

DC MOTOR SPEED CONTROLLER DSD-90 Instruction Manual

We appreciate you for purchasing products of DKM Motor Co., Ltd. Before using the product you have purchased, check to make sure that it is exactly what you ordered. Then, Please use it following the instructions below.



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Safety Information

Alerts declared in the manual are classified to Danger, Warning and Caution by their criticality

⚠ DANGER	DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury
⚠ WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury
⚠ CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

⚠ DANGER

There is a danger of occurring electric shock in the input/output terminals so please never let your body touched to the conductive substance.

⚠ WARNING

- * Do not use the product in an explosive or flammable atmosphere. fire may occur.
- * Only qualified installers should be assigned to the work of installation, connection, running, operation and inspection. This is intended to prevent fire, electric shock and injury.
- * Before starting the work, turn off the speed controller power. Otherwise, electric shock may occur.
- * Be sure to keep power input voltage of the speed controller within the rated range.
- * Electrical connections must be done under strict accordance with the connection example. Otherwise, fire and electric shock may occur.
- * After connection, mount the covers of power connection terminal and input/output signal connection terminal. Otherwise, fire or electric shock may occur.

⚠ CAUTION

- * Do not use the motor and speed controller in excess of ratings. Otherwise, electric shock, injury of the operator and damage of the equipment may occur.
- * Do not grip the motor output shaft or lead wires. Otherwise, injury may occur.
- * Do not place combustibles around the motor and speed controller. Otherwise, fire may occur.
- * Do not put any object into the openings of the speed controller. Otherwise, fire, electric shock or damage of the equipment may occur.
- * Be sure to set the switch to the stop position before connection the power supply.
- * The lower RPM setting is, the lower the motor's torque possible to use is. If the surface temperature of the motor is more than 90 degrees depending on the operating conditions of the motor, we recommend using at a higher speed range than the current set speed range.

CAUTION BEFORE USING

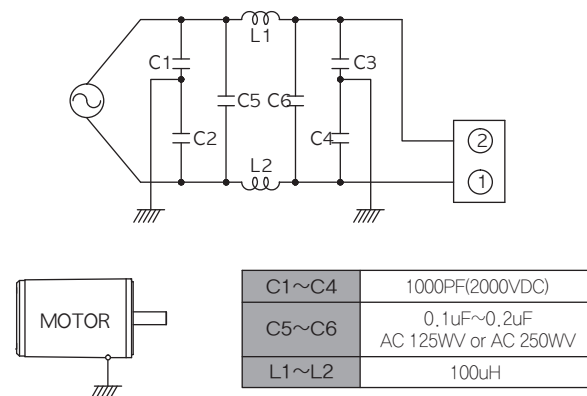
- * Before using the product you purchased, make sure that it's exactly what you ordered.
- * Ambient temperature is $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$, ambient humidity is Max. 85%. Avoid direct ray of light and install a cover.
- * Avoid the place in vibration, deep impact, lots of dust, inflammable gas and corrosive gas.
- * Install the motor and controller as closely as possible. (2m or less)
- * There is possibility of malfunction in case of parallel connection with controlled device in high-capacity electric circuit. Please wire line with separate circuit.
- * Make sure to protect the motor shaft. A tube should be on it.
- * Do not catch only lead wire when it is carried. It can be snapped.

Specifications

Model	DSD-90
Rated Voltage	AC 220V 50/60Hz
Ambient voltage range	$\pm 10\%$
Allowable current	Below 4A
Control method	Phase Control
Speed Control	Operate with volume
Output	15W ~ 200W
Ambient temperature	$-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$
Ambient humidity	35-85%RH (Place without condensation)
Insulation resistance	Over 100M Ω (Base on 500VDC mega)
Dielectric strength	1500VAC for 1minute

Countermeasure of Noise

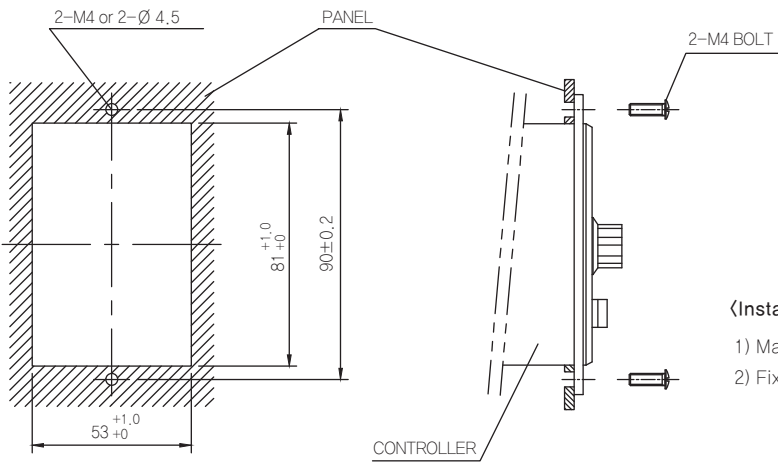
In case of the malfunction by external noise, use the following noise filter.



< Caution >

- 1) L1 and L2 should not be magnetic saturation by motor current.
- 2) Ground of motor and condenser should be in the same position.
- 3) Wiring should be short and grounding should be with thick wire.

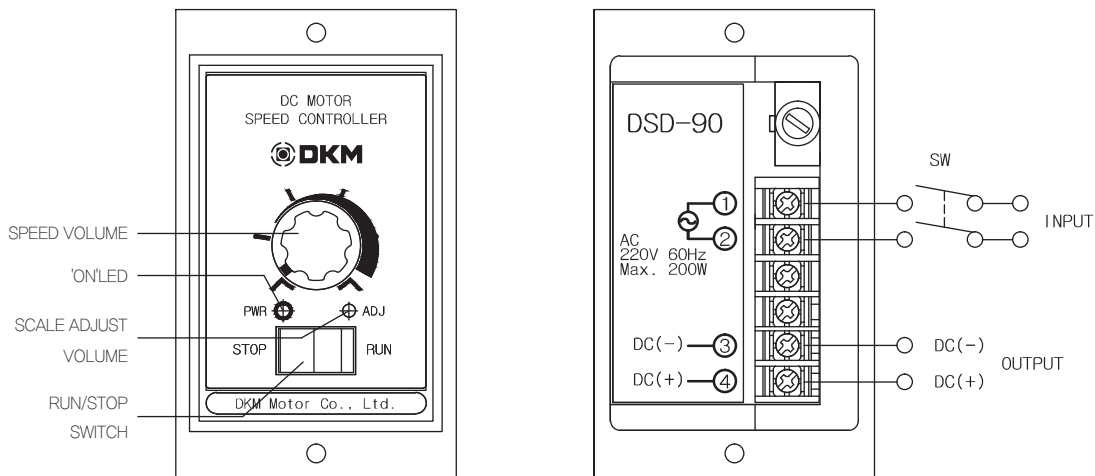
Installation



〈Installation〉

- 1) Make holes on the panel as like the drawing.
- 2) Fix the controller and front cover with screws and nuts.

Part name and connection diagram



〈 Caution 〉

- 1) The surface temperature of the motor should be less than 80°C. (in room temperature)
- 2) Please reverse the operational direction after motor is fully stopped by switching off.
- 3) Depending on the load, Output voltage may drop a little.
- 4) ADJ is initially set to 220V 60Hz. Please contact us in case of using other input voltage. (When input voltage is AC 220V 60Hz, Output is DC 90V)

Dimension

