

TDS Series

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 critically

 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 or conductive substance is touched.

WARNING

- This product does not contain an electric switch or fuse, so the user needs to install a separate electric switch or fuse externally. (Fuse rating: +0.2A)
- To prevent deflection or malfunction of this product, supply proper power voltage in accordance with the rating.
- To prevent electric shock or malfunction of product, do not supply the power until the wiring is completed.
- Since this product is not designed with explosion-protective structure, do not use it any place with flammable or explosive gas.
- Do not decompose, modify, revise or repair this product. This may be a cause of malfunction, electric shock or fire.
- Reassemble this product while the power is OFF. Otherwise, it may be a cause of malfunction or electric shock.
- If you use the product with methods other than specified by the manufacturer, there may be bodily injuries or property damages.
- Due to the danger of electric shock, use this product installed onto a panel while an electric current is applied.

CAUTION

- The contents of this manual may be changed without prior notification.
- Before using the product you purchased, make sure that it is exactly what you ordered.
- Make sure that there is no damage or abnormality of the product during delivery.
- Do not use this product at any place with corrosive (especially noxious gas or ammonia) or flammable gas.
- Do not use this product at any place with direct vibration or impact.
- Do not use this product at any place with liquid, oil, medical substances, dust, salt or iron contents. (Use at Pollution level 1 or 2)
- Do not polish this product with substances such as alcohol or benzene.
- Do not use this product at any place with a large inductive difficulty or occurring static electricity or magnetic noise.
- Do not use this product at any place with possible thermal accumulation due to direct sunlight or heat radiation.
- Install this product at place under 2,000m in altitude.
- When the product gets wet, the inspection is essential because there is a danger of electric leakage or fire.
- If there is excessive noise from the power supply, using insulating transformer or noise filter is recommended. The noise filter must be attached to a panel which is already connected to a ground and the wire between the filter output and power supply terminal must be as short as possible.
- If putting power cables closely together then It is effective against noise.
- Do not connect anything to the unused terminals.
- After checking the polarity of terminal, connect wires at the correct position.
- When this product is connected to a panel, use a circuit breaker or switch approved with IEC947-1 or IEC947-3.
- Install the circuit breaker or switch at near place for convenient use.
- Write down on a label that if the circuit breaker or switch is operating then the power will be disconnected since the circuit breaker or switch is installed.
- For the continuous and safe use of this product, the periodical maintenance is recommended.

Specifications

Model	TDS-1(110V), TDS-2(220V)
Description	Torque Controller
Rated Voltage	TDS-1(110 VAC, 50/60Hz), TDS-2(220 VAC, 50/60Hz)
Voltage Regulation	Proportioned Torque (%)
Power Consumption	Max 4 VA (When no Load)
Control Method	Phase Control
Operating Ambient Temperature	-10°C~55°C (Without condensation)
Operating Ambient Humidity	35~85% RH
Weight	100g
Insulation Resistance	100MΩ (Based on 500V d.c. mega)
Dielectric Strength	1500VAC 50/60Hz for 1 minute

Rate Current for Motor

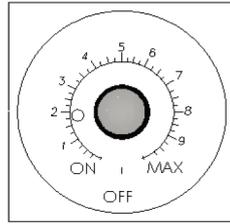
Model	Output	Capacitor	Rated Current
7TDG1-6□	6W	10μF 250VAC	0,6A
7TDG2-6□		1,5μF 450VAC	0,18A
8TDG1-10□	10W	10μF 250VAC	0,8A
8TDG2-10□		2,0μF 450VAC	0,4A
9TDG1-20F2□	20W	16μF 250VAC	1,0A
9TDG2-20F2□		4,0μF 450VAC	0,6A
9TDG1-30F2□	30W	20μF 250VAC	1,6A
9TDG2-30F2□		5,0μF 450VAC	0,9A
9TDG1-40F2□	40W	25μF 250VAC	2,4A
9TDG2-40F2□		6,5μF 450VAC	1,2A

* □ : follows Gearbox Type of "G/P/H"

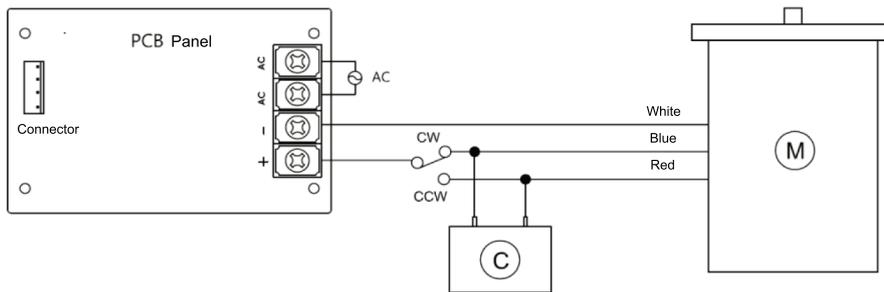
Features

- Easy to control

Easy to set up torque with the separate controller



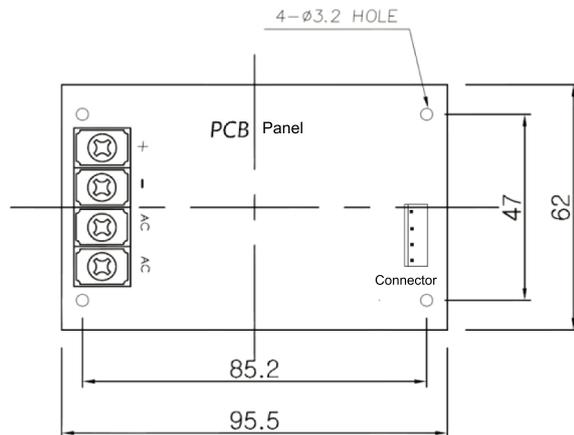
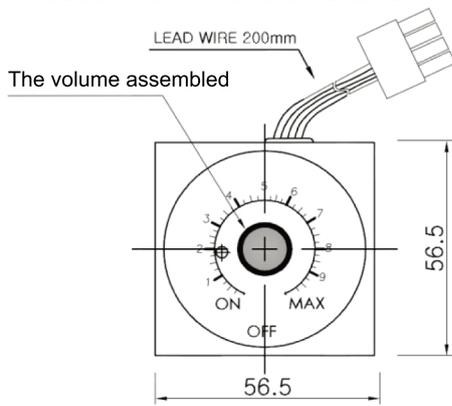
Wiring Diagram



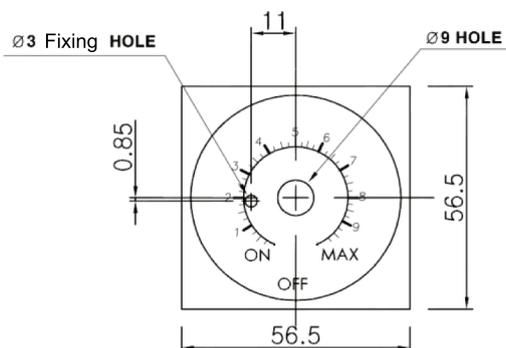
Appearance

Unit : [mm]

- Controller Plate with the volume



- Controller Plate without the volume



* When fixing the controller, it needs ø3 hole and ø9 hole on the main panel.