

Automatic Damper Kit

Proportional Control Type JD-05M

Instruction Manual

Kansai Electric Heat Corp.

OP-004

Date Created: October 2021

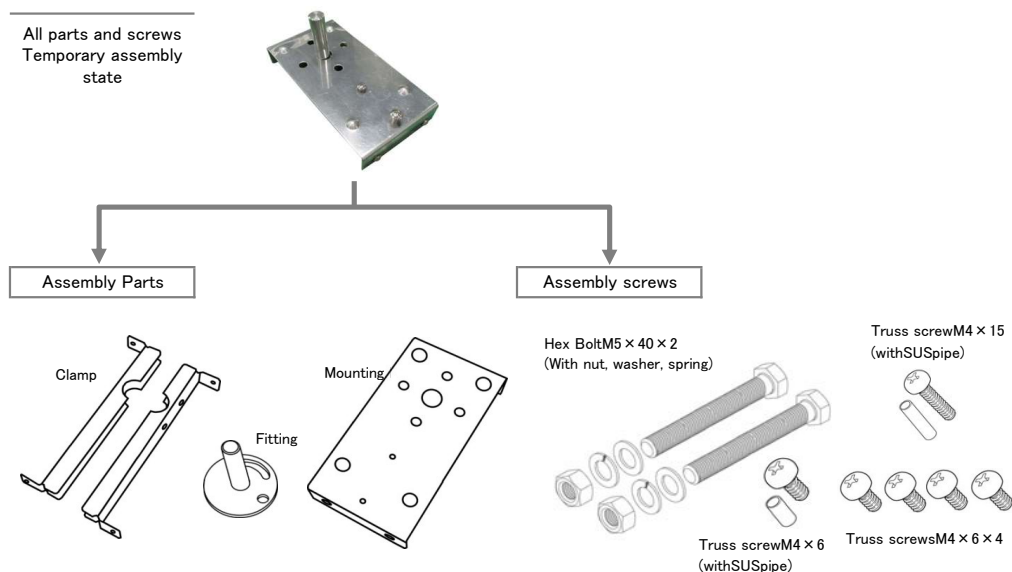
1. Specifications

- Rated Voltage AC 24V 50/60Hz or DC 24V
- Output Shaft 5 N·m
- Rotation Time Approx. 30 sec/90°
- Operating ambient temp -5° C to +40° C (No freezing)
- Operating ambient humidity 85% R.H. or below (non-condensing)
- Power Consumption 5.4 VA (AC) / 2.7 W (DC)
- Opening/Closing Maximum 90°
- Expected service life Approximately 25,000 cycles

2. Assembly Preparation

- Please check the included assembly parts.
All parts and screws are included in a pre-assembled state. Please disassemble them to verify.

All parts and screws
Temporary assembly
state

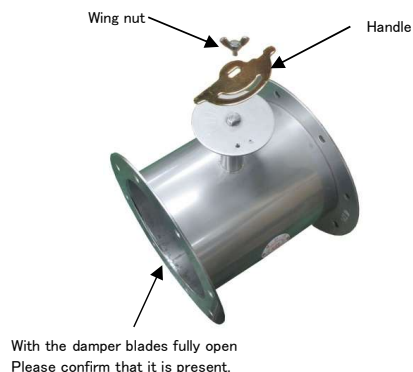


- Please prepare assembly tools yourself.
 - Phillips screwdriver
 - 8mm spanner or 8mm box-end wrench
 - 3.5mm hex wrench



3. Assembly

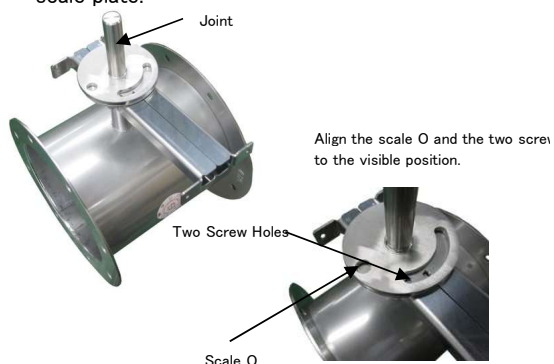
- ① Remove the damper handle and wing nut while fully open.



- ② Clamp the damper shaft section, then assemble the hex bolt with the washer using the spring and nut.



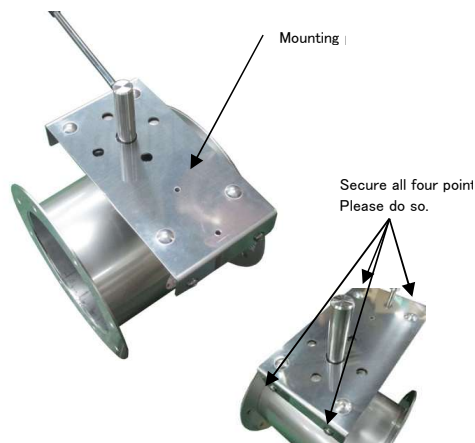
- ③ Install the fitting by aligning it with the damper's scale plate.



- ④ Secure the fitting using M4 × 6 truss screws with the SUS pipe inserted.



- ⑤ Secure the mounting plate to the clamp using truss screws M4 × 6.



- ⑥ Secure the drive unit body to the mounting plate using truss screws M4 × 15 with the SUS pipe inserted, and tighten the two damper shaft sections with a hex wrench.



※ The drive unit, including the mounting plate and fitting, incorporates necessary structural clearances. Therefore, slight play between the fitting and drive unit is normal and does not affect operation.

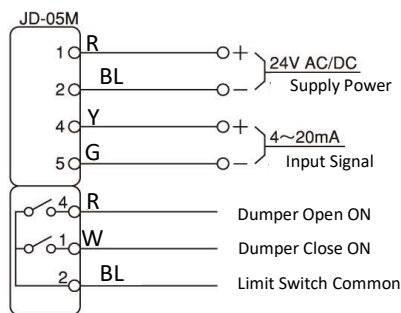
4. Installation

- ① Securely fix the damper body to prevent tilting or distortion of the damper due to the load from the drive unit. If the damper develops tilt or distortion, the damper blades may lock, potentially causing the drive motor to burn out.
- ② Take particular care to avoid tilt or distortion when using the flangeless type damper. Additionally, use the double-flanged damper if the hot air temperature inside the damper exceeds 150° C.
- ③ The drive unit mounting direction is 360° free if there is no interference from flanges, etc. If changing the mounting direction, modify the clamp mounting direction in step 3. Assembly, item ②.
- ④ Locations where installation is not possible
 - Locations with Vibration
 - Near Combustible Materials
 - Locations with floating acidic gases, corrosive gases, etc.
 - Locations outside the ambient temperature range of -5° C to +40° C
 - Locations exposed to wind and rain
 - Locations with ambient humidity of 85% R.H. or higher

5. Wiring and Operation

- ① The automatic damper wiring consists of two cables: the power supply/input signal cable (gray cable: 4-core with red, black, yellow, green) and the output signal cable (black cable: 3-core with red, white, black). Ensure each cable is wired correctly.
- ② Ensure a dedicated power circuit is available (for parallel operation, ensure sufficient power capacity for the number of units).
- ③ Install a junction box near the damper and connect the wiring inside the box.
- ④ Configure the circuit according to the connection example below.

〈Connection Example〉



- Supply AC24V or DC24V to power supply/input signal wires 1 (red wire) and 2 (black wire). Input the 4~20mA input signal to power supply/input signal wires 4 (yellow wire) and 5 (green wire). (Note: The DC24V power supply wires and input signal wires have positive and negative polarity.)
- The damper closes fully when the input signal is 4 mA, and output signal lines 1 (white wire) and 2 (black wire) turn ON.
- The damper fully opens at an input signal of 20mA, turning output signal wires 4 (red wire) and 2 (black wire) ON.

- ⑤ Use the output signal wires (black cable: 3-core with red, white, and black wires) to indicate the damper's open/closed status. (Contact capacity: 250 VAC, 3 A)
- ⑥ To stop the damper at an intermediate position, input any desired signal.
 - To stop the damper at an opening angle of approximately 45° → Input signal: approximately 12 mA
 - When you want to stop the damper at an opening angle of approximately 23° → Input signal: approx. 8 mA
- ※ A slight error may occur in the damper opening/closing angle based on the input signal.
- ⑦ The output signal is only generated when fully open (input signal of 20 mA) and fully closed (input signal of 4 mA) (no output during intermediate stops).
 - ※ Slight errors may occur during output signal generation.

Caution : The drive unit moves slightly during operation, so ensure the wiring has some slack.

Caution : Take care to prevent wiring from contacting high-temperature areas such as the damper section.

6. Precautions for Use

- ① Always perform a test run to confirm operation.
- ② Do not disassemble the drive unit to adjust internal components. This may cause misalignment of the opening/closing angle, incorrect output of opening/closing signals, and malfunctions.
- ③ Do not touch the drive unit switch (pre-adjusted at the factory). Doing so may cause malfunctions.
- ④ If dust or debris adheres to the damper blades, rotation time may increase, or full closure/opening may become impossible. Inspect the damper interior periodically.



Hot Air Generator

Manufacturer
Distributor



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