

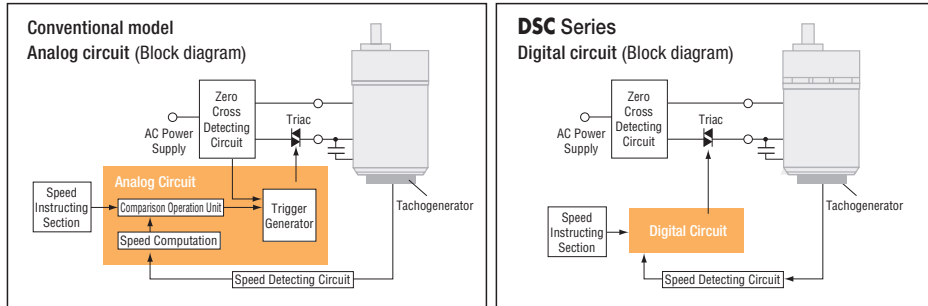
Entry Model of Speed Control Motors



Entry Model of Speed Control Motors

Speed Control by the Closed Loop Control

The tachogenerator installed in the AC motor will monitor the rotation speed. This speed controller controls the rotation speed kept at the set speed even if the load changes.



● Speed regulation $\pm 1\%$ (Reference value)

Digitization of circuit

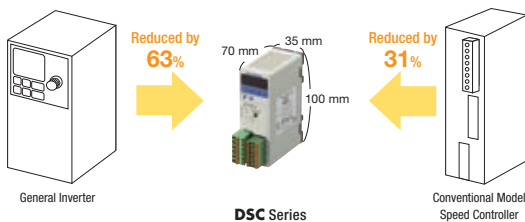
Most of the conventional analog circuits have been replaced with software, which are now run by the CPU. This has drastically reduced the number of circuit components and has produced the smallest circuit ever offered at low prices. In addition, by the digitization, the deviation between the speed command value and the speed detection value can become closer to zero, improving the speed variation from -5% to $\pm 1\%*$.

*0 to permissible torque at 1,000 r/min

Space Savings and Easier Installation

● Compact

The volume is reduced by 63% compared with the general inverter.



● Space Saving by Coherent Installation

The width of the body is 35 mm. The units use multiple shafts that can be installed nearly in contact with each other.



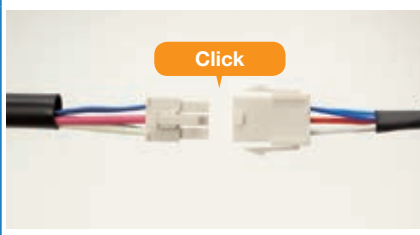
● For Thin Control Board

Depth: 90 mm
Can be installed in a thin control board.



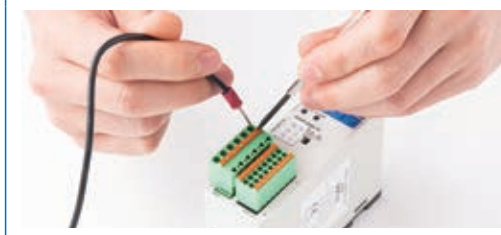
● Simple Connection Using the Connector Between the Motor and the Driver

The wiring between the speed controller and the motor uses the connector connection method, enable easy installation and removal.



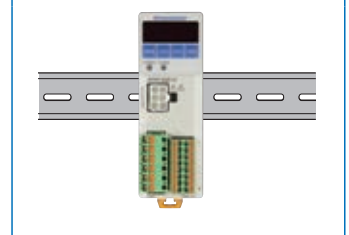
● Screwless Wiring for I/O, Unnecessary of Pressure Joining or Thread Fastening

Soldering, crimp tools and torque control for thread fastening are not necessary. Less time is required for wiring and maintenance.



● Easy Installation onto the DIN Rail

The speed controller can be installed directly onto the DIN rail.



Extensive Functions in Compact Body

Direct Display/Input of Speed and Settings

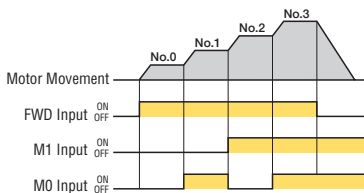


- Monitoring Mode**
Real-time monitoring of speed (motor, gear axis, conveyor speed);
Monitoring of alarm, warning and I/O status
- Data Mode**
Speed Setting
- Parameter Mode**
I/O allocation, parameters setting
- Test Mode**
Test operation available without data setting

● The operation lock can prevent wrong operations.

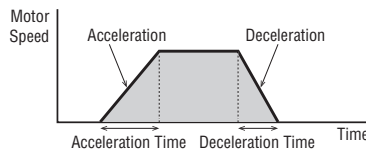
Speed Control (4-speed)

4 operation data can be set and switched among each other by I/O during operation.



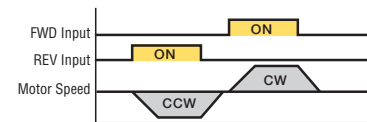
Acceleration/Deceleration

Makes the motor movement at start/stop smoother. Different acceleration/deceleration rates can be set for each of the 4-speed data.



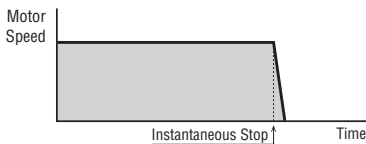
Bi-directional Operation

Performs the operation according to the command for rotation direction.



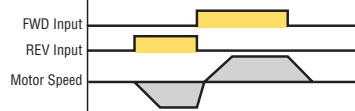
Instantaneous Stop

Stops the operating motor instantaneously. (Short-cycle start/stop is possible subject to certain conditions.)

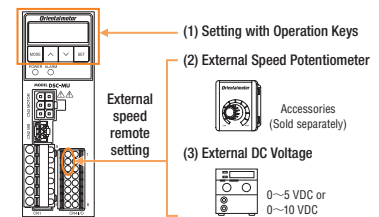


Instantaneous Bi-directional Operation

Switch instantaneously for rotation direction of the motor during operation. (Short-cycle switching is possible subject to certain conditions.)

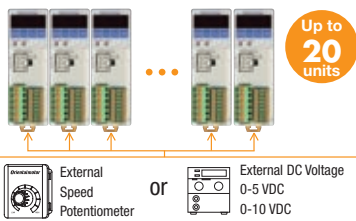


Settable External Speed



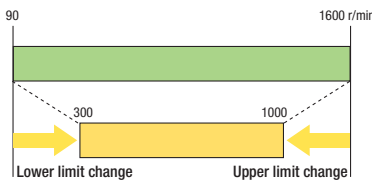
Parallel Operation (Up to 20 units)

For one external speed potentiometer, up to 20 units can be operated in parallel. The speed of each motor can be finely adjusted by changing the parameter of the controller.



Limitation of Rotation Speed Range

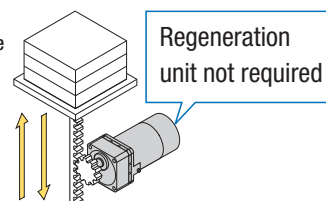
Speed range for speed setting can be limited in advance.



Vertical Driving Available with an Electromagnetic Brake

The speed control in vertical driving is possible for deceleration control. (For details on the deceleration control and the driving condition on the deceleration control, → page 03-21.)

Speed Control Range
[50 Hz]
300~1400 r/min
[60 Hz]
300~1600 r/min



Gearhead with High Permissible Torque and High Strength

DSC Series adopts the motor gearhead with high permissible torque and high strength.

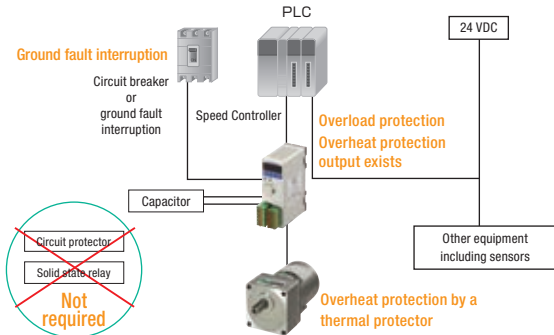
This gearhead uses our unique side plate, increasing the case rigidity. The gear is also strengthened by heat treatment (carburizing and quenching).

Parallel Shaft Combination Type

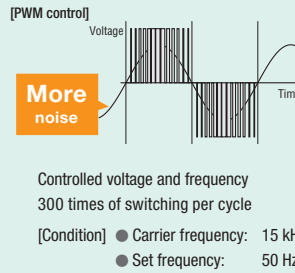


High Reliability

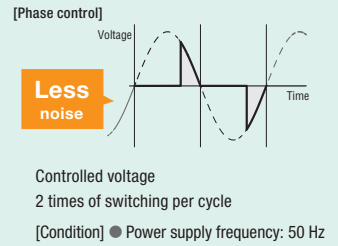
The System Configuration is Simple, with a Reassuring Low Noise Level



Inverter + 3-Phase motor

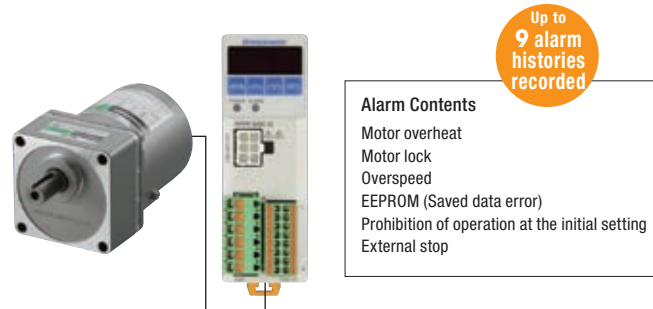


DSC Series



Reliability Enhanced by Alarm Output

The closed loop control feedback the status of the motor to the controller in real time. If an error occurs, such as motor lock due to overloading, the unit output will trigger an alarm signal and stops the power supply to the motor.



Lineup

Motor

Type	Output Power [W]	Power Supply Voltage [VAC]	Maximum Permissible Torque [N·m]
Standard Type Parallel Shaft Combination Type → Page 03-07	6 15 25 40	Single-Phase 110/115 Single-Phase 220/230	40
Standard Type Round Shaft Type → Page 03-08	60 90		0.73
With Electromagnetic Brake Type Parallel Shaft Combination Type → Page 03-20	6 15 25 40 60 90	Single-Phase 110/115 Single-Phase 220/230	40

Speed Controller

Type	Output Power [W]	Power Supply Voltage [VAC]
Standard Type	6 15 25 40 60 90	Single-Phase 110/115 Single-Phase 220/230
With Electromagnetic Brake Type	6 15 25 40 60 90	Single-Phase 110/115 Single-Phase 220/230

Connection Cable

Cable Type
Connection Cable Flexible Connection Cable 1~10 m
Connection Cable Flexible Connection Cable 1~10 m

Product Number Code

Motor

◇ Parallel Shaft Combination Type

SCM 4 25 EC - 15

① ② ③ ④ ⑤ ⑥

◇ Round Shaft Type

SCM 4 25 A - EC

① ② ③ ④ ⑤

Speed Controller

DSCD 25 EC

① ② ③ ④

Connection Cable, Flexible Connection Cable

CC 01 SC R

① ② ③ ④ ⑤

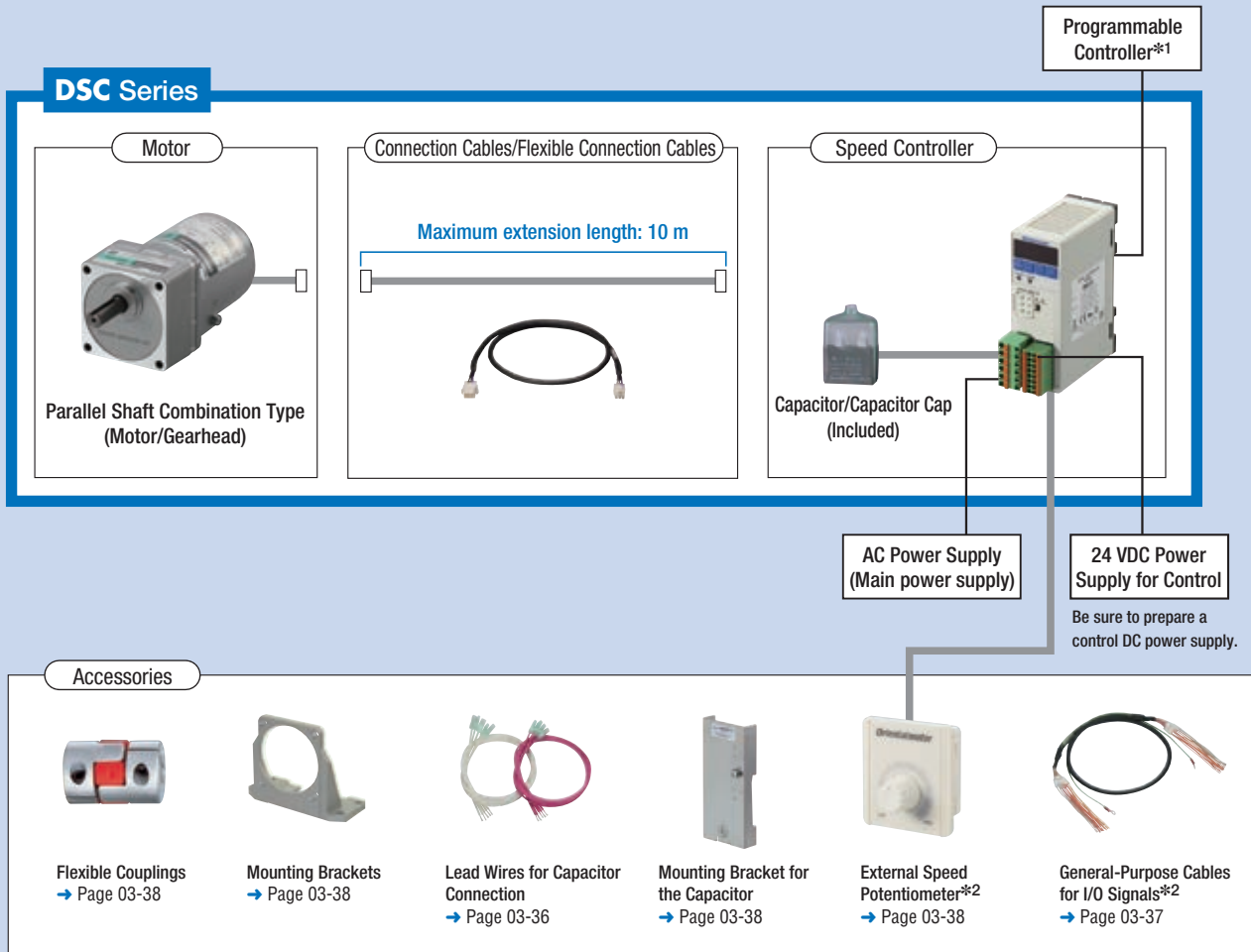
①	Motor Type	SCM : Speed Control Motor
②	Frame Size	2 : 60 mm 3 : 70 mm 4 : 80 mm 5 : 90 mm
③	Output Power (W)	(Example) 25 : 25 W
④	Power Supply Voltage	UA : Single-Phase 110/115 VAC EC : Single-Phase 220/230 VAC
⑤		M : Power Off Activated Type Electromagnetic Brake
⑥	Gear Ratio/Shaft Configuration	Number: Gear Ratio for Combination Type A : Round Shaft Type

①	Speed Controller Type	DSCD : DSC Series Speed Controller
②	Output Power (W)	(Example) 25 : 25 W
③	Power Supply Voltage	UA : Single-Phase 110/115 VAC EC : Single-Phase 220/230 VAC
④		M : Power Off Activated Type Electromagnetic Brake

①	Cable Type	CC : Connection Cable
②	Length	01 : 1 m 02 : 2 m 03 : 3 m 05 : 5 m 10 : 10 m
③	Applied Model	SC : Speed Control Motor
④		M : Power Off Activated Type Electromagnetic Brake
⑤	None: Connection Cable	R : Flexible Connection Cable

System Configuration

The motor, speed controller, and connection cables need to be purchase separately.



*1 Not supplied.

*2 The external speed potentiometer (PAVR2-20K) cannot be used together with the general-purpose cable for I/O signals.

System Configuration Example

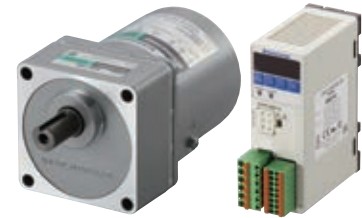
DSC Series			Sold Separately	
Motor Parallel Shaft Combination Type	Speed Controller	Connection Cable (5 m)	Mounting Brackets	Flexible Couplings
SCM425EC-25	DSCD25EC	CC05SC	SOL4M6F	MCL401515
SGD191	SGD126	SGD70	SGD29	SGD93

The system configuration shown above is an example. Other combinations are available.

Standard Type

Parallel Shaft Combination Type

Round Shaft Type



Parallel Shaft Combination Type

Product Line

Parallel Shaft Combination Type

The price includes the prices of the motor and gearhead.



Speed Controller

The price includes the prices of the speed controller and capacitor.



Output Power	Power Supply Voltage	Product Name	Gear Ratio	List Price
6 W	Single-Phase 110/115 VAC	SCM26UA -□	5, 6, 7.5, 9, 12.5, 15, 18	SGD158
			25, 30, 36	SGD166
			50, 60, 75, 90, 100, 120, 150, 180	SGD174
	Single-Phase 220/230 VAC	SCM26EC -□	250, 300, 360	SGD212
			5, 6, 7.5, 9, 12.5, 15, 18	SGD161
			25, 30, 36	SGD168
15 W	Single-Phase 110/115 VAC	SCM315UA -□	50, 60, 75, 90, 100, 120, 150, 180	SGD177
			250, 300, 360	SGD214
			5, 6, 7.5, 9, 12.5, 15, 18	SGD170
	Single-Phase 220/230 VAC	SCM315EC -□	25, 30, 36	SGD178
			50, 60, 75, 90, 100, 120, 150, 180	SGD186
			250, 300, 360	SGD221
25 W	Single-Phase 110/115 VAC	SCM425UA -□	5, 6, 7.5, 9, 12.5, 15, 18	SGD173
			25, 30, 36	SGD180
			50, 60, 75, 90, 100, 120, 150, 180	SGD189
	Single-Phase 220/230 VAC	SCM425EC -□	250, 300, 360	SGD224
			5, 6, 7.5, 9, 12.5, 15, 18	SGD180
			25, 30, 36	SGD188
40 W	Single-Phase 110/115 VAC	SCM540UA -□	50, 60, 75, 90, 100, 120, 150, 180	SGD196
			250, 300, 360	SGD234
			5, 6, 7.5, 9, 12.5, 15, 18	SGD184
	Single-Phase 220/230 VAC	SCM540EC -□	25, 30, 36	SGD191
			50, 60, 75, 90, 100, 120, 150, 180	SGD200
			250, 300, 360	SGD238
60 W	Single-Phase 110/115 VAC	SCM560UA -□	5, 6, 7.5, 9, 12.5, 15, 18	SGD214
			25, 30, 36	SGD223
			50, 60, 75, 90, 100, 120, 150, 180	SGD230
	Single-Phase 220/230 VAC	SCM560EC -□	250, 300	SGD300
			5, 6, 7.5, 9, 12.5, 15, 18	SGD218
			25, 30, 36	SGD226
90 W	Single-Phase 110/115 VAC	SCM590UA -□	50, 60, 75, 90, 100, 120, 150, 180	SGD234
			250, 300	SGD304
			5, 6, 7.5, 9, 12.5, 15, 18	SGD259
	Single-Phase 220/230 VAC	SCM590EC -□	25, 30, 36, 50, 60, 75, 90, 100	SGD270
			120, 150, 180	SGD281
			250, 300	SGD318
90 W	Single-Phase 110/115 VAC	SCM590UA -□	5, 6, 7.5, 9, 12.5, 15, 18	SGD264
			25, 30, 36, 50, 60	SGD275
			75, 90, 100, 120, 150, 180	SGD310
	Single-Phase 220/230 VAC	SCM590EC -□	5, 6, 7.5, 9, 12.5, 15, 18	SGD286
			25, 30, 36, 50, 60	SGD286
			75, 90, 100, 120, 150, 180	SGD323

Output Power	Power Supply Voltage	Product Name	List Price
6 W	Single-Phase 110/115 VAC	DSCD6UA	SGD126
	Single-Phase 220/230 VAC	DSCD6EC	SGD126
15 W	Single-Phase 110/115 VAC	DSCD15UA	SGD126
	Single-Phase 220/230 VAC	DSCD15EC	SGD126
25 W	Single-Phase 110/115 VAC	DSCD25UA	SGD126
	Single-Phase 220/230 VAC	DSCD25EC	SGD126
40 W	Single-Phase 110/115 VAC	DSCD40UA	SGD126
	Single-Phase 220/230 VAC	DSCD40EC	SGD126
60 W	Single-Phase 110/115 VAC	DSCD60UA	SGD128
	Single-Phase 220/230 VAC	DSCD60EC	SGD128
90 W	Single-Phase 110/115 VAC	DSCD90UA	SGD128
	Single-Phase 220/230 VAC	DSCD90EC	SGD128

● A number in the box □ in the product name indicates the gear ratio.

● Round Shaft Type



Output Power	Power Supply Voltage	Product Name	List Price
6 W	Single-Phase 110/115 VAC	SCM26A-UA	SGD88
	Single-Phase 220/230 VAC	SCM26A-EC	SGD91
15 W	Single-Phase 110/115 VAC	SCM315A-UA	SGD94
	Single-Phase 220/230 VAC	SCM315A-EC	SGD96
25 W	Single-Phase 110/115 VAC	SCM425A-UA	SGD103
	Single-Phase 220/230 VAC	SCM425A-EC	SGD106
40 W	Single-Phase 110/115 VAC	SCM540A-UA	SGD121
	Single-Phase 220/230 VAC	SCM540A-EC	SGD125
60 W	Single-Phase 110/115 VAC	SCM560A-UA	SGD139
	Single-Phase 220/230 VAC	SCM560A-EC	SGD144
90 W	Single-Phase 110/115 VAC	SCM590A-UA	SGD158
	Single-Phase 220/230 VAC	SCM590A-EC	SGD163

● Speed Controller

The price includes the prices of the speed controller and capacitor.



Output Power	Power Supply Voltage	Product Name	List Price
6 W	Single-Phase 110/115 VAC	DSCD6UA	SGD126
	Single-Phase 220/230 VAC	DSCD6EC	
15 W	Single-Phase 110/115 VAC	DSCD15UA	SGD126
	Single-Phase 220/230 VAC	DSCD15EC	
25 W	Single-Phase 110/115 VAC	DSCD25UA	SGD126
	Single-Phase 220/230 VAC	DSCD25EC	
40 W	Single-Phase 110/115 VAC	DSCD40UA	SGD126
	Single-Phase 220/230 VAC	DSCD40EC	
60 W	Single-Phase 110/115 VAC	DSCD60UA	SGD128
	Single-Phase 220/230 VAC	DSCD60EC	
90 W	Single-Phase 110/115 VAC	DSCD90UA	SGD128
	Single-Phase 220/230 VAC	DSCD90EC	

● Connection Cables



Length	Product Name	List Price
1 m	CC01SC	SGD35
2 m	CC02SC	SGD40
3 m	CC03SC	SGD50
5 m	CC05SC	SGD70
10 m	CC10SC	SGD120

● Flexible Connection Cables



Length	Product Name	List Price
1 m	CC01SCR	SGD70
2 m	CC02SCR	SGD80
3 m	CC03SCR	SGD100
5 m	CC05SCR	SGD140
10 m	CC10SCR	SGD240

■ Accessories

● Motor

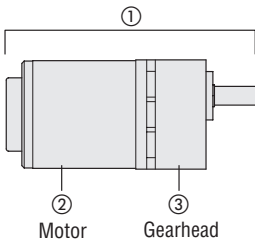
Type	Parallel Key	Installation Screws	Operating Manual
Parallel Shaft Combination Type	1 piece	1 set	1 copy
Round Shaft Type	—	—	

● Speed Controller

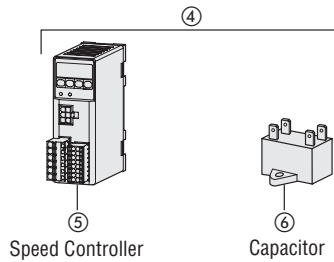
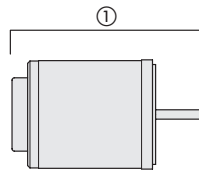
Capacitor	Capacitor Cap	Operating Manual
1 piece	1 piece	1 copy

Combination List

Parallel Shaft Combination Type



Round Shaft Type



Combination Type

The combination type comes with a motor and a gearhead pre-assembled. The combination of the motor and the gearhead can be changed. They are also available separately. You can remove the gearhead to change the installation position by 90°.

Parallel Shaft Combination Type

Output Power	Power Supply Voltage	Speed Control Motor			Speed Controller		
		Product Name	Component Product Name		Product Name	Component Product Name	
		①	②	③	④	⑤	⑥
6 W	Single-Phase 110/115 VAC	SCM26UA -□	SCM26GV-UA	2GV□B	DSCD6UA	DSC-U	CH25FAUL2
	Single-Phase 220/230 VAC	SCM26EC -□	SCM26GV-EC		DSCD6EC		CH06BFAUL
15 W	Single-Phase 110/115 VAC	SCM315UA -□	SCM315GV-UA	3GV□B	DSCD15UA		CH45FAUL2
	Single-Phase 220/230 VAC	SCM315EC -□	SCM315GV-EC		DSCD15EC		CH10BFAUL
25 W	Single-Phase 110/115 VAC	SCM425UA -□	SCM425GV-UA	4GV□B	DSCD25UA		CH65CFAUL2
	Single-Phase 220/230 VAC	SCM425EC -□	SCM425GV-EC		DSCD25EC		CH15BFAUL
40 W	Single-Phase 110/115 VAC	SCM540UA -□	SCM540GV-UA	5GV□B	DSCD40UA		CH90CFAUL2
	Single-Phase 220/230 VAC	SCM540EC -□	SCM540GV-EC		DSCD40EC		CH23BFAUL
60 W	Single-Phase 110/115 VAC	SCM560UA -□	SCM560GVH-UA	5GVH□B	DSCD60UA		CH120CFAUL2
	Single-Phase 220/230 VAC	SCM560EC -□	SCM560GVH-EC		DSCD60EC		CH30BFAUL
90 W	Single-Phase 110/115 VAC	SCM590UA -□	SCM590GVR-UA	5GVR□B	DSCD90UA	CH200CFAUL2	
	Single-Phase 220/230 VAC	SCM590EC -□	SCM590GVR-EC		DSCD90EC	CH60BFAUL	

● A capacitor cap is included with the capacitor.

Round Shaft Type

Output Power	Power Supply Voltage	Speed Control Motor	Speed Controller		
		Product Name	Product Name	Component Product Name	
		①	④	⑤	⑥
6 W	Single-Phase 110/115 VAC	SCM26A-UA	DSCD6UA	DSC-U	CH25FAUL2
	Single-Phase 220/230 VAC	SCM26A-EC	DSCD6EC		CH06BFAUL
15 W	Single-Phase 110/115 VAC	SCM315A-UA	DSCD15UA		CH45FAUL2
	Single-Phase 220/230 VAC	SCM315A-EC	DSCD15EC		CH10BFAUL
25 W	Single-Phase 110/115 VAC	SCM425A-UA	DSCD25UA		CH65CFAUL2
	Single-Phase 220/230 VAC	SCM425A-EC	DSCD25EC		CH15BFAUL
40 W	Single-Phase 110/115 VAC	SCM540A-UA	DSCD40UA		CH90CFAUL2
	Single-Phase 220/230 VAC	SCM540A-EC	DSCD40EC		CH23BFAUL
60 W	Single-Phase 110/115 VAC	SCM560A-UA	DSCD60UA		CH120CFAUL2
	Single-Phase 220/230 VAC	SCM560A-EC	DSCD60EC		CH30BFAUL
90 W	Single-Phase 110/115 VAC	SCM590A-UA	DSCD90UA	CH200CFAUL2	
	Single-Phase 220/230 VAC	SCM590A-EC	DSCD90EC	CH60BFAUL	

● A capacitor cap is included with the capacitor.

● A number in the box □ in the product name indicates the gear ratio.

Specifications Continuous Rating



Product Name		Maximum Output Power	Voltage	Frequency	Variable Speed Range	Permissible Torque		Starting Torque	Current	Power Consumption	Capacitor	Motor Overheat Protection Device			
						1200 r/min (50 Hz)	90 r/min								
Upper Level: Parallel Shaft Combination Type	Speed Controller	W	VAC	Hz	r/min	mN·m	mN·m	mN·m	A	W	μF				
Lower Level: Round Shaft Type															
SCM26UA-□ SCM26A-UA	DSCD6UA	6	Single-Phase 110	60	90~1600	50	38	40	0.28	29	2.5	ZP			
			Single-Phase 115												
SCM26EC-□ SCM26A-EC	DSCD6EC	6	Single-Phase 220	60	90~1400	42	40	44	0.135	29	0.6	ZP			
			Single-Phase 230												
			Single-Phase 220	60	90~1600	46	37	44							
			Single-Phase 230										60	90~1600	50
SCM315UA-□ SCM315A-UA	DSCD15UA	15	Single-Phase 110	60	90~1600	120	45	84	0.48	46	4.5	TP			
			Single-Phase 115					125					90		
SCM315EC-□ SCM315A-EC	DSCD15EC	15	Single-Phase 220	60	90~1400	125	40	67	0.23	43	1.0	TP			
			Single-Phase 230					110		46					
			Single-Phase 220	60	90~1600	125		72		44					
			Single-Phase 230					60		90~1600			120	81	47
SCM425UA-□ SCM425A-UA	DSCD25UA	25	Single-Phase 110	60	90~1600	205	45		125		0.75	58		6.5	TP
			Single-Phase 115					135	69						
SCM425EC-□ SCM425A-EC	DSCD25EC	25	Single-Phase 220	60	90~1400	205	40	110	0.37	70	1.5	TP			
			Single-Phase 230					120		70					
			Single-Phase 220	60	90~1600			120		70			105		
			Single-Phase 230											60	90~1600
SCM540UA-□ SCM540A-UA	DSCD40UA	40	Single-Phase 110	60	90~1600	320	70	180	1.1	107	9.0	TP			
			Single-Phase 115					190							
SCM540EC-□ SCM540A-EC	DSCD40EC	40	Single-Phase 220	60	90~1400	320	65	190	0.55	96	2.3	TP			
			Single-Phase 230							70			104		
			Single-Phase 220	60	90~1600					65			99		
			Single-Phase 230											60	90~1600
SCM560UA-□ SCM560A-UA	DSCD60UA	60	Single-Phase 110	60	90~1600	460	80	260	1.5	144	12	TP			
			Single-Phase 115					490		280			145		
SCM560EC-□ SCM560A-EC	DSCD60EC	60	Single-Phase 220	60	90~1400	490	80	280	0.71	129	3.0	TP			
			Single-Phase 230					460		75			143		
			Single-Phase 220	60	90~1600			490		85			290	0.72	132
			Single-Phase 230												
SCM590UA-□ SCM590A-UA	DSCD90UA	90	Single-Phase 110	60	90~1600	730	85	400	2.4	224	20	TP			
			Single-Phase 115					440		227					
SCM590EC-□ SCM590A-EC	DSCD90EC	90	Single-Phase 220	60	90~1400	730	95	490	1.2	201	6.0	TP			
			Single-Phase 230					500		226					
			Single-Phase 220	60	90~1600			520		1.2			204		
			Single-Phase 230											60	90~1600

● The specifications apply to the motor only. The variable speed ranges shown are under no load conditions.

ZP: These products are impedance protected.

TP: This indicates that there is a built-in thermal protector (Automatic return type).

● A number in the box □ in the product name indicates the gear ratio.

Common Specifications

Item	Specifications
Speed Setting Methods	Set in either of the following methods. <ul style="list-style-type: none"> Setting using the control panel Up to 4 patterns of operation data can be set. External speed potentiometer External DC voltage: 0~5 VDC or 0~10 VDC
Acceleration and Deceleration Time Setting Range	0.0~15.0 seconds Acceleration time/deceleration time varies with the load condition of the motor.
Monitoring Mode	Rotation speed, operation data No., alarm code, warning code, I/O monitor
Data Mode	Rotation speed, acceleration time, deceleration time, initialization
Function	Gear ratio, speed up ratio, fixed display of the lower first digit, prohibition alarm of operation at the initial setting, external speed instruction input, external speed instruction voltage selection, external speed instruction offset, Upper and lower limits of speed, input function selection, output function selection, motor lock detection time, motor rotation direction, initialization
Parameter Mode	
Test Mode	JOG operation
Others	Locking of data editing
Control Power Source	24 VDC±10% 0.15 A or more
Input Signals	Photocoupler input Input resistance 4.7 kΩ Signals can be optionally allocated to IN0~IN5 inputs (6 points) []: Initial setting [FWD], [REV], [MO], [M1], [ALARM-RESET], [FREE], EXT-ERROR Sink input/source input ... Switchable by the selection switch: The factory setting is Sink input
Output Signals	Photocoupler and open collector output External power source: 4.5~30 VDC 40 mA or less Signals can be optionally allocated to OUT0 or OUT1 (2 points) []: Initial setting [SPEED-OUT], [ALARM-OUT], TH-OUT, WNG Sink output/source output ... Supplied through external wiring
Protective Functions	When the following protective functions are activated, the motor will coast to a stop, and the ALARM output will be turned OFF. At the same time, the alarm code is indicated in the operating panel and ALARM LED lights. Alarm types: Motor overheat, motor lock, overspeed, EEPROM error, prohibition of operation at the initial setting, external stop
Maximum Extension Length	Motor and speed controller distance 10 m

General Specifications

Item	Motor	Speed Controller
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the motor windings and the case after continuous operation under normal ambient temperature and humidity.	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the main circuit terminal and the input signal terminal, between the main circuit terminal and the case, and between the main circuit terminal and FG, after continuous operation under normal ambient temperature and humidity.
Dielectric Strength Voltage	No abnormality is judged even with application of 1.5 kVAC at 50 Hz or 60 Hz between the windings and the case for 1 minute after continuous operation under normal ambient temperature and humidity.	No abnormality is judged even with application of 1.9 kVAC at 50 Hz or 60 Hz between the main circuit terminal and the input signal terminal and between the main circuit terminal and the case, and 1.5 kVAC at 50 Hz or 60 Hz between the main circuit terminal and FG for 1 minute after continuous operation under normal ambient temperature and humidity.
Temperature Rise	A gearhead or equivalent heat sink*1 is connected to the motor and the winding temperature rise is measured at 80°C or less using the resistance change method after continuous operation with no load under normal ambient temperature and humidity.	—
Overheat Protection Device	The 6 W type is impedance protected. All other motors have a built-in thermal protector (Automatic return type) Open: 130±5°C Close: 85±20°C	—
Operating Environment	Ambient Temperature	−10~+40°C (Non-freezing)
	Ambient Humidity	85% or less (Non-condensing)
	Altitude	Up to 1000 m above sea level
	Atmosphere	No corrosive gases or dust. Not exposed to water or oil. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.
Vibration	Not subject to continuous vibration or excessive shock Conforms to JIS C 60068-2-6 "Sine-wave vibration test method" Frequency range: 10~55 Hz, Pulsating amplitude: 0.15 mm Sweep direction: 3 directions (X, Y, Z) Number of sweeps: 20 times	
Storage Condition*2	Ambient Temperature	−25~+70°C (Non-freezing)
	Ambient Humidity	85% or less (Non-condensing)
	Altitude	Up to 3000 m above sea level
	Atmosphere	No corrosive gases or dust. Not exposed to water or oil. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.
Heat-resistant Class	130 (B)	—
Degree of Protection	IP20	IP20

*1 Heat sink size (Material: Aluminum)

Motor Output Power	Size (mm)	Thickness (mm)
6 W	115×115	5
15 W	125×125	
25 W	135×135	
40 W	165×165	
60 W	200×200	
90 W	200×200	

*2 The storage condition applies to a short period such as a period during transportation.

[Note]

● Do not measure insulation resistance or perform the dielectric strength test while the motor and speed controller are connected.

Output Shaft Speed of the Combination Type

Motor Shaft Speed

Low speed: 90 r/min, High speed 50 Hz: 1400 r/min, High speed 60 Hz: 1600 r/min

Unit: r/min

Gear Ratio	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
High Speed 50 Hz	280	233	186	155	112	93	77	56	46	38	28	23	18.6	15.5	14	11.6	9.3	7.7	5.6	4.6	3.8
High Speed 60 Hz	320	266	213	177	128	106	88	64	53	44	32	26	21	17.7	16	13.3	10.6	8.8	6.4	5.3	4.4
Low Speed	18	15	12	10	7.2	6	5	3.6	3	2.5	1.8	1.5	1.2	1	0.9	0.75	0.6	0.5	0.36	0.3	0.25

Permissible Torque of Combination Type

A colored background indicates gear shaft rotation in the same direction as the motor shaft. Others rotate in the opposite direction.

A number in the box in the product name indicates the gear ratio.

Single-Phase 110/115 VAC

Unit: N·m

Product Name	Gear Ratio																							
	Motor Shaft Speed r/min		5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360	
SCM26UA-□	1450		0.23	0.27	0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6	6	6	6	6	6
	90		0.17	0.21	0.26	0.31	0.43	0.51	0.62	0.86	0.98	1.2	1.6	2.0	2.5	2.9	3.3	3.9	4.6	5.5	6	6	6	6
SCM315UA-□	1450	110 VAC	0.54	0.65	0.81	0.97	1.4	1.6	1.9	2.7	3.1	3.7	5.2	6.2	7.7	9.3	10	10	10	10	10	10	10	10
		115 VAC	0.56	0.68	0.84	1.0	1.4	1.7	2.0	2.8	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10	10	10	10	10
SCM425UA-□	1450		0.20	0.24	0.30	0.36	0.51	0.61	0.73	1.0	1.2	1.4	1.9	2.3	2.9	3.5	3.9	4.6	5.5	6.6	9.1	10	10	10
	90		0.20	0.24	0.30	0.36	0.51	0.61	0.73	1.0	1.2	1.4	1.9	2.3	2.9	3.5	3.9	4.6	5.5	6.6	9.1	10.9	13.1	
SCM540UA-□	1450		0.92	1.1	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16	16
	90		0.20	0.24	0.30	0.36	0.51	0.61	0.73	1.0	1.2	1.4	1.9	2.3	2.9	3.5	3.9	4.6	5.5	6.6	9.1	10.9	13.1	
SCM560UA-□	1450		1.4	1.7	2.2	2.6	3.6	4.3	5.2	6.9	8.3	9.9	13.8	16.5	20.6	24.8	27.5	30	30	30	30	30	30	—
	90		0.32	0.38	0.47	0.57	0.79	0.95	1.1	1.5	1.8	2.2	3.0	3.6	4.5	5.4	6.0	6.8	8.5	10.2	14.2	17.0	—	
SCM590UA-□	1450	110 VAC	2.1	2.5	3.1	3.7	5.2	6.2	7.5	9.9	11.9	14.2	19.8	23.7	29.7	30	30	30	30	30	30	30	30	—
		115 VAC	2.2	2.6	3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	30	30	30	—
SCM590UA-□	1450		0.36	0.43	0.54	0.65	0.90	1.1	1.3	1.7	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.7	11.7	16.2	19.4	—	
	90		3.3	3.9	4.9	5.9	8.2	9.9	11.3	15.7	18.8	22.6	31.4	37.7	40	40	40	40	40	40	—	—	—	
SCM590UA-□	1450		0.38	0.46	0.57	0.69	0.96	1.1	1.3	1.8	2.2	2.6	3.7	4.4	5.2	6.2	6.9	8.3	10.3	12.4	—	—	—	
	90		0.38	0.46	0.57	0.69	0.96	1.1	1.3	1.8	2.2	2.6	3.7	4.4	5.2	6.2	6.9	8.3	10.3	12.4	—	—	—	

Single-Phase 220/230 VAC

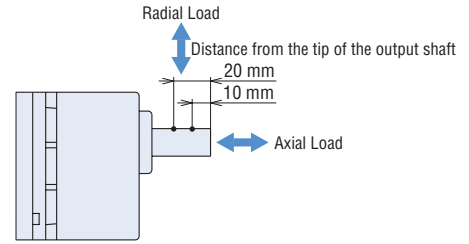
Unit: N·m

Product Name	Gear Ratio																							
	Motor Shaft Speed r/min		5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360	
SCM26EC-□	1200	220 VAC 50 Hz	0.19	0.23	0.28	0.34	0.47	0.57	0.68	0.95	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.3	5.1	6	6	6	6	6
		230 VAC 50 Hz	0.21	0.25	0.31	0.37	0.52	0.62	0.75	1.0	1.2	1.4	2.0	2.4	3.0	3.6	4.0	4.7	5.6	6	6	6	6	6
	1450	220 VAC 60 Hz	0.21	0.25	0.31	0.37	0.52	0.62	0.75	1.0	1.2	1.4	2.0	2.4	3.0	3.6	4.0	4.7	5.6	6	6	6	6	6
		230 VAC 60 Hz	0.23	0.27	0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6	6	6	6	6	6
	90	220 VAC 50/60 Hz	0.18	0.22	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	6
		230 VAC 50 Hz	0.17	0.20	0.25	0.30	0.42	0.50	0.60	0.83	0.95	1.1	1.6	1.9	2.4	2.9	3.2	3.8	4.5	5.4	6	6	6	6
SCM315EC-□	1200	50 Hz	0.56	0.68	0.84	1.0	1.4	1.7	2.0	2.8	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10	10	10	10	10
	1450	220 VAC 60 Hz	0.50	0.59	0.74	0.89	1.2	1.5	1.8	2.5	2.8	3.4	4.7	5.7	7.1	8.5	9.5	10	10	10	10	10	10	10
		230 VAC 60 Hz	0.54	0.65	0.81	0.97	1.4	1.6	1.9	2.7	3.1	3.7	5.2	6.2	7.7	9.3	10	10	10	10	10	10	10	10
SCM425EC-□	1200	50 Hz	0.18	0.22	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	8.1	9.7	10	10
	1450	60 Hz	0.92	1.1	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16	16
SCM540EC-□	1200	50 Hz	0.18	0.22	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	8.1	9.7	11.7	—
	1450	60 Hz	1.4	1.7	2.2	2.6	3.6	4.3	5.2	6.9	8.3	9.9	13.8	16.5	20.6	24.8	27.5	30	30	30	30	30	—	
SCM560EC-□	90	50 Hz	0.29	0.35	0.44	0.53	0.73	0.88	1.1	1.4	1.7	2.0	2.8	3.4	4.2	5.0	5.6	6.3	7.9	9.5	13.2	15.8	—	—
		60 Hz	0.32	0.38	0.47	0.57	0.79	0.95	1.1	1.5	1.8	2.2	3.0	3.6	4.5	5.4	6.0	6.8	8.5	10.2	14.2	17.0	—	
SCM590EC-□	1200	50 Hz	2.2	2.6	3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	30	30	30	—
		60 Hz	2.2	2.6	3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	30	30	30	—
	1450	220 VAC 50 Hz	0.36	0.43	0.54	0.65	0.90	1.1	1.3	1.7	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.7	11.7	16.2	19.4	—	—
		230 VAC 60 Hz	0.34	0.41	0.51	0.61	0.84	1.0	1.2	1.6	1.9	2.3	3.2	3.9	4.8	5.8	6.5	7.3	9.1	10.9	15.2	18.2	—	—
SCM590EC-□	1200	50 Hz	0.38	0.46	0.57	0.69	0.96	1.1	1.4	1.8	2.2	2.6	3.7	4.4	5.5	6.6	7.3	8.3	10.3	12.4	17.2	20.7	—	—
	1450	60 Hz	3.3	3.9	4.9	5.9	8.2	9.9	11.3	15.7	18.8	22.6	31.4	37.7	40	40	40	40	40	40	—	—	—	
SCM590EC-□	1200	50 Hz	0.43	0.51	0.64	0.77	1.1	1.3	1.5	2.0	2.5	2.9	4.1	4.9	5.8	6.9	7.7	9.2	11.5	13.9	—	—	—	—
	1450	60 Hz	0.43	0.51	0.64	0.77	1.1	1.3	1.5	2.0	2.5	2.9	4.1	4.9	5.8	6.9	7.7	9.2	11.5	13.9	—	—	—	—

Permissible Radial Load/Permissible Axial Load

Parallel Shaft Combination Type

Output Power	Gear Ratio	Permissible Radial Load N		Permissible Axial Load N
		Distance from the tip of the gearhead output shaft 10 mm	20 mm	
6 W	5~25	150	200	40
	30~360	200	300	
15 W	5~25	200	300	80
	30~360	300	400	
25 W	5~25	300	350	100
	30~360	450	550	
40 W 60 W	5~9	400	500	150
	12.5~18	450	600	
	25~300	500	700	
90 W	5~9	400	500	150
	12.5~18	450	600	
	25~180	500	700	



Round Shaft Type

Output Power	Permissible Radial Load N		Permissible Axial Load
	Distance from the tip of the motor output shaft 10 mm	20 mm	
6 W	50	110	Half of motor mass or less*
15 W	40	60	
25 W	90	140	
40 W	140	200	
60 W	240	270	
90 W			

*Avoid axial loads as much as possible.

If axial load is unavoidable, keep it at half or less of the motor mass.

Gearhead Transmission Efficiency

Gear Ratio	Product Name																			
	5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300
2GV□B, 3GV□B, 4GV□B	90%								86%							81%				
5GV□B, 5GVH□B	90%								86%							81%				
5GVR□B	90%								86%							81%				

Permissible Load Inertia J of Combination Types

Unit: $\times 10^{-4} \text{kg}\cdot\text{m}^2$

Output Power	Gear Ratio	Gear Ratio																				
		5	6	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
6 W		12	18	28	40	78	110	160	260	370	540	920	1300	1700	2000	2500	3600	5000	5000	5000	5000	5000
	When instantaneous stop or instantaneous bi-directional operation*	1.55	2.23	3.49	5.02	9.69	14	20.1	38.8	55.8	80.4	155	155	155	155	155	155	155	155	155	155	155
15 W		20	28	45	65	120	180	260	440	630	900	1500	2100	2800	3200	4000	5700	8000	8000	8000	8000	8000
	When instantaneous stop or instantaneous bi-directional operation*	3.5	5.04	7.88	11.3	21.9	31.5	45.4	87.5	126	181	350	350	350	350	350	350	350	350	350	350	350
25 W		22	32	50	72	150	220	310	550	800	1100	2200	3200	4000	5000	6200	8900	12000	12000	12000	12000	12000
	When instantaneous stop or instantaneous bi-directional operation*	7.75	11.2	17.4	25.1	48.4	69.8	100	194	279	402	775	775	775	775	775	775	775	775	775	775	775
40 W 60 W		45	65	100	150	300	420	620	1100	1600	2300	4500	6000	8000	10000	12000	17000	25000	25000	25000	25000	—
	When instantaneous stop or instantaneous bi-directional operation*	27.5	39.6	61.9	89.1	172	248	356	688	990	1426	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	—
90 W		45	65	100	150	300	420	620	1100	1600	2300	4500	6000	8000	10000	12000	17000	25000	25000	—	—	—
	When instantaneous stop or instantaneous bi-directional operation*	27.5	39.6	61.9	89.1	172	248	356	688	990	1426	2750	2750	2750	2750	2750	2750	2750	2750	—	—	—

*If the type includes a DSC Series electromagnetic brake, this is the value when deceleration control is ON.

How to Read Speed – Torque Characteristics

The characteristics diagram on the right shows the relationship between each setting speed and torque when a speed control motor is operated.

① 50 Hz Safe-Operation Line

② 60 Hz Safe-Operation Line

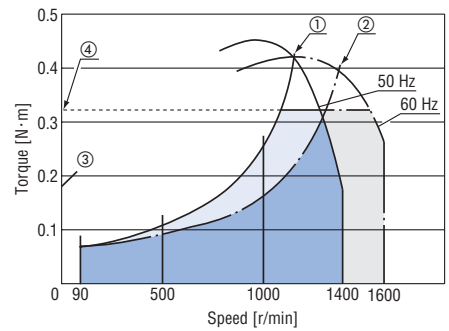
The safe-operation line is the permissible line of the torque that is limited according to the permissible temperature.

Motors can be operated at a continuous rating within the safe-operation line.

The safe-operation line is determined under the most severe condition where there is no heat conduction. Therefore, the motor can be operated depending on installation conditions of the motor.

Note

● When operating beyond the safe-operation line, make sure the motor case temperature is kept at 90°C or less.



③ Starting Torque

This refers to the size of torque with which the motor can start.

④ Combination Type Permissible Torque

This refers to the permissible value of the motor torque when operating with the gearhead installed.

The permissible torque of the combination type varies according to the gear ratio. Use the motor without exceeding the value on the list of permissible torques.

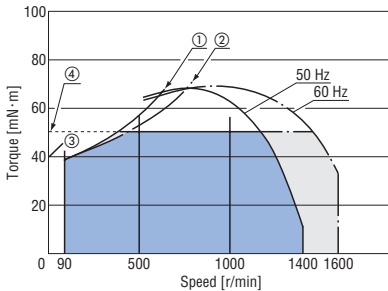
Speed – Torque Characteristics (Reference)

① 50 Hz Safe-Operation Line ② 60 Hz Safe-Operation Line ③ Starting Torque ④ Combination Type Permissible Torque

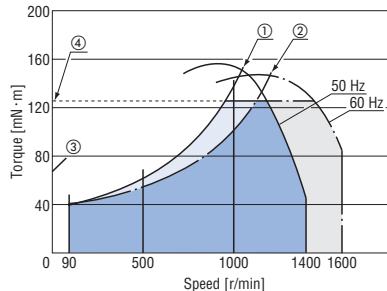
● The characteristics of each output are their representatives. (For motor only)

The permissible torque and starting torque of the motor vary according to the voltage. Check the specifications and the permissible torque of the combination type when using the motor.

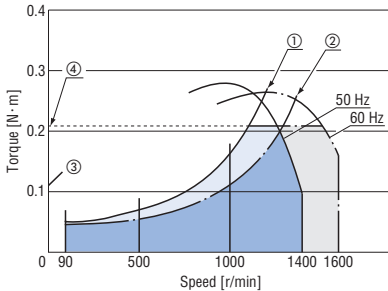
◇ 6 W



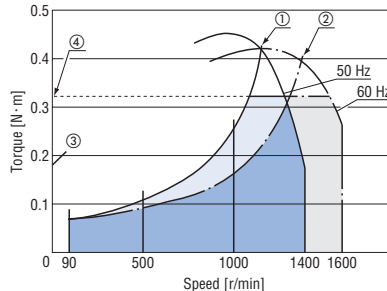
◇ 15 W



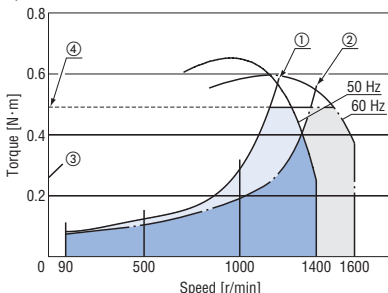
◇ 25 W



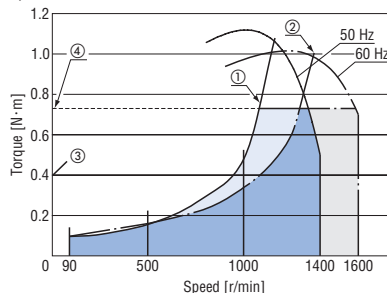
◇ 40 W



◇ 60 W



◇ 90 W



Dimensions (Unit: mm)

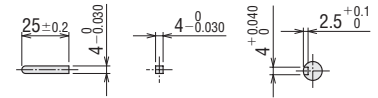
- "Mounting screws" are included with the parallel shaft combination type. Dimensions of installation screws → Page 03-31
- A number in the box □ in the product name indicates the gear ratio.

Parallel Shaft Combination Type

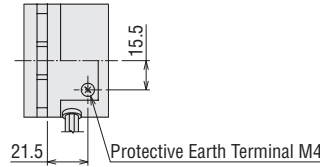
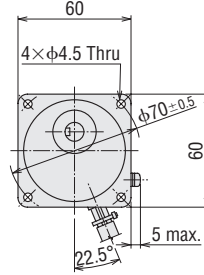
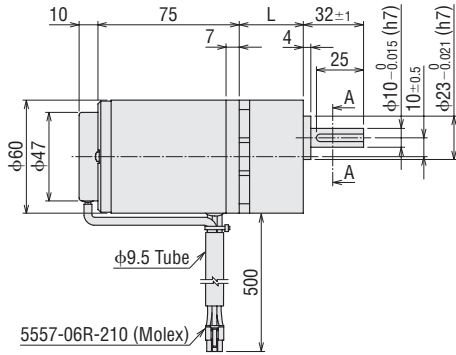
◇ 6 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM26UA -□ SCM26EC -□	SCM26GV-UA SCM26GV-EC	2GV□B	5~25	34	1.1	A1214A
			30~120	38	1.1	A1214B
			150~360	43	1.2	A1214C



Parallel Key (Included) Cross Section A-A

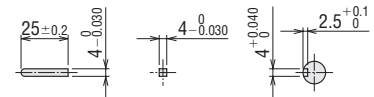


Detail Drawing of Protective Earth Terminal

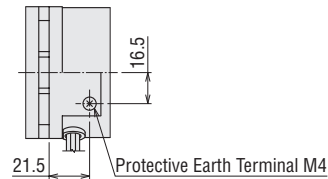
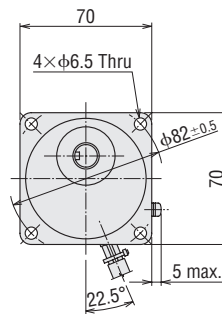
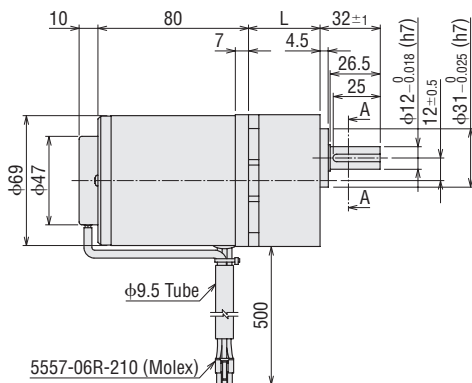
◇ 15 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM315UA -□ SCM315EC -□	SCM315GV-UA SCM315GV-EC	3GV□B	5~25	38	1.6	A1215A
			30~120	43	1.7	A1215B
			150~360	48	1.8	A1215C



Parallel Key (Included) Cross Section A-A

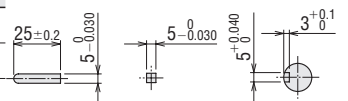


Detail Drawing of Protective Earth Terminal

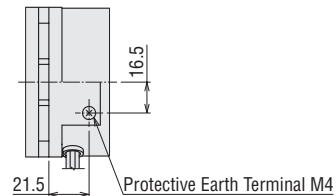
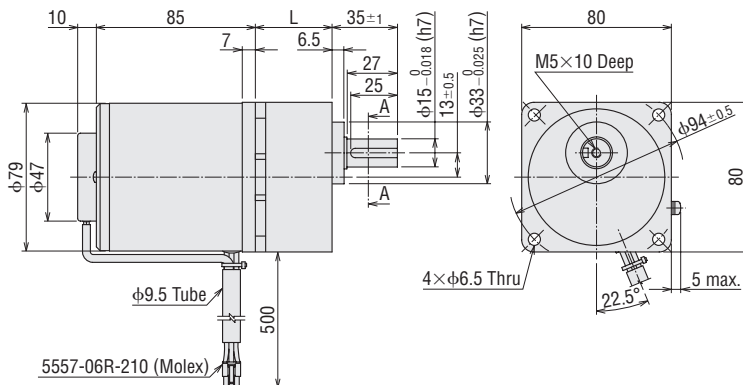
◇ 25 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM425UA -□ SCM425EC -□	SCM425GV-UA SCM425GV-EC	4GV□B	5~25	41	2.3	A1216A
			30~120	46	2.4	A1216B
			150~360	51	2.5	A1216C



Parallel Key (Included) Cross Section A-A

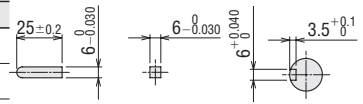


Detail Drawing of Protective Earth Terminal

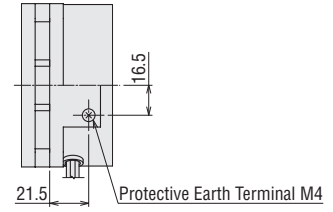
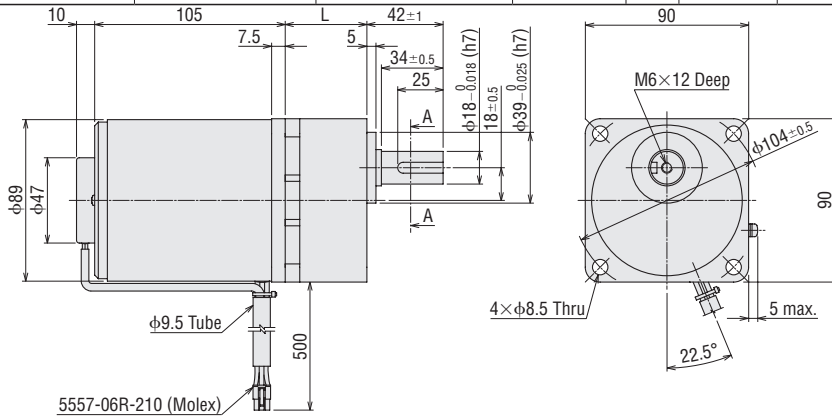
◇ 40 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM540UA-□ SCM540EC-□	SCM540GV-UA SCM540GV-EC	5GV□B	5~18	45	3.6	A1217A
			25~100	58	3.9	A1217B
			120~300	64	4.0	A1217C



Parallel Key (Included) Cross Section A-A

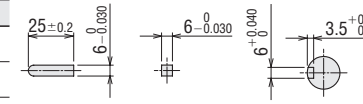


Detail Drawing of Protective Earth Terminal

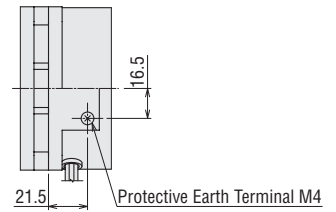
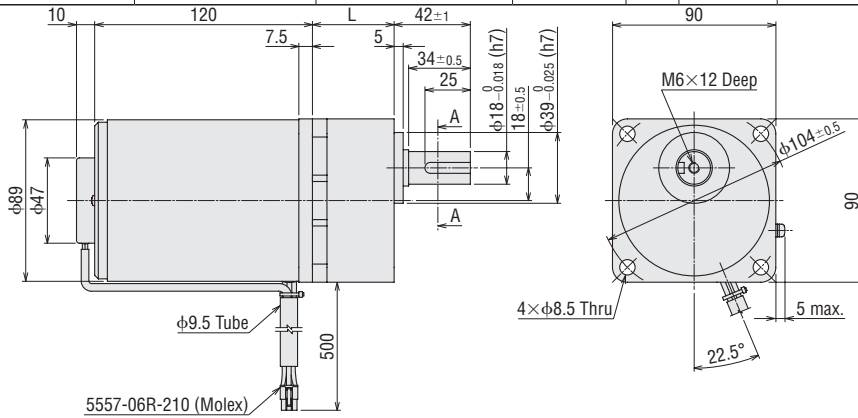
◇ 60 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM560UA-□ SCM560EC-□	SCM560GVH-UA SCM560GVH-EC	5GVH□B	5~18	45	4.1	A1218A
			25~100	58	4.4	A1218B
			120~300	64	4.5	A1218C



Parallel Key (Included) Cross Section A-A

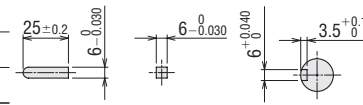


Detail Drawing of Protective Earth Terminal

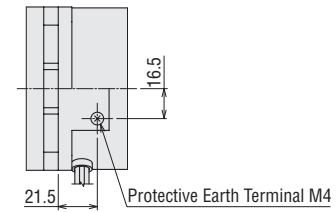
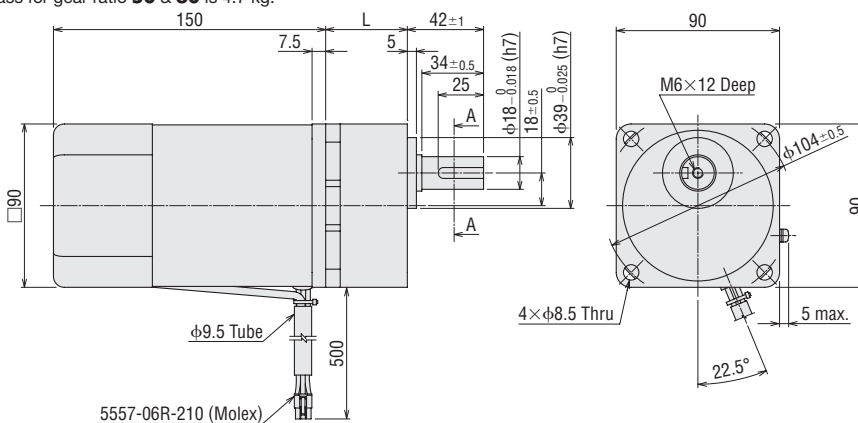
◇ 90 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM590UA-□ SCM590EC-□	SCM590GVR-UA SCM590GVR-EC	5GVR□B	5~15	45	4.3	A1219A
			18~36	58	4.7	A1219B
			50~180	70	4.8*	A1219C



Parallel Key (Included) Cross Section A-A



Detail Drawing of Protective Earth Terminal

*Mass for gear ratio 50 & 60 is 4.7 kg.

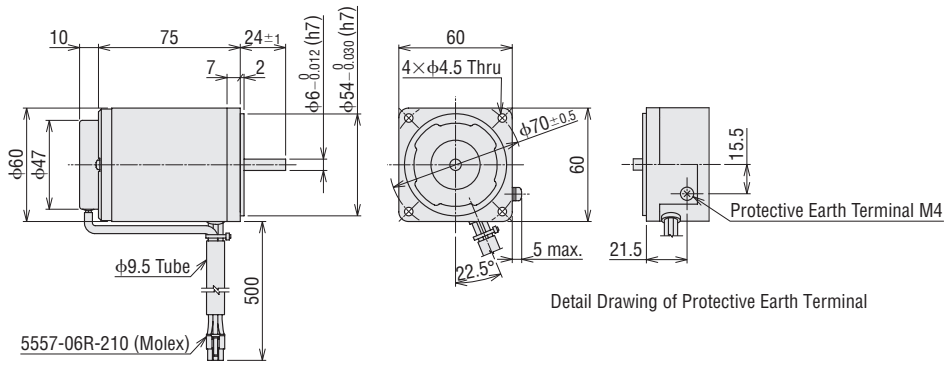
● Round Shaft Type

◇ 6 W

SCM26A-UA, SCM26A-EC

Mass: 0.8 kg

2D CAD A1256 3D CAD

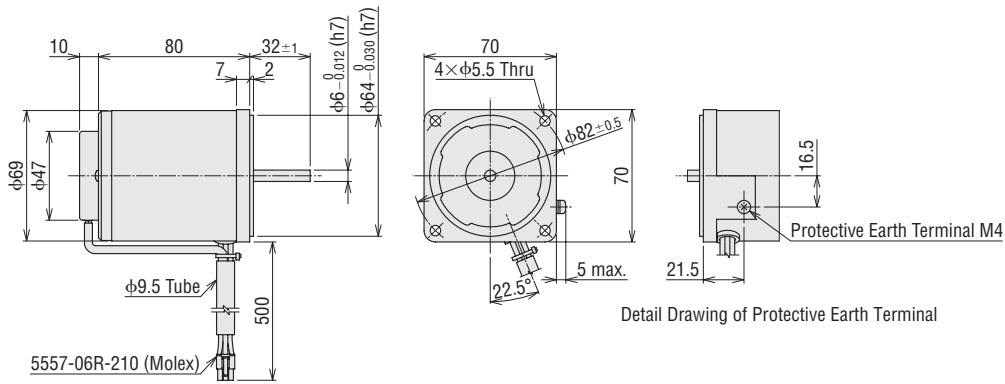


◇ 15 W

SCM315A-UA, SCM315A-EC

Mass: 1.2 kg

2D CAD A1257 3D CAD

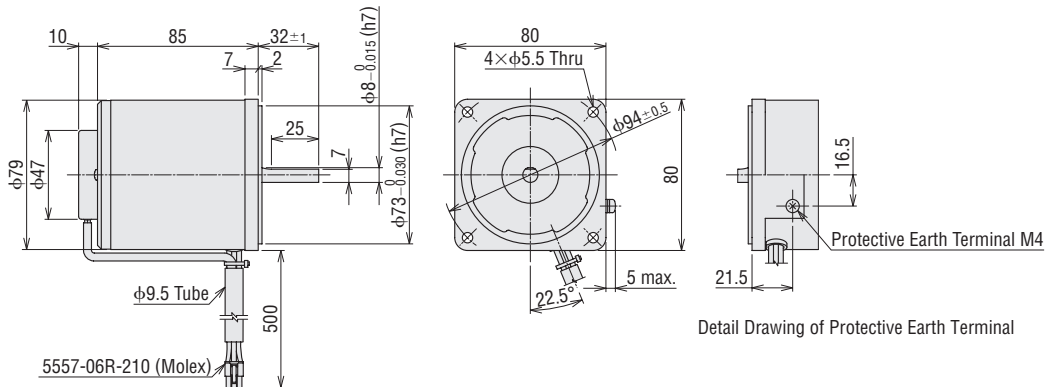


◇ 25 W

SCM425A-UA, SCM425A-EC

Mass: 1.6 kg

2D CAD A1258 3D CAD

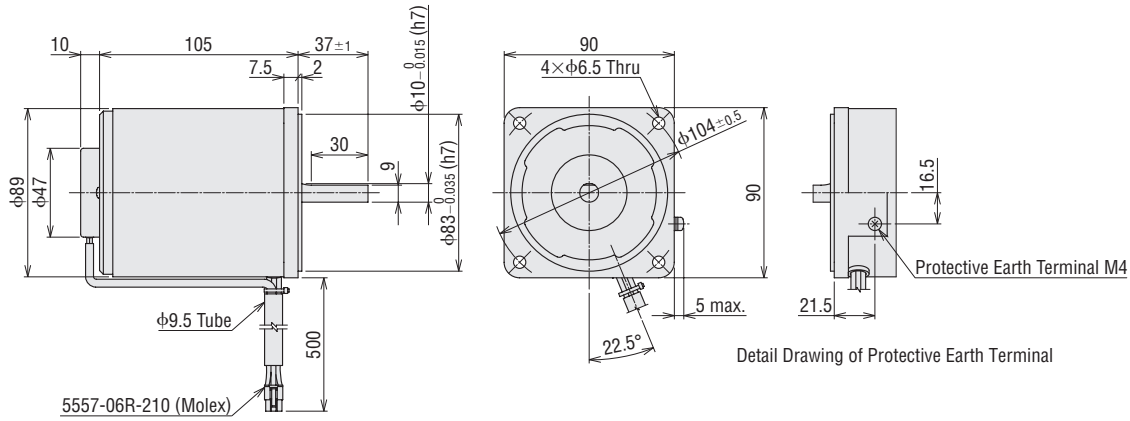


◇ 40 W

SCM540A-UA, SCM540A-EC

Mass: 2.6 kg

2D CAD A1259 3D CAD

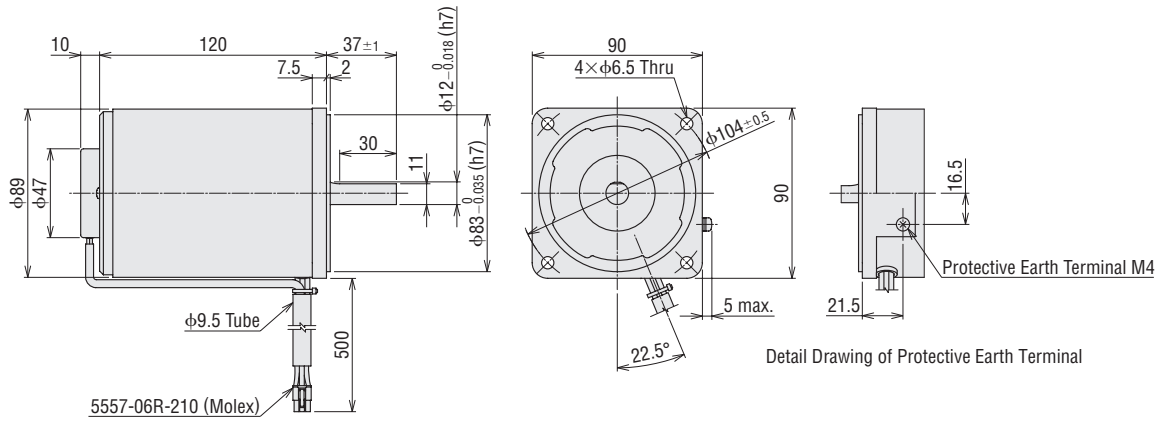


◇ 60 W

SCM560A-UA, SCM560A-EC

Mass: 3.1 kg

2D CAD A1260 3D CAD

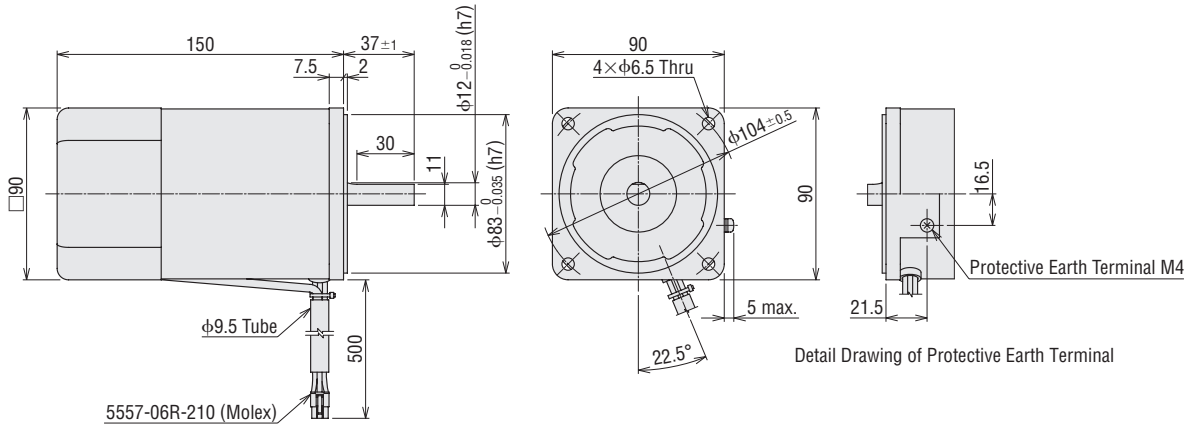


◇ 90 W

SCM590A-UA, SCM590A-EC

Mass: 3.3 kg

2D CAD A1261 3D CAD



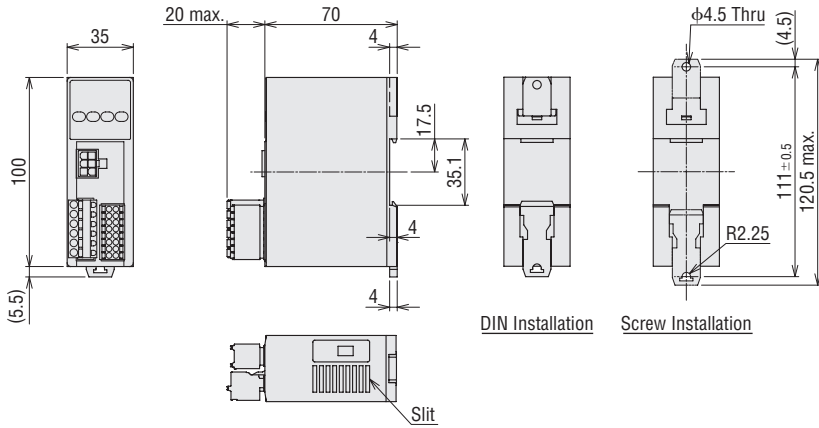
Speed Controller

DSC-U

Mass: 0.2 kg

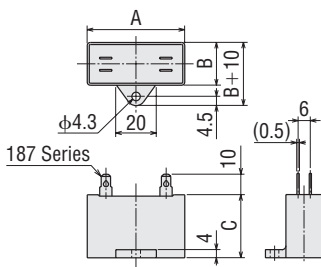
2D CAD A1262

3D CAD

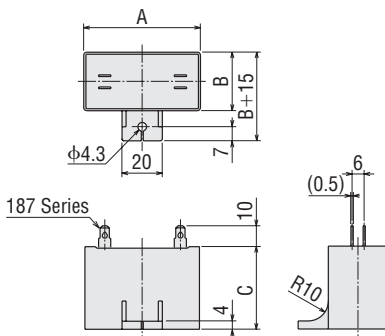


Capacitor (Included)

Dimensions No. ①



Dimensions No. ②



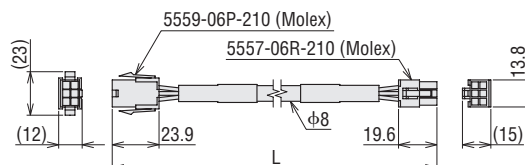
Capacitor Dimensions (Unit: mm)

Speed Controller Product Name	Capacitor					Dimensions No.
	Product Name	A	B	C	Mass g	
DSCD6UA	CH25FAUL2	31	17	27	21	①
DSCD6EC	CH06BFAUL	31	14.5	23.5	18	
DSCD15UA	CH45FAUL2	37	18	27	26	
DSCD15EC	CH10BFAUL	37	18	27	27	
DSCD25UA	CH65CFAUL2	48	19	29	35	
DSCD25EC	CH15BFAUL	38	21	31	37	
DSCD40UA	CH90CFAUL2	48	22.5	31.5	45	
DSCD40EC	CH23BFAUL	48	21	31	43	
DSCD60UA	CH120CFAUL2	58	22	35	60	
DSCD60EC	CH30BFAUL	58	21	31	50	
DSCD90UA	CH200CFAUL2	58	29	41	91	②
DSCD90EC	CH60BFAUL	58	29	41	92	

● A capacitor cap is included with the capacitor.

Connection Cables

Product Name	Length L (m)
CC01SC	1
CC02SC	2
CC03SC	3
CC05SC	5
CC10SC	10

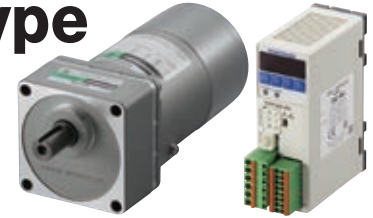


Flexible Connection Cables

Product Name	Length L (m)
CC01SCR	1
CC02SCR	2
CC03SCR	3
CC05SCR	5
CC10SCR	10

With Electromagnetic Brake Type

Parallel Shaft Combination Type



Parallel Shaft Combination Type

Product Line

Parallel Shaft Combination Type

The price includes the prices of the motor and gearhead.



Speed Controller

The price includes the prices of the speed controller and capacitor.



03

DSC Series

Output Power	Power Supply Voltage	Product Name	Gear Ratio	List Price
6 W	Single-Phase 110/115 VAC	SCM26UAM -□	7.5, 9, 12.5, 15, 18	SGD239
			25, 30, 36	SDD247
			50, 60, 75, 90, 100, 120, 150, 180	SGD256
	Single-Phase 220/230 VAC	SCM26ECM -□	250, 300, 360	SGD293
			7.5, 9, 12.5, 15, 18	SGD242
			25, 30, 36	SGD249
			50, 60, 75, 90, 100, 120, 150, 180	SGD258
			250, 300, 360	SGD296
			7.5, 9, 12.5, 15, 18	SGD251
15 W	Single-Phase 110/115 VAC	SCM315UAM -□	25, 30, 36	SGD259
			50, 60, 75, 90, 100, 120, 150, 180	SGD268
			250, 300, 360	SGD303
	Single-Phase 220/230 VAC	SCM315ECM -□	7.5, 9, 12.5, 15, 18	SGD254
			25, 30, 36	SGD261
			50, 60, 75, 90, 100, 120, 150, 180	SGD270
			250, 300, 360	SGD305
			7.5, 9, 12.5, 15, 18	SGD286
			25, 30, 36	SGD294
25 W	Single-Phase 110/115 VAC	SCM425UAM -□	50, 60, 75, 90, 100, 120, 150, 180	SGD303
			250, 300, 360	SGD340
			7.5, 9, 12.5, 15, 18	SGD290
	Single-Phase 220/230 VAC	SCM425ECM -□	25, 30, 36	SGD298
			50, 60, 75, 90, 100, 120, 150, 180	SGD306
			250, 300, 360	SGD344
40 W	Single-Phase 110/115 VAC	SCM540UAM -□	7.5, 9, 12.5, 15, 18	SGD333
			25, 30, 36	SGD341
			50, 60, 75, 90, 100, 120, 150, 180	SGD349
	Single-Phase 220/230 VAC	SCM540ECM -□	250, 300	SGD419
			7.5, 9, 12.5, 15, 18	SGD336
			25, 30, 36	SGD345
			50, 60, 75, 90, 100, 120, 150, 180	SGD353
			250, 300	SGD423
			7.5, 9, 12.5, 15, 18	SGD396
60 W	Single-Phase 110/115 VAC	SCM560UAM -□	25, 30, 36, 50, 60, 75, 90, 100	SGD408
			120, 150, 180	SGD419
			250, 300	SGD455
	Single-Phase 220/230 VAC	SCM560ECM -□	7.5, 9, 12.5, 15, 18	SGD401
			25, 30, 36, 50, 60, 75, 90, 100	SGD413
			120, 150, 180	SGD424
			250, 300	SGD460
			7.5, 9, 12.5, 15, 18	SGD416
			25, 30, 36, 50, 60	SGD438
90 W	Single-Phase 110/115 VAC	SCM590UAM -□	75, 90, 100, 120, 150, 180	SGD448
			7.5, 9, 12.5, 15, 18	SGD421
	Single-Phase 220/230 VAC	SCM590ECM -□	25, 30, 36, 50, 60	SGD443
			75, 90, 100, 120, 150, 180	SGD453

Output Power	Power Supply Voltage	Product Name	List Price
6 W	Single-Phase 110/115 VAC	DSCD6UAM	SGD133
	Single-Phase 220/230 VAC	DSCD6ECM	SGD133
15 W	Single-Phase 110/115 VAC	DSCD15UAM	SGD133
	Single-Phase 220/230 VAC	DSCD15ECM	SGD133
25 W	Single-Phase 110/115 VAC	DSCD25UAM	SGD133
	Single-Phase 220/230 VAC	DSCD25ECM	SGD133
40 W	Single-Phase 110/115 VAC	DSCD40UAM	SGD133
	Single-Phase 220/230 VAC	DSCD40ECM	SGD133
60 W	Single-Phase 110/115 VAC	DSCD60UAM	SGD134
	Single-Phase 220/230 VAC	DSCD60ECM	SGD134
90 W	Single-Phase 110/115 VAC	DSCD90UAM	SGD135
	Single-Phase 220/230 VAC	DSCD90ECM	SGD135

● A number in the box □ in the product name indicates the gear ratio.

● Connection Cables



Length	Product Name	List Price
1 m	CC01SCM	SGD48
2 m	CC02SCM	SGD53
3 m	CC03SCM	SGD63
5 m	CC05SCM	SGD83
10 m	CC10SCM	SGD133

● Flexible Connection Cables



Length	Product Name	List Price
1 m	CC01SCMR	SGD95
2 m	CC02SCMR	SGD105
3 m	CC03SCMR	SGD125
5 m	CC05SCMR	SGD165
10 m	CC10SCMR	SGD265

■ Accessories

● Motor

Type	Parallel Key	Installation Screws	Operating Manual
Parallel Shaft Combination Type	1 piece	1 set	1 copy

● Speed Controller

Capacitor	Capacitor Cap	Operating Manual
1 piece	1 piece	1 copy

The deceleration control function implemented in the electromagnetic brake type

The electromagnetic brake type has the deceleration control function implemented. This enables speed control at the time of vertical driving or lowering operation.

"What is the deceleration control function?"

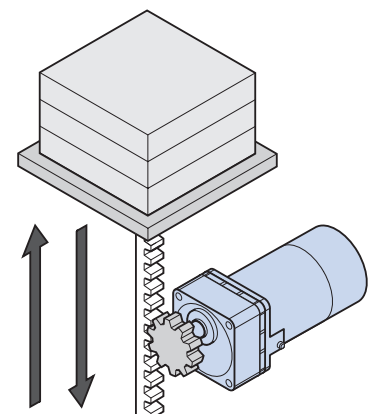
This is the function that adjusts the speed by applying the brake current automatically to the motor when it rotates at a speed faster than the set speed. For operation by vertical driving or even when force is applied to the direction where the motor output shaft rotates due to the inertial load, this function controls the motor to rotate at the set speed.

"Deceleration Control" ON (Factory setting): For vertical driving, lowering operation, horizontal driving and position keeping

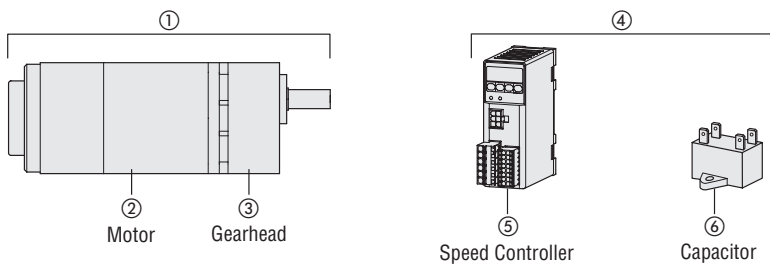
"Deceleration Control" OFF: For horizontal driving and position keeping (Variable speed range is extended.)

● The specification values and permissible torque differ between the "Deceleration Control" ON and OFF.

Item	"Deceleration Control" Parameter ON (Factory setting)	"Deceleration Control" Parameter OFF
Deceleration Control Function	Enabled	Disabled
Variable Speed Range	300~1400 r/min (50 Hz) 300~1600 r/min (60 Hz)	90~1400 r/min (50 Hz) 90~1600 r/min (60 Hz)
Acceleration Time/Deceleration Time Range	0.2~15.0 seconds	0.0~15.0 seconds



Combination List



Combination Type

The combination type comes with a motor and a gearhead pre-assembled. The combination of the motor and the gearhead can be changed. They are also available separately. You can remove the gearhead to change the installation position by 90°.

Output Power	Power Supply Voltage	Speed Control Motor			Speed Controller		
		Product Name	Component Product Name		Product Name	Component Product Name	
		①	②	③	④	⑤	⑥
6 W	Single-Phase 110/115 VAC	SCM26UAM -□	SCM26GV-UAM	2GV□B	DSCD6UAM	DSC-MU	CH25FAUL2
	Single-Phase 220/230 VAC	SCM26ECM -□	SCM26GV-ECM		DSCD6ECM		CH06BFAUL
15 W	Single-Phase 110/115 VAC	SCM315UAM -□	SCM315GV-UAM	3GV□B	DSCD15UAM		CH45FAUL2
	Single-Phase 220/230 VAC	SCM315ECM -□	SCM315GV-ECM		DSCD15ECM		CH10BFAUL
25 W	Single-Phase 110/115 VAC	SCM425UAM -□	SCM425GV-UAM	4GV□B	DSCD25UAM		CH65CFAUL2
	Single-Phase 220/230 VAC	SCM425ECM -□	SCM425GV-ECM		DSCD25ECM		CH15BFAUL
40 W	Single-Phase 110/115 VAC	SCM540UAM -□	SCM540GV-UAM	5GV□B	DSCD40UAM		CH90CFAUL2
	Single-Phase 220/230 VAC	SCM540ECM -□	SCM540GV-ECM		DSCD40ECM		CH23BFAUL
60 W	Single-Phase 110/115 VAC	SCM560UAM -□	SCM560GVH-UAM	5GVH□B	DSCD60UAM		CH120CFAUL2
	Single-Phase 220/230 VAC	SCM560ECM -□	SCM560GVH-ECM		DSCD60ECM		CH30BFAUL
90 W	Single-Phase 110/115 VAC	SCM590UAM -□	SCM590GVR-UAM	5GVR□B	DSCD90UAM	CH200CFAUL2	
	Single-Phase 220/230 VAC	SCM590ECM -□	SCM590GVR-ECM		DSCD90ECM	CH60BFAUL	

● A capacitor cap is included with the capacitor.

● A number in the box □ in the product name indicates the gear ratio.

Common Specifications

Item	Specifications	
Speed Setting Methods	<ul style="list-style-type: none"> Set in either of the following methods. Setting using the control panel <ul style="list-style-type: none"> Up to 4 patterns of operation data can be set. External speed potentiometer External DC voltage: 0~5 VDC or 0~10 VDC 	
Acceleration and Deceleration Time Setting Range	0.2~15.0 seconds (0.0~15.0 seconds: This value can be set when using the motor with the deceleration control OFF) Acceleration time/deceleration time varies with the load condition of the motor.	
Function	Monitoring Mode	Rotation speed, operation data No., alarm code, warning code, I/O monitor
	Data Mode	Rotation speed, acceleration time, deceleration time, initialization
	Parameter Mode	Gear ratio, speed up ratio, fixed display of the lower first digit, prohibition alarm of operation at the initial setting, external speed instruction input, external speed instruction voltage selection, external speed instruction offset, upper and lower limits of speed, deceleration control, brake type, input function selection, output function selection, motor lock detection time, motor rotation direction, initialization
	Test Mode	JOG operation, release of the electromagnetic brake
	Others	Locking of data editing
Control Power Source	24 VDC±10% 0.15 A or more	
Input Signals	Photocoupler input Input resistance 4.7 kΩ Signals can be optionally allocated to IN0~IN5 inputs (6 points) []: Initial setting [FWD], [REV], [MO], [M1], [ALARM-RESET], [FREE], EXT-ERROR Sink input/source input ... Switchable by the selection switch: The factory setting is Sink input	
Output Signals	Photocoupler and open collector output External power source: 4.5~30 VDC 40 mA or less Signals can be optionally allocated to OUT0 or OUT1 (2 points) []: Initial setting [SPEED-OUT], [ALARM-OUT], TH-OUT, WNG Sink output/source output ... Supplied through external wiring	
Protective Functions	When the following protective function is activated, the output to the motor is blocked and the electromagnetic brake operates to stop the motor. The alarm output is turned OFF. At the same time, the alarm code is indicated in the operating panel and ALARM LED lights. Alarm types: Motor overheat, motor lock, overspeed, EEPROM error, prohibition of operation at the initial setting, external stop	
Continuous Operation Time with Deceleration Control ON	6 W	Continuous operation time: Continuous Operating duty: Continuous
	15 W, 25 W, 40 W	Continuous operation time: 1 minute Operating duty: 50% or less (Example: Operation for 1 minute, stop for 1 minute)
	60 W, 90 W	Continuous operation time: 1 minute Operating duty: 33% or less (Example: Operation for 1 minute, stop for 2 minute)
Maximum Extension Length	Motor and speed controller distance 10 m	

General Specifications

Item	Motor	Speed Controller	
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the motor windings and the case after continuous operation under normal ambient temperature and humidity.	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the main circuit terminal and the input signal terminal, between the main circuit terminal and the case, and between the main circuit terminal and FG, after continuous operation under normal ambient temperature and humidity.	
Dielectric Strength Voltage	No abnormality is judged even with application of 1.5 kVAC at 50 Hz or 60 Hz between the windings and the case for 1 minute after continuous operation under normal ambient temperature and humidity.	No abnormality is judged even with application of 1.9 kVAC at 50 Hz or 60 Hz between the main circuit terminal and the input signal terminal and between the main circuit terminal and the case, and 1.5 kVAC at 50 Hz or 60 Hz between the main circuit terminal and FG for 1 minute after continuous operation under normal ambient temperature and humidity.	
Temperature Rise	The measurement of the windings temperature rise in the resistance method is 80°C or less after no-load continuous operation under normal ambient temperature and humidity.	—	
Overheat Protection Device	The 6 W type is impedance protected. All other motors have a built-in thermal protector (Automatic return type) Open: 130±5°C Close: 85±20°C	—	
Operating Environment	Ambient Temperature	-10~+40°C (Non-freezing)	0~+40°C (Non-freezing)
	Ambient Humidity	85% or less (Non-condensing)	
	Altitude	Up to 1000 m above sea level	
	Atmosphere	No corrosive gases or dust. Not exposed to water or oil. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.	
	Vibration	Not subject to continuous vibration or excessive shock Conforms to JIS C 60068-2-6 "Sine-wave vibration test method" Frequency range: 10~55 Hz, Pulsating amplitude: 0.15 mm Sweep direction: 3 directions (X, Y, Z) Number of sweeps: 20 times	
Storage Condition*	Ambient Temperature	-25~+70°C (Non-freezing)	
	Ambient Humidity	85% or less (Non-condensing)	
	Altitude	Up to 3000 m above sea level	
	Atmosphere	No corrosive gases or dust. Not exposed to water or oil. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.	
Heat-resistant Class	130 (B)	—	
Degree of Protection	IP20	IP20	

*The storage condition applies to a short period such as a period during transportation.

Note

Do not measure insulation resistance or perform the dielectric strength test while the motor and speed controller are connected.

Output Shaft Speed with Deceleration Control ON (Factory Setting), Permissible Torque, Starting Torque

Description on the deceleration control → Page 03-21

Output Shaft Speed

● Motor Shaft Speed

Low speed: 300 r/min, High speed 50 Hz: 1400 r/min, High speed 60 Hz: 1600 r/min

Unit: r/min

Gear Ratio		7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
High Speed	50 Hz	186	155	112	93	77	56	46	38	28	23	18.6	15.5	14	11.6	9.3	7.7	5.6	4.6	3.8
	60 Hz	213	177	128	106	88	64	53	44	32	26	21	17.7	16	13.3	10.6	8.8	6.4	5.3	4.4
Low Speed		40	33	24	20	16	12	10	8.3	6	5	4	3.3	3	2.5	2	1.6	1.2	1	0.83

Permissible Torque and Starting Torque

- Permissible torque and Starting Torque are fixed within the variable speed range (50 Hz: 300~1400 r/min, 60 Hz: 300~1600 r/min).
- In the case of horizontal driving, even if the deceleration control is ON, the torques with the deceleration control OFF are available. Permissible torque and starting torque when deceleration control is OFF → Page 03-26
- A colored background indicates gear shaft rotation in the same direction as the motor shaft. Others rotate in the opposite direction.
- A number in the box in the product name indicates the gear ratio.

Unit: N·m

Product Name	Gear Ratio	7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
SCM26UAM- SCM26ECM- 		0.20	0.24	0.34	0.41	0.49	0.68	0.77	0.93	1.3	1.5	1.9	2.3	2.6	3.1	3.6	4.4	6	6	6
SCM315UAM- SCM315ECM- 		0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6.1	7.3	10	10	10
SCM425UAM- SCM425ECM- 		0.54	0.65	0.90	1.1	1.3	1.8	2.1	2.5	3.4	4.1	5.2	6.2	6.9	8.3	9.7	11.7	16	16	16
SCM540UAM- SCM540ECM- 		0.95	1.1	1.6	1.9	2.3	3.0	3.6	4.3	6.0	7.2	9.0	10.8	12.0	13.6	17.0	20.4	28.4	30	—
SCM560UAM- SCM560ECM- 		1.4	1.7	2.4	2.8	3.4	4.5	5.4	6.5	9.0	10.8	13.5	16.3	18.1	20.4	25.5	30	30	30	—
SCM590UAM- SCM590ECM- 		2.2	2.6	3.6	4.3	5.0	6.9	8.3	9.9	13.8	16.5	19.4	23.3	25.9	31.1	38.9	40	—	—	—

03

DSC Series

Output Shaft Speed with Deceleration Control OFF, Permissible Torque, Starting Torque

Description on the deceleration control → Page 03-21

Output Shaft Speed

● Motor Shaft Speed

Low speed: 90 r/min, High speed 50 Hz: 1400 r/min, High speed 60 Hz: 1600 r/min

Unit: r/min

Gear Ratio		7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360
High Speed	50 Hz	186	155	112	93	77	56	46	38	28	23	18.6	15.5	14	11.6	9.3	7.7	5.6	4.6	3.8
	60 Hz	213	177	128	106	88	64	53	44	32	26	21	17.7	16	13.3	10.6	8.8	6.4	5.3	4.4
Low Speed		12	10	7.2	6	5	3.6	3	2.5	1.8	1.5	1.2	1	0.9	0.75	0.6	0.5	0.36	0.3	0.25

Permissible Torque and Starting Torque

- A colored background indicates gear shaft rotation in the same direction as the motor shaft. Others rotate in the opposite direction.
- A number in the box in the product name indicates the gear ratio.

● Single-Phase 110/115 VAC

Unit: N·m

Product Name	Gear Ratio		7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360	
	Motor Shaft Speed r/min																					
SCM26UAM-□	Permissible	1450	0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6	6	6	6	6	6
		90	0.26	0.31	0.43	0.51	0.62	0.86	0.98	1.2	1.6	2.0	2.5	2.9	3.3	3.9	4.6	5.5	6	6	6	6
	Starting		0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	6
SCM315UAM-□	Permissible	1450	110 VAC	0.81	0.97	1.4	1.6	1.9	2.7	3.1	3.7	5.2	6.2	7.7	9.3	10	10	10	10	10	10	10
			115 VAC	0.84	1.0	1.4	1.7	2.0	2.8	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10	10	10	10
		90	0.30	0.36	0.51	0.61	0.73	1.0	1.2	1.4	1.9	2.3	2.9	3.5	3.9	4.6	5.5	6.6	9.1	10	10	10
	Starting	110 VAC	0.57	0.68	0.95	1.1	1.4	1.9	2.2	2.6	3.6	4.3	5.4	6.5	7.2	8.7	10	10	10	10	10	10
			115 VAC	0.61	0.73	1.0	1.2	1.5	2.0	2.3	2.8	3.9	4.6	5.8	7.0	7.7	9.3	10	10	10	10	10
		90	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	6
SCM425UAM-□	Permissible	1450	110 VAC	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16
			115 VAC	0.84	1.0	1.4	1.7	2.0	2.8	3.2	3.9	5.4	6.5	8.1	9.7	10.8	12.9	15.2	16	16	16	16
		90	0.30	0.36	0.51	0.61	0.73	1.0	1.2	1.4	1.9	2.3	2.9	3.5	3.9	4.6	5.5	6.6	9.1	10.9	13.1	16
	Starting	110 VAC	0.91	1.1	1.5	1.8	2.2	3.0	3.5	4.2	5.8	7.0	8.7	10.4	11.6	13.9	16	16	16	16	16	
			115 VAC	0.91	1.1	1.5	1.8	2.2	3.0	3.5	4.2	5.8	7.0	8.7	10.4	11.6	13.9	16	16	16	16	
		90	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	
SCM540UAM-□	Permissible	1450	110 VAC	2.2	2.6	3.6	4.3	5.2	6.9	8.3	9.9	13.8	16.5	20.6	24.8	27.5	30	30	30	30	30	—
			115 VAC	0.91	1.1	1.5	1.8	2.2	3.0	3.5	4.2	5.8	7.0	8.7	10.4	11.6	13.9	16	16	16	16	
		90	0.47	0.57	0.79	0.95	1.1	1.5	1.8	2.2	3.0	3.6	4.5	5.4	6.0	6.8	8.5	10.2	14.2	17	—	
	Starting	110 VAC	1.2	1.5	2.0	2.4	2.9	3.9	4.6	5.6	7.7	9.3	11.6	13.9	15.5	17.5	21.9	26.2	30	30	—	
			115 VAC	1.3	1.5	2.1	2.6	3.1	4.1	4.9	5.9	8.2	9.8	12.3	14.7	16.3	18.5	23.1	27.7	30	—	
		90	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	
SCM560UAM-□	Permissible	1450	110 VAC	3.1	3.7	5.2	6.2	7.5	9.9	11.9	14.2	19.8	23.7	29.7	30	30	30	30	30	30	—	
			115 VAC	3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	—		
		90	0.54	0.65	0.90	1.1	1.3	1.7	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.7	11.7	16.2	19.4	—	
	Starting	110 VAC	1.8	2.1	2.9	3.5	4.2	5.6	6.7	8.0	11.2	13.4	16.8	20.1	22.4	25.3	30	30	30	30	—	
			115 VAC	1.9	2.3	3.2	3.8	4.5	6.0	7.2	8.7	12.0	14.4	18.1	21.7	24.1	27.2	30	30	30	—	
		90	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	
SCM590UAM-□	Permissible	1450	110 VAC	4.9	5.9	8.2	9.9	11.3	15.7	18.8	22.6	31.4	37.7	40	40	40	40	40	—	—	—	
			115 VAC	0.57	0.69	0.96	1.1	1.3	1.8	2.2	2.6	3.7	4.4	5.2	6.2	6.9	8.3	10.3	12.4	—	—	
	Starting	110 VAC	2.7	3.2	4.5	5.4	6.2	8.6	10.3	12.4	17.2	20.6	24.3	29.2	32.4	38.9	40	40	—	—		
115 VAC			3.0	3.6	5.0	5.9	6.8	9.5	11.4	13.6	18.9	22.7	26.7	32.1	35.6	40	40	—	—			

Output Shaft Speed with Deceleration Control OFF, Permissible Torque, Starting Torque

Description on the deceleration control → Page 03-21

Single-Phase 220/230 VAC

Unit: N·m

Product Name	Gear Ratio		7.5	9	12.5	15	18	25	30	36	50	60	75	90	100	120	150	180	250	300	360		
	Motor Shaft Speed r/min																						
SCM26ECM-□	Permissible	1200	220 VAC 50 Hz	0.28	0.34	0.47	0.57	0.68	0.95	1.1	1.3	1.8	2.2	2.7	3.3	3.6	4.3	5.1	6	6	6	6	
			230 VAC 50 Hz	0.31	0.37	0.52	0.62	0.75	1.0	1.2	1.4	2.0	2.4	3.0	3.6	4.0	4.7	5.6	6	6	6	6	
		1450	220 VAC 60 Hz	0.31	0.37	0.52	0.62	0.75	1.0	1.2	1.4	2.0	2.4	3.0	3.6	4.0	4.7	5.6	6	6	6	6	6
			230 VAC 60 Hz	0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6	6	6	6	6	
		90	220 VAC 50/60Hz	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	6	6	6	6
			230 VAC 50 Hz	0.25	0.30	0.42	0.50	0.60	0.83	0.95	1.1	1.6	1.9	2.4	2.9	3.2	3.8	4.5	5.4	6	6	6	6
	Starting		220 VAC 50/60Hz	0.30	0.36	0.50	0.59	0.71	0.99	1.1	1.4	1.9	2.3	2.8	3.4	3.8	4.5	5.3	6	6	6	6	6
			230 VAC 50 Hz	0.30	0.36	0.50	0.59	0.71	0.99	1.1	1.4	1.9	2.3	2.8	3.4	3.8	4.5	5.3	6	6	6	6	6
			230 VAC 60 Hz	0.34	0.41	0.56	0.68	0.81	1.1	1.3	1.5	2.2	2.6	3.2	3.9	4.3	5.2	6	6	6	6	6	
	SCM315ECM-□	Permissible	1200	50 Hz	0.84	1.0	1.4	1.7	2.0	2.8	3.2	3.9	5.4	6.5	8.1	9.7	10	10	10	10	10	10	10
220 VAC 60 Hz				0.74	0.89	1.2	1.5	1.8	2.5	2.8	3.4	4.7	5.7	7.1	8.5	9.5	10	10	10	10	10	10	
1450			230 VAC 60 Hz	0.81	0.97	1.4	1.6	1.9	2.7	3.1	3.7	5.2	6.2	7.7	9.3	10	10	10	10	10	10	10	10
			90	0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	8.1	9.7	10	
Starting				220 VAC 50/60Hz	0.45	0.54	0.75	0.90	1.1	1.5	1.7	2.1	2.9	3.5	4.3	5.2	5.8	6.9	8.1	9.8	10	10	10
				230 VAC 50 Hz	0.49	0.58	0.81	0.97	1.2	1.6	1.9	2.2	3.1	3.7	4.6	5.6	6.2	7.4	8.7	10	10	10	10
Starting			230 VAC 60 Hz	0.55	0.66	0.91	1.1	1.3	1.8	2.1	2.5	3.5	4.2	5.2	6.3	7.0	8.4	9.8	10	10	10	10	
			50 Hz	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16	
			60 Hz	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16	
SCM425ECM-□		Permissible	1200	50 Hz	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	16
	1450			60 Hz	1.4	1.7	2.3	2.8	3.3	4.6	5.3	6.3	8.8	10.6	13.2	15.9	16	16	16	16	16	16	
	90		0.27	0.32	0.45	0.54	0.65	0.90	1.0	1.2	1.7	2.1	2.6	3.1	3.4	4.1	4.9	5.8	8.1	9.7	11.7		
	Starting		220 VAC 50/60Hz	0.74	0.89	1.2	1.5	1.8	2.5	2.8	3.4	4.7	5.7	7.1	8.5	9.5	11.4	13.4	16	16	16	16	
			230 VAC 50/60Hz	0.81	0.97	1.4	1.6	1.9	2.7	3.1	3.7	5.2	6.2	7.7	9.3	10.3	12.4	14.6	16	16	16	16	
			50 Hz	2.2	2.6	3.6	4.3	5.2	6.9	8.3	9.9	13.8	16.5	20.6	24.8	27.5	30	30	30	30	30	—	
	Permissible	1450	60 Hz	2.2	2.6	3.6	4.3	5.2	6.9	8.3	9.9	13.8	16.5	20.6	24.8	27.5	30	30	30	30	30	30	—
			90	0.44	0.53	0.73	0.88	1.1	1.4	1.7	2.0	2.8	3.4	4.2	5.0	5.6	6.3	7.9	9.5	13.2	15.8	—	
		60 Hz	0.47	0.57	0.79	0.95	1.1	1.5	1.8	2.2	3.0	3.6	4.5	5.4	6.0	6.8	8.5	10.2	14.2	17	—		
	SCM540ECM-□	Starting		1.3	1.5	2.1	2.6	3.1	4.1	4.9	5.9	8.2	9.8	12.3	14.7	16.3	18.5	23.1	27.7	30	30	—	
50 Hz				3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	30	30	—	
1450				220 VAC 60 Hz	3.1	3.7	5.2	6.2	7.5	9.9	11.9	14.2	19.8	23.7	29.7	30	30	30	30	30	30	30	—
Permissible		1450	230 VAC 60 Hz	3.3	4.0	5.5	6.6	7.9	10.5	12.6	15.2	21.1	25.3	30	30	30	30	30	30	30	30	—	
			90	0.54	0.65	0.90	1.1	1.3	1.7	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.7	11.7	16.2	19.4	—	
		90	220 VAC 60 Hz	0.51	0.61	0.84	1.0	1.2	1.6	1.9	2.3	3.2	3.9	4.8	5.8	6.5	7.3	9.1	10.9	15.2	18.2	—	
			230 VAC 50 Hz	0.57	0.69	0.96	1.1	1.4	1.8	2.2	2.6	3.7	4.4	5.5	6.6	7.3	8.3	10.3	12.4	17.2	20.7	—	
		230 VAC 60 Hz	0.54	0.65	0.90	1.1	1.3	1.7	2.1	2.5	3.4	4.1	5.2	6.2	6.9	7.8	9.7	11.7	16.2	19.4	—		
			220 VAC 50 Hz	1.9	2.3	3.2	3.8	4.5	6.0	7.2	8.7	12.0	14.4	18.1	21.7	24.1	27.2	30	30	30	30	—	
Starting			220 VAC 60 Hz	2.0	2.3	3.3	3.9	4.7	6.2	7.5	9.0	12.5	15.0	18.7	22.4	24.9	28.2	30	30	30	30	—	
	230 VAC 50 Hz		2.0	2.3	3.3	3.9	4.7	6.2	7.5	9.0	12.5	15.0	18.7	22.4	24.9	28.2	30	30	30	30	—		
	230 VAC 60 Hz		2.0	2.4	3.4	4.1	4.9	6.5	7.7	9.3	12.9	15.5	19.4	23.2	25.8	29.2	30	30	30	30	—		
SCM590ECM-□	Permissible	1200	50 Hz	4.9	5.9	8.2	9.9	11.3	15.7	18.8	22.6	31.4	37.7	40	40	40	40	40	40	—	—	—	
			1450	60 Hz	4.9	5.9	8.2	9.9	11.3	15.7	18.8	22.6	31.4	37.7	40	40	40	40	40	40	—	—	—
		90	0.64	0.77	1.1	1.3	1.5	2.0	2.5	2.9	4.1	4.9	5.8	6.9	7.7	9.2	11.5	13.9	—	—	—		
	Starting		220 VAC 50 Hz	3.3	4.0	5.5	6.6	7.6	10.5	12.6	15.2	21.1	25.3	29.8	35.7	39.7	40	40	40	—	—	—	
			220 VAC 60 Hz	3.4	4.1	5.6	6.8	7.7	10.8	12.9	15.5	21.5	25.8	30.4	36.5	40	40	40	40	—	—	—	
			230 VAC 50 Hz	3.5	4.2	5.9	7.0	8.0	11.2	13.4	16.1	22.4	26.8	31.6	37.9	40	40	40	40	—	—	—	
			230 VAC 60 Hz	3.6	4.3	6.0	7.2	8.2	11.4	13.7	16.4	22.8	27.3	32.2	38.6	40	40	40	40	—	—	—	

Permissible Radial Load/Permissible Axial Load

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Gearhead Transmission Efficiency

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Permissible Load Inertia J

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How to Read Speed – Torque Characteristics

→ Page 03-14

Speed – Torque Characteristics (Reference)

→ Page 03-14

Click Here

For more information, please visit ORIENTAL MOTOR Website:
<https://www.orientalmotor.com.sg/om/tp/index.html>

Dimensions (Unit: mm)

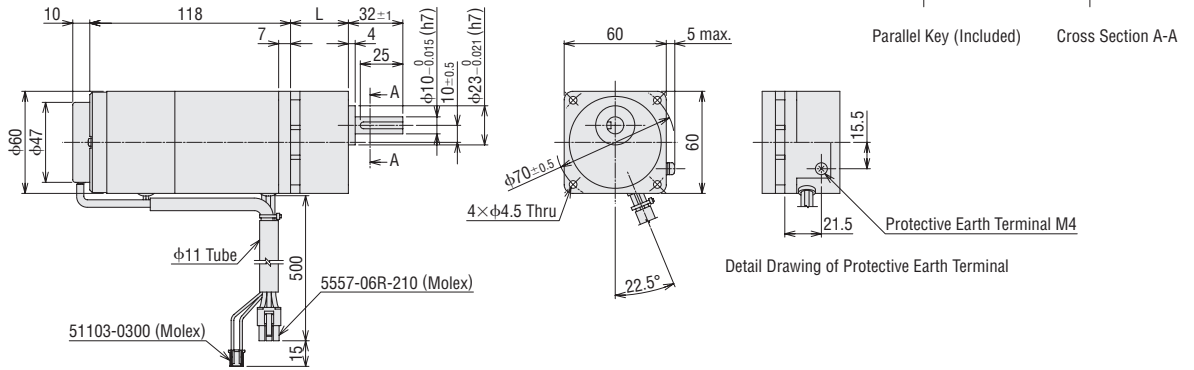
- "Mounting screws" are included with the combination type. Dimensions of installation screws → Page 03-31
- A number in the box □ in the product name indicates the gear ratio.

Parallel Shaft Combination Type

◇ 6 W

2D & 3D CAD

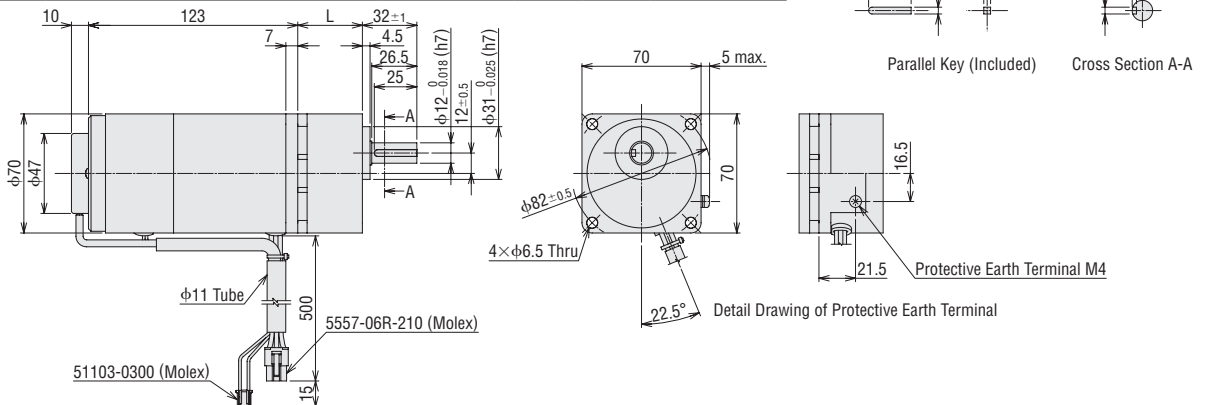
Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM26UAM -□ SCM26ECM -□	SCM26GV-UAM SCM26GV-ECM	2GV□B	7.5~25	34	1.5	A1297A
			30~120	38	1.5	A1297B
			150~360	43	1.6	A1297C



◇ 15 W

2D & 3D CAD

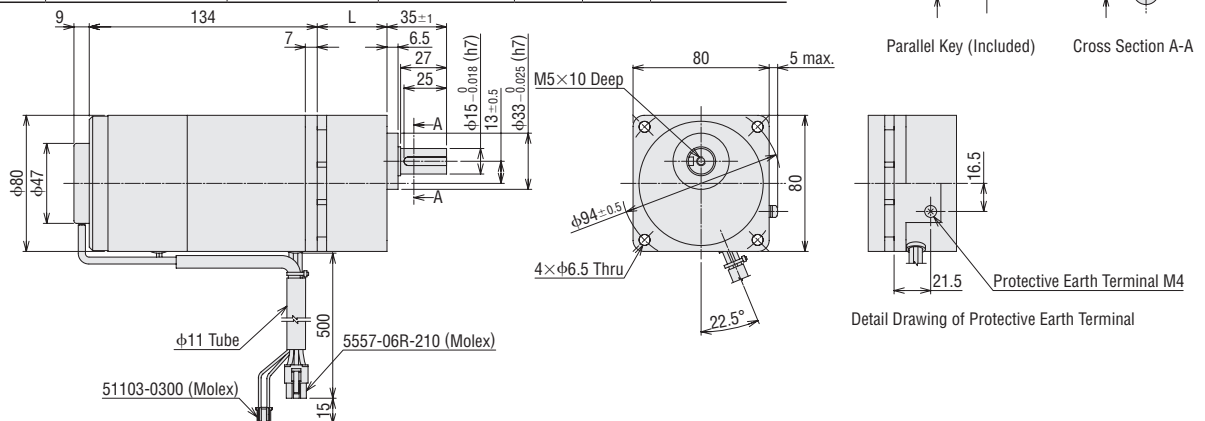
Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM315UAM -□ SCM315ECM -□	SCM315GV-UAM SCM315GV-ECM	3GV□B	7.5~25	38	2.0	A1298A
			30~120	43	2.1	A1298B
			150~360	48	2.2	A1298C



◇ 25 W

2D & 3D CAD

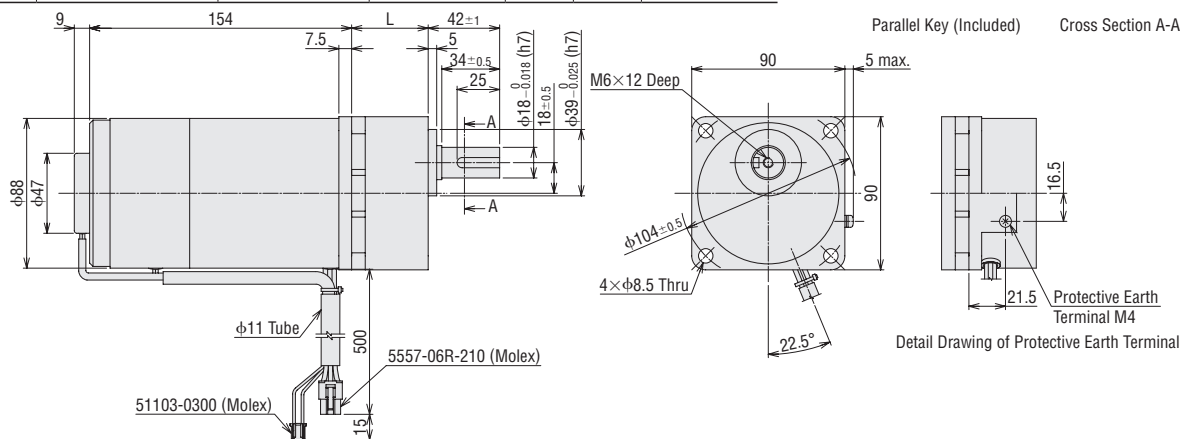
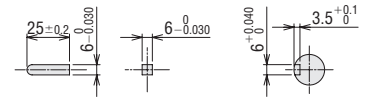
Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM425UAM -□ SCM425ECM -□	SCM425GV-UAM SCM425GV-ECM	4GV□B	7.5~25	41	3.0	A1299A
			30~120	46	3.1	A1299B
			150~360	51	3.2	A1299C



◇ 40 W

2D & 3D CAD

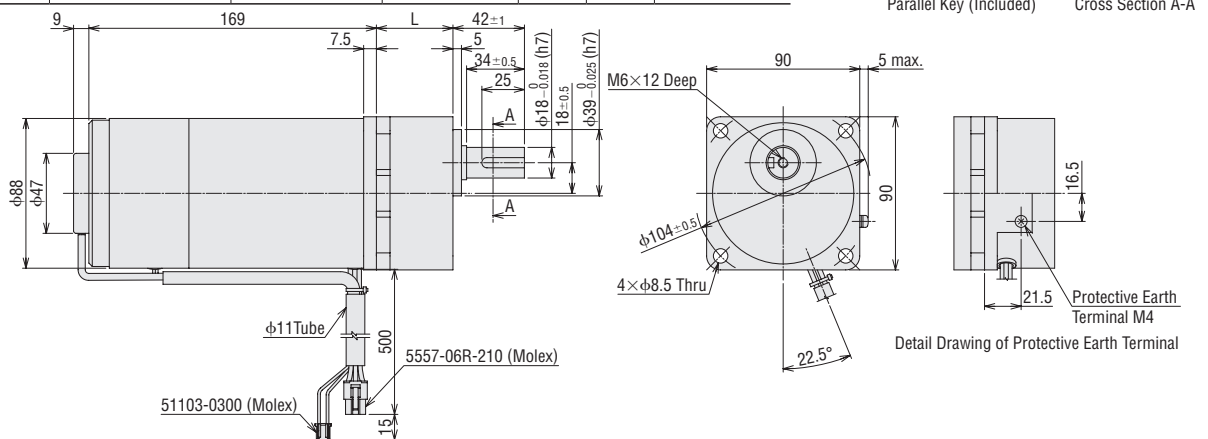
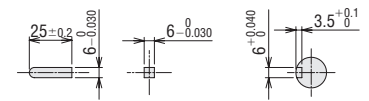
Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM540UAM-□ SCM540ECM-□	SCM540GV-UAM SCM540GV-ECM	5GV□B	7.5~18	45	4.2	A1300A
			25~100	58	4.5	A1300B
			120~300	64	4.6	A1300C



◇ 60 W

2D & 3D CAD

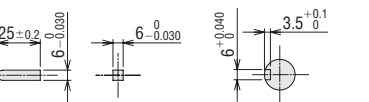
Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM560UAM-□ SCM560ECM-□	SCM560GVH-UAM SCM560GVH-ECM	5GVH□B	7.5~18	45	4.8	A1301A
			25~100	58	5.1	A1301B
			120~300	64	5.2	A1301C



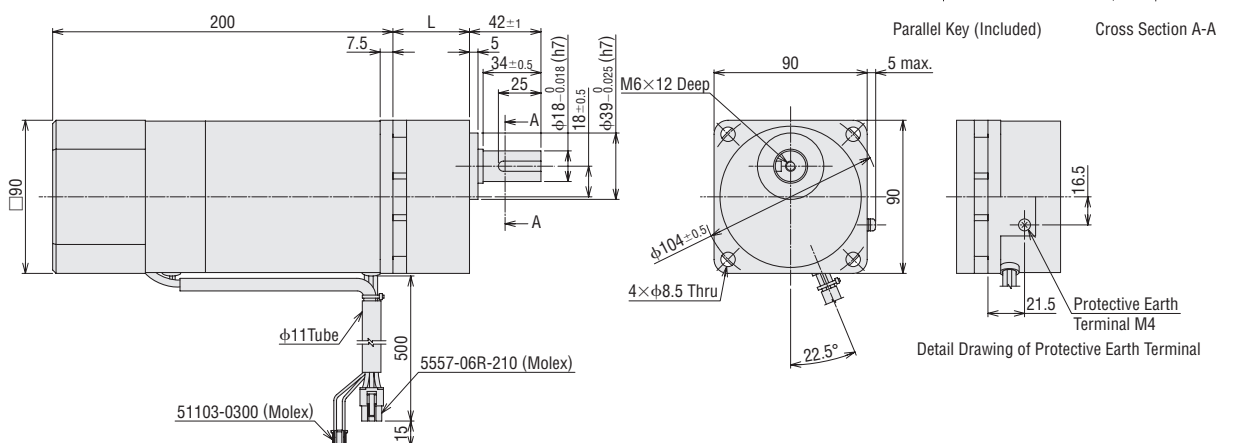
◇ 90 W

2D & 3D CAD

Product Name	Motor Product Name	Gearhead Product Name	Gear Ratio	L	Mass kg	2D CAD
SCM590UAM-□ SCM590ECM-□	SCM590GVR-UAM SCM590GVR-ECM	5GVR□B	7.5~15	45	5.0	A1302A
			18~36	58	5.4	A1302B
			50~180	70	5.5*	A1302C



*Mass for gear ratio 50 & 60 is 5.4 kg.



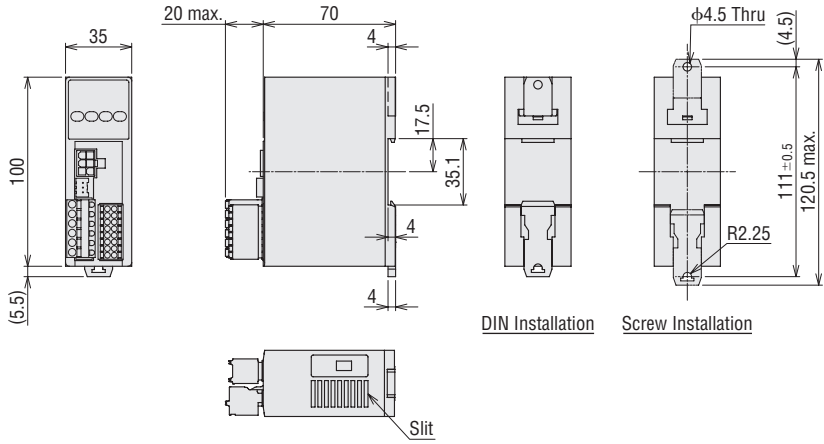
Speed Controller

DSC-MU

Mass: 0.2 kg

2D CAD A1303

3D CAD



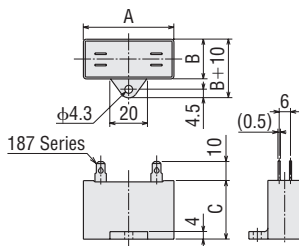
DIN Installation

Screw Installation

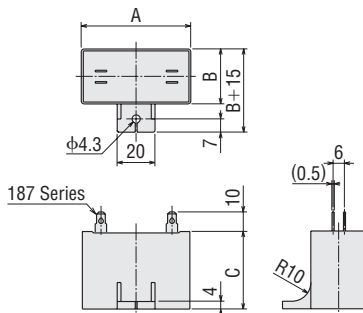
Slit

Capacitor (Included)

Dimensions No. ①



Dimensions No. ②



Capacitor Dimensions (Unit: mm)

Speed Controller Product Name	Capacitor					Dimensions No.
	Product Name	A	B	C	Mass g	
DSCD6UAM	CH25FAUL2	31	17	27	21	①
DSCD6ECM	CH06BFAUL	31	14.5	23.5	18	
DSCD15UAM	CH45FAUL2	37	18	27	26	
DSCD15ECM	CH10BFAUL	37	18	27	27	
DSCD25UAM	CH65CFAUL2	48	19	29	35	
DSCD25ECM	CH15BFAUL	38	21	31	37	
DSCD40UAM	CH90CFAUL2	48	22.5	31.5	45	
DSCD40ECM	CH23BFAUL	48	21	31	43	
DSCD60UAM	CH120CFAUL2	58	22	35	60	
DSCD60ECM	CH30BFAUL	58	21	31	50	
DSCD90UAM	CH200CFAUL2	58	29	41	91	②
DSCD90ECM	CH60BFAUL	58	29	41	92	

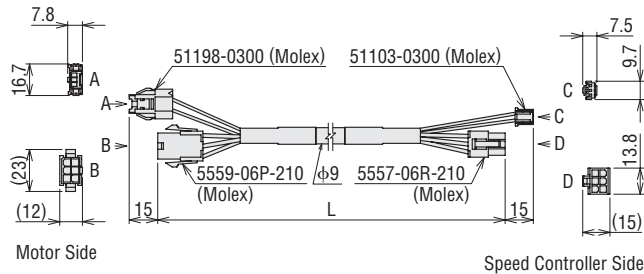
● A capacitor cap is included with the capacitor.

Connection Cables

Product Name	Length L (m)
CC01SCM	1
CC02SCM	2
CC03SCM	3
CC05SCM	5
CC10SCM	10

Flexible Connection Cables

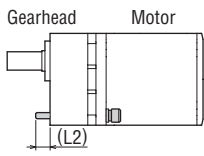
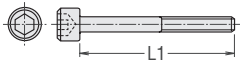
Product Name	Length L (m)
CC01SCMR	1
CC02SCMR	2
CC03SCMR	3
CC05SCMR	5
CC10SCMR	10



Motor Side

Speed Controller Side

■ Dimensions of Installation Screws

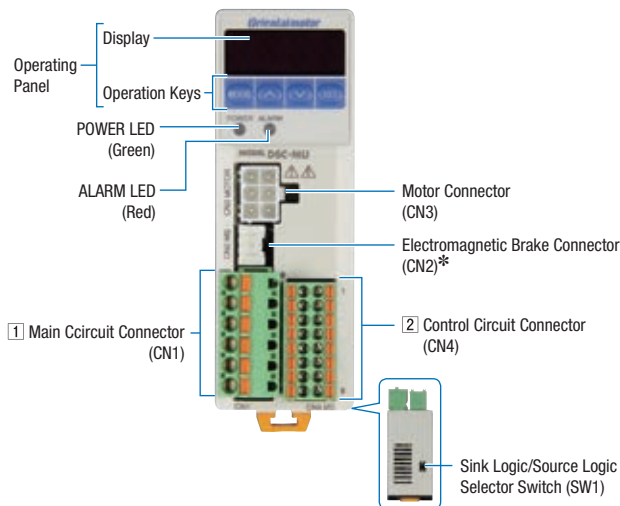


Product Name	Gear Ratio	Installation Screws		L2 (mm)
		Screw Size	L1 (mm)	
2GV□B	5~25	M4	50	7
	30~120		55	8
	150~360		60	8
3GV□B	5~25	M6	60	12
	30~120		65	12
	150~360		70	12
4GV□B	5~25	M6	60	9
	30~120		65	9
	150~360		70	9
5GV□B	5~18	M8	70	14
	25~100		85	16
	120~300		90	15
5GVH□B	5~18	M8	70	14
	25~100		85	16
	120~300		90	15
5GVR□B	5~15	M8	70	14
	18~36		85	16
	50~180		95	14

- Installation Screws: 4 plain washers and 4 spring washers are included.
- The installation screw material is stainless steel.

Connection and Operation

Names and Functions of Speed Controller Parts



Name		Overview
Operating Panel	Display (4-digit LED)	Displays speed, parameter, alarm, etc.
	Operation Keys	Switches the operation mode or changes the setting or parameter of the operation data.
POWER LED (Green)		Lights while the AC power supply is provided to the speed controller.
ALARM LED (Red)		Lights when the alarm is generated.
Motor Connector (CN3)		Connect the connector of the motor.
Electromagnetic Brake Connector (CN2)*		Connects the connector of the electromagnetic brake.
Main Circuit Connector (CN1)		Connects the AC power source, capacitor and FG.
Control Circuit Connector (CN4)		Connects the DC power supply for control and I/O signals.
Sink Logic/Source Logic Selector Switch		Switches between the sink logic and source logic for the input signals.

*Only the electromagnetic brake type is connected.

1 Main Circuit Connector (CN1)

Pin No.	Description	Description
1	Capacitor	Connects the capacitor.
2		
3	N.C.	No connection.
4	AC Power Supply	Connects the live side.
5		Connects the neutral side.
6	FG	Connects the ground wire.

2 Control Circuit Connector (CN4)

Pin No.	Signal Name	Function*1	Description
1	+24 V	DC Power Supply for Control	Connects the 24 VDC power supply for control.
2	0 V (GND)		
3	IN0	[FWD]	The motor rotates in the FWD direction when "ON".*2
4	IN1	[REV]	The motor rotates in the REV direction when "ON".*2
5	IN2	[MO]	Select the operating data.
6	IN3	[M1]	
7	IN4	[ALARM-RESET]	Alarms are reset.
8	IN5	[FREE]	When turning the FREE Input to "ON" during the motor operation, the motor automatically stops. With the FREE Input "ON", even if the FWD Input or REV Input is turned "ON", the motor does not rotate. For electromagnetic brake types, turn the FREE Input to "ON" to release the electromagnetic brake.
9	VH	External Speed Setting Input	Connects this to externally set the speed by using an external speed potentiometer or external DC voltage.
10	VM		
11	VL		
12	N.C.	—	No connection.
13	OUT0+	[SPEED-OUT]	For every rotation of the motor output shaft, 12 pulses are output.
14	OUT0-		
15	OUT1+	[ALARM-OUT]	This signal is output when an alarm is generated. (Normally closed)
16	OUT1-		

*1 The [] indicates the functions assigned in the factory. From the following signals, necessary signals can be assigned to any of the 6 input signal terminals (IN0~IN5) and 2 output signal terminals (OUT0, OUT1).

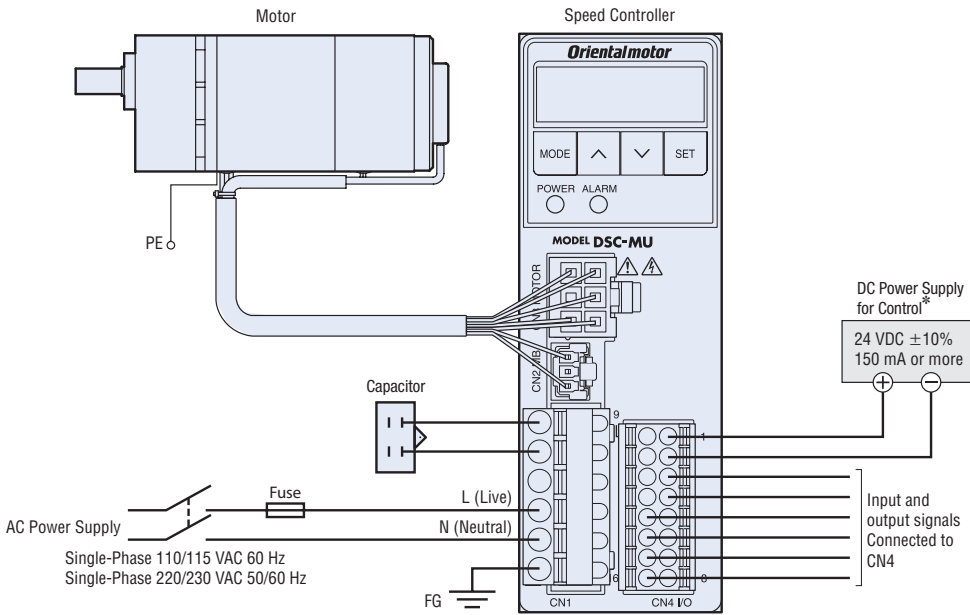
6 points for any of the 7 input signals (FWD, REV, MO, M1, ALARM-RESET, FREE, EXT-ERROR)

2 points for any of the 4 output signals (SPEED-OUT, ALARM-OUT, TH-OUT, WNG)

*2 The rotation direction varies depending on the gear ratio of the gearhead or parameter setting.

● Connection Diagram

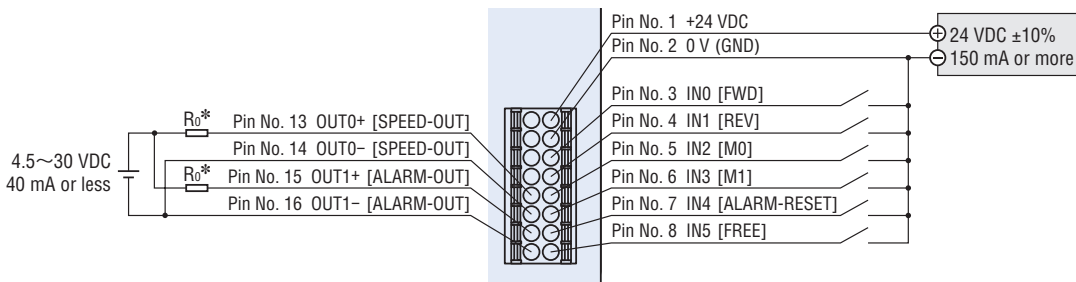
The figure shows a connection example of a motor with an electromagnetic brake. Be sure to connect the DC power supply for control in addition to the AC power supply when operating the motor.



*For the DC power supply for control, use the power supply with reinforced insulation provided on the primary and secondary sides.

◇ Connection Example of Input and Output Signals (CN4)

The figure shows a connection example for the operation of the motor using switches having contacts, such as relays or switches, in the sink logic setting.



*Recommended resistance value

For 24 VDC: 680 Ω~4.7 kΩ (2 W) For 5 VDC: 150 Ω~1 kΩ (0.5 W)

Note

● Connect the controlling resistance R0 according to the power supply voltage to use so that the current applied to the output signals does not exceed 40 mA.

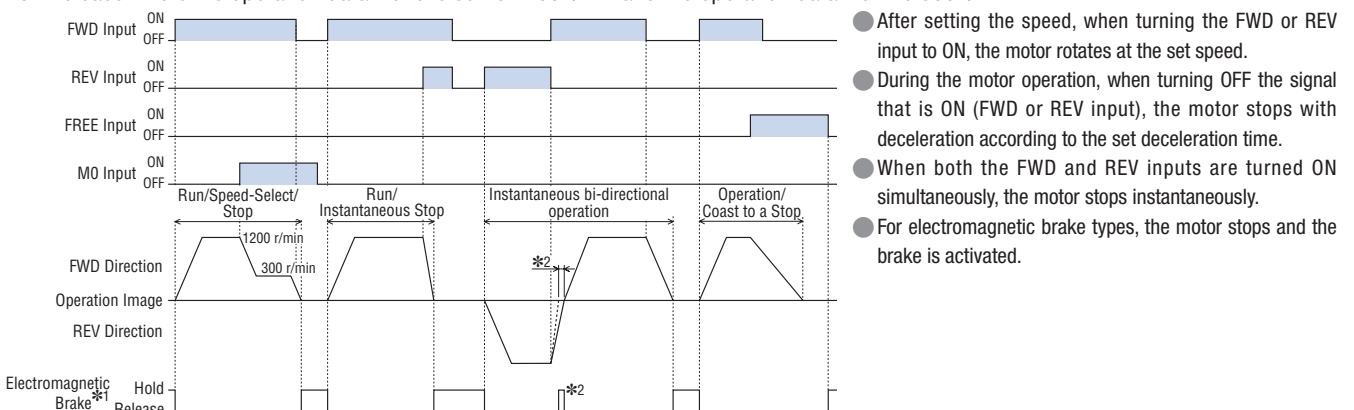
◇ Rating of Fuse

For overcurrent protection, be sure to insert a fuse into the AC power supply line.

Rating of Fuse	Single-Phase 110/115 VAC	216 Series (Littelfuse, Inc.) 10 A or equivalent
	Single-Phase 220/230 VAC	216 Series (Littelfuse, Inc.) 6.3 A or equivalent

● Timing Chart

For the case where the operation data No. 0 is set to 1200 r/min and the operation data No.1 to 300 r/min.



*1 Only for electromagnetic brake types.

*2 Only for electromagnetic brake types. This is retained when the "Deceleration Control" parameter is ON and a time lag (around 0.1 seconds) occurs due to the stop of the motor. When the "Deceleration Control" parameter is OFF, this is not retained. There is no time lag either.

Note

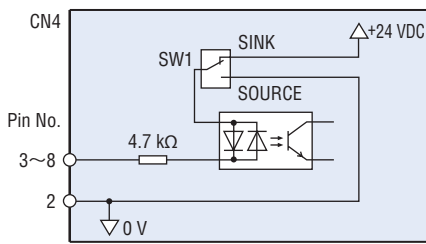
● The duration of ON for each signal must be 10 ms or more.

I/O Signal Circuits

Select sink logic or source logic according to the external control device you will be using.

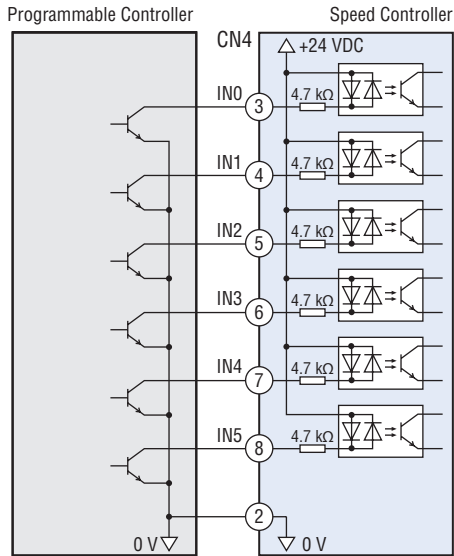
◇ Input Circuit

IN0~IN5

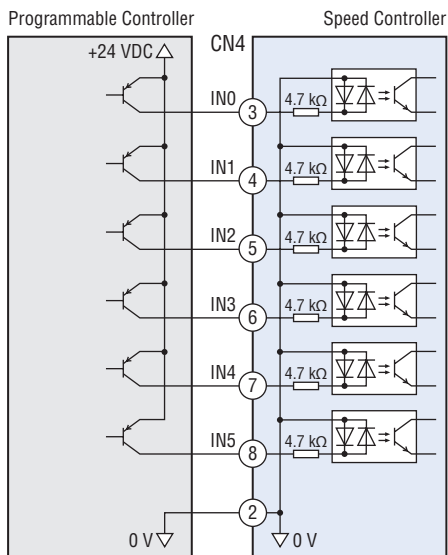


◇ Connecting to the Host Controller

● Sink Logic

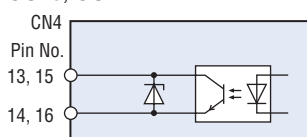


● Source Logic



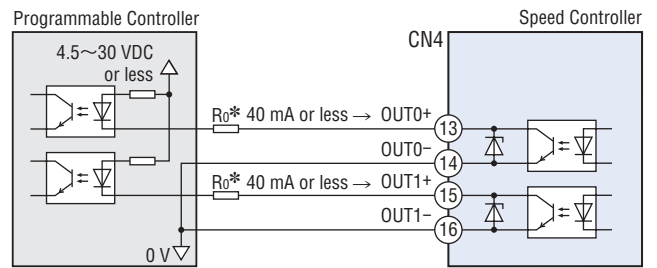
◇ Output Circuit

OUT0, OUT1

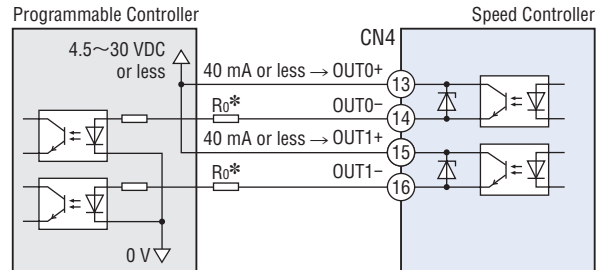


◇ Connecting to the Host Controller

● Sink Logic



● Source Logic



*Recommended resistance value

For 24 VDC: 680 Ω~4.7 kΩ (2 W) For 5 VDC: 150 Ω~1 kΩ (0.5 W)

Note

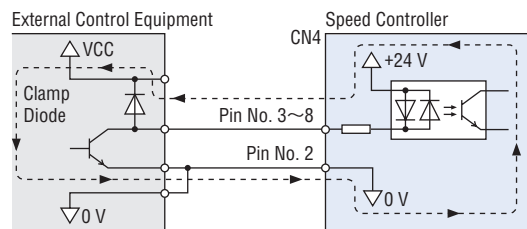
● The current applied to OUT0 and OUT1 must be 40 mA or less. If this value is exceeded, connect the limiting resistor R0.

◇ When an External Control Device with a Built-In Clamp Diode is Used

With external control equipment with built-in clamping diodes connected, if the power of the external control equipment is turned off with the speed controller turned on, the motor may rotate due to current flowing around. Also, depending on the speed controller and the external control equipment used, the motor may rotate even if the power is simultaneously turned ON/OFF. To turn ON/OFF the power, follow the procedure below.

To turn OFF: Speed controller → External control equipment

To turn ON: External control equipment → Speed controller



◇ Speed Output

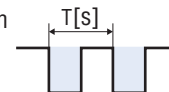
Pulse signals of 12 pulses are output at every rotation of the motor output shaft in synchronization with the motor rotation.

You can measure the SPEED-OUT frequency and calculate the motor speed.

$$\text{Motor Shaft Speed [r/min]} = \frac{\text{Speed Output Frequency [Hz]} \times 60}{12}$$

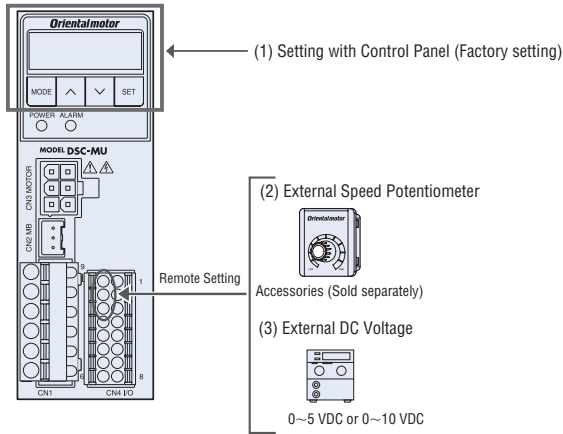
$$\text{Speed Output Frequency [Hz]} = \frac{1}{T[\text{s}]}$$

Speed Output Waveform



Speed Setting Method

There are following 3 methods to set the speed.



Setting with Control Panel

Up to 4 patterns of operating data can be set.

Select a pattern by switching the ON/OFF of the M0 and M1 inputs for operation.

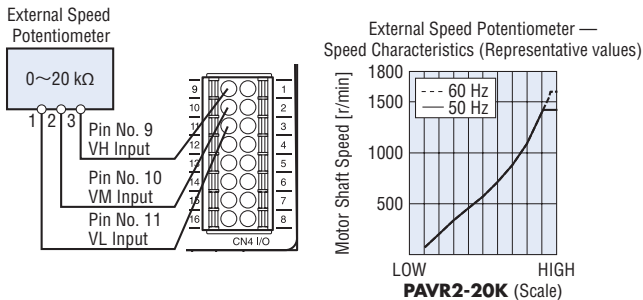
Operating Data No.	M1	M0	Description
0	OFF	OFF	Setting with control panel/remote setting*
1	OFF	ON	Setting with control panel
2	ON	OFF	
3	ON	ON	

*When the "External Speed Instruction Input" parameter is "ON (enabled)" (Default: OFF), the speed can be set with an external speed potentiometer or external DC voltage.

Setting with External Speed Potentiometer

Connect an external speed potentiometer to CN4.

Setting of the "External Speed Instruction Voltage Selection" parameter: "0-5" (Default)



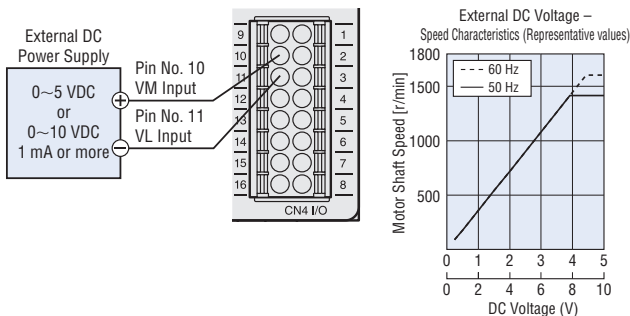
Setting with External DC Voltage

Connect an external DC power (0~5 VDC or 0~10 VDC) to CN4.

Setting of the "External Speed Instruction Voltage Selection" parameter:

For 0~5 VDC: "0-5" (Default)

For 0~10 VDC: "0-10"



Note

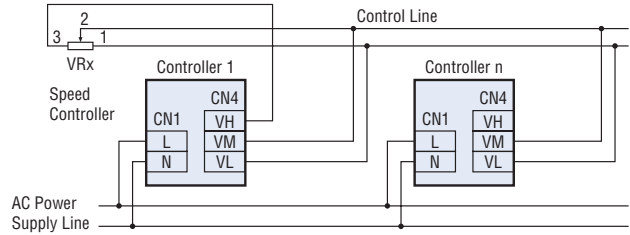
● The external DC voltage must be 10 VDC or less. Also, when connecting the external DC voltage, make sure not to connect to the wrong polarity. This may damage the speed controllers.

Multi-Motor Control

Multiple motors can be operated at the same speed by using one external speed potentiometer or an external DC voltage.

When Using an External Speed Potentiometer

Parallel-motor operation using the external speed potentiometer (VRx) should be performed with 20 speed controllers or less.



● The calculation method of the resistance value (VRx) when the number of speed controllers is connected is n

Resistance value (VRx) = 20/n (kΩ), Allowable dissipation = n/4 (W)

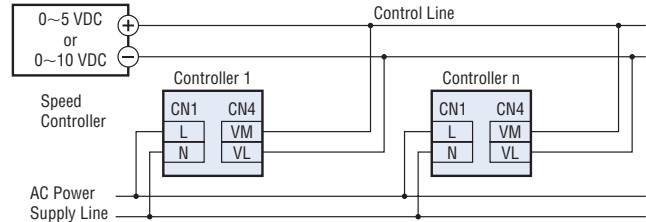
Example: When connecting 2 speed controllers

Resistance value = 20/2 = 10 (kΩ), Allowable dissipation = 2/4 = 1/2 (W)

When using External DC Voltage

The number of connected controllers is limited according to the current capacity of the external DC voltage.

DC Power Supply



● The calculation method of the current capacity of the external DC power supply (I) when the number of speed controllers connected is n

Current Capacity (I) = 1 × n (mA)

Example: When connecting 2 speed controllers

Current Capacity (I) = 1 × 2 = 2 (mA)

Repeated Operation Cycle

When repeating the motor operation in a short cycle, refer to the following cycle to set the motor housing temperature to 90°C or less.

Instantaneous Stop	6 W ~ 40 W	For repetition of operation and instantaneous stop 2 seconds or more, 50% or less of operation duty (Example: Run for 1 second., stop for 1 second)
	60 W, 90 W	For repetition of operation and instantaneous stop 4 seconds or more, 50% or less of operation duty (Example: Run for 2 seconds, stop for 2 seconds)
Instantaneous bi-directional operation	6 W ~ 40 W	For repetition of switching of rotation direction during operation Switching every 2 seconds or more
	60 W, 90 W	For repetition of switching of rotation direction during operation Switching every 4 seconds or more

● When using a motor having electromagnetic brake with the "Deceleration Control" parameter ON, the conditions on the continuous operation are applied. See also "Continuous Operation Time with Deceleration Control ON" under Common Specifications for the electromagnetic brake type (→ Page 03-24).

Braking Current

For instantaneous stop, instantaneous bi-directional operation and operation by vertical driving*, a large half-wave rectified braking current flows in the AC power supply line for around 0.4 seconds. For this sort of operation, consider the braking current (peak value) in the following table when selecting the capacity of the breaker and AC power supply for the equipment.

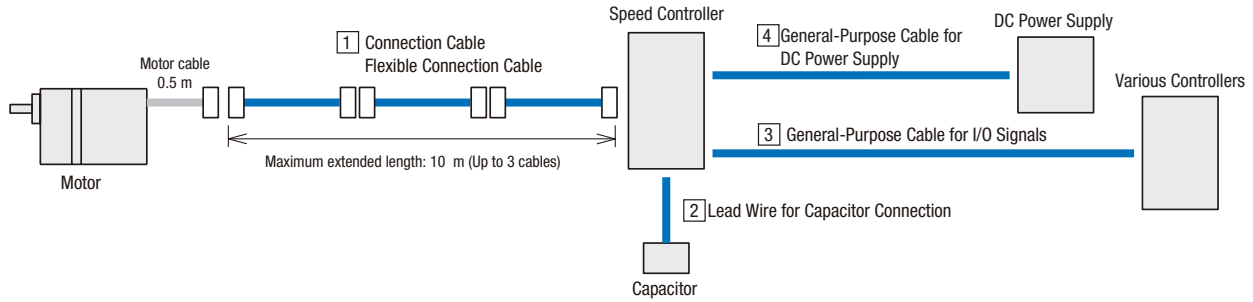
Motor Output Power	Braking Current (Peak value)	
	Single-Phase 110/115 VAC	Single-Phase 220/230 VAC
6 W	2 A	1 A
15 W	4 A	3 A
25 W	8 A	4 A
40 W	12 A	7 A
60 W	21 A	10 A
90 W	29 A	13 A

*Only for electromagnetic brake types

Accessories (Sold Separately)

Cable

Cable System Configuration



1 Connection Cables Flexible Connection Cables

This is a connection cable for connecting the motor and the speed controller. The maximum extension length of cables used between products is 10 m (up to 3 cables). Use the flexible connection cable in applications where the cable is bent and flexed.

Product Line

Connection Cables For Standard Type (CC_SC)

Product Name	Length L (m)	List Price
CC01SC	1	SGD35
CC02SC	2	SGD40
CC03SC	3	SGD50
CC05SC	5	SGD70
CC10SC	10	SGD120



Connection Cables For Electromagnetic Brake Type (CC_SCM)

Product Name	Length L (m)	List Price
CC01SCM	1	SGD48
CC02SCM	2	SGD53
CC03SCM	3	SGD63
CC05SCM	5	SGD83
CC10SCM	10	SGD133



Flexible Connection Cables For Standard Type (CC_SCR)

Product Name	Length L (m)	List Price
CC01SCR	1	SGD70
CC02SCR	2	SGD80
CC03SCR	3	SGD100
CC05SCR	5	SGD140
CC10SCR	10	SGD240



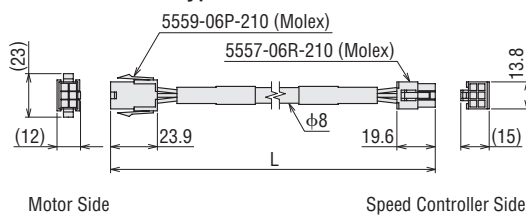
Flexible Connection Cables For Electromagnetic Brake Type (CC_SCMR)

Product Name	Length L (m)	List Price
CC01SCMR	1	SGD95
CC02SCMR	2	SGD105
CC03SCMR	3	SGD125
CC05SCMR	5	SGD165
CC10SCMR	10	SGD265

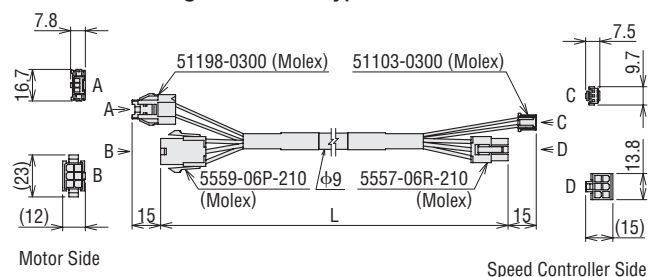


Dimensions (Unit: mm)

For Standard Type



For Electromagnetic Brake Type

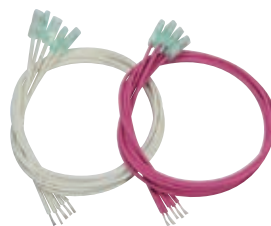


2 Lead Wires for Capacitor Connection

Includes lead wire with a terminal that can be connected to the capacitor terminal as it is.

Product Line

Product Name	Set Details	List Price
LCCN0510	White: 5 leads Red: 5 leads	SGD15



Use with the capacitor cap

Application example

3 General-Purpose Cables for I/O Signals

These cables are useful for connecting the I/O signals of the speed controller. Up to 2 m is available.



Product Name	Length (m)	List Price
CC16D005B-1	0.5	SGD22
CC16D010B-1	1	SGD25
CC16D015B-1	1.5	SGD28
CC16D020B-1	2	SGD31

● The available general-purpose cable for I/O signals are those with 6 cores (**CC06D□B-1**), 10 cores (**CC10D□B-1**) and 12 cores (**CC12D□B-1**). Select the cable with most suitable number of cores according to the function you will use. For details on the products, contact with Oriental Motor sales office.

4 General-Purpose Cables for DC Power Supply

These cables connect the speed controller and DC power supply.

● Product Line

Product Name	Length (m)	List Price
CC02D005-3	0.5	SGD11
CC02D010-3	1	SGD12
CC02D015-3	1.5	SGD13
CC02D020-3	2	SGD14
CC02D050-3	5	SGD23



Flexible Couplings

These are clamp type couplings for connecting the motor and gearhead shaft with the driven shaft. Once the gearhead is determined, the coupling can be selected.

● Couplings can also be used with round shaft types. Select a coupling with the same inner diameter size as the motor shaft diameter.



Applicable Product	Load Type	Coupling Type	List Price
SCM26	Uniform load	MCL30	SGD61
	Shock load		
SCM315	Uniform load	MCL30	SGD61
	Shock load	MCL40	SGD93
SCM425	Uniform load	MCL40	SGD93
	Shock load	MCL55	SGD124
SCM540 SCM560 SCM590	Uniform load	MCL55	SGD124
	Shock load		

Motor and Gearhead Mounting Brackets

These dedicated mounting brackets are for mounting motors and gearheads.

Product Name	List Price	Applicable Product
SOL2M4F	SGD24	SCM26 Round Shaft Type
		SCM26 Parallel Shaft Combination Type
SOL3M5F	SGD26	SCM315 Round Shaft Type
SOL3M6F	SGD26	SCM315 Parallel Shaft Combination Type
SOL4M5F	SGD29	SCM425 Round Shaft Type
SOL4M6F	SGD29	SCM425 Parallel Shaft Combination Type
SOL5M6F	SGD31	SCM540, SCM560, SCM590 Round Shaft Type
SOL5M8F	SGD31	SCM540, SCM560, SCM590 Parallel Shaft Combination Type



Mounting Bracket for the Capacitor

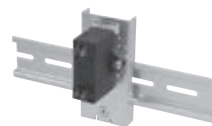
Allows you to connect capacitors on DIN rails.

Material: SPCC

Surface treatment: Trivalent chromate

Product Line

Product Name	List Price
PADP01C	SGD6



<Application example>

External Speed Potentiometer

Features

- Potentiometer which allows the adjustment of rotation speed and torque.
- Easy installation
Simply insert the potentiometer into the mounting hole. No tools are required. It can be removed.
- Easy wiring
A terminal block is employed. Lead wire connection or soldering is not required. The efficiency of wiring is improved.



(Front)



(Back)

Product Line

Product Name	List Price
PAVR2-20K	SGD25

The following items are included in each product.
External speed potentiometer, operating manual

Note

- The external speed potentiometer (**PAVR2-20K**) cannot be used together with a general-purpose cable for I/O signals.

Specifications

Resistance: 0~20 kΩ
Rate power: 0.05 W
Resistance change characteristics: B curve

Applicable Lead Wire Size

AWG22~18 (0.3~0.75 mm²)