

FX3000

Speed Controller

Special Features

- Easy, Simple Wiring**
 Possible to control the speed and torque of the motor simply by connecting a motor and control unit with connector and inputting the AC terminal to the power source.
- Easy Wiring and Maintenance**
 The screwless connector is used for FX3000.
- Efficient and Convenient Operation**
 Possible to control speed and torque easily with the front panel dial.
- Digital Display**
 Display the current rotation speed(r/min) and torque(%).
- Various Functions**
 Possible to operate various functions by setting the parameter.



General Specifications

Model	FX3000-□□	
Rated Voltage	1Ø AC 220~240V 50/60Hz ±10 %	
Allowable Current	Below 6 A	
Control Function	Speed Control, Torque Control	
Control System	Phase Control	
Operating Range	Speed Control	50Hz : 90~1400r/min 60Hz : 90~1700r/min
	Torque Control	0 ~ 100 %
Speed Control	Internal volume	
Speed Variation	±5%(Standard Value)	
Motor Output	3W~180W	
Ambient Temperature	-10C°~ 55C°	
Ambient Humidity	35 ~ 85%RH (Without condensation)	
Insulation Resistance	Over DC 500V 100MΩ (between power supply and external terminal)	
Dielectric Strength	AC 1500V 1minute (between power supply and external terminal)	

CONTROLLER CODING SYSTEM

FX3000 — 060

Controller Model

OUTPUT

003: 3W 030: 30W
006: 6W 040: 40W
010: 10W 060: 60W
015: 15W 090: 90W
020: 20W 120: 120W
025: 25W 180: 180W

S

TYPE

S: Speed Control Motor
T: Torque Control Motor

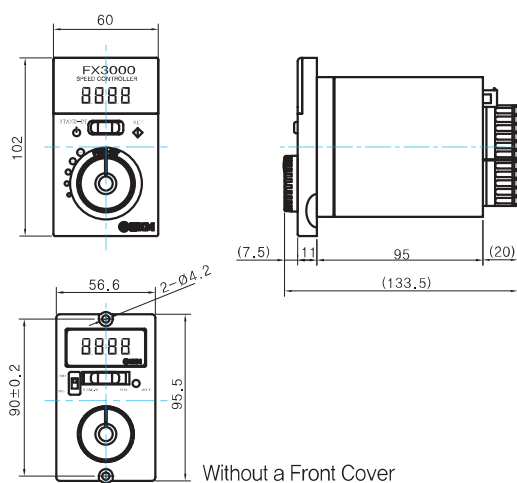
*Initial setting mode is speed control.
Please change to '1' (torque motor) on parameter 'Pr04'(control mode), if using torque motor.
Regarding changing method, please refer to 'Parameter Setting Procedure'.

Combination Table

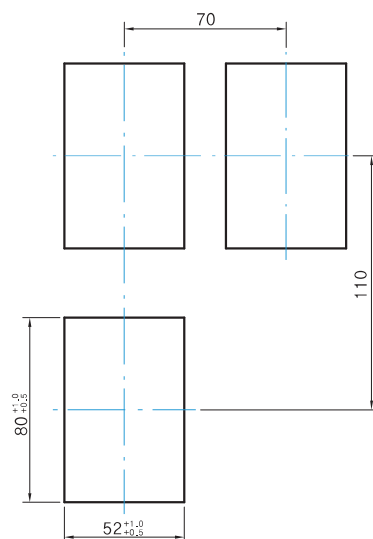
Item	Output	Motor Model	Controller Model
SPEED MOTOR	6W	6SD □ □ -6 □	FX3000-006 S
		7SD □ □ -6 □	
	10W	7SD □ □ -10 □	FX3000-010 S
	15W	7SD □ □ -15 □	FX3000-015 S
		8SD □ □ -15 □	
	25W	8SD □ □ -25 □	FX3000-025 S
	40W	9SD □ □ -40 □	FX3000-040 S
	60W	9SD □ □ -60F2 □	FX3000-060 S
	90W	9SD □ □ -90F2 □	FX3000-090 S
	120W	9SD □ □ -120F2 □	FX3000-120 S
	180W	9SD □ □ -180F2 □	FX3000-180 S

Item	Output	Motor Model	Controller Model
TORQUE MOTOR	3W	6TD □ □ -3 □	FX3000-003 T
	6W	7TD □ □ -6 □	FX3000-006 T
	10W	8TD □ □ -10 □	FX3000-010 T
	20W	9TD □ □ -20F2 □	FX3000-020 T
	30W	9TD □ □ -30F2 □	FX3000-030 T
	40W	9TD □ □ -40F2 □	FX3000-040 T
	60W	9TD □ □ -60F2 □	FX3000-060 T

Dimensions

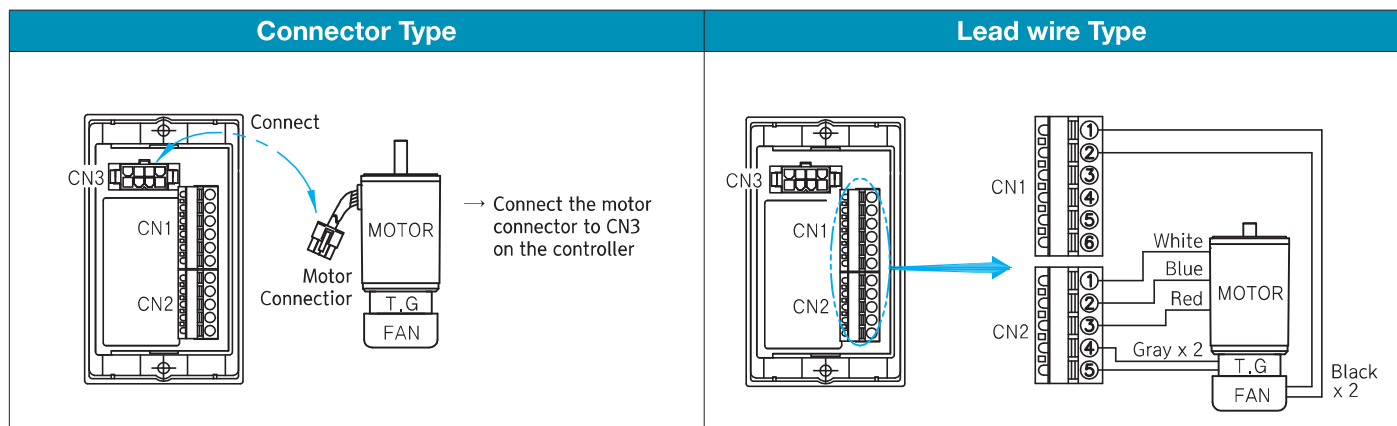


Mounting Panel Dimension



Wiring Diagram

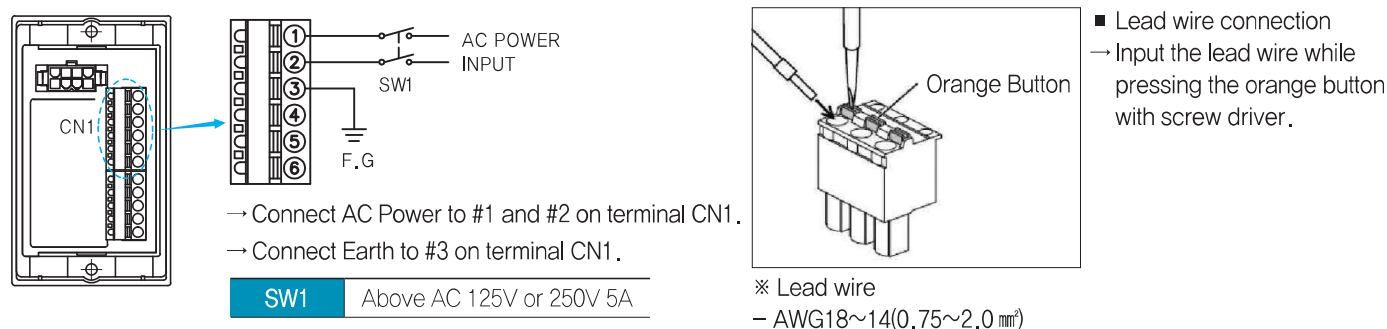
Speed Control Motor or Torque Motor



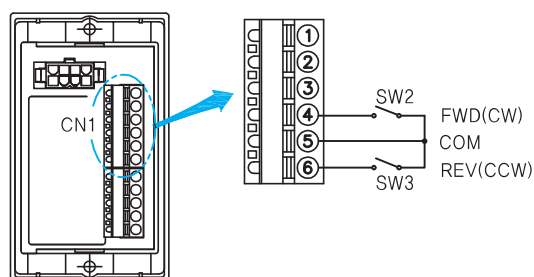
※ Depending on the motor type and specification, there can be no powerful fan cable (Blackx2), T.G cable (Greyx2).

※ You could use FX3000 with motors and gearboxes from other brand.

Controller Power Connection



Uni-directional operation



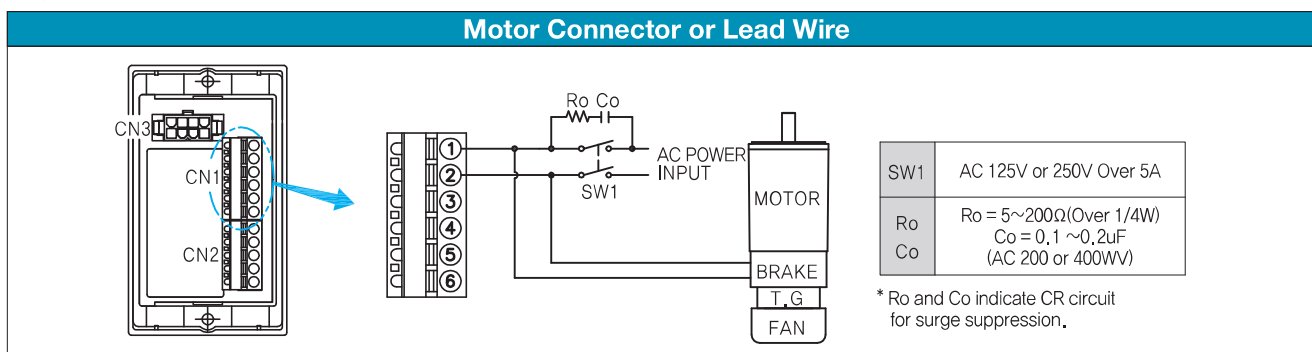
* In case of RUN/ STOP operation externally, please make sure that the switch position should be on STAND-BY and connect #4, #5, and #6 on terminal CN1.

SW2	SW3	Motor Shaft
ON	OFF	Rotate to FWD
OFF	ON	Rotate to REV
OFF	OFF	STOP

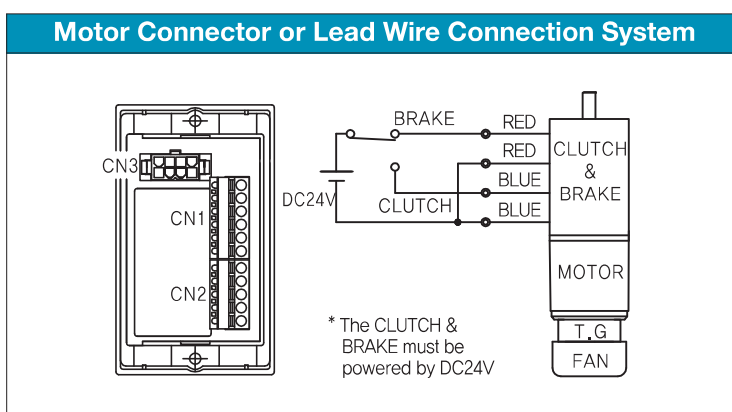
※ Front switch should be at STAND-BY position when operating by external signal.(Connect only for external RUN/STOP)

Speed Control Brake Motor

– Please refer to the wiring diagram below which is the wiring diagram of Speed Control Brake Motor, and the other motor's wiring diagrams are the same as the Speed Control Motor or Torque Motor.



Speed Control Clutch & Brake Motor



– Please refer to the wiring diagram which is the wiring diagram of the Clutch & Brake, and the wiring diagram for the others is the same as the 'Speed Control Motor or Torque Motor'.

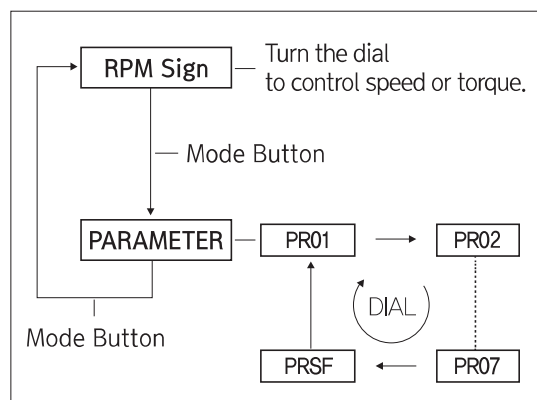
Parameter Contents

Parameter NO.	Display	Function	Range	Standard Value	Remark
1	Pr01	Acceleration Time	0~15.0	0.1	Time(second) to reach the set speed
2	Pr02	Rotation Direction	0,1	0	0 : Clockwise 1 : Counterclockwise
3	Pr03	Gear Ratio	1~999	1.0	Input gear ratio
4	Pr04	Control Mode	0,1	0	0: Speed Control 1: Torque Control
5	Pr05	P Gain	0~255	100	
6	Pr06	I Gain	0~255	50	
7	Pr07	Parameter Reset	—	0	Reset when pressing and holding the SET button
SF	PrSF	Software Version	—	—	Display the software version

* Speed Control P, I gain

- Parameter which determines responsibility of speed control.
- Vibration and hunting may occur if the value is too large.

Product Formation



※ Press the dial(SET button) to enter the parameter data.

※ Press and hold the dial(SET button) to change the parameter data.