

# Replacement procedure

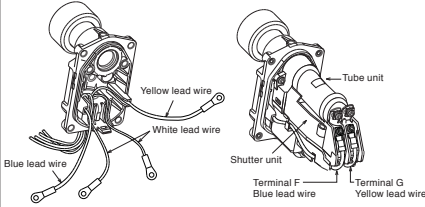
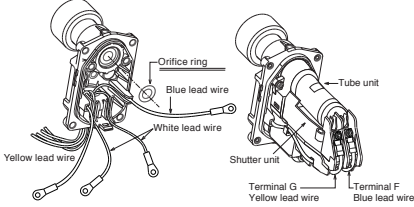
## for the AUD300C2100 Advanced Ultraviolet Flame Detector tube unit and shutter unit

The AUD300C2100 Advanced Ultraviolet Flame Detector was discontinued at the end of March, 2010. Its replacement is the AUD300C1000. To replace the tube unit and shutter unit, use the AUD60A1000 AUD Maintenance Kit. Follow the steps below to replace the tube or shutter unit.

**[ ! ] Handling Precautions**

- Because the tube units of the AUD300C2100 and AUD300C1000 differ in shape, replacing an AUD300C2100 unit requires the replacement of both the tube and shutter units at the same time.
- The service life of the tube unit and shutter unit is a maximum of 3 years. To ensure operational safety, be sure to replace them with new ones within this service life period.

### ■ Differences between the AUD300C1000 (replacement model) and AUD300C2100 (discontinued model)

Product name and model number	AUD300C1000 Advanced Ultraviolet Flame Detector (replacement model)	AUD300C2100 Advanced Ultraviolet Flame Detector (discontinued model)
Dimensions	W: 55 mm D: 153 mm H: 88 mm	
Operating ambient temperature	-20 to +100 °C *1	
Diagrams of AUD300C models		
Differences	<p>1. Due to the difference in shape between the two tube units, <u>terminals F and G on the tube units are in opposite positions, and the wiring paths of the blue lead wire (to terminal F) and yellow lead wire (to terminal G) also differ (because the tube units are secured in a different way).</u></p> <p>2. The AUD300C2100 has an orifice ring, but <u>the AUD300C1000 does not.</u></p>	
Replacement kit for tube and shutter units	Use the AUD60A1000 Maintenance Kit.	Use the AUD60A1000 Maintenance Kit and follow the steps below.
Compatible devices	AUR300C、AUR350C、AUR450C	

\*1 During flame detection, the maximum allowable ambient temperature is +120 °C. Using with AUR450 to meet the approval. CE, UL and CSA, the maximum ambient temperature is still +100 °C. Above clause can not applied to this case.

### ■ Replacement of the shutter unit and tube unit using the AUD Maintenance Kit (AUD60A1000)

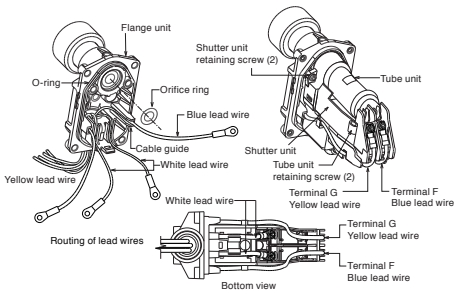
**[ ! ] Handling Precautions**

- When replacing, handle the tube unit gently, taking care not to jar it.
- When mounting the cover after replacement, fit the O-ring onto the flange unit properly. Failure to do so will impair its sealing performance.
- Tighten the terminal screws and mounting screws to a torque of 0.7 N·m.

#### [ Replacement procedure ]

##### ● Removing the shutter unit

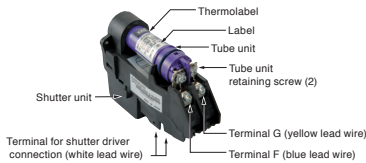
- (1) Turn off the power to the burner controller.
- (2) After waiting at least one minute, loosen the mounting nut and remove the AUD300C Advanced Ultraviolet Flame Detector from the monitoring pipe.
- (3) Remove the cover by unscrewing the 4 mounting screws.
- (4) Remove the 4 terminal screws to disconnect the lead wires (2 white, 1 blue, and 1 yellow) from the shutter unit.
- (5) Remove the 2 screws that hold the shutter unit in place.
- (6) Dismantle by separating the flange unit and shutter unit at the top. The position of terminals F and G on the shutter unit of the AUD Maintenance Kit (AUD60A1000) is the opposite of what is required for the AUD300C2100. Therefore, remove the blue and yellow lead wires from the cable guide of the flange unit, swap their positions, and put them back in the cable guide carefully.
- (7) Remove the O-ring and orifice ring from the flange unit. (The orifice ring is unnecessary.)



**AUD300C2100 (discontinued model)**

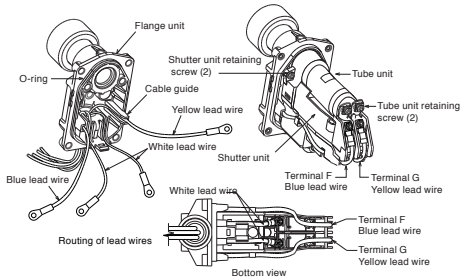
### ● Mounting the shutter unit onto the flange unit

- (1) Fit the O-ring that is included in the AUD Maintenance Kit onto the flange unit.
- (2) Loosen the 2 screws holding the new tube unit (the one from the AUD Maintenance Kit) and then remove the unit, grasping it by the back of the unit.



### Components of the AUD60A1000 AUD Maintenance Kit

- (3) After removing the tube unit, mount the shutter unit only on the flange unit using the 2 retaining screws.



**AUD300C1000 (replacement model)**

### ! Handling Precautions

- If the lead wires do not remain in the cable guide groove on the flange unit, insert the wires into the slits of the shutter unit before mounting. When mounting the unit onto the flange unit, hold the white lead wires under the shutter unit so that they stay in the cable guide groove.
- (4) Be sure to connect the lead wires to the 4 terminals of the shutter unit correctly.

### ! Handling Precautions

- The blue lead wire is for terminal F and the yellow one for terminal G. Connect the two wires according to the "F" and "G" shown on the polarity indication label on the shutter unit.

### ● Wiring check for tube and shutter units

- (1) Turn on the power to the burner controller.
- (2) Measure the DC voltage between terminals F and G using a digital voltage meter or circuit tester having an input impedance of at least 100 kΩ.
- (3) Connect the + tester probe (red) to terminal G (yellow lead wire) and the - tester probe (black) to terminal F (blue lead wire). If the reading is between 160 and 220 Vdc, the leads are connected correctly. If a negative voltage is measured, the terminal F and G connections are reversed.
- (4) Next, measure the DC voltage (shutter voltage) between terminals S1 and S2 (both lead wires are white). If the needle fluctuates between 15 and 24 Vdc, the leads are connected correctly.

### ● Mounting the tube unit and cover

- (1) Turn off the power to the burner controller.
- (2) After 1 minute or more, mount the tube unit onto the shutter unit, holding the back of the tube unit, and tighten the 2 retaining screws to secure the unit.
- (3) Check to make sure that the O-ring is still fitted properly on the flange unit.
- (4) Secure the cover with the 4 cover mounting screws.
- (5) Remount the AUD300C on the monitoring pipe.

### ● Expiration date label

Affix the expiration date label included in the AUD Maintenance Kit to the cover as shown below.

Expiration date label



**azbil**

Specifications are subject to change without notice. (09)

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