

# SHIHLIN ELECTRIC & ENGINEERING

Transmission & Distribution, Electrical Products, Power Control, Switches & Breaker, Factory Automation, Automotive Electrical Components

**AUTOMATION FOR  
SMART MANUFACTURING**

## **SHIHLIN SERVO SYSTEM SDC/SDE/SDP/SME**



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B230608E.SERVO-BO3



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## Model Definition

### Servo Drive



①	②	③	④	⑤	⑥	⑦	⑧					
<b>Product</b>	<b>Series</b>		<b>Capacity</b>		<b>Communication</b>		<b>Input Voltage</b>	<b>Model Code</b>	<b>Standard</b>		<b>Design Code</b>	
SD Servo Drive	C Basic	010 100W	A Modbus	2 AC220V	Blank	Standard	Blank	CE	Blank	General	P	Advanced Pulse
	E Standard	020 200W	C CANopen	4 AC440V	U		U	UL/CE (Optional)			M	Advanced Analog
	P Advanced	040 400W	E EtherCAT		C	Closed Loop					xyz	Customized or Localized
		075 750W										
		100 1kW										
		150 1.5kW										
		200 2kW										
		300 3kW										
		500 5kW										
		700 7kW										

### Servo Motor



①	②	③	④	⑤	⑥					
<b>Product</b>	<b>Series</b>	<b>Inertia</b>		<b>Capacity</b>		<b>Capacity</b>	<b>Rated Rotation</b>	<b>Encoder</b>		
SM Servo Motor	E	L Low	005 50W	180 1.8kW	15 1500rpm	E	Hollow Optical Absolute			
	P	M Medium	010 100W	200 2kW	20 2000rpm	S	Optical Incremental			
		H High	020 200W	290 2.9kW	30 3000rpm	T	Magnetic Incremental			
			040 400W	300 3kW		M	Optical Absolute			
			075 750W	440 4.4kW		N	Magnetic Absolute			
			085 850W	500 5kW		Z	Customized			
			100 1kW	550 5.5kW						
			130 1.3kW	700 7kW						
			150 1.5kW	750 7.5kW						

⑦	⑧	⑨	⑩	⑪
<b>Brake &amp; Oil Seal</b>	<b>Key &amp; Cable</b>	<b>Input Voltage</b>	<b>Standard</b>	<b>Design Code</b>
A N/A	A W/O Key, Load Side Lead	Blank AC220V	Blank CE	Blank General
B W/ Brake, W/O Oil Seal	B W/ Key, Load Side Lead	4 AC440V	U UL/CE (Optional)	xyz Customized or Localized
C W/O Brake, W/ Oil Seal	C W/O Key, Opposite Side Lead		N N/A	
D W/ Brake & Oil Seal	D W/ Key, Opposite Side Lead			
Z Customized	Z Customized			

**Note**

- The code here is just to let the user understand the model definition better but don't mean that every combination is available. Please contact our sales team for available models.
- If a magnetic absolute or optical absolute type motor is purchased, an extra absolute type encoder battery set (SDH-BAT-SET) is needed.
- This catalog just lists out the details of standard servo motor. Some specific motors such as hollow shaft motor, motor with special diameter of shaft, etc., aren't listed in this catalog. Please feel free to contact us for more information.

# Products

## SDC Series Drive



Pulse Type: SDC-A  
 Advanced Analog Type: SDC-A(M)  
 CANopen Type: SDC-C  
 EtherCAT Type: SDC-E  
 Speed Response: 2kHz  
 Rated Capacity: 100W~1kW  
 Input Voltage: 1φ220V

## SDE Series Drive

Advanced Pulse Type: SDE-P  
 Speed Response: 2kHz  
 Rated Capacity: 100W~3kW  
 Input Voltage: 1φ/3φ220V(2kW and below)  
 3φ220V(3kW)



## SDP Series Drive



Advanced Pulse Type: SDP-A  
 EtherCAT Type: SDP-E  
 Speed Response: 2.5kHz(SDP-E)/3.2kHz(SDP-A)  
 Rated Capacity: 100W~7kW  
 Input Voltage: 1φ/3φ220V(2kW and below)  
 3φ220V(3kW~7kW)  
 3φ380V(2kW~7kW)

## SME Series Motor

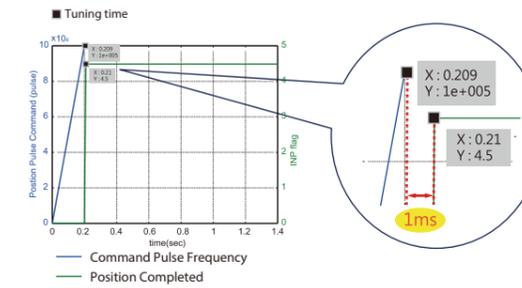
Low Inertia : Light Load, High Speed Positioning  
 Capacity : 50W~3kW (220V)  
 Medium Inertia : Normal Load, Stability Application  
 Capacity : 1kW~7kW (220V)  
 High Inertia : Heavy Load, Stability Application  
 Capacity : 200W~1.8kW (220V)  
 1.8kW~7.5kW (440V/SMP Series)



# Features

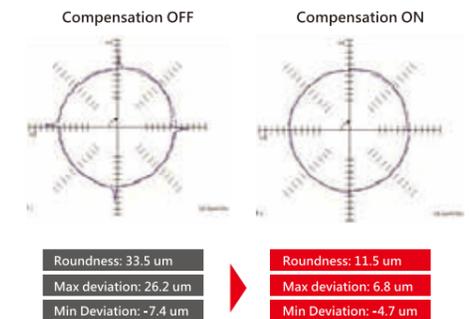
## Outstanding Speed Response Performance

Accurate and fast automatic load inertia measurement greatly shortens the tuning time.



## Disturbance Compensation and Backlash Compensation

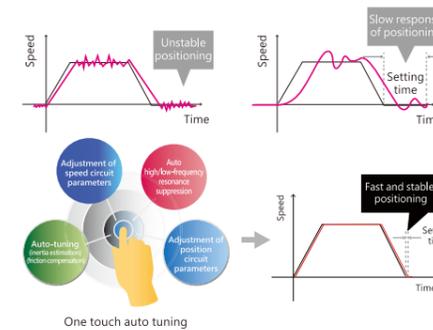
Improve the error due to non-linear disturbance effectively and increase the circularity.



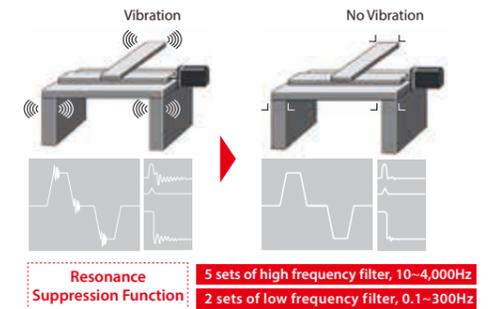
## One Touch Tuning

SDC/SDE-P/SDP Series

Effectively reduces tuning time and maximizes drive performance

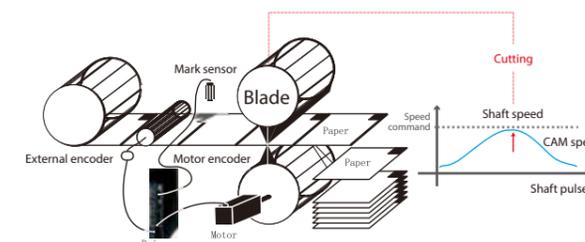


## Reduce Resonance & Vibration



## Electronic CAM SDP Series

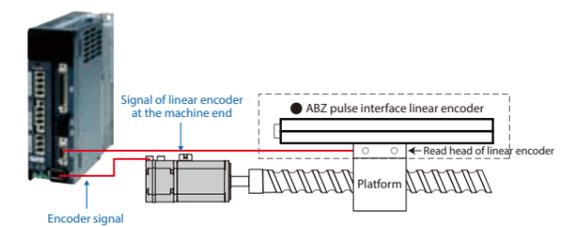
The E-CAM profile can support up to 720 points. It can be applied in CAM control of various machines such as printing machine, labeling machine, packing machine, flying shears and etc.



## Full-closed loop control SDP Series

It can be connected to external linear encoder and motor encoder, then control the position accurately through the signal of terminal position feedback.

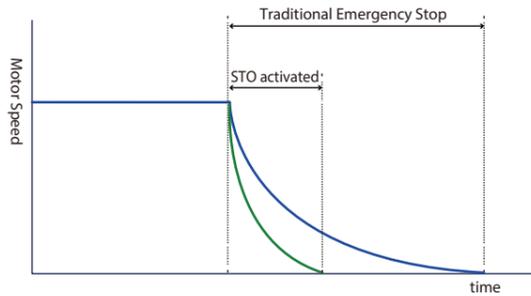
Support incremental-type and absolute-type Endat2.2



# Features

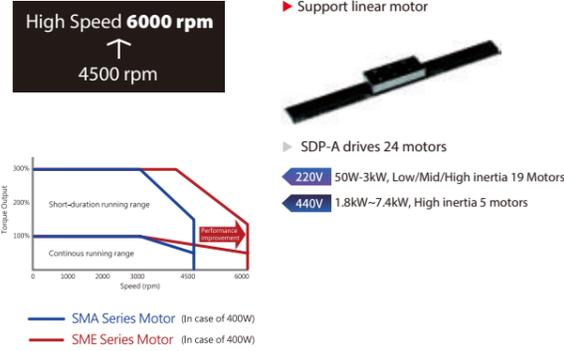
## Safe Torque OFF(STO) function SDP Series

Support STO function to enhance the integration of mechanical and factory safety



## Motor diversification and performance enhancement

Speed increasing and better torque output help to enhance the performance (productivity). Support linear motor and DD motor on the market.



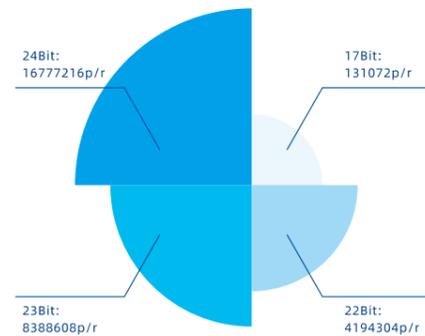
## Flexible configuration to meet customer needs

Low-inertia servomotor, medium-inertia servomotor and high-inertia servomotor are optional. All series included key slot, oil seal and optional motor with brake.



## Encoder Resolution

17-bit magnetic encoder and 22/23/24 optical encoder. Optical encoder offers excellent performance in high-precision position control and high stability in low-speed running. Magnetic encoder has excellent oil resistance and vibration resistance.



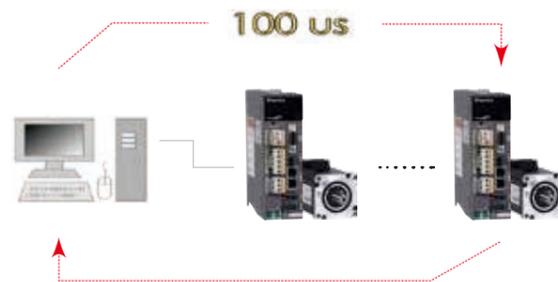
## ETG certification SDP-E Series

Passed international certification. Both efficiency and functionality are proven.



## The fastest communication cycle time in the industry SDP-E Series

Support maximum cycle time of 100us to achieve high-speed and high-precision motion control.



# Specifications

## SDC-A/SDC-A(M) Drive

Dimensions & Weight	Model	010	020	040	075	100
	Capacity	100W	200W	400W	750W	1kW
	Length (mm)	162	162	162	162	162
	Width (mm)	51	51	51	51	51
	Height (mm)	164	164	164	164	164
	Weight (kg)	1.4	1.4	1.4	1.7	1.7
Main Circuit Power	Input Voltage 50/60Hz	1φ AC200~240V				
	Input Permissible Voltage Variation 50/60Hz	1φ AC170~264V				
	Input Permissible Frequency Variation	±5%				
Control Circuit	Output Voltage	0~240VAC				
	Output Current	1.0A	1.8A	3.2A	5.8A	6.4A
	Output Frequency	0~250Hz				
	Voltage 50/60Hz	N/A				
	Permissible Voltage Variation 50/60Hz	N/A				
Environment	Permissible Frequency Variation	N/A				
	Power Consumption (W)	N/A				
	Control Method	IGBT-PWM control (SVPWM drives)				
	Encoder Resolution	Magnetic encoder 17bit (131072 Pulse), Optical encoder 22bit (4194304 Pulse)				
	Communication Interface	USB, RS485				
	Brake Unit	All series built-in				
	Regenerative Resistor	N/A		Built-in		
	Control Signal Input DI	SDC-A:9/SDC-A(M):6				
	Control Signal Output DO	SDC-A:5/SDC-A(M):3				
	Analog Signal Input	SDC-A:N/A / SDC-A(M):2				
Analog Signal Output	SDC-A:N/A / SDC-A(M):1					
Protective Function	Overcurrent protection, undervoltage protection, overvoltage protection, overheat protection, overload protection (electronic heat accumulation), abnormal pulse command protection, encoder error protection, regenerative error protection, overspeed protection, excessive error protection, serial-communication error, serial communication time out, motor matching error, motor impact error, short circuit protection of terminal U,V,W, control circuit error					
Temperature	0°C~55°C ( If operating temperature is above 45°C, force cooling will be required), storage temperature: -20~65°C(Non-freezing)					
Humidity	Maximum 90% RH(Non-condensing), Storage: Below 90% RH (Non-condensing)					
Installation Site	Indoors (avoid direct sunlight), no corrosive gas, avoid flammable gas,oil mist or dust					
Altitude	Below 1000m					
Vibration	Maximum 5.9m / S <sup>2</sup>					
Cooling method	Natural cooling, open		Fan cooling, open(IP20)			
Position Control Mode	Input Pulse Frequency	Transmitted by differential: 500 Kpps (low speed)/4 Mpps (high-speed), Transmitted by open-collector: 200 Kpps				
	Command Pulse Type	CCW pulse + CW pulse, Pulse + direction, A phase + B phase pulse				
	Command Type	External pulse control / Set by parameters				
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing				
	E-gear Ratio	Electronic gear A/B multiple A:1~4194304 B:1~4194304 (1/50 < A/B < 64000)				
	Error Excessive	±3 rotations				
	Torque limit	Set by parameters				
	Feedforward Compensation	Set by parameters (0~200%)				
	Speed Control Range	Internal speed command 1:5000				
	Command Type	Set by parameters				
Speed Control Mode	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing				
	Analog Speed Command Input	N/A				
	Speed Fluctuation Rate	Maximum ±0.01% at 0 to 100% load fluctuation, Maximum 0.01% at ±10% power fluctuation				
	Torque Limit	Set by parameters				
	Bandwidth	Maximum 2.0 kHz				
Torque Control Mode	Command Type	Set by parameters				
	Command Smoothing Strategy	Low-pass filter				
	Analog Torque Command Input	N/A				
Input and Output Signal	Speed Limit	Set by parameters				
	Digital Input	Servo on, forward/reverse rotation limit prohibition, pulse error clear, torque direction selection, speed command selection, position command selection, forward/reverse rotation direction startup, proportion control switching, torque limit switch, fault reset, emergency stop, control mode switching, electronic gear ratio selection, gain switch, position command trigger, motor stop, pulse input prohibition, events trigger command, origin point searching, homing				
	Digital Output	Torque limit reached, speed limit reached, reserved signal, zero speed reached, target position reached, target speed reached, servo alarm, servo warning, homing completed, overload level reached, internal position reached, position command overflow, software positive direction limit reached, software negative direction limit reached				
	Analog Input	N/A				
	Analog Output	N/A				

# Servo Drive Specifications

## SDE-P

Dimensions & Weight	Model	010	020	040	075	100	150	200	300	
	Capacity	100W	200W	400W	750W	1kW	1.5kW	2kW	3kW	
	Length (mm)	162	162	162	162	162	162	162	162	
	Width (mm)	50	50	50	70	70	85	85	85	
	Height (mm)	150	150	150	170	170	190	190	190	
	Weight (kg)	1.4	1.4	1.4	1.7	1.7	2.6	2.6	2.6	
	Main Circuit Power	Input Voltage 50/60Hz	1φ or 3φ AC200~240V							3φ AC200~240V
Input Permissible Voltage Variation 50/60Hz		1φ or 3φ AC170~264V							3φ AC170~264V	
Input Permissible Frequency Variation		±5%								
Output Voltage		AC 0-240V								
Output Current		1.0A	1.8A	3.2A	5.8A	6.4A	9.4A	12.1A	17.6A	
Control Circuit	Output Frequency	0-250Hz				0-167Hz				
	Voltage 50/60Hz	1φ AC200~240V								
	Permissible Voltage Variation 50/60Hz	1φ AC170~264V								
	Permissible Frequency Variation	±5%								
	Power Consumption (W)	30								
	Control Method	Three phase full-wave rectification, IGBT-PWM control (SVPWM drives)								
	Encoder Feedback	22bit (419304 Pulse)								
	Communication Interface	USB, RS485								
	Brake Unit	All series built-in								
	Regenerative Resistor	All series built-in								
	Control Signal Input DI	12								
	Control Signal Output DO	6								
	Analog Signal Input	2 groups (±10V)								
Analog Signal Output	2 groups (±10V)									
Environment	Protective Function	Overcurrent protection, undervoltage protection, overvoltage protection, overheat protection, overload protection (electronic heat accumulation), fan failure protection, abnormal pulse command protection, encoder error protection, regenerative error protection, overspeed protection, excessive error protection, serial communication error, serial communication time out, motor matching error, motor impact error, short circuit protection of terminal U,V,W, control circuit error etc.								
	Temperature	0°C~55°C ( If operating temperature is above 45°C, force cooling will be required), storage temperature: -20~65°C(Non-freezing)								
	Humidity	Maximum 90% RH(Non-condensing), Storage: Below 90% RH (Non-condensing)								
	Installation Site	Indoors (avoid direct sunlight), no corrosive gas, avoid flammable gas,oil mist or dust								
	Altitude	Below 1000m								
	Vibration	Maximum 5.9m / S <sup>2</sup>								
	Cooling method	Natural cooling, open				Fan cooling, open (IP20)				
Position Control Mode	Input Pulse Frequency	Transmitted by differential: 500 Kpps (low speed)/4 Mpps (high-speed), Transmitted by open-collector: 200 Kpps								
	Command Pulse Type	CCW pulse + CW pulse, Pulse + direction, A phase + B phase pulse								
	Command Type	External pulse control / Set by parameters								
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing								
	E-gear Ratio	Electronic gear A/B multiple A:1~4194304 B:1~4194304 (1/50 < A/B < 64000)								
	Error Excessive	±3 rotations								
	Torque limit	Set by parameters or external analog signal input (DC 0~+10V / maximum torque)								
	Feedforward Compensation	Set by parameters (0~200%)								
Speed Control Mode	Speed Control Range	Analog speed command 1:2000, internal speed command1:5000								
	Command Type	External analog voltage input / Set by parameters								
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing								
	Analog Speed Command Input	Input DC0~±10V / Rated speed ( Input Impedance 10~12kΩ)								
	Speed Fluctuation Rate	Maximum ±0.01% at 0 to 100% load fluctuation, Maximum 0.01% at ±10% power fluctuation								
	Torque Limit	Set by parameters or external analog input (DC 0~+10V / maximum torque)								
Torque Control Mode	Bandwidth	Maximum 2kHz								
	Command Type	External analog voltage input / Set by parameters								
	Command Smoothing Strategy	Low-pass filter								
	Analog Torque Command Input	Input DC0~±10V / Maximum torque ( Input Impedance 10~12kΩ)								
Input and Output Signal	Speed Limit	Set by parameters or external analog input (DC 0~+10V / maximum speed)								
	Digital Input	Servo on, forward/reverse rotation limit prohibition, pulse error clear, torque direction selection, speed command selection, position command selection, forward/reverse rotation direction startup, proportion control switching, fault reset, emergency stop, control mode switching, electronic gear ratio selection, gain switch, position command trigger, motor stop, pulse input prohibition, events trigger command,origin point searching, homing								
	Digital Output	Torque limit reached, speed limit reached, reserved signal, zero speed reached, target position reached, target speed reached, alarm display, warning display, homing completed, overload level reached, internal position reached, position command overflow, software positive direction limit reached, software negative direction limit reached								
	Analog Input	Analog speed command / limit, analog torque command / limit								
	Analog Output	Command pulse frequency, pulse error, current command, DC bus voltage, servo motor speed, torque								

# Servo Drive Specifications

## SDP-E

Dimensions & Weight	Model	010	020	040	075	100	150	200	300	500	700	
	Capacity	100W	200W	400W	750W	1kW	1.5kW	2kW	3kW	5kW	7kW	
	Length (mm)	162	162	162	162	162	162	162	162	162	232	
	Width (mm)	50	50	50	70	70	85	85	85	85	136	
	Height (mm)	150	150	150	170	170	190	190	190	196	205	
	Weight (kg)	1.4	1.4	1.4	1.4	1.7	1.7	2.6	2.6	5.9	5.9	
	Main Circuit Power	Input Voltage 50/60Hz	1φ or 3φ AC200~240V							3φ AC200~240V		
Input Permissible Voltage Variation 50/60Hz		1φ or 3φ AC170~264V							3φ AC170~264V			
Input Permissible Frequency Variation		±5%										
Output Voltage		110V				140V				208V		
Output Current		1.0A	1.8A	3.2A	5.4A	6.4A	9.4A	12.1A	17.6A	21.2A	30.2A	
Control Circuit	Output Frequency	0-250Hz				0-167Hz						
	Voltage 50/60Hz	1φ AC200~240V										
	Permissible Voltage Variation 50/60Hz	1φ AC170~264V										
	Permissible Frequency Variation	±5%										
	Power Consumption (W)	30										
	Control Method	Three phase full-wave rectification, IGBT-PWM control (SVPWM drives)										
	Encoder Feedback	24bit(1677216 pulse)/50W-750W motor, 23bit(8388608 pulse)/ 1kW-7kW motor										
	Communication Interface	EtherCAT, USB										
	Brake Unit	All series built-in										
	Regenerative Resistor	Built-in									N/A	
	Control Signal Input DI	7										
	Control Signal Output DO	4										
	Analog Signal Input	N/A										
Analog Signal Output	N/A											
Environment	Protective Function	Overcurrent protection, undervoltage protection, overvoltage protection, overheat protection, overload protection (electronic heat accumulation), fan failure protection, abnormal pulse command protection, encoder error protection, regenerative error protection, overspeed protection, excessive error protection, serial communication error, serial communication time out, motor matching error, motor impact error, short circuit protection of terminal U,V,W, control circuit error etc.										
	Temperature	0°C~55°C ( If operating temperature is above 45°C, force cooling will be required), storage temperature: -20~65°C(Non-freezing)										
	Humidity	Maximum 90% RH(Non-condensing), Storage: Below 90% RH (Non-condensing)										
	Installation Site	Indoors (avoid direct sunlight), no corrosive gas, avoid flammable gas,oil mist or dust										
	Altitude	Below 1000m										
	Vibration	Maximum 5.9m / S <sup>2</sup>										
	Cooling method	Natural cooling, open				Fan cooling, open (IP20)						
Position Control Mode	Input Pulse Frequency	N/A										
	Command Pulse Type	N/A										
	Command Type	Controlled by EtherCAT										
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing										
	E-gear Ratio	Electronic gear A/B multiple A:1~4194304 B:1~4194304 (1/50 < A/B < 64000)										
	Error Excessive	±3 rotations										
	Torque limit	Controlled by EtherCAT										
	Feedforward Compensation	Set by parameters or controlled by EtherCAT (0~200%)										
Speed Control Mode	Speed Control Range	1:5000										
	Command Type	Controlled by EtherCAT										
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing										
	Analog Speed Command Input	N/A										
	Speed Fluctuation Rate	Maximum ±0.01% at 0 to 100% load fluctuation, Maximum 0.01% at ±10% power fluctuation										
	Torque Limit	Controlled by EtherCAT										
Torque Control Mode	Bandwidth	Maximum 2.5kHz										
	Command Type	Controlled by EtherCAT										
	Command Smoothing Strategy	Low-pass filter										
	Analog Torque Command Input	N/A										
Input and Output Signal	Speed Limit	Controlled by EtherCAT										
	Digital Input	Servo on, forward/reverse rotation limit prohibition, pulse error clear, torque direction selection, speed command selection, position command selection, forward/reverse rotation direction startup, proportion control switching, fault reset, emergency stop, control mode switching, electronic gear ratio selection, gain switch, position command trigger, motor stop, pulse input prohibition, events trigger command, origin point searching, homing, E-CAM meshing										
	Digital Output	Torque limit reached, speed limit reached, reserved signal, zero speed reached, target position reached, target speed reached, alarm display, warning display,homing completed, overload level reached, internal position reached, position command overflow, software positive direction limit reached, software negative direction limit reached, Capture program completed, Master position of E-CAM										
	Analog Input	N/A										
	Analog Output	N/A										

# Servo Drive Specifications

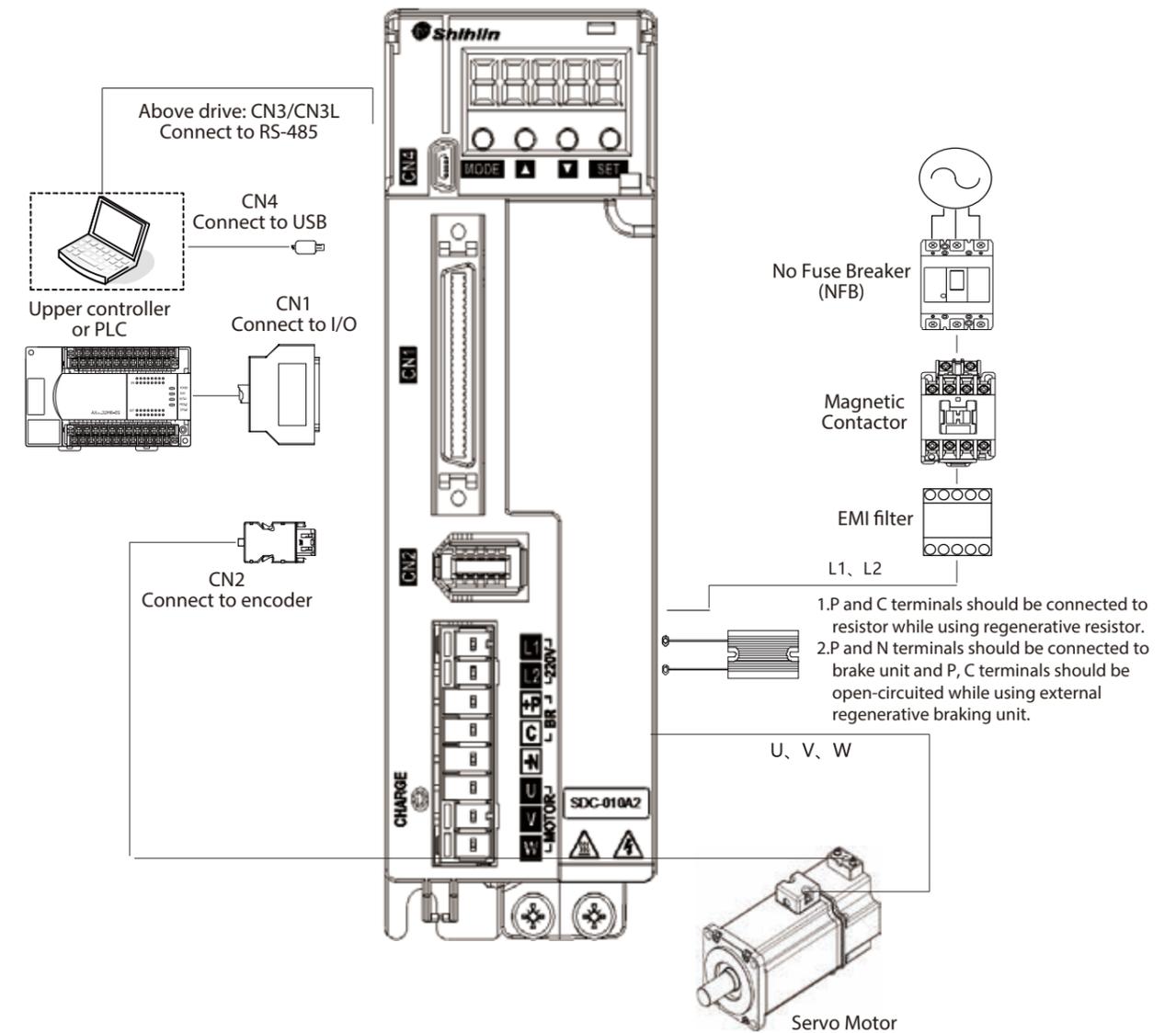
## SDP-A

Dimensions & Weight	Model	010	020	040	075	100	150	200	300	200	300	500	700
	Capacity	100W	200W	400W	750W	1kW	1.5kW	2kW	3kW	2kW	3kW	5kW	7kW
	Length (mm)	162	162	162	162	162	162	162	162	245	245	245	245
	Width (mm)	50	50	50	70	70	85	85	85	123.5	123.5	123.5	123.5
	Height (mm)	150	150	150	170	170	190	190	190	205	205	205	205
Weight (kg)	1.4	1.4	1.4	1.7	1.7	2.6	2.6	2.6	2.6	5.3	5.3	5.3	5.3
Main Circuit Power	Input Voltage 50/60Hz	1φ or 3φ AC200~240V							3φ AC200~240V	3φ AC380~480V			
	Input Permissible Voltage Variation 50/60Hz	1φ or 3φ AC170~264V							3φ AC170~264V	3φ AC323~528V			
	Input Permissible Frequency Variation	±5%											
	Output Voltage	AC 0-110V				AC 0-140V				AC 300V			
Output Current	1.0A	1.8A	3.2A	5.4A	6.4A	9.4A	12.1A	17.6A	8.4A	11.9A	16.5A <small>(with 4.4kW motor)</small>	20.8A <small>(with 5.5kW motor)</small>	27.2A
Output Frequency	0-250Hz				0-167Hz				0-125Hz				
Control Circuit	Voltage 50/60Hz	1φ AC200~240V							24VDC				
	Permissible Voltage Variation 50/60Hz	1φ AC170~264V							21.6~26.4VDC				
	Permissible Frequency Variation	±5%				Maximum ±5%							
	Power Consumption (W)	30				45							
	Control Method	Three phase full-wave rectification, IGBT-PWM control (SVPWM drives)											
	Encoder Feedback	24bit(1677216 pulse)/50W-750W motor, 23bit(838608 pulse)/ 850W-7.5kW motor											
	Communication Interface	USB, RS485											
	Brake Unit	All series built-in											
	Regenerative Resistor	Built-in							N/A				
	Control Signal Input DI	12											
Control Signal Output DO	6												
Analog Signal Input	2 groups (±10V)												
Analog Signal Output	2 groups (±10V)												
Protective Function	Overcurrent protection, regenerative overvoltage protection, overload protection (electronic heat accumulation), servo motor overheat protection, encoder error protection, regenerative error protection, fan failure protection, short circuit protection, undervoltage / instantaneous power failure protection, overspeed protection, excessive error protection, etc.												
Environment	Temperature	0°C~55°C(If operating temperature is above 45°C, force cooling will be required), storage temperature: -20~65°C(Non-freezing)											
	Humidity	Maximum 90% RH(Non-condensing), Storage: Below 90% RH (Non-condensing)											
	Installation Site	Indoors (avoid direct sunlight), no corrosive gas, avoid flammable gas,oil mist or dust											
	Altitude	Between sea level and 1000m											
	Vibration	Maximum 5.9m / S², 10~55 Hz (XYZ direction)											
Cooling method	Natural cooling, open						Fan cooling, open (IP20)						
	Input Pulse Frequency Transmitted by differential: 500 Kpps (low speed)/4 Mpps (high-speed), Transmitted by open-collector: 200 Kpps												
Position Control Mode	Command Pulse Type	CCW pulse + CW pulse, Pulse + direction, A phase + B phase pulse											
	Command Type	External pulse control / Set by parameters											
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing											
	E-gear Ratio	Electronic gear A/B multiple A:1~4194304 B:1~4194304 (1/50 < A/B < 25600)											
	Error Excessive	±3 rotations											
	Torque limit	Set by parameters or external analog signal input (DC 0~+10V / maximum torque)											
	Feedforward Compensation	Set by parameters (0~200%)											
	Speed Control Range	analog speed command 1:2000, internal speed command 1:5000											
	Command Type	External analog voltage input / Set by parameters											
	Command Smoothing Strategy	Low-pass filter / Linear smoothing / S-curve smoothing											
Speed Control Mode	Analog Speed Command input	Input DC0~±10V / Rated speed ( Input Impedance 10~12kΩ)											
	Speed Fluctuation Rate	Maximum ±0.01% at 0 to 100% load fluctuation, Maximum 0.01% at ±10% power fluctuation											
	Torque Limit	Set by parameters or external analog input (DC 0~+10V / maximum torque)											
	Bandwidth	Above 3.2kHz											
	Command Type	External analog voltage input / Set by parameters											
Torque Control Mode	Command Smoothing Strategy	Low-pass filter											
	Analog Torque Command Input	Input DC0~±10V / Maximum torque ( Input Impedance 10~12kΩ)											
	Speed Limit	Set by parameters or external analog input (DC 0~+10V / maximum speed)											
Input and Output Signal	Digital Input	Servo on, forward/reverse rotation limit prohibition, pulse error clear, torque direction selection, speed command selection, position command selection, forward/reverse rotation direction startup, proportion control switching, torque limit switching, fault reset, emergency stop, control mode switching, electronic gear ratio selection, gain switch, position command trigger, motor stop, pulse input prohibition, events trigger command, origin point searching, homing, E-CAM meshing											
	Digital Output	ABZ Line Driver output, Z open-collector output, torque limit reached, speed limit reached, reserved signal, zero speed reached, target position reached, target speed reached, alarm display, warning display, homing completed, overload level reached, internal position reached, position command overflow, software positive direction limit reached, software negative direction limit reached, Master position of E-CAM											
	Analog Input	Analog speed command / limit, analog torque command / limit											
	Analog Output	Command pulse frequency, pulse error, current command, DC bus voltage, servo motor speed, torque											

# Connection with Peripheral Equipment

## SDC Series

### Wiring Diagram of Main Circuit Power and Peripherals



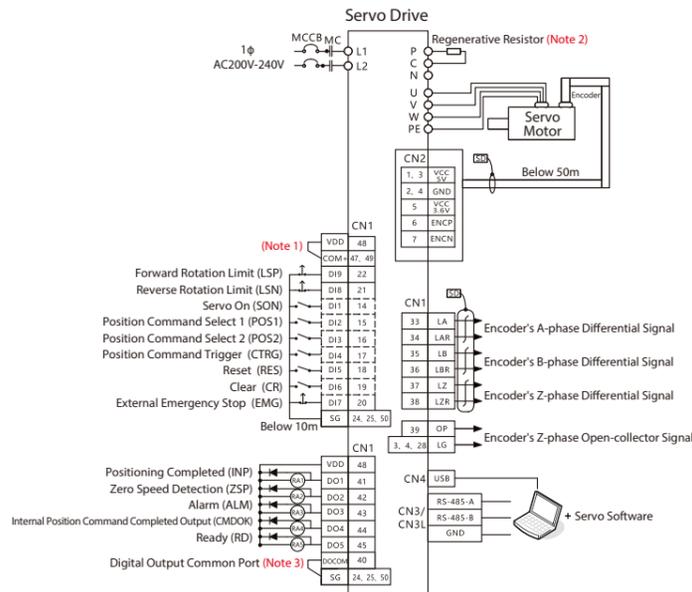
### Note

- While installing regenerative resistor, please remove the original P and C contact wires. Connect the external resistor to P and C contacts. Please refer to the user manual for each capacity resistance value and power.
- While using a motor with brake, please use the specific power cable and DC24V should be connected. DO NOT use the VDD contact inside the drive. Please refer to user manual for more details.
- While using absolute position, SDH-BAT-SET battery should be applied.

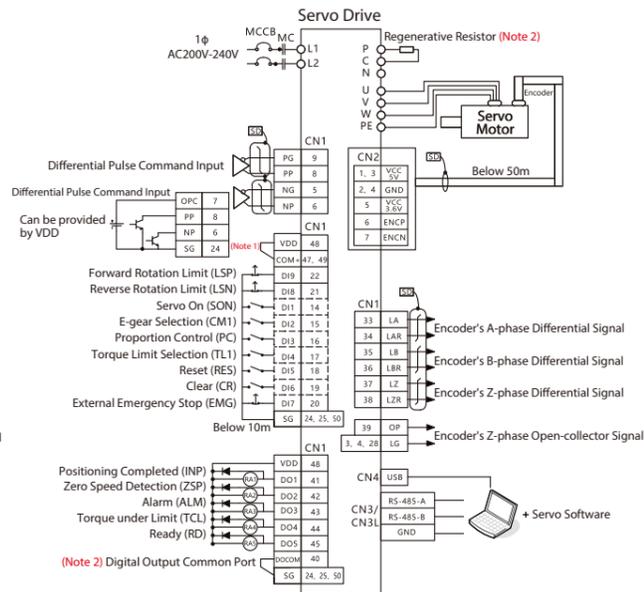
# Connection with Peripheral Equipment

## Wiring Diagram of Control Mode

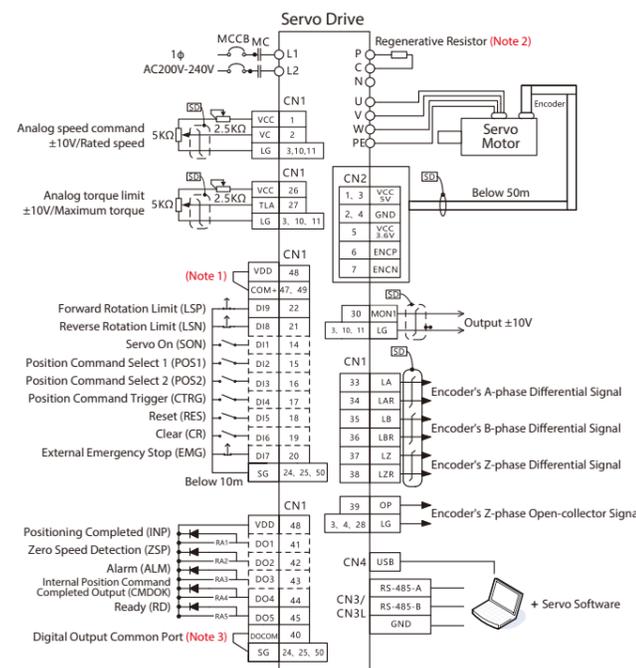
Pr Mode: Wiring Diagram of Procedure Control Mode



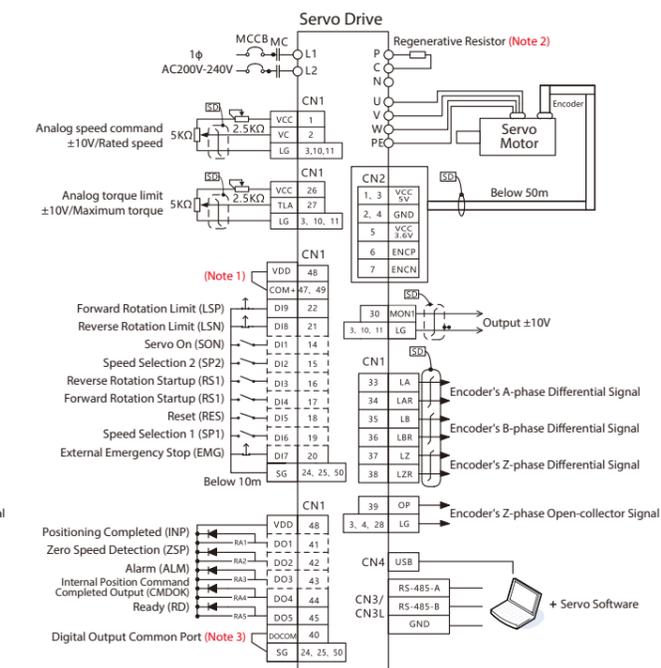
Pt Mode: Wiring Diagram of Position Control Mode



S Mode: Wiring Diagram of Speed Control Mode



T Mode: Wiring Diagram of Torque Control Mode



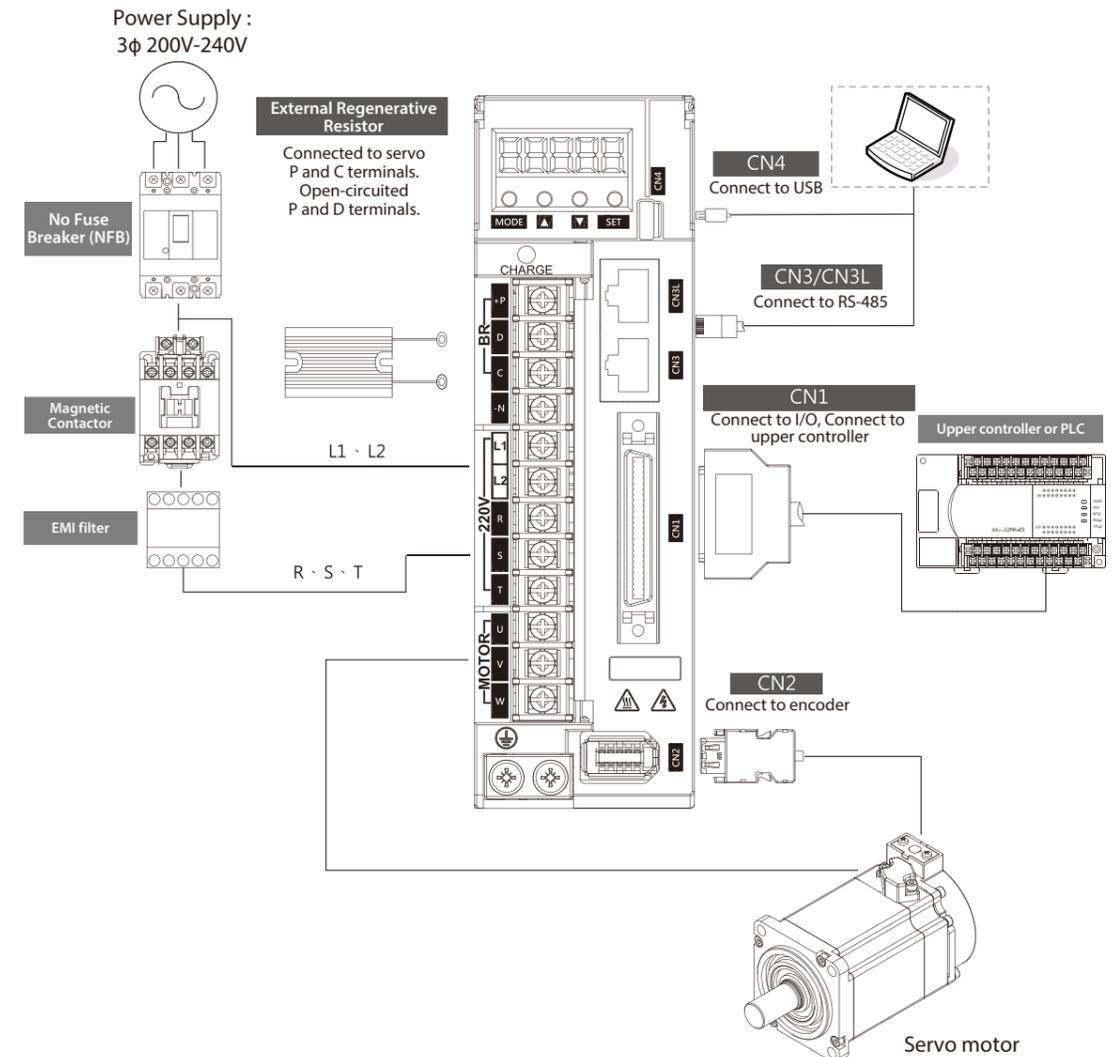
**Note**

1. While using external power supply, VDD and COM+ could not be connected.
2. Please refer to user manual for more details about regenerative resistor and brake unit.
3. Please refer to user manual for more details about digital DO output Sink Type or Source Type.
4. The dotted-line frame in the diagram above is for SDC-A(M) model. DI and DO can be self-defined.

# Connection with Peripheral Equipment

## SDE-P

### Wiring Diagram of Main Circuit Power and Peripherals



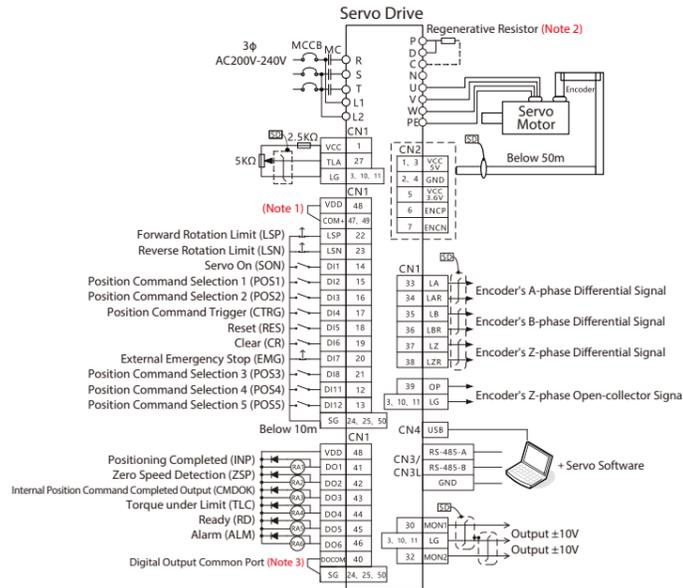
**Note**

1. While installing regenerative resistor, please remove the original P and D's short-circuit plate. Connect the external resistor to P and C contacts. Please refer to the user manual for each capacity resistance value and power.
2. While using a motor with brake, please use the specific power cable and DC24V should be connected. DO NOT use the VDD contact inside the drive. Please refer to user manual for more details.
3. While using absolute position, SDH-BAT-SET battery should be applied.

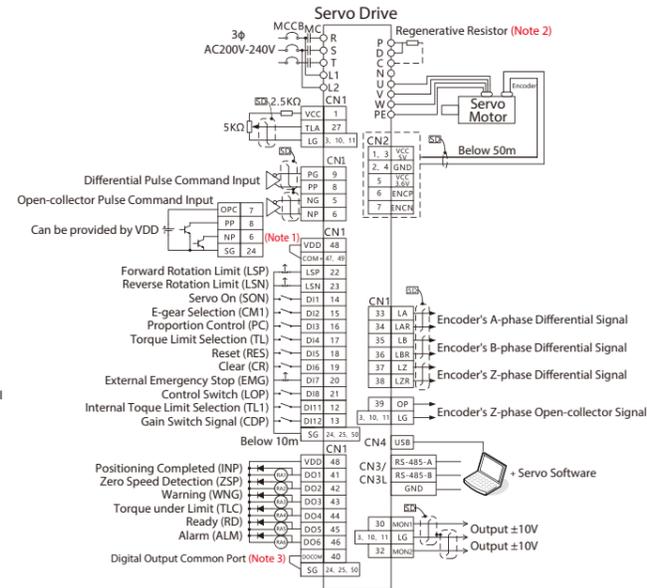
# Connection with Peripheral Equipment

## Wiring Diagram of Control Mode

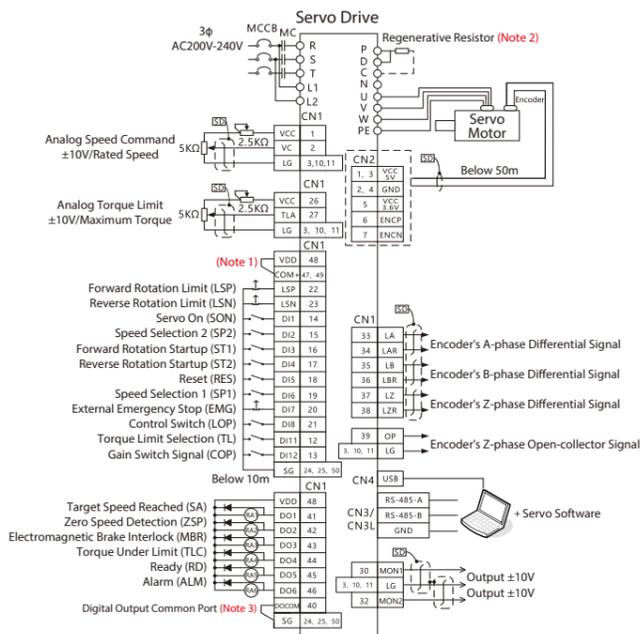
Pr Mode: Wiring Diagram of Procedure Control Mode



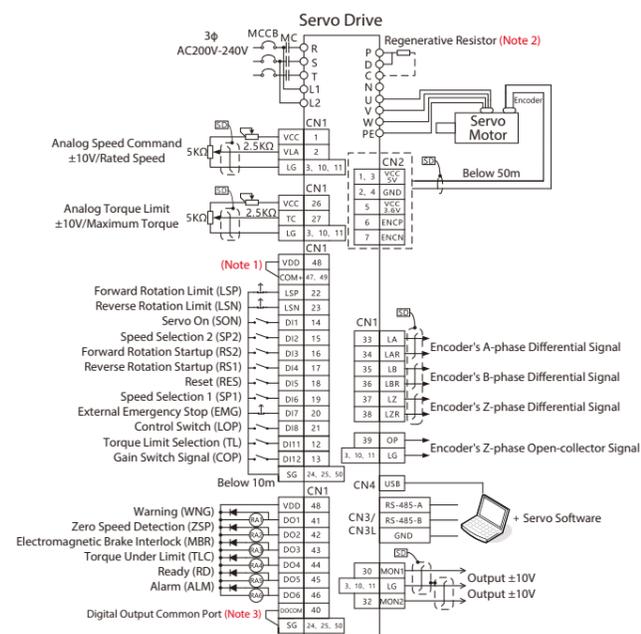
Pt Mode: Wiring Diagram of Position Control Mode



S Mode: Wiring Diagram of Speed Control Mode



T Mode: Wiring Diagram of Torque Control Mode



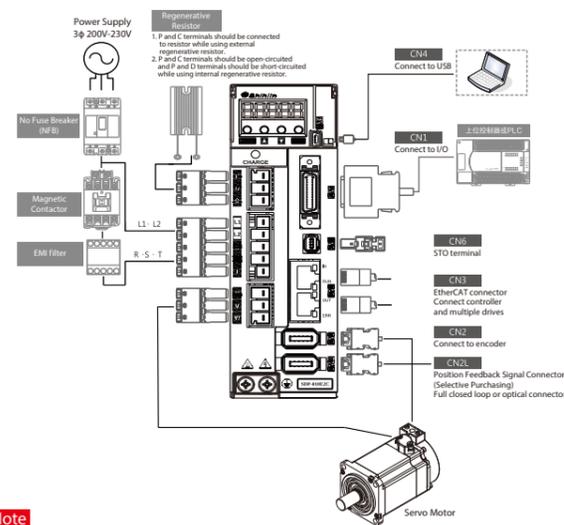
**Note**

1. While using external power supply, VDD and COM+ could not be connected.
2. Please refer to user manual for more details about regenerative resistor and brake unit.
3. Please refer to user manual for more details about digital DO output Sink Type or Source Type.

# Connection with Peripheral Equipment

## SDP-E

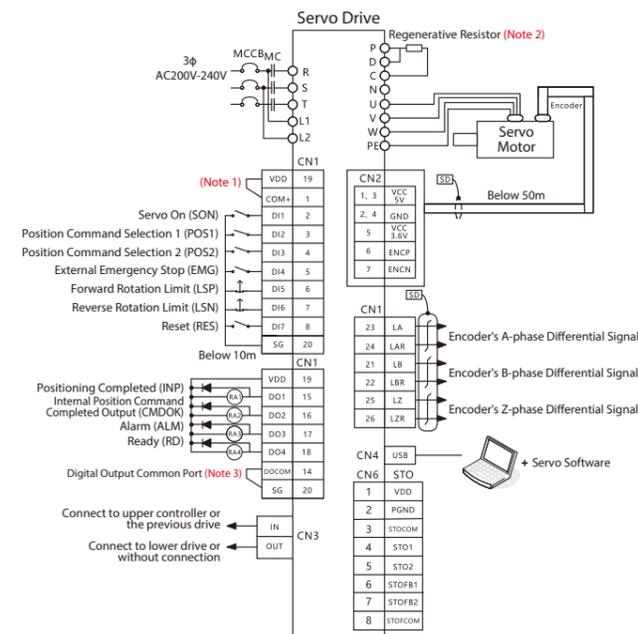
## Wiring Diagram of Main Circuit Power and Peripherals



**Note**

1. While installing regenerative resistor, please remove the original P and D contact wires. Connect the external resistor to P and C contacts. Please refer to the user manual for each capacity resistance value and power.
2. While using a motor with brake, please use the specific power cable and DC24V should be connected. DO NOT use the VDD contact inside the drive. Please refer to user manual for more details.
3. While using absolute position, SDH-BAT-SET battery should be applied.

Pr Mode: Wiring Diagram of Procedure Control Mode

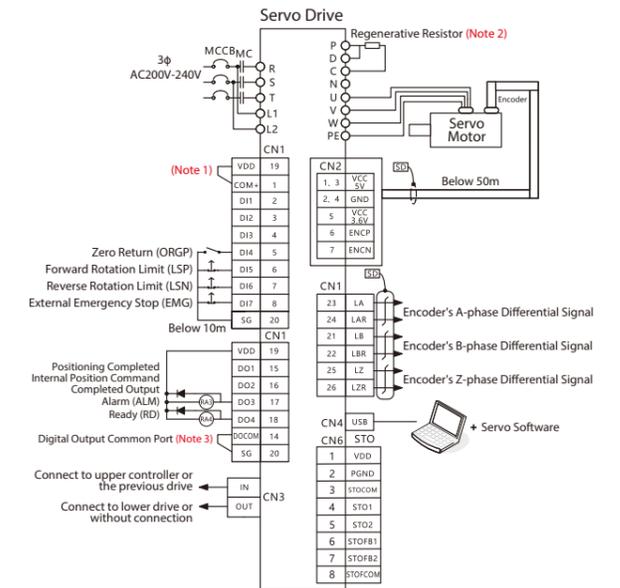


**Note**

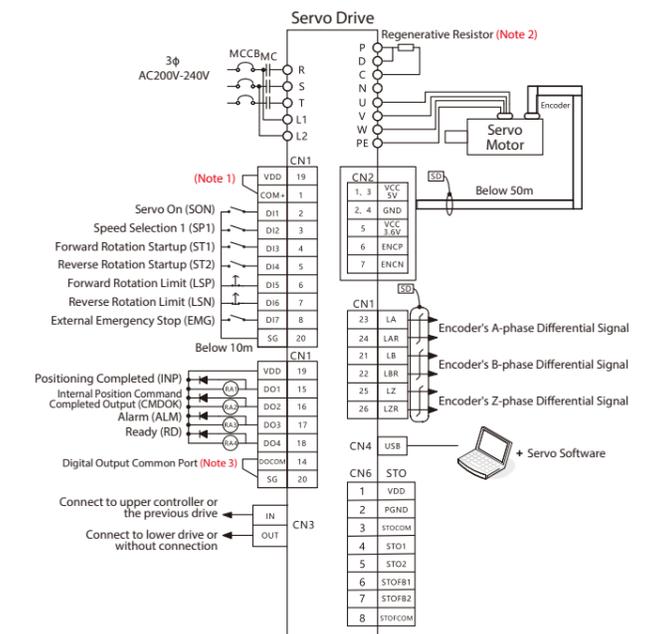
1. While using external power supply, VDD and COM+ could not be connected.
2. Please refer to user manual for more details about regenerative resistor and brake unit.
3. Please refer to user manual for more details about digital DO output Sink Type or Source Type.

## Wiring Diagram of Control Mode

COE Mode: Wiring Diagram of EtherCAT Mode



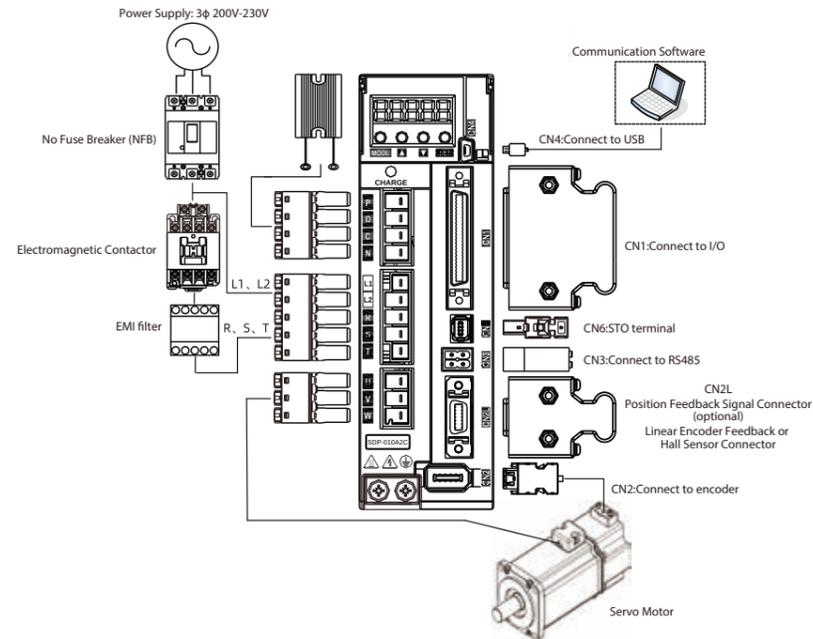
S Mode: Wiring Diagram of Speed Control Mode



# Connection with Peripheral Equipment

## SDP-A

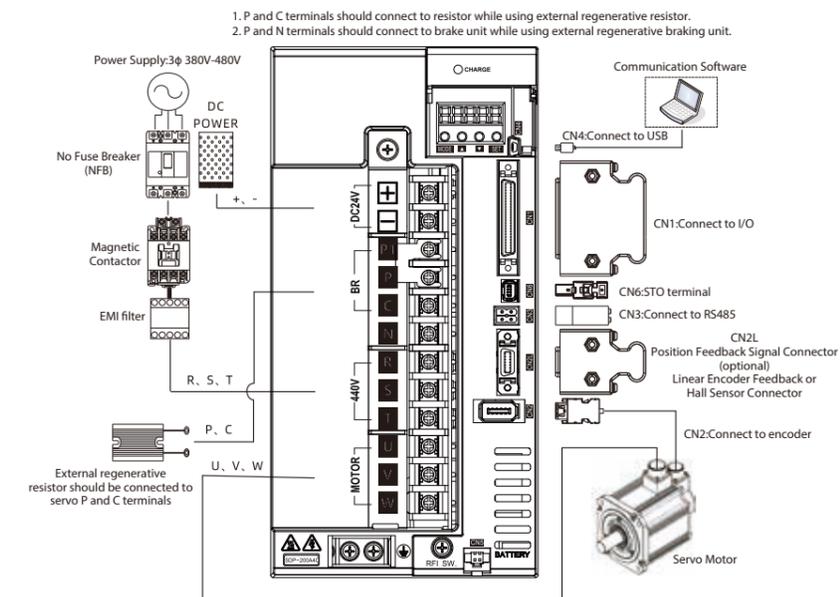
### Wiring Diagram of Main Circuit Power and Peripherals - 220V



#### Note

1. While installing regenerative resistor, please remove the original P and D contact wires. Connect the external resistor to P and C contacts. Please refer to the user manual for each capacity resistance value and power.
2. While using a motor with brake, please use the specific power cable and DC24V should be connected. DO NOT use the VDD contact inside the drive. Please refer to user manual for more details.
3. While using absolute position, SDH-BAT-SET battery should be applied.

### Wiring Diagram of Main Circuit Power and Peripherals - 440V



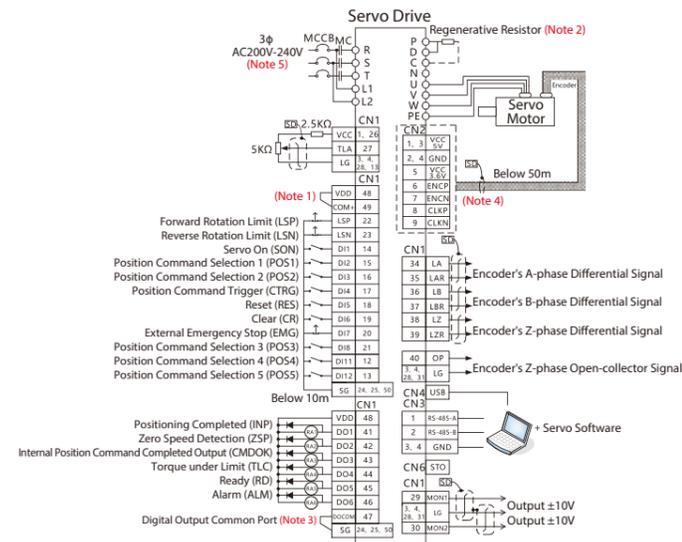
#### Note

1. While installing regenerative resistor, please connect it to P and C contacts. Please refer to the user manual for each capacity resistance value and power.
2. While using a motor with brake, please use the specific power cable and DC24V should be connected. DO NOT use the VDD contact inside the drive. Please refer to user manual for more details.
3. While using absolute position, SDH-BAT-SET battery should be applied.

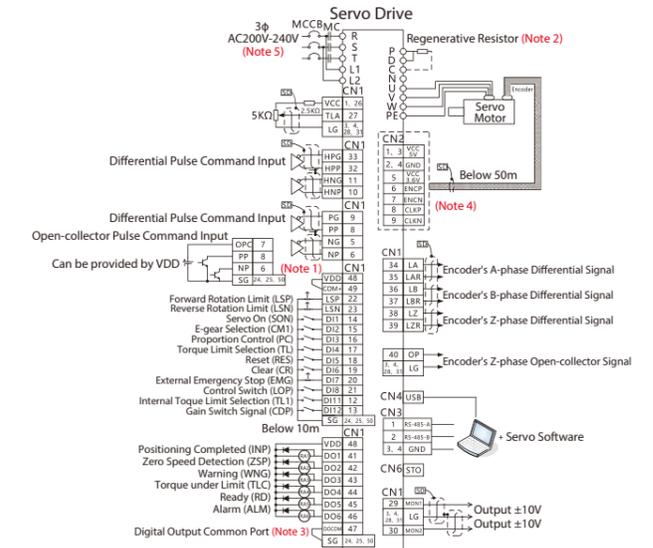
# Wiring Diagram of Peripherals

## Connection with Peripheral Equipment

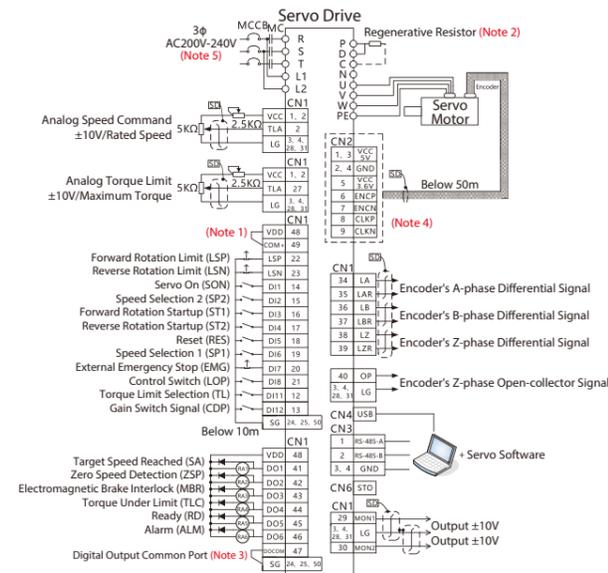
### Pr Mode: Wiring Diagram of Procedure Control Mode



### Pt Mode: Wiring Diagram of Position Control Mode



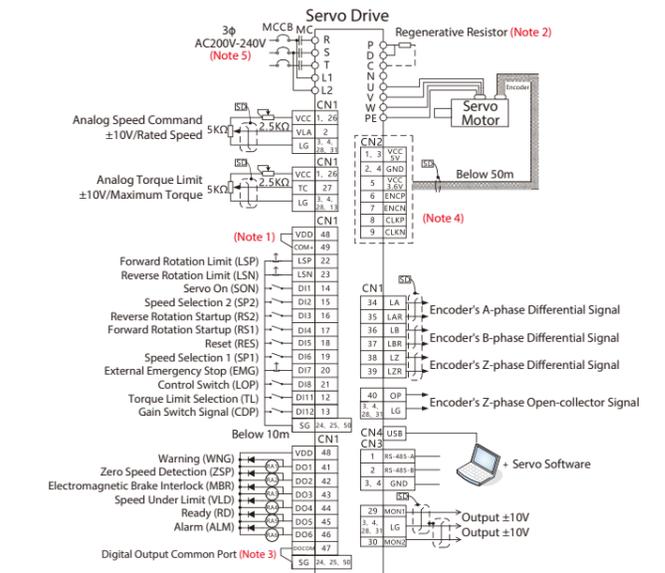
### S Mode: Wiring Diagram of Speed Control Mode



#### Note

1. While using external power supply, VDD and COM+ could not be connected.
2. Please refer to user manual for more details about regenerative resistor and brake unit.
3. Please refer to user manual for more details about digital DO output Sink Type or Source Type.
4. CN2 and PIN6-9 should be connected only if Heidenhain absolute communication protocol (Endat 2.2) is needed.
5. There are no L1 and L2 for 440V system. Please connect to external DC 24V power supply on where the +/- symbol located on the front-panel.

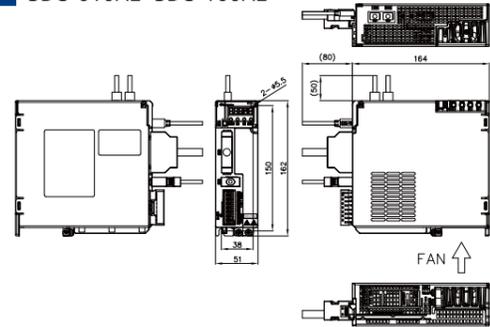
### T Mode: Wiring Diagram of Torque Control Mode



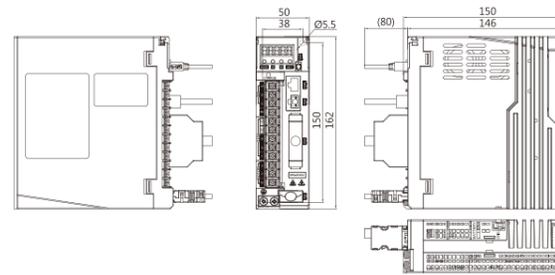
# Drive Dimensions

## Servo Drive Dimensions

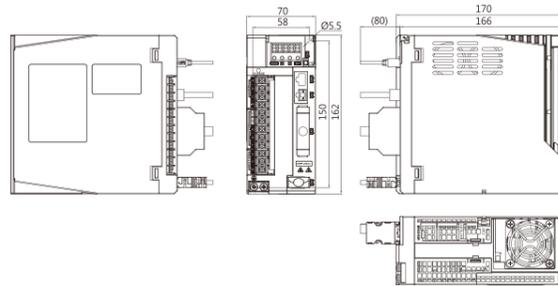
■ SDC-010A2~SDC-100A2



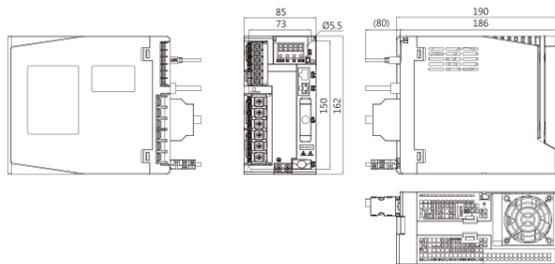
■ SDE-010A2、SDE-020A2、SDE-040A2



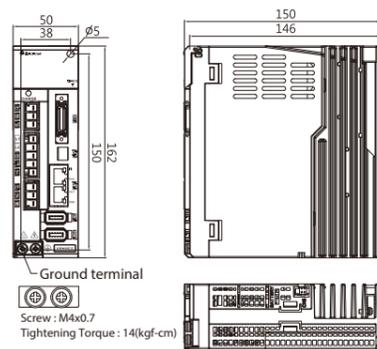
■ SDE-075A2、SDE-100A2



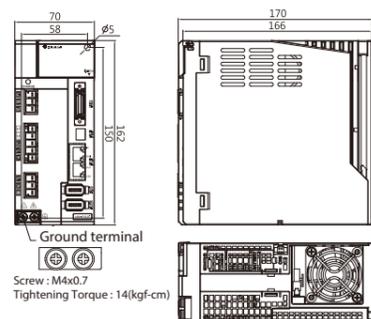
■ SDE-150A2、SDE-200A2、SDE-300A2



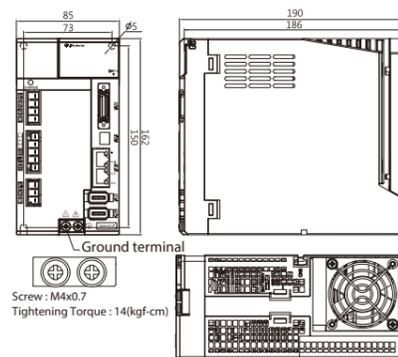
■ SDP-010E2C、SDP-020E2C  
SDP-040E2C



■ SDP-075E2C、SDP-100E2C



■ SDP-150E2C、SDP-200E2C  
SDP-300E2C

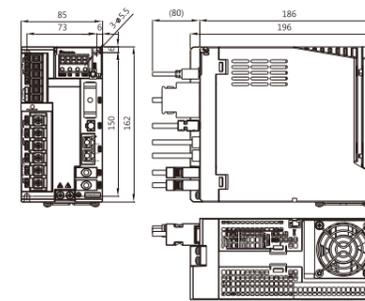


Note:  
1. Please refer to the Shihlin official website for the latest drawings.  
Dimensions may be revised without prior notice.  
2. 3D drawings download link: <http://automation.seec.com.tw>

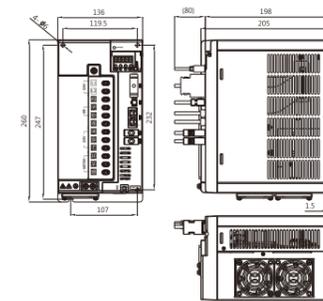
# Dimensions

## Servo Drive Dimensions

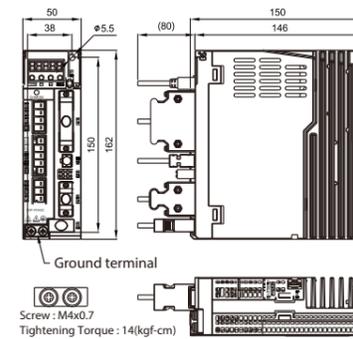
■ SDP-500E2C



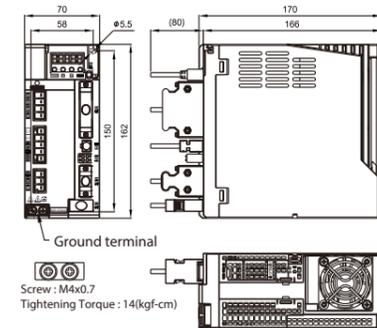
■ SDP-700E2C



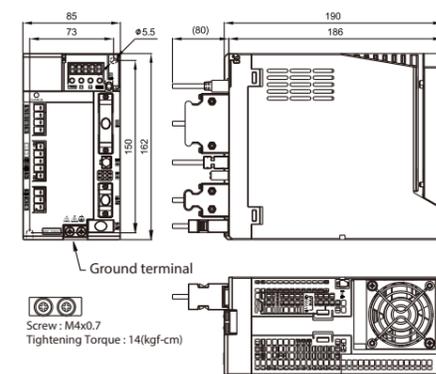
■ SDP-010A2C、SDP-020A2C、SDP-040A2C



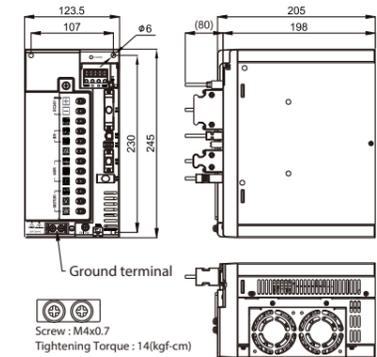
■ SDP-075A2C、SDP-100A2C



■ SDP-150A2C、SDP-200A2C、SDP-300A2C



■ SDP-200A4C、SDP-300A4C、SDP-500A4C、SDP-700A4C



Note:  
1. Please refer to the Shihlin official website for the latest drawings.  
Dimensions may be revised without prior notice.  
2. 3D drawings download link: <http://automation.seec.com.tw>

# Servo Drive Selection Table

Servo Drive Selection Table

Series	Control Method	Model	Power	Power Supply	Response Bandwidth kHz	EtherCAT Bus	CANopen Bus	RS 485 Communication	Total I/Os	Pulse Input Type					Z phase OP Output	Analog Output	Analog Input	Full-closed Loop	E-CAM	Gantry Control	Support Linear and DD Motor	Pr Mode (Internal Position)	Support Encoder Resolution
										Pulse Signal Mode			Wiring Type										
										Pulse + Direction	AB Phase	CW / CCW	Differential Transmission	Open-collector									
SDC	A (Pulse Type) A(M) (Advanced Analog Type)	SDC-010A2	0.1	1φ AC 200~240V	2	x	x	√	9/5 (A/M): 6/3	√	√	√	√	√	x A(M): 2	x A(M): 1	x	x	x	x	√	17bit/22bit	
		SDC-020A2	0.2																				
		SDC-040A2	0.4																				
		SDC-075A2	0.75																				
		SDC-100A2	1																				
C (CANopen Bus Type)	Coming soon			2	x	√	x	5/3	x	x	x	x	x	x	x	x	x	x	x	√	17bit/22bit		
	E (EtherCAT Bus Type)	Coming soon				√	x	x	5/3	x	x	x	x	x	x	x	x	x	x	√	17bit/24bit		
SDE	P (Advanced Pulse Type)	SDE-010A2-P	0.1	1φ or 3φ AC 200~240V	2	x	x	√	12/6	√	√	√	√	√	2	2	x	x	x	x	√	22bit	
		SDE-020A2-P	0.2																				
		SDE-040A2-P	0.4																				
		SDE-075A2-P	0.75																				
		SDE-100A2-P	1																				
		SDE-150A2-P	1.5																				
		SDE-200A2-P	2																				
		SDE-300A2-P	3							3φ AC 200~240V													
SDP	E (EtherCAT Bus Type)	SDP-010E2C	0.1	1φ or 3φ AC 200~240V	2.5	√	x	x	7/4	x	x	x	x	x	x	x	√	√	√	x	√	24bit	
		SDP-020E2C	0.2																				
		SDP-040E2C	0.4																				
		SDP-075E2C	0.75																				
		SDP-100E2C	1																				
		SDP-150E2C	1.5																				
		SDP-200E2C	2																				
		SDP-300E2C	3							3φ AC 200~240V													
		SDP-500E2C	5																				
SDP-700E2C	7																						
SDP	A (High-end Pulse Type)	SDP-010A2C	0.1	1φ or 3φ AC 200~240V	3.2	x	x	√	12/6	√	√	√	√	√	2	2	√	√	√	√	√	24bit	
		SDP-020A2C	0.2																				
		SDP-040A2C	0.4																				
		SDP-075A2C	0.75																				
		SDP-100A2C	1																				
		SDP-150A2C	1.5																				
		SDP-200A2C	2																				
		SDP-300A2C	3							3φ AC 200~240V													
		SDP-200A4C	2																				
		SDP-300A4C	3							3φ AC 400V													
		SDP-500A4C	5																				
SDP-700A4C	7																						

# Accessories

Accessories

Item	Model	SME-L	SME-M	SME-H	SMP-H	
Motor power cable	Connector (without brake)	SDA-PWCNL1	50W~750W, 1kW (80 frame)	x	50W~750W	x
	Cable (without brake)(Note 1)	SDE-PWCNL1-□M-L/H				
	Connector (with brake)	SDA-PWCNL2				
	Cable (with brake)(Note 1)	SDE-PWCNL2-□M-L/H				
	Connector	SDA-PWCNM1	1kW~3kW	1kW~1.5kW	850W~1.8kW	x
	Cable (without brake)	SDE-PWCNM1-□M-L/H				
	Cable (with brake)	SDE-PWCNM1B-□M-L/H				
	Connector	SDA-PWCNM2				
	Cable (without brake)(Note 1)	SDE-PWCNM2-□M-L/H	x	2kW~3kW	x	x
	Cable (with brake)(Note 1)	SDE-PWCNM2B-□M-L/H				
	Connector	SDH-PWCNM4				
	Cable (Note 1)	SDH-PWCNM4-□M-L/H	x	5kW~7kW	x	x
		SDH-PWCNM5-□M-L/H				
	Connector	SDP-PWCNH1	x	x	x	1.8kW
	Cable	SDP-PWCNH1-□M-L/H				
Connector	SDP-PWCNH2	x	x	x	2.9kW~4.4kW (model without brake)	
Cable (Note 1)	SDP-PWCNH2-□M-L/H					
Connector	SDP-PWCNH3	x	x	x	2.9kW~4.4kW (model with brake) 5.5kW~7.5kW	
Cable (Note 1)	SDP-PWCNH3-□M-L/H					
Brake connector	SDH-BKCNS1	x	5kW~7kW	x	x	
	SDP-BKCNS1					
Brake cable (Note 1)	SDH-BKCNS1-□M-L/H	x	5kW~7kW	x	x	
	SDP-BKCNS1-□M-L/H					
Encoder cable CN2	Connector	SDH-ENL	50W~750W, 1kW (80 frame)	x	x	x
	Cable (Note 1)	SDH-ENL-□M-L/H				
	Connector	SDH-ENM	1kW~3kW	1kW~3kW	850W~1.8kW	x
	Cable (Note 1)	SDH-ENM-□M-L/H				
	Connector	SDP-ENM	x	x	x	1.8kW~7.5kW
	Cable (Note 1)	SDP-ENM-□M-L/H				
Linear motor encoder cable (Endat 2.2 protocol)(Note 1)	SDP-Endat (Connector)	For SDP-A				
	SDP-Endat-□M-L/H (Cable)	For SDP-A				
For CN2L	Full closed loop Gantry control	SDH-CN2 (Connector)	For SDP-E			
		SDH-CN2L-0.5M (Cable)	For SDP-A			
		SDP-CN2 (Connector)	For SDP-A			
For CN1	I/O connector	SDA-CN1	For SDC, SDE-P, SDP-A			
		SDP-CN1	For SDP-E			
	Terminal block and wire set	SDA-TB50	For SDC, SDE-P, SDP-A			
		SDP-TB26	For SDP-E			
For CN6	STO communication cable	SDA-CN6-□M	For SDP Series			
		SDP-CN6-□M	For SDP Series			
Battery set (Note 2)	Absolute encoder battery set	SDH-BAT-SET	√	√	√	√
		SDH-BAT				
		SDH-BAT-CASE				

**Note**

- stands for cable length. The standard length would be 2m, 3m, 5m and 10m. Other length could be customized; L/H stands for flexibility characteristics of the cable. L stands for the standard cable and H stands for the high-flexibility cable.
- Please contact Shihlin before purchasing the battery accessories for more details.

# Servo Motor Selection Table

Servo Motor Selection Table

Power (kW)	Model (Note 1)	Compatible Drive	Frame (mm)	Shaft diameter (Note 2) (mm)	Inertia Type	Rotor Inertia (Note 1) J*10 <sup>-4</sup> (kg.m <sup>2</sup> )	Encoder Resolution (bit)	Rated Speed (rpm)	Maximum Speed (rpm)	Rated Torque (Nm)	Maximum Torque (Nm)	Rated current (A)	Maximum current (A)	Weight (Note 3) C/U(kg)
0.05	SME-L00530SCB (SME-L00530SDB)	SDE-010 SDP-010	40	8	Low	0.0295 (0.0299)	22(SDE-P) 24(SDP)	3000	6000	0.2	0.48	0.85	2.7	0.33 (0.55)
	SME-L00530MCB (SME-L00530MDB)													
0.1	SME-L01030TCB (SME-L01030TDB)	SDC-010	40	8	Low	0.0518 (0.0523)	17	3000	6000	0.3	0.96	0.85	2.7	0.49 (0.71)
	SME-L01030NCB (SME-L01030NDB)													
	SME-L01030SCB (SME-L01030SDB)	SDC-010 SDE-010 SDP-010												
	SME-L01030MCB (SME-L01030MDB)													
0.2	SME-L02030TCB (SME-L02030TDB)	SDC-020	60	14	Low	0.161 (0.178)	17	3000	6000	0.6	1.92	1.7	5.2	0.89 (1.27)
	SME-L02030NCB (SME-L02030NDB)													
	SME-L02030SCB (SME-L02030SDB)	SDC-020 SDE-020 SDP-020												
	SME-L02030MCB (SME-L02030MDB)													
	SME-H02030SCB (SME-H02030SDB)													
	SME-H02030MCB (SME-H02030MDB)													
SME-L04030TCB (SME-L04030TDB)	SDC-040	60	14	Low	0.277 (0.294)	17	3000	6000	1.3	3.81	2.8	9	1.28 (1.66)	
SME-L04030NCB (SME-L04030NDB)														
SME-L04030SCB (SME-L04030SDB)	SDC-040 SDE-040 SDP-040													
SME-L04030MCB (SME-L04030MDB)														
SME-H04030SCB (SME-H04030SDB)														
SME-H04030MCB (SME-H04030MDB)														
SME-L07530TCB (SME-L07530TDB)	SDC-075	80	19	Low	1.07 (1.11)	17	3000	6000	2.4	7.2	5.8	18.5	2.28 (3.02)	
SME-L07530NCB (SME-L07530NDB)														
SME-L07530SCB (SME-L07530SDB)	SDC-075 SDE-075 SDP-075													
SME-L07530MCB (SME-L07530MDB)														
SME-H07530SCB (SME-H07530SDB)														
SME-H07530MCB (SME-H07530MDB)														
SME-L07530TCB (SME-L07530TDB)	SDC-075	80	19	High	1.07 (1.11)	22(SDC-A, SDE-P) 24(SDP)	3000	6000	2.4	7.2	5.8	18.5	2.24 (2.87)	
SME-L07530NCB (SME-L07530NDB)														
SME-L07530SCB (SME-L07530SDB)	SDC-075 SDE-075 SDP-075													
SME-L07530MCB (SME-L07530MDB)														
SME-H07530SCB (SME-H07530SDB)														
SME-H07530MCB (SME-H07530MDB)														
0.85	SME-H08515SCB (SME-H08515SDB)	SDC-100 SDE-100 SDP-100	130	24 (22)	High	13.01 (14.91)	22(SDC-A, SDE-P) 23(SDP)	1500	3500	5.4	13.8	7.2	20.1	5.1 (6.9)
	SME-H08515MCB (SME-H08515MDB)													
1	SME-L10030TCB (SME-L10030TDB)	SDC-100	80	19	Low	1.89 (1.91)	17	3000	5000	3.2	9.5	5.5	18.2	3.55 (4.36)
	SME-L10030NCB (SME-L10030NDB)													
	SME-L10020SCB (SME-L10020SDB)	SDC-100 SDE-100 SDP-100												
	SME-L10020MCB (SME-L10020MDB)													
	SME-M10020SCB (SME-M10020SDB)													
	SME-M10020MCB (SME-M10020MDB)													
SME-L13015TCB (SME-L13015TDB)	SDE-300 SDP-300	130	24 (22)	High	19.82 (21.72)	22(SDE-P) 23(SDP)	1500	3500	8.3	23.2	13.2	40.3	6.6 (8.4)	
SME-L13015NCB (SME-L13015NDB)														
SME-L13015SCB (SME-L13015SDB)	SDE-150 SDP-150													
SME-L15020TCB (SME-L15020TDB)														
SME-L15020MCB (SME-L15020MDB)														
SME-M15020SCB (SME-M15020SDB)														
SME-L15020TCB (SME-L15020TDB)	SDE-150 SDP-150	130	24 (22)	Low	8.8 (10.7)	22(SDE-P) 23(SDP)	2000	3500	7.2	21.6	8.5	25.2	6.5/6.9 (8.3/8.7)	
SME-L15020NCB (SME-L15020NDB)														
SME-M15020SCB (SME-M15020SDB)	SDE-150 SDP-150													
SME-M15020MCB (SME-M15020MDB)														
SME-M15020SCB (SME-M15020SDB)														
SME-M15020MCB (SME-M15020MDB)														
1.8	SME-H18015TCB (SME-H18015TDB)	SDE-300 SDP-300	130	24 (22)	High	26.42 (28.32)	22(SDE-P) 23(SDP)	1500	3500	12	28.7	17.6	48.3	7.8 (9.6)
	SME-H18015NCB (SME-H18015NDB)													

# Regenerative Resistor Selection Table

Servo Motor Selection Table

Power (kW)	Model (Note 1)	Compatible Drive	Frame (mm)	Shaft diameter (Note 2) (mm)	Inertia Type	Rotor Inertia (Note 1) J*10 <sup>-4</sup> (kg.m <sup>2</sup> )	Encoder Resolution (bit)	Rated Speed (rpm)	Maximum Speed (rpm)	Rated Torque (Nm)	Maximum Torque (Nm)	Rated current (A)	Maximum current (A)	Weight (Note 3) C/U(kg)
2	SME-L20020SCB (SME-L20020SDB)	SDE-200 SDP-200	130	24 (22)	Low	11.5 (13.5)	22(SDE-P) 23(SDP)	2000	3500	9.6	28.5	11	33	7.7/8.1 (9.5/9.9)
	SME-L20020MCB (SME-L20020MDB)													
	SME-M20020SCB (SME-M20020SDB)		176	35	Medium	32.1 (42.4)								
	SME-M20020MCB (SME-M20020MDB)													
3	SME-L30020SCB (SME-L30020SDB)	SDE-300 SDP-300	130	24 (22)	Low	16.7 (18.7)	22(SDE-P) 23(SDP)	2000	3500	14	43	16	48	10.2/10.6 (12.0/12.4)
	SME-L30020MCB (SME-L30020MDB)													
	SME-M30020SCB (SME-M30020SDB)		176	35	Medium	61.2 (71.6)								
	SME-M30020MCB (SME-M30020MDB)													
5	SME-M50020SCB (SME-M50020SDB)	SDP-500	176	35	Medium	84.6 (95)	23	2000	2000	24	71.7	22	66	19.1 (24.4)
	SME-M50020MCB (SME-M50020MDB)													
7	SME-M70020SCB (SME-M70020SDB)	SDP-700	176	35	Medium	121.6 (132)	23	2000	2000	33	100.2	30	90	24.5 (29.8)
	SME-M70020MCB (SME-M70020MDB)													
1.8	SMP-H18015MCB4 (SMP-H18015MDB4)	SDP-200A4	130	24	High	26.1 (28.1)	23	1500	3000	12	28.7	8.4	20	8.8 (10.76)
2.9	SMP-H29015MCB4 (SMP-H29015MDB4)	SDP-300A4	180	35	High	46 (54.5)	23	1500	3000	19	45.1	12	28	13 (19.5)
4.4	SMP-H44015MCB4 (SMP-H44015MDB4)	SDP-500A4	180	35	High	67.5 (75.4)	23	1500	3000	28	71.1	16.5	40.5	17.5 (24)
5.5	SMP-H55015MCB4 (SMP-H55015MDB4)													180
7.5	SMP-H75015MCB4 (SMP-H75015MDB4)	SDP-700A4	180	42	High	125 (134)	23	1500	3000	48	119	27	69	29.5 (35)

**Note**

- The details inside ( ) are the models and specifications for motors with brake.
- The details inside ( ) are special shaft diameters. Please contact Shihlin for more details.
- Weight C/U: Weight of model with CE certification; U: Weight of model with UL certification. Motors with special specifications are not listed in this table. If there's any requirement, please contact Shihlin for more details.

## Regenerative Resistor Selection Table SDC/SDE/SDP Series

Drive Model	External regenerative resistor (recommended) specifications		Regenerative resistor parameter setting	
	Minimum allowance resistance(Ω)	Recommended capacity(W)	PA10 setting	PA11 setting
SD□-010A2□□□	100	300	100	300
SD□-020A2□□□	100	300	100	300
SD□-040A2□□□	100	300	100	300
SD□-075A2□□□	40	500	40	500
SD□-100A2□□□	40	500	40	500
SD□-150A2□□□	13	1000	13	1000
SD□-200A2□□□	13	1000	13	1000
SD□-300A2□□□	13	1000	13	1000
SD□-500A2□□□	13	1000	13	1000
SD□-700A2□□□	8	1000	8	1000
SD□-200A4□□□	30	1000	30	1000
SD□-300A4□□□	30	1000	30	1000
SD□-500A4□□□	20	2000	20	2000
SD□-700A4□□□	15	2000	15	2000

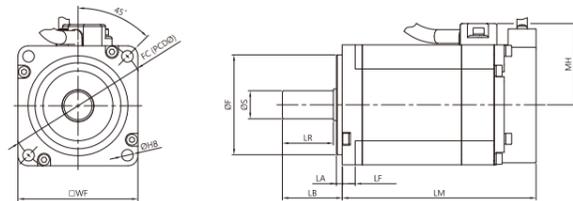
**Note**

When the regenerative energy is too large, the built-in regenerative resistor is not powerful enough and require external regenerative resistor. Please select according to the above table.

# Motor Dimensions

## 220V (Optical Encoder) Motor Dimensions

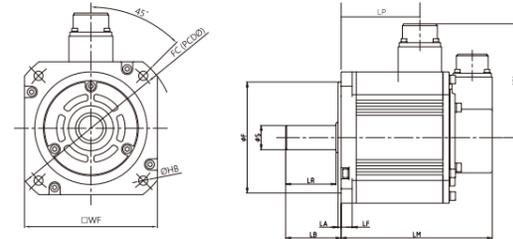
■ Small Capacity Low Inertia SME-L□□□30/  
Low Capacity High Inertia SME-H□□□30



Model	Dimensions (mm)											
	WF	OS	OF	LA	LB	LF	LR	LP	MH	LM*	FC	HB
SME-L005(B)	40	Ø8 <sup>-0.009</sup>	Ø30 <sup>-0.03</sup>	2.5	25	5.5	21.5	32	64.5 (99.2)	46	2-Ø4.5	
SME-L010(B)												80.0 (114.7)
SME-L020(B)	60	Ø14 <sup>-0.011</sup>	Ø50 <sup>-0.03</sup>	3	30	6.5	25	42	77.0 (112)	70	4-Ø5.8	
SME-H020(B)												97.0 (132)
SME-L040(B)												97.0 (132)
SME-H040(B)												101.2 (140.2)
SME-L075(B)	80	Ø19 <sup>-0.013</sup>	Ø70 <sup>-0.03</sup>	3	40	7.5	35.5	52	101.2 (140.2)	90	4-Ø6.6	
SME-H075(B)												101.2 (145.5)

\*LM() stands for the length of the servo motor with brake.

■ Medium Capacity Medium Inertia SME-M□□□20



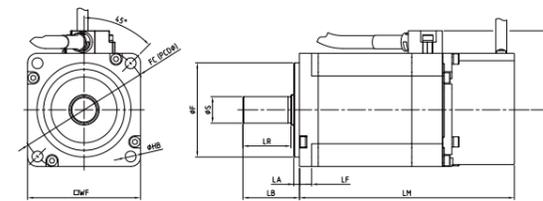
Model	Dimensions (mm)												
	WF	OS	OF	LA	LB	LF	LR	LP	MH	LM*	FC	HB	
SME-M100(B)	130	Ø24 <sup>-0.013</sup>	Ø110 <sup>-0.03</sup>	3	55	11	50	55.5	113	127 (161)	145	4-Ø9.0	
SME-M150(B)													141.5 (175.5)
SME-M200(B)	176	Ø35 <sup>-0.016</sup>	Ø114.3 <sup>-0.03</sup>	3	78	18.5	74	61.5	139	139 (189)	200	4-Ø13.5	
SME-M300(B)													169 (219)
SME-M500(B)													189 (239)
SME-M700(B)													229 (299)

\*LM() stands for the length of the servo motor with brake.

# Motor Dimensions

## 220V (Magnetic Encoder) Motor Dimensions

■ Small Capacity Low Inertia SME-L□□□30

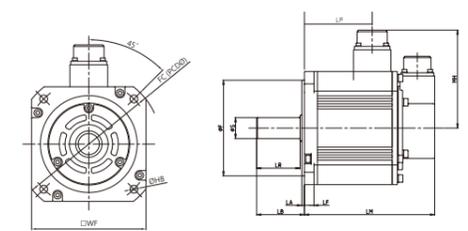


Model (Magnetic Encoder)	Dimensions (mm)										
	WF	OS	OF	LA	LB	LF	LR	MH	LM*	FC	HB
SME-L010(B)	40	Ø8 <sup>-0.009</sup>	Ø30 <sup>-0.03</sup>	2.5	25	5.5	21.2	32	97.8 (132.5)	46	2-Ø4.5
SME-L020(B)	60	Ø14 <sup>-0.011</sup>	Ø50 <sup>-0.03</sup>	3	30	6.5	25.5	42	94.2 (129.2)	70	4-Ø5.8
SME-L040(B)											
SME-L075(B)	80	Ø19 <sup>-0.013</sup>	Ø70 <sup>-0.03</sup>	3	40	7.5	35.3	52	119.2 (158.2)	90	4-Ø6.6
SME-L100(B)											

\*LM() stands for the length of the servo motor with brake.

## 440V (Optical Encoder) Motor Dimensions

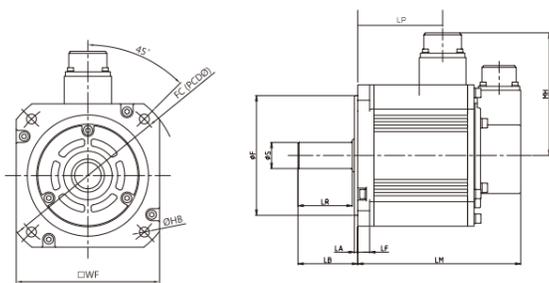
■ Medium Capacity High Inertia SME-H□□□15



Model (Optical Encoder)	Dimensions (mm)												
	WF	OS	OF	LA	LB	LR	LM*	SE	SG	FC	ØHB	LP	MH
SMP-H180(B)	130	Ø24 <sup>-0.013</sup>	Ø110 <sup>-0.03</sup>	6	58	40	184.9 (217.4)	Ø28	12	145	4-Ø9.0	128.5	104.5
SMP-H290(B)	180	Ø35 <sup>-0.01</sup>	Ø114.3 <sup>-0.03</sup>	3.2	79	-	-	-	-	200	4-Ø13.5	118.5	135.5
SMP-H440(B)													
SMP-H550(B)	180	Ø42 <sup>-0.016</sup>	Ø114.3 <sup>-0.03</sup>	113	-	-	-	-	-	-	-	142.5	135.5
SMP-H750(B)													
SMP-H750(B)												173.5	135.5
SMP-H750(B)												219.5	135.5

\*LM() stands for the length of the servo motor with brake.

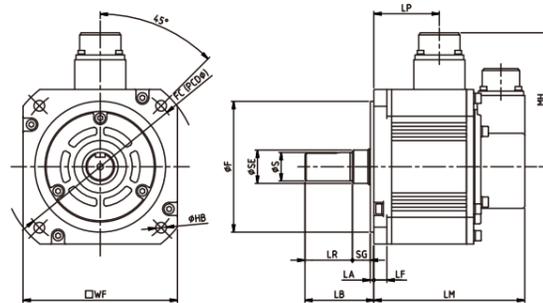
■ Medium Capacity Low Inertia SME-L□□□20



Model	Dimensions (mm)												
	WF	OS	OF	LA	LB	LF	LR	LP	MH	LM*	FC	HB	
SME-L100(B)	130	Ø24 <sup>-0.013</sup>	Ø110 <sup>-0.03</sup>	3	55	11	50	55.5	113	127 (161)	145	4-Ø9.0	
SME-L150(B)													141.5 (175.5)
SME-L200(B)													156 (190)
SME-L300(B)													185 (219)

\*LM() stands for the length of the servo motor with brake.

■ Medium Capacity High Inertia SME-H□□□15



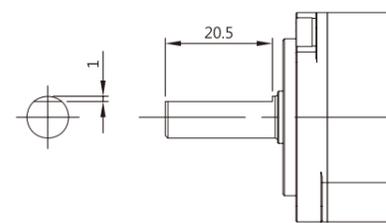
Model	Dimensions (mm)														
	WF	OS	OF	LA	LB	LF	LR	LP	MH	LM*	SE	SG	FC	HB	
SME-H085(B)	130	Ø24 <sup>-0.013</sup>	Ø110 <sup>-0.03</sup>	3	58	11	40	55.5	113	127 (161)	Ø28	15	145	4-Ø9.0	
SME-H130(B)															141.5 (175.5)
SME-H180(B)															156 (190)
SME-H180(B)															185 (219)

\*LM() stands for the length of the servo motor with brake.

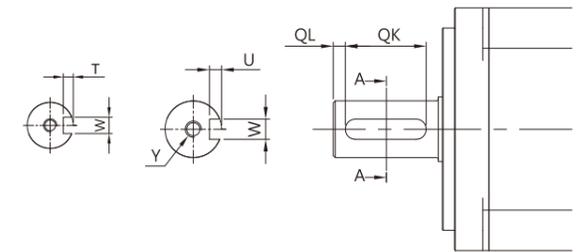
# Motor Shaft and Key Dimensions

## Dimensional Drawing of Motor Shaft Key Slot

■ D-cut Shaft: L005/L010



■ General Keyway

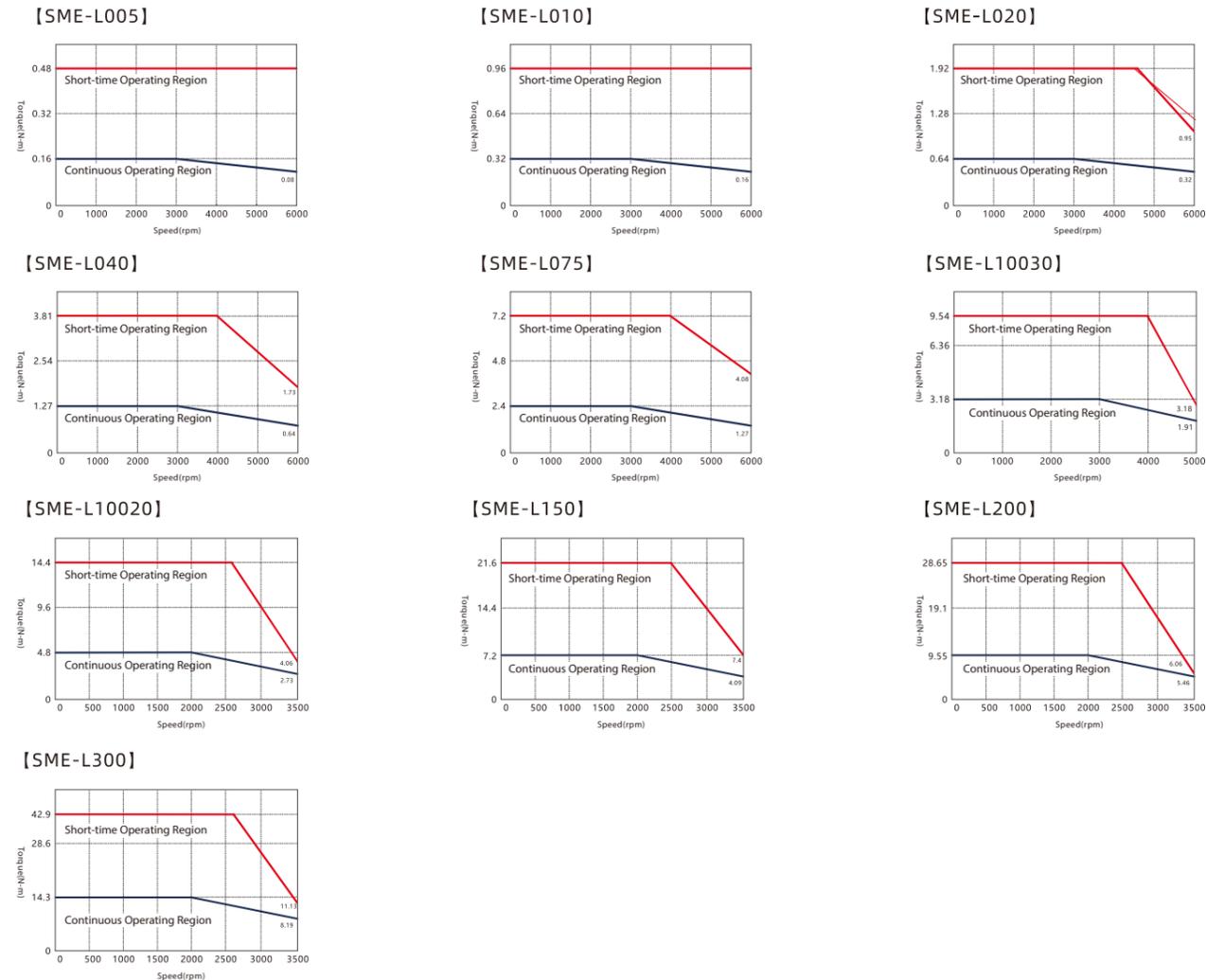


Motor	Dimensions (mm)					
	QL	QK	W	T	U	Y
L020 / L040 / H020 / H040	3	20	5	5	3	Screw: M4, Depth:15
L075 / H075 / L100 <sup>Note</sup>	5	25	6	6	3.5	Screw: M5, Depth:20
L100 / L150 / L200 / L300 / M100 / M150	5	35	8	7	4	Screw: M8, Depth:20
M220 / M300	5	55	10	8	5	Screw: M8, Depth:20
H085 / H130 / H180	-	25	8	7	4	Screw: M5, Depth:12
H180	-	29	8	-	4	Screw: M5, Depth:15
H290 / H440	-	65	10	-	5	Screw: M12, Depth:25
H550 / H750	-	96	12	-	5	Screw: M16, Depth:32

Note: The L100(B) here stands for 80 frame motor.

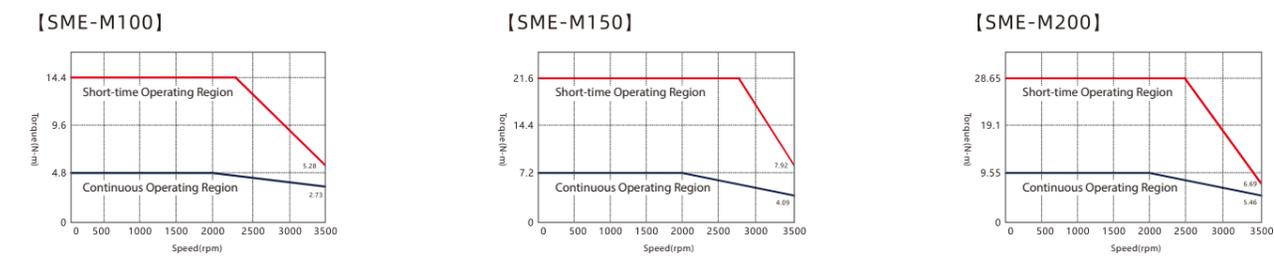
# Torque Characteristic Curves

## T/N Curve of SME Series Low Inertia Motor- 220V

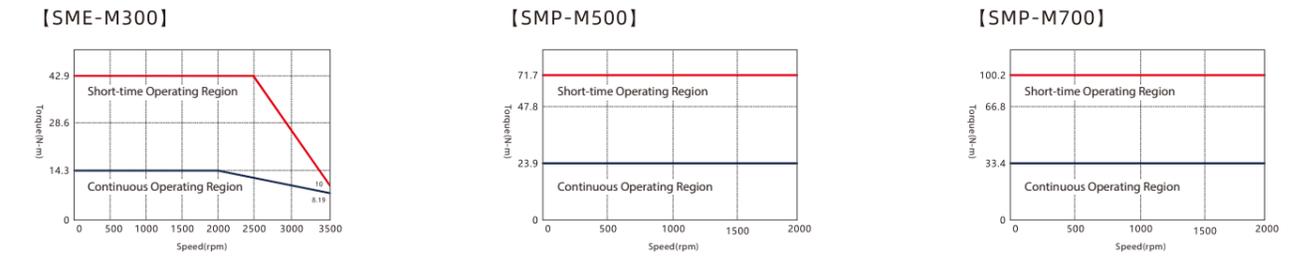


Motor characteristics of 220V power supply, torque characteristics will be reduced by low voltage.

## T/N Curve of SME Series Medium Inertia Motor- 220V

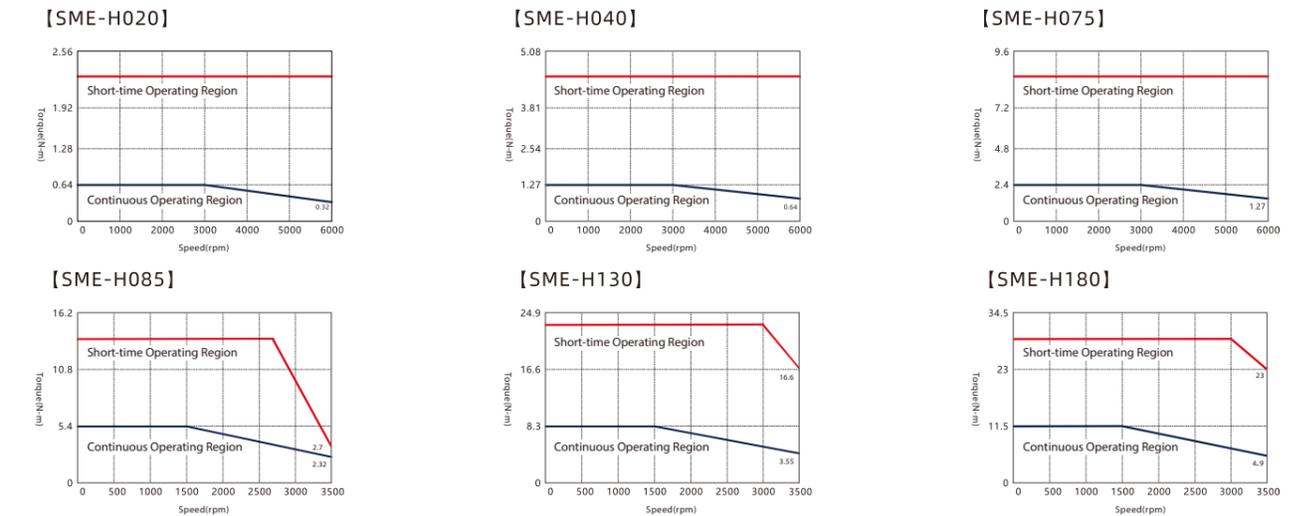


# Torque Characteristic Curves



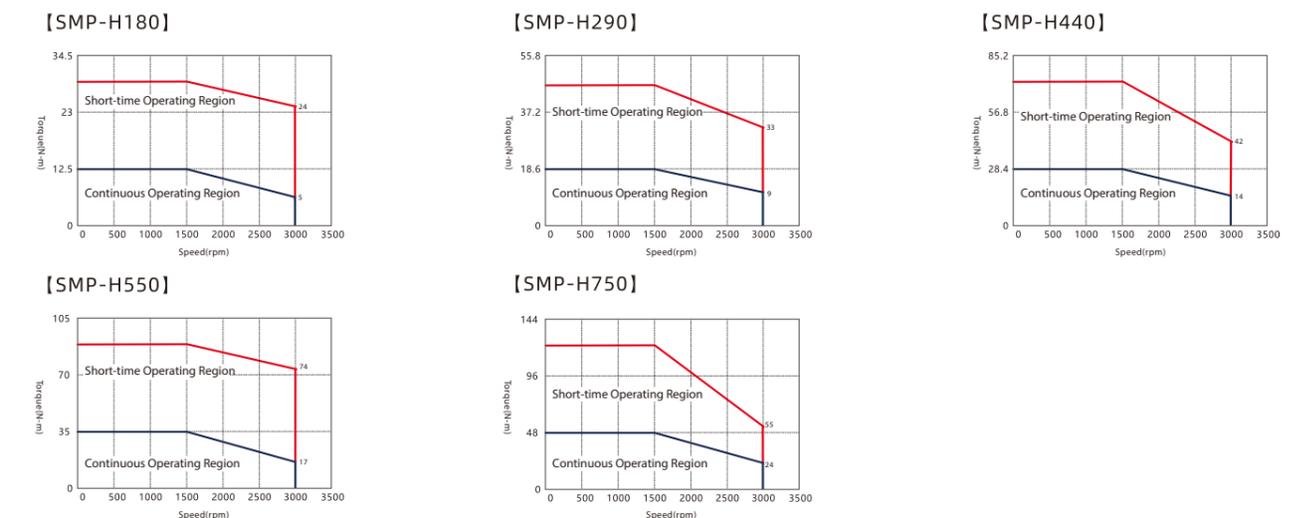
Motor characteristics of 220V power supply, torque characteristics will be reduced by low voltage.

## T/N Curve of SME Series High Inertia Motor- 220V



Motor characteristics of 220V power supply, torque characteristics will be reduced by low voltage.

## T/N Curve of SMP Series High Inertia Motor- 440V



Motor characteristics of 440V power supply, torque characteristics will be reduced by low voltage.