

Electric heater for generating the high temp. hot-air

SL-series

Operation manual

● *Please read this without fail before use.*

- ◆ *This time, thank you very much for purchasing Electric heater for generating the high temp. hot-air SL-series.*
- ◆ *Please confirm whether the model, type, voltage and the order article are not wrong by the name board of this machine.*



*Electric heater for generating the high temp. hot-air
SL-series*

- *SL-3T*
- *SL-4T*
- *SL-6T*

《Accessories》

Please confirm the accessories.

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| ▪ <i>Wet felt (Insulating material)</i> | <i>1 pc.</i> |
| ▪ <i>Hose nipple for connecting the hose</i> | <i>1 pc.</i> |
| ▪ <i>Plug PT1/8</i> | <i>1 pc.</i> |



KANSAI ELECTRIC HEAT CORP.

1. Installation

- ① Please use the place where the ambient temp. is $+70\text{ }^{\circ}\text{C}$ from $-10\text{ }^{\circ}\text{C}$.
- ② Please establish to the place where the heater is not exposed to the storm.
- ③ Please establish to the place where the wind passes well at indoor.
- ④ Please do not put the combustible to the periphery of the heater because the outside of the heater becomes the high temp. And, please execute the insulating material to the heater case as occasion demands.
- ⑤ Please do not use the place that there are the hazardous substance that may explode and ignite by the mixture of the combustibility gas and inflammability liquid steam.
- ⑥ Please establish at the setting attitude that the angle of the inclination is less than ± 20 degree in the case that hot-air more than $400\text{ }^{\circ}\text{C}$ is discharged from the heater. There is not the restriction of the setting attitude in the case that hot-air less than $400\text{ }^{\circ}\text{C}$ is discharged from the heater.

Attention Please pay attention so that heat does not flow backward when blow was stopped at every setting attitude. Air inlet and the power supply connection terminal is heated if heat flows backward. So, please conduct cooling operation without fail.

- ⑦ Please do not use the place where has floating objects that pass electricity. (Carbon fiber etc.)
- ⑧ Please do not use the place where the acid and corrosiveness gas is floating.

2. Power supply and Wiring

- ① Please ask the connection of the power supply and ground construction work to the electric repairing work technician.
- ② Please execute the ground construction work to prevent electric shock accident prevention. (Less than 300V : D-class ground Less than 600V : C-class ground)
- ③ Please establish the exclusive use circuit. Please use the electric leakage circuit breaker that the capacity of the sensitivity current is 100mA - 200mA in the case that the electric leakage circuit breaker is attached.
- ④ Please use the compensating wire with the shield without fail about the wiring of the temp. sensor. (A-sensor and B-sensor) Please do not unite or wire that was adjoined the wiring of the temp. sensor with the power supply line and high tone wave line to prevent the wrong action by noise.
- ⑤ Please decide the power supply wire and heater wire in consideration of length and need capacity.
- ⑥ Please confirm whether cutting powder etc. is not remaining inside terminal when wiring ended.

3. Preparation before operation

- ① Please secure the inter-lock circuit to the blower that is used without fail.
- ② Please manage the temp. of the outlet without fail.
- ③ Please attach the temp. sensor (K600A) to the A-sensor attachment entrance PT1/8 of the outlet after removing the PT1/8 plug that is attached. At this time, please attach so that the top of the sensor is located at the center of the outlet.

Attention Heater snaps because the hot-air that exceeded the max. usable temp. of the heater may be discharged in the case that temp. was controlled in the place other than the A-sensor attachment entrance PT1/8.

- ④ We suggest that Auto-temp. controller TR31A (Reference to Catalog No.8) is used as the temp. control of the heater.
- ⑤ Please test-operate about 20 minutes at $200\text{ }^{\circ}\text{C}$ by the air. By this, the life of the heater becomes long because the oxidization membrane is formed on the surface of the heater.
- ⑥ Please detect pressure and please manage the supply of gas capacity from the hose nipple for detecting the pressure of the inlet to the snapping of a wire prevention of the heater. Please exchange with the PT1/8 plug of the belonging if the hose nipple for detecting the pressure is not used.

4. Piping

- ① Please fix the piping to the outlet and inlet certainly. Leakage of the hot-air is occurred without fail on the characteristic of the flexible hose in the case of the piping by the flexible hose to the outlet and inlet of the heater. So, please pay attention sufficiently.
- ② Please insulate sufficiently without fail to piping. Gas capacity decreases and the heater heats abnormal in the case that the resistance of piping is big.
- ③ Please pipe as thickly, short, and gradual curve as possible.
- ④ Please use the piping that has sufficient heatproof and the piping that bears the pressure of the air resource.
- ⑤ Please connect piping without mistaking the inlet and outlet of the heater. Heater snaps if the piping is mistaked.
- ⑥ Please give flexibility to piping in consideration of the thermal expansion at the time of hot-air operation and the contraction by the cooling at the time of operation completion. Heater may damage.

5. Operation

- ① Heater snaps right away if the heater is turned ON without supplying gas capacity. This time, the heater case becomes the high temp. So, it may ignite in the case that there was the combustible in the surroundings of the heater. Please secure inter-lock circuit with the air resource without fail. (Snapping of a wire of the heater is out of the guarantee.)

Attention Please use clean air without being mixing oil, moisture, and dust etc. to the air resource. Insulation of the heater falls off and life of the heater becomes short if oil, moisture, and dust etc. are mixed to the heater inside. And, it is very dangerous because dust that is mixed to the inside is ignited and is jumped out.

- ② Please do not operate the heater exceeding max. usable hot-air temp. that is entered to Catalog No.8 at the outlet of the heater.
- ③ Please do not supply the heater exceeding max. usable pressure that is entered to Catalog No.8.
- ④ Please do not use in the place where there is the vibration. And, please do not conduct frequent ON-OFF operation and pulsation of air. Because the insulator inside the heater damages and insulation becomes bad.
- ⑤ Performance of the heater can not demonstrate if the inlet of the air resource and filter is clogged. So, please clean periodically.
- ⑥ Condensation may occur in the case that the humidity inside piping is high after operation is stopped. Please operate by only blow for a while if insulation falls off by the condensation. By it, condensation is gone and insulation rises.
- ⑦ Please pay attention so that heat does not flow backward when the blow is stopped. The inlet and power supply connection terminal is heated if heat flows backward. Please conduct cooling operation without fail until hot-air temp. drops to the suction temp. of the supply air that is entered to Catalog. After it, the supply of air is stopped.

6. Heater exchange

- ① The spare heater is prepared. Please purchase the spare heater if the heater snaps. And then, please instruct the model and type of the heater.

7. Individual inspection

① *I recommend that is carried out the individual inspection in the case that the use period exceeded 10 years to have this machine used more safely.*

【Item of the individual inspection】

• Measurement of the insulation resistance value • Measurement of the heater current value • Increase bundle inspection of each terminal unit • Foreign substance mixing inspection and cleaning inside this machine and inlet • Other inspection by eyes

② *Please ask to the adjacent electricity businessman about the individual inspection.*

Inquiry regarding the hot-air generator

Homepage www.kansaidennetsu.co.jp

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