
	Rated Speed	3,000 r/min				
	Speed Fluctuation Rate	±0.2 % or less / Conditions : 0~Rated Torque, Rated Speed, Rated Voltage, Ambient Temperature				
	LED Display	POWER, ALARM, RUN, ERROR				
	Brake Control	Brake output connector				
	Regenerative Control	Regenerative resistor output connector				
I/O Signal	Digital Input	7 programmable inputs				
	Digital Output	2 programmable outputs				

Dimensions of Drive [mm]



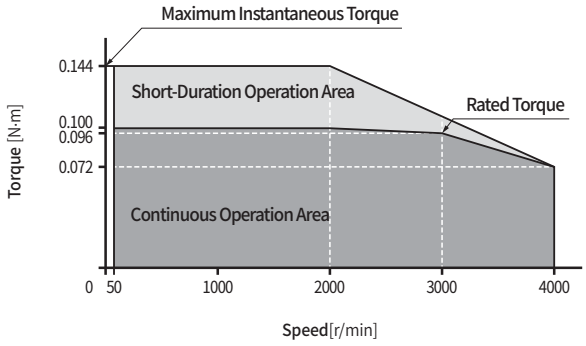
Specifications of Motor

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
Power input	Voltage		V	Single-phase 200 ~ 240 V / Three-phase 200 ~ 240 V (±10 %)				
	Frequency		Hz	50 / 60				
	Rated input current		A	Single-phase: 0.8 Three-phase: 0.5	Single-phase : 1.0 Three-phase: 0.7	Single-phase : 2.0 Three-phase: 1.2	Single-phase : 2.5 Three-phase: 1.8	Single-phase: 4.0 Three-phase: 3.0
	Maximum input current		A	Single-phase: 1.6 Three-phase: 1.0	Single-phase: 2.0 Three-phase: 1.4	Single-phase: 4.0 Three-phase: 2.4	Single-phase: 5.0 Three-phase: 3.6	Single-phase: 7.8 Three-phase: 5.5
Rated Torque			N·m	0.096	0.192	0.382	0.637	1.272
Maximum Instantaneous Torque			N·m	0.144	0.287	0.573	1.15	1.91
Rated Speed			r/min	3,000				
Speed Control Range			r/min	50 ~ 4,000				
Permissible Load Inertia Moment			10^{-4} kg·m^2	0.5	1.8	5.8	5.8	8.75
Inertia Moment			10^{-4} kg·m^2	0.086	0.234	0.61	0.61	0.66
Motor Weight			kg	0.5	0.8	1.3	2.4	2.4
Length			mm	62	74	94	156	156
Permissible Radial Load	Distance from End of Shaft	10 mm	N	70	120	160	197	197
		20 mm		100	140	170	220	220
Permissible Axial Load			N	Lower than 50 % or less of the motor's weight				
Insulation Resistance			MΩ	100 MΩ or more (At 500 V DC between the motor coil and case)				
Insulation Class			-	EN: class B (130 ℃)				
Protection Class			-	IP65 (excluding output shaft section)				
Brake	Operating method		-	Non-excitation-actuated electromagnetic brake, automatically controlled by the drive				
	Braking Torque		N·m	0.24		1	2	

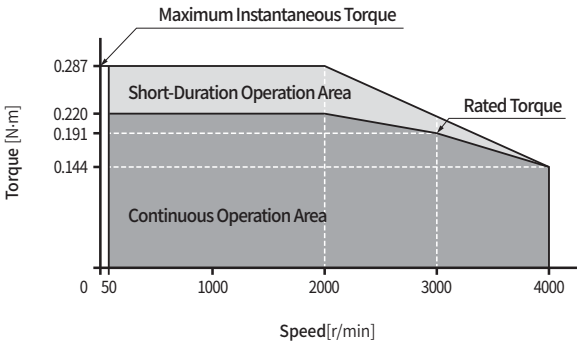
※ Motor axis is D-cut type.
※ □: Brake Option - No symbol indicates no brake; "B" indicates a motor with a brake.

Torque Characteristics of Motor

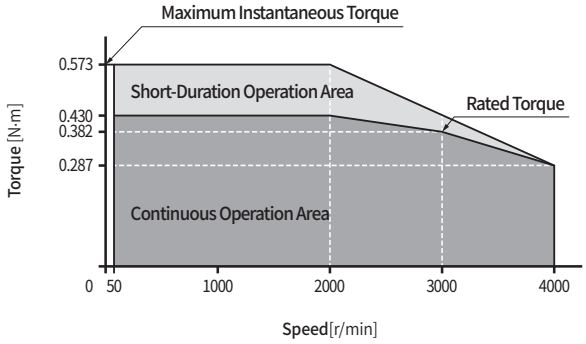
Ezi-SPEED-30 W



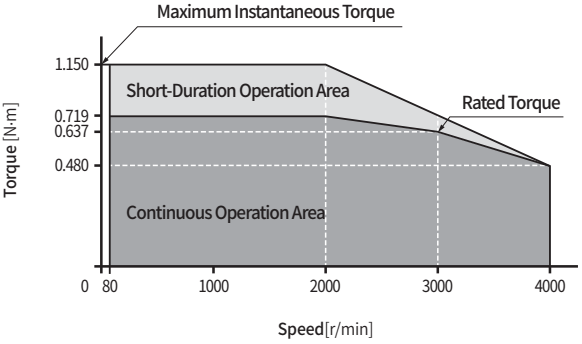
Ezi-SPEED-60 W



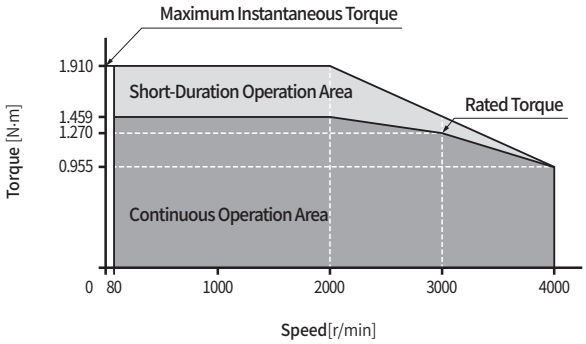
Ezi-SPEED-120 W



Ezi-SPEED-200 W



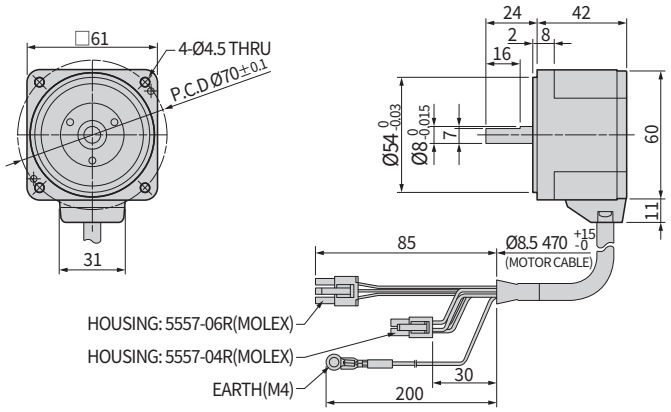
Ezi-SPEED-400 W



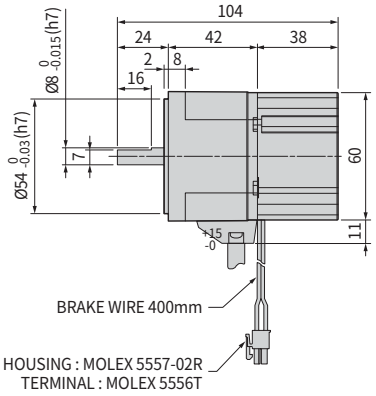
Dimensions of Motor [mm]

30 W

Without Brake
ESM-60-S-30

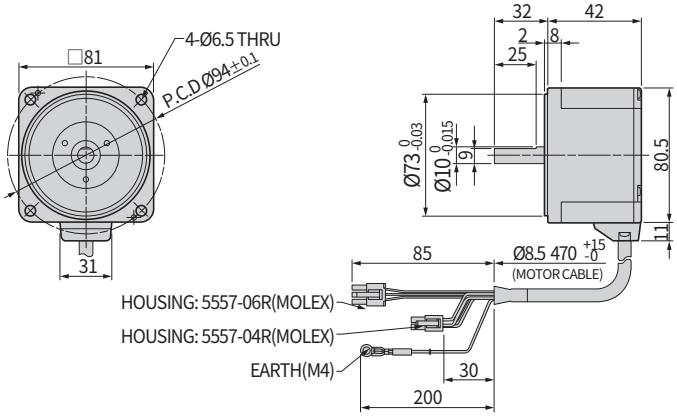


With Brake
ESM-60-S-30-B

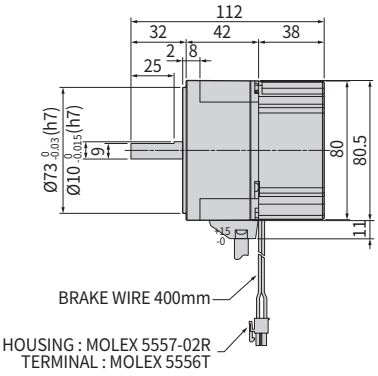


60 W

Without Brake
ESM-80-S-60

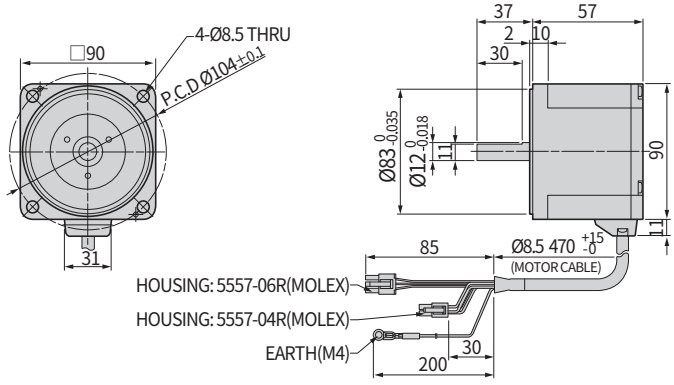


With Brake
ESM-80-S-60-B

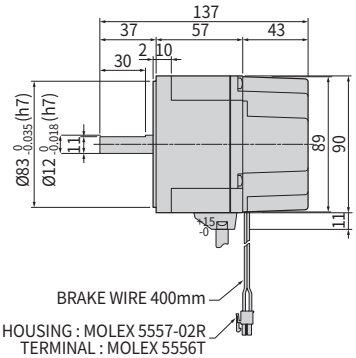


120 W

Without Brake
ESM-90-S-120



With Brake
ESM-90-S-120-B



Dimensions of Motor [mm]

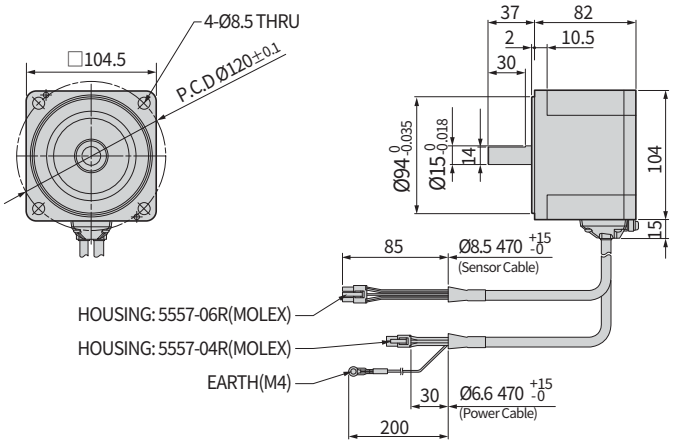
200 W
400 W

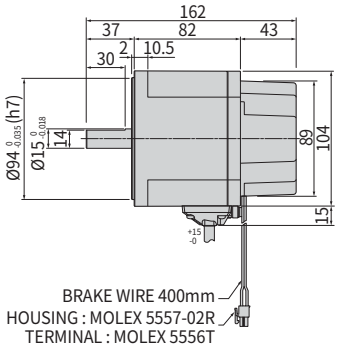
Without Brake

ESM-104-S-200
ESM-104-S-400

With Brake

ESM-104-S-200-B
ESM-104-S-400-B





Parallel Shaft Gearbox Type Motor Specifications

30 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-60-H-30-CD-R5-P-□	5	0.45	0.36	10 ~ 800	0.9	100	150	40
Ezi-SPEED-CT-60-H-30-CD-R10-P-□	10	0.9	0.72	5 ~ 400		150	200	
Ezi-SPEED-CT-60-H-30-CD-R15-P-□	15	1.4	1.08	3.3 ~ 266.7				
Ezi-SPEED-CT-60-H-30-CD-R20-P-□	20	1.8	1.4	2.5 ~ 200				
Ezi-SPEED-CT-60-H-30-CD-R30-P-□	30	2.6	2.1	1.7 ~ 133.3		200	300	
Ezi-SPEED-CT-60-H-30-CD-R50-P-□	50	4.3	3.4	1 ~ 80				
Ezi-SPEED-CT-60-H-30-CD-R100-P-□	100	6	5.4	0.5 ~ 40				
Ezi-SPEED-CT-60-H-30-CD-R200-P-□	200	6	5.4	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

60 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-80-H-60-CD-R5-P-□	5	0.9	0.68	10 ~ 800	1.6	200	250	100
Ezi-SPEED-CT-80-H-60-CD-R10-P-□	10	1.8	1.4	5 ~ 400		300	350	
Ezi-SPEED-CT-80-H-60-CD-R15-P-□	15	2.7	2	3.3 ~ 266.7				
Ezi-SPEED-CT-80-H-60-CD-R20-P-□	20	3.6	2.7	2.5 ~ 200				
Ezi-SPEED-CT-80-H-60-CD-R30-P-□	30	5.2	3.9	1.7 ~ 133.3		450	550	
Ezi-SPEED-CT-80-H-60-CD-R50-P-□	50	8.6	6.5	1 ~ 80				
Ezi-SPEED-CT-80-H-60-CD-R100-P-□	100	16	12.9	0.5 ~ 40				
Ezi-SPEED-CT-80-H-60-CD-R200-P-□	200	16	14	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Parallel Shaft Gearbox Type Motor Specifications

120 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-90-H-120-CD-R5-P-□	5	2.2	1.4	10 ~ 800	2.7	300	400	150
Ezi-SPEED-CT-90-H-120-CD-R10-P-□	10	4.4	2.7	5 ~ 400		400	500	
Ezi-SPEED-CT-90-H-120-CD-R15-P-□	15	6.6	4.1	3.3 ~ 266.7				
Ezi-SPEED-CT-90-H-120-CD-R20-P-□	20	8.8	5.4	2.5 ~ 200				
Ezi-SPEED-CT-90-H-120-CD-R30-P-□	30	12.6	7.7	1.7 ~ 133.3		500	650	
Ezi-SPEED-CT-90-H-120-CD-R50-P-□	50	21.1	12.9	1 ~ 80				
Ezi-SPEED-CT-90-H-120-CD-R100-P-□	100	30	25.8	0.5 ~ 40				
Ezi-SPEED-CT-90-H-120-CD-R200-P-□	200	30	27	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

200 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-104-H-200-CD-R5-P-□	5	2.9	2	10 ~ 800	4.2	550	800	200
Ezi-SPEED-CT-104-H-200-CD-R10-P-□	10	5.9	4.1	5 ~ 400				
Ezi-SPEED-CT-104-H-200-CD-R15-P-□	15	8.8	6.1	3.3 ~ 266.7				
Ezi-SPEED-CT-104-H-200-CD-R20-P-□	20	11.7	8.1	2.5 ~ 200				
Ezi-SPEED-CT-104-H-200-CD-R30-P-□	30	16.8	11.6	1.7 ~ 133.3		1,000	1,250	300
Ezi-SPEED-CT-104-H-200-CD-R50-P-□	50	28	19.4	1 ~ 80				
Ezi-SPEED-CT-104-H-200-CD-R100-P-□	100	52.7	36.5	0.5 ~ 40		1,400	1,700	400
Ezi-SPEED-CT-104-H-200-CD-R200-P-□	200	70	63	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Parallel Shaft Gearbox Type Motor Specifications

400 W

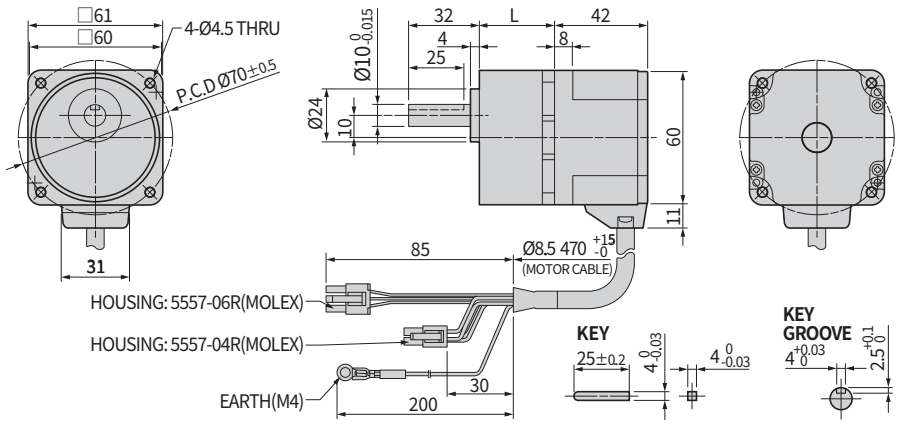
Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-104-H-400-CD-R5-P-□	5	5.9	4.3	10 ~ 800	4.2	550	800	200
Ezi-SPEED-CT-104-H-400-CD-R10-P-□	10	11.7	8.6	5 ~ 400				
Ezi-SPEED-CT-104-H-400-CD-R15-P-□	15	17.6	12.8	3.3 ~ 266.7				
Ezi-SPEED-CT-104-H-400-CD-R20-P-□	20	23.4	17.1	2.5 ~ 200				
Ezi-SPEED-CT-104-H-400-CD-R30-P-□	30	33.5	24.5	1.7 ~ 133.3		1,000	1,250	300
Ezi-SPEED-CT-104-H-400-CD-R50-P-□	50	55.9	40.9	1 ~ 80				
Ezi-SPEED-CT-104-H-400-CD-R100-P-□	100	70	63	0.5 ~ 40		1,400	1,700	400
Ezi-SPEED-CT-104-H-400-CD-R200-P-□	200	70	63	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Parallel Shaft Gearbox Type Dimensions of Motor [mm]

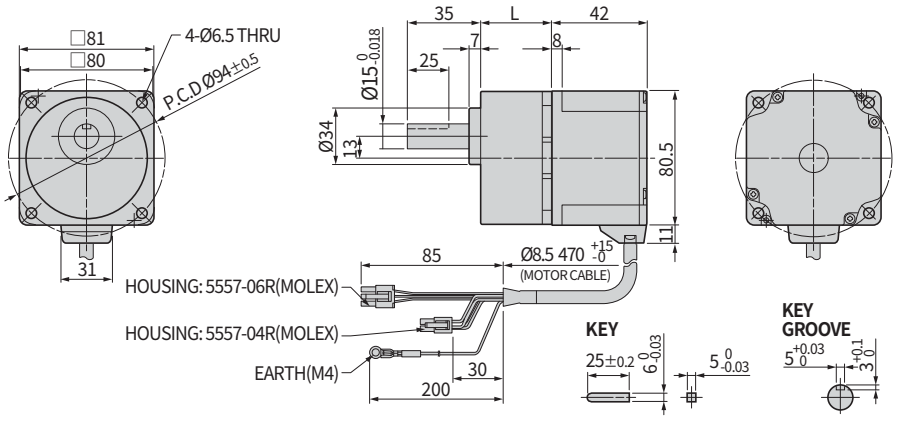
30 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt	L [mm]
Ezi-SPEED-CT-60-H-30-CD-R□-P	ESG-60-H-R□-P	5, 10, 15, 20	M4×50	34
		30, 50, 100	M4×55	38
		200	M4×60	43



60 W

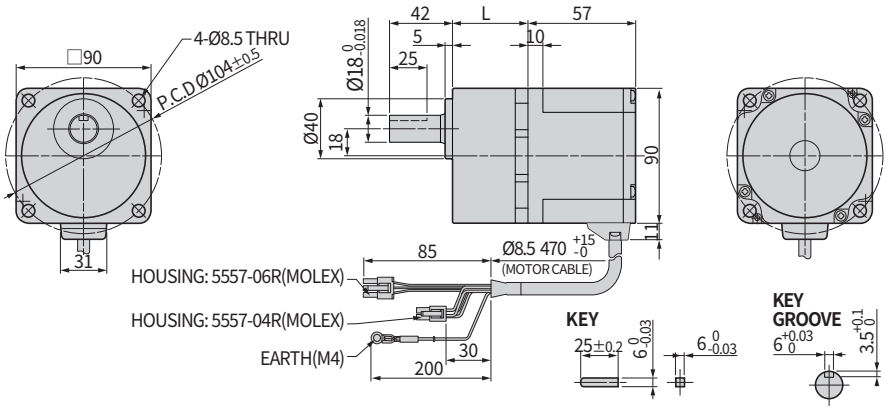
Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt	L [mm]
Ezi-SPEED-CT-80-H-60-CD-R□-P	ESG-80-H-R□-P	5, 10, 15, 20	M4×65	41
		30, 50, 100	M4×70	46
		200	M4×75	51



Parallel Shaft Gearbox Type Dimensions of Motor [mm]

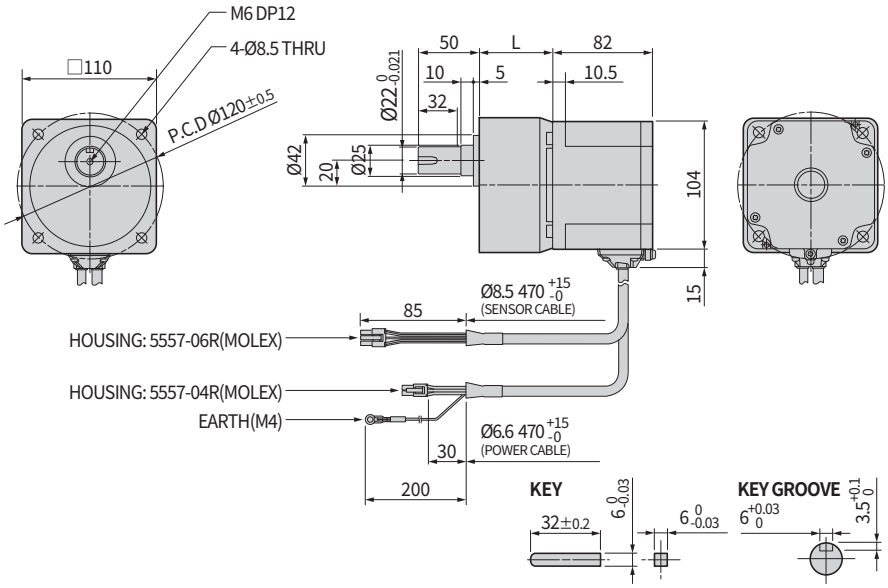
120 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt	L [mm]
Ezi-SPEED-CT-90-H-120-CD-R□-P	ESG-90-H-R□-P	5, 10, 15, 20	M8×75	45
		30, 50, 100	M8×90	58
		200	M8×95	64



200 W

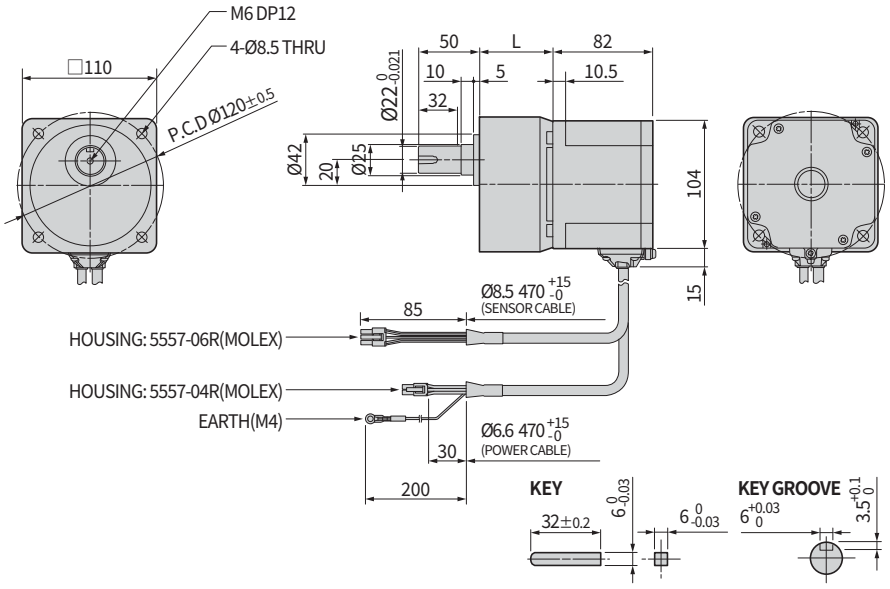
Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt	L [mm]
Ezi-SPEED-CT-104-H-200-CD-R□-P	ESG-104-H-R□-P	5, 10, 15, 20	M8×95	60
		30, 50	M8×110	72
		100, 200	M8×120	86



Parallel Shaft Gearbox Type Dimensions of Motor [mm]

400 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt	L [mm]
Ezi-SPEED-CT-104-H-400-CD-R□-P	ESG-104-H-R□-P	5, 10, 15, 20	M8×95	60
		30, 50	M8×110	72
		100, 200	M8×120	86



Hollow Shaft Flat Gearbox Type Motor Specifications

30 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-60-H-30-CD-R5-H-□	5	0.4	0.3	10 ~ 800	1.2	450	370	200
Ezi-SPEED-CT-60-H-30-CD-R15-H-□	10	0.85	0.64	5 ~ 400				
Ezi-SPEED-CT-60-H-30-CD-R15-H-□	15	1.3	0.96	3.3 ~ 266.7		500	400	
Ezi-SPEED-CT-60-H-30-CD-R20-H-□	20	1.7	1.3	2.5 ~ 200				
Ezi-SPEED-CT-60-H-30-CD-R30-H-□	30	2.6	1.9	1.7 ~ 133.3				
Ezi-SPEED-CT-60-H-30-CD-R50-H-□	50	4.3	3.2	1 ~ 80				
Ezi-SPEED-CT-60-H-30-CD-R100-H-□	100	8.5	6.4	0.5 ~ 40				
Ezi-SPEED-CT-60-H-30-CD-R200-H-□	200	17	12.8	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

60 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-80-H-60-CD-R5-H-□	5	0.85	0.64	10 ~ 800	2.2	800	660	400
Ezi-SPEED-CT-80-H-60-CD-R10-H-□	10	1.7	1.3	5 ~ 400				
Ezi-SPEED-CT-80-H-60-CD-R15-H-□	15	2.6	1.9	3.3 ~ 266.7		1,200	1,000	
Ezi-SPEED-CT-80-H-60-CD-R20-H-□	20	3.4	2.6	2.5 ~ 200				
Ezi-SPEED-CT-80-H-60-CD-R30-H-□	30	5.1	3.8	1.7 ~ 133.3				
Ezi-SPEED-CT-80-H-60-CD-R50-H-□	50	8.5	6.4	1 ~ 80				
Ezi-SPEED-CT-80-H-60-CD-R100-H-□	100	17	12.8	0.5 ~ 40				
Ezi-SPEED-CT-80-H-60-CD-R200-H-□	200	34	25.5	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Hollow Shaft Flat Gearbox Type Motor Specifications

120 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-90-H-120-CD-R5-H-□	5	2.1	1.3	10 ~ 800	3.3	900	770	500
Ezi-SPEED-CT-90-H-120-CD-R10-H-□	10	4.2	2.6	5 ~ 400				
Ezi-SPEED-CT-90-H-120-CD-R15-H-□	15	6.2	3.8	3.3 ~ 266.7		1,300	1,000	
Ezi-SPEED-CT-90-H-120-CD-R20-H-□	20	8.3	5.1	2.5 ~ 200				
Ezi-SPEED-CT-90-H-120-CD-R30-H-□	30	12.5	7.7	1.7 ~ 133.3		1,500	1,280	
Ezi-SPEED-CT-90-H-120-CD-R50-H-□	50	21	12.8	1 ~ 80				
Ezi-SPEED-CT-90-H-120-CD-R100-H-□	100	42	25.5	0.5 ~ 40				
Ezi-SPEED-CT-90-H-120-CD-R200-H-□	200	68	51	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

200 W

Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-104-H-200-CD-R5-H-□	5	2.8	1.9	10 ~ 800	4.2	1,230	1,070	800
Ezi-SPEED-CT-104-H-200-CD-R10-H-□	10	5.5	3.8	5 ~ 400				
Ezi-SPEED-CT-104-H-200-CD-R15-H -□	15	8.3	5.7	3.3 ~ 266.7		1,680	1,470	
Ezi-SPEED-CT-104-H-200-CD-R20-H -□	20	11.1	7.7	2.5 ~ 200				
Ezi-SPEED-CT-104-H-200-CD-R30-H-□	30	16.6	11.5	1.7 ~ 133.3		2,040	1,780	
Ezi-SPEED-CT-104-H-200-CD-R50-H-□	50	27.6	19.1	1 ~ 80				
Ezi-SPEED-CT-104-H-200-CD-R100-H-□	100	55.3	38.3	0.25 ~ 20				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Hollow Shaft Flat Gearbox Type Motor Specifications

400 W

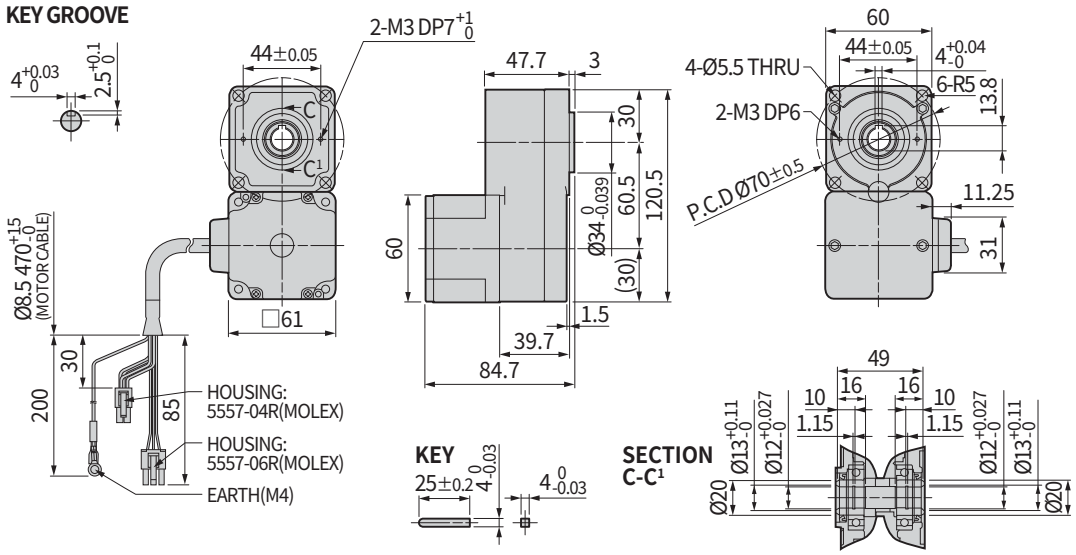
Unit Part Number	Gear Ratio	Permissible Torque [N·m]		Permissible Speed Range [r/min]	Motor Weight [kg]	Permissible Radial Load [N]		Permissible Axial Load [N]
		50 ~ 3,000 [r/min]	4,000 [r/min]			Distance from Output Shaft End [mm]		
						10	20	
Ezi-SPEED-CT-104-H-400-CD-R5-H -□	5	5.5	4.0	10 ~ 800	4.2	1,230	1,070	800
Ezi-SPEED-CT-104-H-400-CD-R10-H -□	10	11.1	8.1	5 ~ 400				
Ezi-SPEED-CT-104-H-400-CD-R15-H-□	15	16.6	12.1	3.3 ~ 266.7		1,680	1,470	
Ezi-SPEED-CT-104-H-400-CD-R20-H -□	20	22.1	16.2	2.5 ~ 200				
Ezi-SPEED-CT-104-H-400-CD-R30-H-□	30	33.2	24.2	1.7 ~ 133.3		2,040	1,780	
Ezi-SPEED-CT-104-H-400-CD-R50-H -□	50	55.3	40.4	1 ~ 80				
Ezi-SPEED-CT-104-H-400-CD-R100-H-□	100	110	80.8	0.5 ~ 40				

□: Brake Option - No symbol indicates no brake; “B” indicates a motor with a brake

Hollow Shaft Flat Gearbox Type Dimensions of Motor [mm]

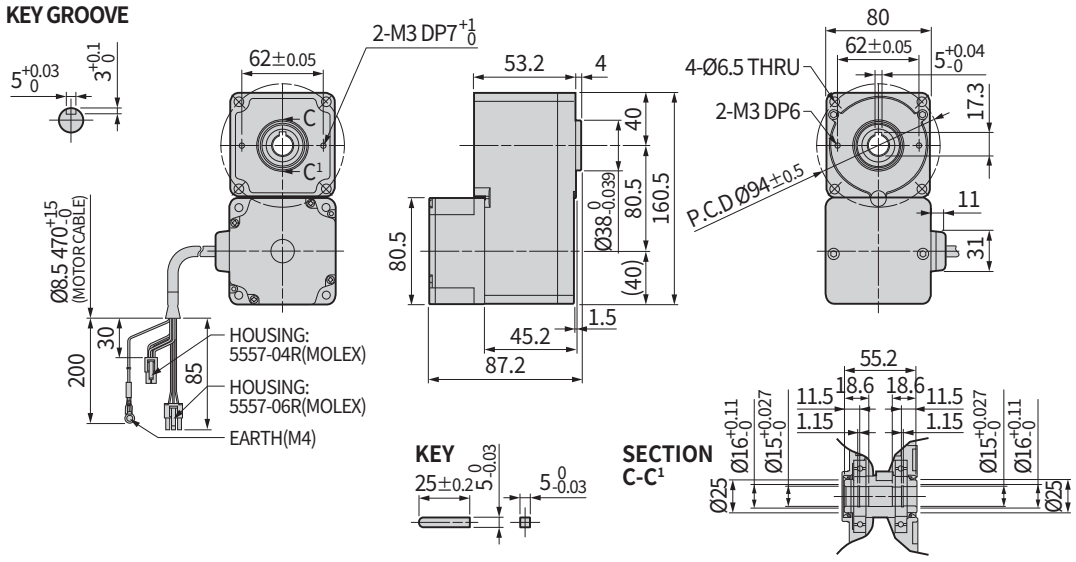
30 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt
Ezi-SPEED-CT-60-H-30-CD-R□-H	ESG-60-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M5×65



60 W

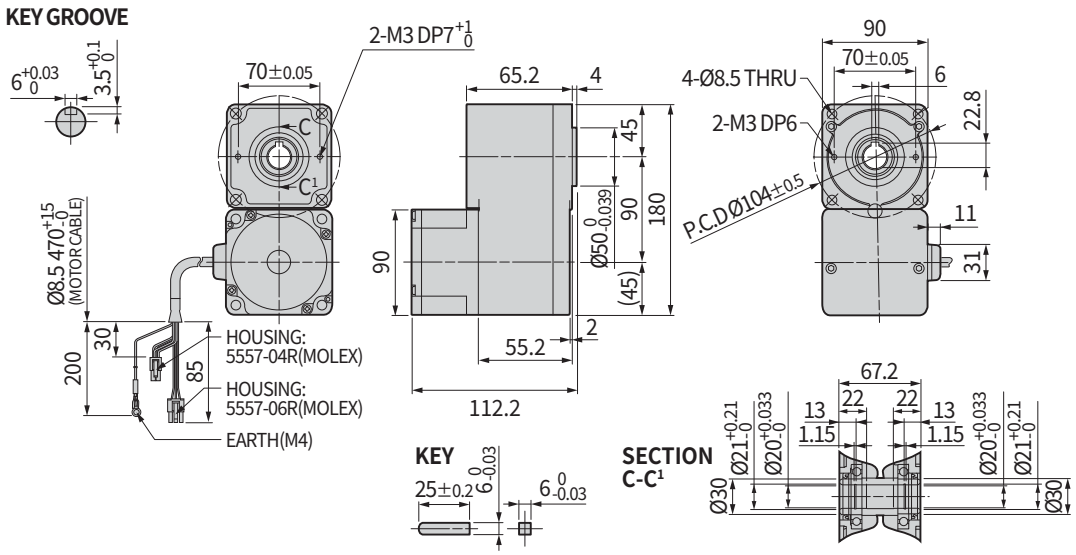
Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt
Ezi-SPEED-CT-80-H-60-CD-R□-H	ESG-80-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M6×70



Hollow Shaft Flat Gearbox Type Dimensions of Motor [mm]

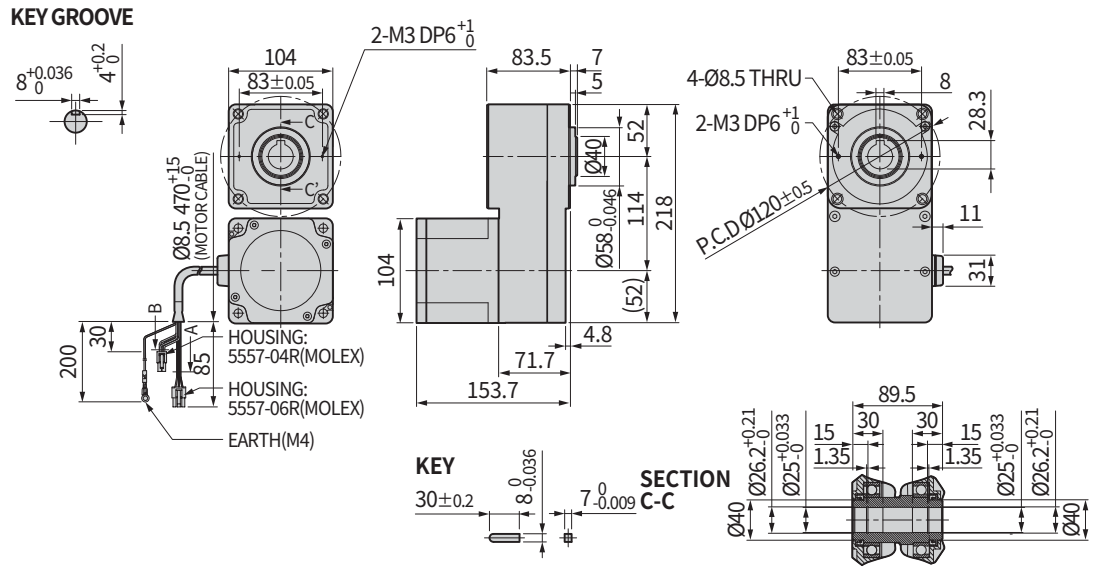
120 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt
Ezi-SPEED-CT-90-H-120-CD-R□-H	ESG-90-H-R□-H	5, 10, 15, 20, 30, 50, 100, 200	M8×90



200 W

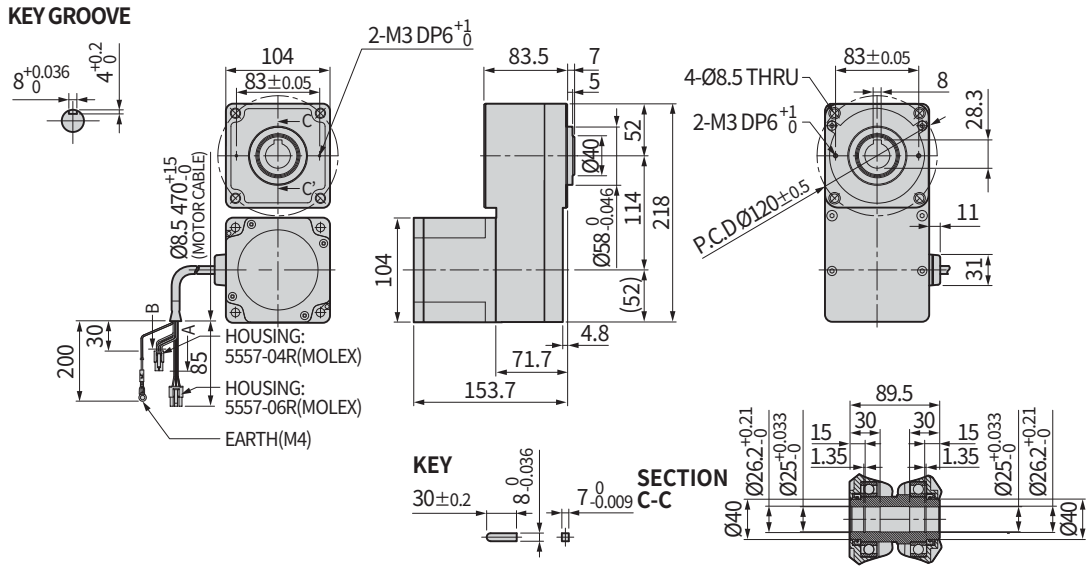
Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt
Ezi-SPEED-CT-104-H-200-CD-R□-H	ESG-104-H-R□-H	5, 10, 15, 20, 30, 50, 100	M8×90



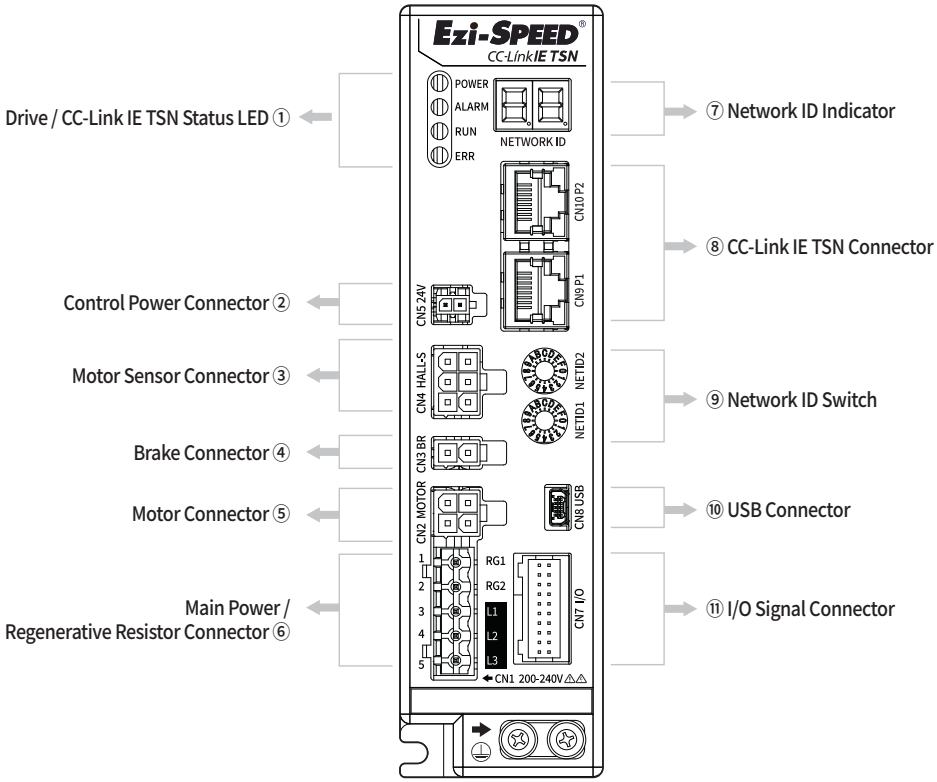
Hollow Shaft Flat Gearbox Type Dimensions of Motor [mm]

400 W

Unit Part Number	Gearbox Part Number	□Gear Ratio	Mounting Bolt
Ezi-SPEED-CT-104-H-400-CD-R□-H	ESG-104-H-R□-H	5, 10, 15, 20, 30, 50, 100	M8×90



Settings and Operation



1. Name and Function of Parts

No.	Name	Function
①	Drive / CC-Link IE TSN Status LED	Indicates the drive and CC-Link IE TSN communication status.
②	Control Power Connector (CN5)	Connect a 24 V DC power supply for control power.
③	Motor Sensor Connector (CN4)	Connects the motor sensor.
④	Brake Connector	When using a motor equipped with a brake, connect the brake connector.
⑤	Motor Connector (CN2)	Connects the motor power.
⑥	Main Power / Regenerative Resistor Connector (CN1)	Connects the main power supply and the regenerative resistor.
⑦	Network ID Indicator	During normal operation, the 7-segment LED displays the node address. When an alarm occurs, it displays the error code.
⑧	CC-Link IE TSN Connector (CN9, CN10)	Connects to a manager station (PLC) or another remote station.
⑨	Network ID Switch (SW1, SW2)	Sets the node address.
⑩	USB Connector (CN8)	Cannot be used.
⑪	I/O Signal Connector (CN7)	Connects input / output signals.

2. Network Status LED

(1) Drive Status Indicator LED

Item	Color	Function	Description
POWER	Green	Power Status	Lights up when power is applied.
ALARM	Red	Alarm Status	Flashes when an error occurs.

List of Error Types by the Number of LED Blinking

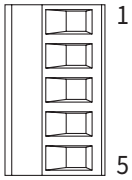
No.		Error Type	Causes
1		Overcurrent	Excessive current has flown through the drive.
2		Overspeed	The rotation speed of the motor output shaft exceeds approx. 120 % of maximum speed.
5		Overtemperature	When the internal temperature of the drive exceeds the allowable temperature.
6		Overvoltage	When the back electromotive force of the motor increases and the motor driving voltage inside the drive exceeds the allowable rated voltage.
8		Hall sensor Error	There is a problem with the connection between the drive and the motor sensor.
9		Undervoltage	When the input power voltage is lower than allowable minimum voltage.
10		Initial Operation Inhibition	Power is applied while the FWD or REV input is on. The error will operate only if the 'No Operation at Initial Run' parameter is set to 1.
11		System error	There is a problem in the internal circuit board.
12		ROM error	The stored data is damaged or the read / write of the EEPROM is failed.
15		External stop error	When EXT-ERROR input is executed in direct IO (operates when EXT-ERROR input is set in direct IO).
Lights up	49	Drive Alarm Occurrence	When other alarms occur in the drive.
	50	Drive Internal Communication Error	When a timeout error occurs in the internal communication.
	52		When a CRC error occurs in the internal communication.
	53		When a command is not executed properly in the internal communication.
	71	Network Initialization Error	When an error occurs during the initialization process of communication hardware due to incorrect values written in the EEPROM.
	76	Drive Internal Communication Failure	When internal communication of the drive cannot be started
	100	ROM Error	When parameters are not properly saved in ROM
	101		When the checksum of the ROM does not match
	102		When an error occurs during the process of reading data from FRAM
	110		When an error occurs during the process of reading data from ROM
	121		When an error occurs during the process of writing data to ROM (1)
	122		When an error occurs during the process of writing data to ROM (2)
	123		When an error occurs during the process of writing data to ROM (3)
	124		When an error occurs during the process of writing data to ROM (4)
	200	ROM Data Out of Range	When the parameter values stored in ROM exceed the allowable range
	500	CC-Link IE TSN Communication Error	When a communication error occurs during CC-Link IE TSN communication

(2) CC-Link IE TSN Indicator LED

Item	Color	Status	Description
RUN	Green	OFF	Power OFF
		ON	Normal Operation Status
ERR	Red	OFF	No Error or Power OFF
		Blinking	Drive Error
		Single Flash	CC-Link IE TSN Communication Error
		Double Flash	IP Address Conflict Error
LINK1, LINK2	Green	OFF	Link Inactive
		ON	Link Active

3. Power / Regenerative Resistor Connector (CN1)

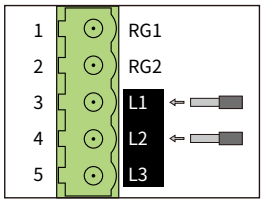
No.	Function
1	Regenerative Resistor Connection (RG1)
2	Regenerative Resistor Connection (RG2)
3	Power Input (L1)
4	Power Input (L2)
5	Power Input (L3)



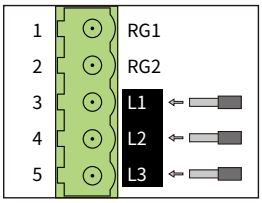
* Use RG1, RG2 terminals when connecting a regenerative resistor.
* regenerative resistor can be used when the deceleration time is short or the load with large inertia is applied.
* Please refer to the manual for details of regenerative resistor specifications.

Connection Method

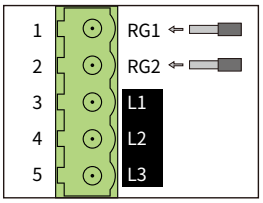
Single-Phase: 200 - 240 V



Three-Phase: 200 - 240 V



Regenerative Resistor

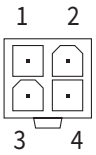


Wire Specifications

AWG18 ~ 14 (0.75 ~ 2.0 mm^2)

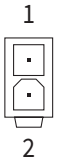
4. Motor Connector (CN2)

No.	Function	I/O
1	-	-
2	BLDC_U	Output
3	BLDC_W	Output
4	BLDC_V	Output



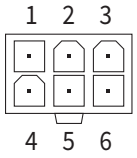
5. Brake Connector (CN3)

No.	Function	I/O
1	BRAKE+	Output
2	BRAKE-	Output



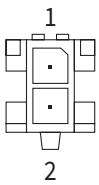
6. Motor sensor Connector (CN4)

No.	Function	I/O
1	5 V DC	Output
2	GND	Common
3	GND	Common
4	HALL_U	Input
5	HALL_V	Input
6	HALL_W	Input



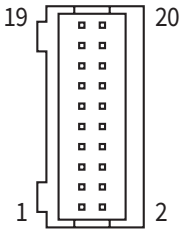
7. Control power Connector (CN5)

No.	Function	I/O
1	24 V DC	Input
2	GND	Input



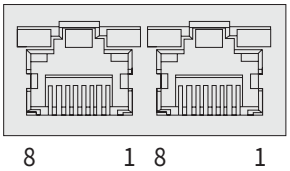
9. I/O Signal Connector (CN7)

No.	Function	I/O
1	HCOM	Input
2	IN0	Input
3	IN1	Input
4	IN2	Input
5	IN3	Input
6	IN4	Input
7	IN5	Input
8	IN6	Input
9	LCOM	Common
10	OUT0+	Output
11	OUT0-	Output
12	OUT1+	Output
13	OUT1-	Output
14	VH	Input
15	VM	Input
16	VL	Input
17	-	-
18	-	-
19	-	-
20	-	-

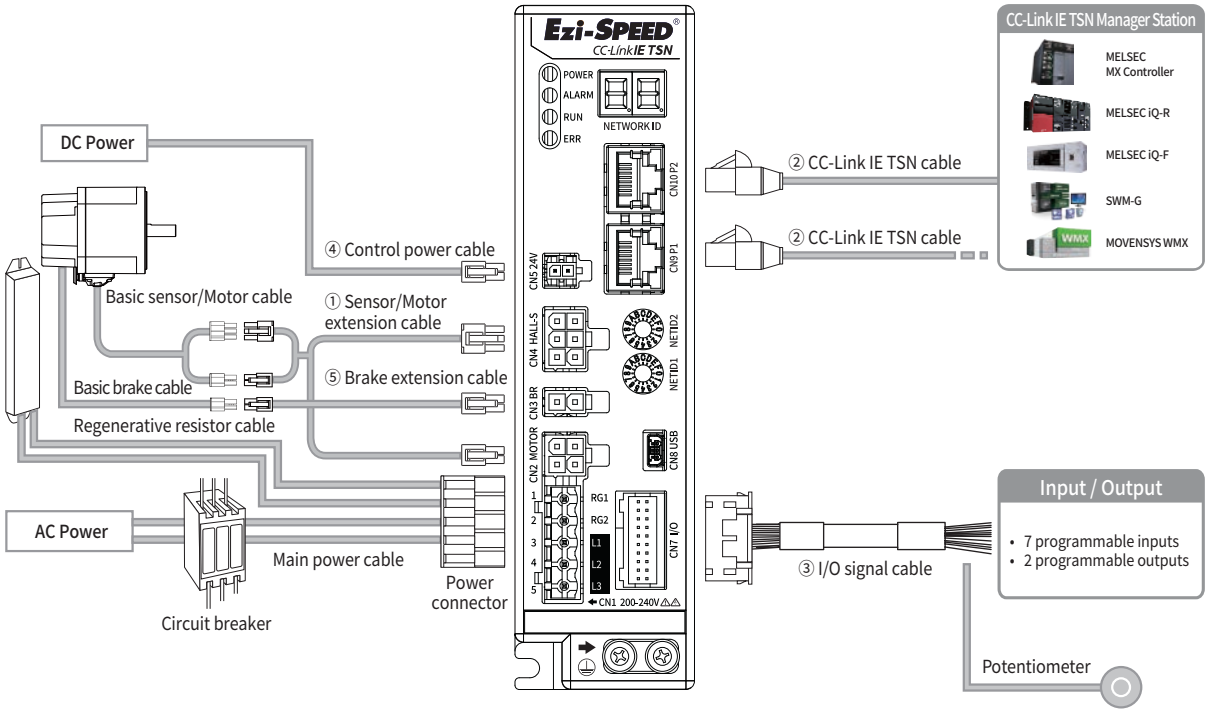


10. CC-Link IE TSN Connector (CN9, CN10)

No.	Function	Description
1	TD+	Transmission Data+
2	TD-	Transmission Data-
3	RD+	Reception Data+
4	N.C.	Not connected
5	N.C.	Not connected
6	RD-	Reception Data-
7	N.C.	Not connected
8	N.C.	Not connected
Frame	FG	Frame Ground



System Configuration [30, 60, 120 W]



Cable Type	Max. Cable Length	Remarks
① Sensor / Motor Extension Cable	10 m	Options (Sold separately)
② CC-Link IE TSN Cable	100 m	
③ I/O Signal Cable	20 m	
④ Control Power Cable	2 m	
⑤ Brake Extension Cable	10 m	
Basic Sensor / Motor Cable	0.3 m	Basic cables are attached to motors.
Main Power Cable	3 m	This cable is not provided by FASTECH.

1. Accessories

Connectors

These are connector specifications for drive cabling.

Purpose		Item	Part Number	Manufacturer
Main Power (CN1)		Terminal Block	CPF5.08-05P	STELVIO
Motor (CN2)	Drive Side (CN2)	Housing	5557-04R	MOLEX
		Terminal	5556T	
	Motor Side	Housing	5559-04P	MOLEX
		Terminal	5558T	
Brake (CN3)	Drive Side (CN3)	Housing	5557-02R	MOLEX
		Terminal	5556T	
	Brake Side	Housing	5559-02P	MOLEX
		Terminal	5558T	
Sensor (CN4)	Drive Side (CN4)	Housing	5557-06R	MOLEX
		Terminal	5556T	
	Sensor Side	Housing	5559-06P	MOLEX
		Terminal	5558T	
Control Power (CN5)	Drive Side (CN5)	Housing	43025-0200	MOLEX
		Terminal	43030-0001	
I/O Signal (CN7)		Housing	PADP-20V-1S	JST
		Terminal	SPH-002T-P0.5L	

※ The above connector is supplied with the product. When using other components, please ensure that they meet the required specifications.

2. Optional

① Sensor / Motor Extension Cable

These are the cables to connect the drive for 30 W, 60 W and 120 W to a sensor and a motor.

Purpose	Part Number	Length [m]	Cable Type	Remarks
1	CSPD-A-001F	1	Fixed Cable	Max. Cable Length: 10 m
2	CSPD-A-002F	2		
3	CSPD-A-003F	3		
5	CSPD-A-005F	5		
7	CSPD-A-007F	7		
10	CSPD-A-010F	10		

② CC-Link IE TSN Communication Cable

Purpose	Part Number	Length [m]	Cable Type	Remarks
CC-Link IE TSN Communication	CGNR-EC-001F	1	Fixed Cable	• STP (Shielded Twisted Pair) cable • Category 5e or higher • Max. Cable Length: 100 m
	CGNR-EC-002F	2		
	CGNR-EC-003F	3		
	CGNR-EC-005F	5		

※ If you need cables with length(in units of 1 m) not listed on the table, please contact FASTECH for more information.

③ I/O Signal Cable

These are the cables to connect the drive and other input / output devices.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive - I/O Device Connection	CSPD-IO-0R6F	0.6	Fixed Cable	Max. Cable Length: 10 m
	CSPD-IO-001F	1		
	CSPD-IO-002F	2		
	CSPD-IO-003F	3		
	CSPD-IO-005F	5		
	CSPD-IO-007F	7		
	CSPD-IO-010F	10		
	CSPD-IO-015F	15		
	CSPD-IO-020F	20		

④ Control Power Cable

Used for connecting 24 V DC.

Purpose	Part Number	Length [m]	Cable Type	Remarks
24 V DC Connection	CSMI-P-001F	1	Fixed Cable	Max. Cable Length: 2 m
	CSMI-P-002F	2		

⑤ Brake Extension Cable

Used for connecting brake.

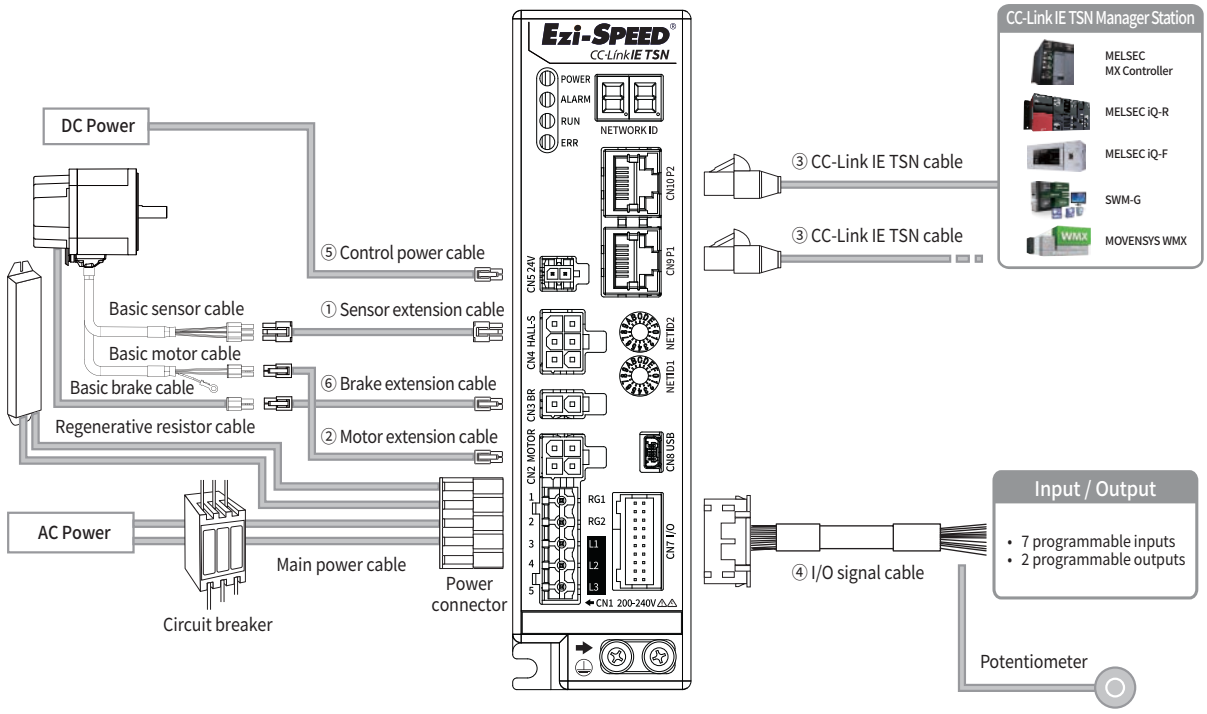
Purpose	Part Number	Length [m]	Cable Type	Remarks
Brake connection	CSPD-B-001F	1	Fixed Cable	Max. Cable Length: 10 m
	CSPD-B-002F	2		
	CSPD-B-003F	3		
	CSPD-B-005F	5		
	CSPD-B-007F	7		
	CSPD-B-010F	10		

⑥ Regenerative Resistor

It is used to prevent overvoltage alarms when driving a load with a short deceleration time or a large inertia.

Purpose	Part Number	Specifications		Product Image
Regenerative Resistor	BRM-A100W-400J	Resistance	400 Ω	
		Capacity	100 W	
		Cable Length	30 cm	

System Configuration [200, 400 W]



Cable Type	Max. Cable Length	Remarks
① Sensor Extension Cable	10 m	Options
② Motor Extension Cable	10 m	
③ CC-Link IE TSN Cable	100 m	
④ I/O Signal Cable	20 m	
⑤ Control Power Cable	2 m	
⑥ Brake Extension Cable	10 m	
Basic Sensor Cable	0.3 m	Basic cables are attached to motors.
Basic Motor Cable	0.3 m	
Main Power Cable	3 m	This cable is not provided by FASTECH.

1. Accessories

Connectors

These are connector specifications for drive cabling.

Purpose		Item	Part Number	Manufacturer
Main Power (CN1)		Terminal Block	CPF5.08-05P	STELVIO
Motor (CN2)	Drive Side (CN2)	Housing	5557-04R	MOLEX
		Terminal	5556T	
	Motor Side	Housing	5559-04P	MOLEX
		Terminal	5558T	
Brake (CN3)	Drive Side (CN3)	Housing	5557-02R	MOLEX
		Terminal	5556T	
	Brake Side	Housing	5559-02P	MOLEX
		Terminal	5558T	
Sensor (CN4)	Drive Side (CN4)	Housing	5557-06R	MOLEX
		Terminal	5556T	
	Sensor Side	Housing	5559-06P	MOLEX
		Terminal	5558T	
Control Power (CN5)	Drive Side (CN5)	Housing	43025-0200	MOLEX
		Terminal	43030-0001	
I/O Signal (CN7)		Housing	PADP-20V-1S	JST
		Terminal	SPH-002T-P0.5L	

※ The above connector is supplied with the product. When using other components, please ensure that they meet the required specifications.

2. Optional

① Sensor Extension Cable

These are the cables to connect the drive for 200 W and 400 W to a sensor.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive - Basic Sensor Connection	CSPD-S-001F	1	Fixed Cable	Max. Cable Length: 10m
	CSPD-S-002F	2		
	CSPD-S-003F	3		
	CSPD-S-005F	5		
	CSPD-S-007F	7		
	CSPD-S-010F	10		

② Motor Extension Cable

These are the cables to connect the drive for 200 W and 400 W to a motor.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive - Basic Motor Connection	CSPD-M-001F	1	Fixed Cable	Max. Cable Length: 10m
	CSPD-M-002F	2		
	CSPD-M-003F	3		
	CSPD-M-005F	5		
	CSPD-M-007F	7		
	CSPD-M-010F	10		

③ CC-Link IE TSN Communication Cable

Purpose	Part Number	Length [m]	Cable Type	Remarks
CC-Link IE TSN Communication	CGNR-EC-001F	1	Fixed Cable	• STP (Shielded Twisted Pair) cable • Category 5e or higher • Max. Cable Length: 10 m
	CGNR-EC-002F	2		
	CGNR-EC-003F	3		
	CGNR-EC-005F	5		

※ If you need cables with length(in units of 1 m) not listed on the table, please contact FASTECH for more information.

④ I/O Signal Cable

These are the cables to connect the drive and other input/output devices.

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive - I/O Device Connection	CSPD-IO-0R6F	0.6	Fixed Cable	Max. Cable Length: 20m
	CSPD-IO-001F	1		
	CSPD-IO-002F	2		
	CSPD-IO-003F	3		
	CSPD-IO-005F	5		
	CSPD-IO-007F	7		
	CSPD-IO-010F	10		
	CSPD-IO-015F	15		
	CSPD-IO-020F	20		

⑤ Control Power Cable

Used for connecting drive and control power (24V DC).

Purpose	Part Number	Length [m]	Cable Type	Remarks
Drive and control power connection	CSMI-P-001F	1	Fixed Cable	Max. Cable Length: 2 m
	CSMI-P-002F	2		

⑥ Brake Extension Cable

Used for connectiong brake.

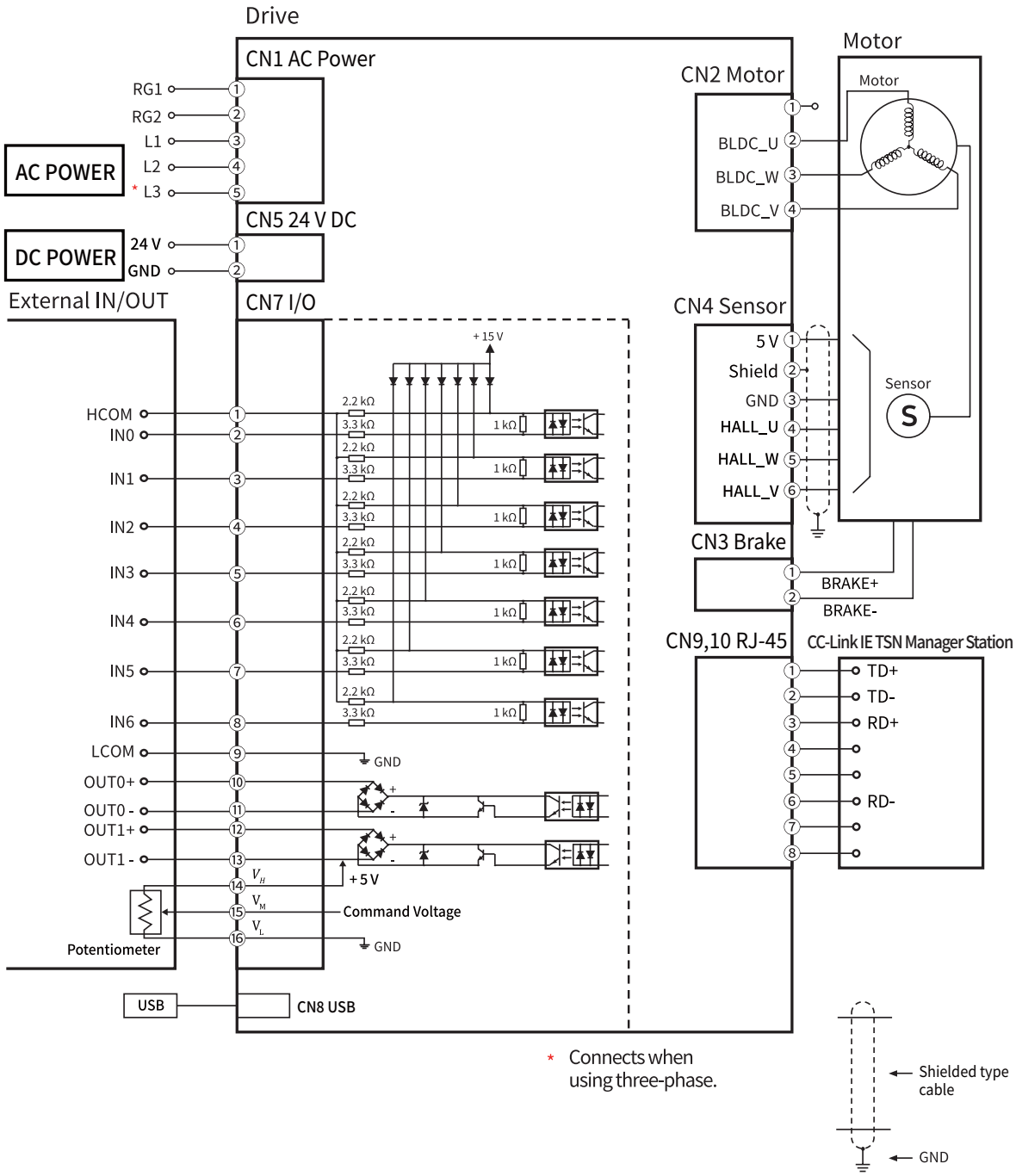
Purpose	Part Number	Length [m]	Cable Type	Remarks
Brake connection cable	CSPD-B-001F	1	Fixed Cable	Max. Cable Length: 10 m
	CSPD-B-002F	2		
	CSPD-B-003F	3		
	CSPD-B-005F	5		
	CSPD-B-007F	7		
	CSPD-B-010F	10		

⑦ Regenerative Resistor

It is used to prevent overvoltage alarms when driving a load with a short deceleration time or a large inertia.

Purpose	Part Number	Specifications		Product Image
Regenerative Resistor	BRM-A100W-400J	Resistance	400 Ω	
		Capacity	100 W	
		Cable Length	30 cm	

External Wiring Diagram



To ensure the safe and proper use of the products listed in this catalog, please be sure to read the user manual thoroughly before use.

When connecting the I/O cable between the drive and the master controller, be sure to turn off the power to both the master controller and the drive. Failure to do so may result in electric shock or product damage.

MEMO

FASTECH

Fast Accurate Smooth Motion

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