

International Business Department
Control Products Headquarters
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Date: October 2, 2004
To: Those listed
Issued by: C. C. Chang, International Business Department
Subject: AUD300C Advanced UV Sensor, AUR300C Advanced UV Relay
Purpose: To announce the international sales release of the **AUD300C** advanced UV sensor with dynamic self-check and the **AUR300C** advanced UV relay, which is used with the **AUD300C**.

Background: Our flame safeguard products are often used without selecting the appropriate model for ensuring safety. As a result, batch operation burner type flame detectors and Protectorelays are inappropriately used for continuous operation burners.

We have a responsibility to see that the user selects an appropriate model. Also, recent user safety awareness is a great opportunity for our flame safeguard business to promote flame safeguard principles.

We are releasing the **AUD300C** and **AUR300C**, which are suitable for both batch and continuous burners, as the main products of our flame safeguard business—the business of providing safety and reliability to users.

Features:

■ **AUD300C** Advanced UV sensor

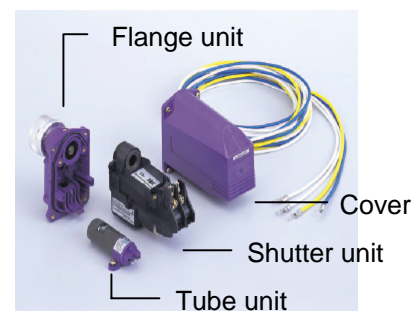
The **AUD300C** flame detector, with its 25,000h service life, is unique in the world of IP66 protection.

(1) Modular structure

- The **AUD300C** has a simple structure composed of only 4 units: the tube unit, shutter unit, flange unit and cover (no PWA). This ensures easy replacement of the tube and shutter units.



AUD300C AUR300C



AUD300C Components

(2) Compact body

- When compared with the conventional model, the **AUD300C** has only 1/3 the weight and approx. 1/5 the volume.
- The body depth is reduced by 30mm and the body width is reduced by 80mm.

External dimensions:

C7012E	133 × 130 × 185mm
AUD300C	88 × 55 × 154mm

- Package size is approx. 1/4 the volume of the conventional model, reducing the required stock space.

(3) Wiring

- Number of wires is reduced from 6 to 4.
- Maximum wiring distance is extended from 50 to 200m.
- IV cable can be used. Coaxial cable is no longer required.

(4) Improved resistance to environmental conditions

- The F-G line current is hardly affected by electromagnetic noise because it operates on the mA level, as does the **C7035A**, whereas the **C7012** current is on the μ A level.
- Wiring material does not need to be changed when replacing the **C7035A**.
- Maximum operating temperature is 100°C. Additional cooling is rarely necessary when replacing an older model.
- IP66 protection

(5) High reliability

- The service life for the tube unit is 3 years or 25,000 operating hours.
- The service life of the shutter unit is approx. 3 years at continuous running (120,000,000 times, actual life: 150,000,000 times).
- Reliable shutter blade operation with 24Vdc drive

(6) UL-based design

- Soon to file for UL conformity

■ **AUR300C** Advanced UV relay

(1) 1-channel model

- With the conventional 2-channel model, some users would have an unneeded channel.

(2) Easy replacement

- Mounting space and contact signal are compatible with the R4332 and R4334.

(3) Indicators

- Various LED indicators allow easy checking of operation status (POWER, SHUTTER, START CHECK, and FLAME).

(4) Flame signal

- A flame signal output (0 to 5Vdc) is provided.

(5) Low power consumption

- Power consumption has almost been cut in half.

R4332 + C7012E 19W

AUR300C + AUD300C 10W

Selection guide:

AUD300C2000 Advanced UV sensor

Model No.	Description
AUD300C2000	Advanced UV Sensor
AUD300C200D	Advanced UV Sensor with inspection certificate

Maintenance parts and optional parts for the AUD300C

Model No.	Description
AUD10C2000	Tube unit for AUD300C2000
AUD10C200D	Tube unit for AUD300C2000 with inspection certificate
AUD50C2000	Shutter unit for AUD300C2000
AUD50C200D	Shutter unit for AUD300C2000 with inspection certificate
81446925-002	Cover for AUD300C2000
81446926-001	O-ring for AUD300C
81409780-001	Bushing 1 × 3/4

AUR300C Advanced UV relay

Model No.	Flame response	Power voltage	Option
AUR300C13100	3s	100Vac	—
AUR300C13200		200Vac	
AUR300C131D0		100Vac	With inspection certificate
AUR300C132D0		200Vac	
AUR300C12100	2s max.	100Vac	—
AUR300C12200		200Vac	
AUR300C121D0		100Vac	With inspection certificate
AUR300C122D0		200Vac	

Comparison of AUD300C and C7012E

Summary

Model No.	AUD300C2000 Advanced UV sensor	C7012E Ultraviolet flame detector
Compact size	○	△
Noise resistance	○	△
Safety	○	○
Ease of maintenance	○ ● Modular structure	△ ● Bare tube ● Wire cutting and crimping required for shutter replacement
Applicable relay	AUR300/350	R4332B + R7247C

Details

Model No.	AUD300C2000 Advanced UV sensor	C7012E Ultraviolet flame detector	Improvement
Dimensions	88 × 55 × 154	133 × 130 × 185	◎
Mass	0.63kg	1.9kg	◎
Wiring	4 wires	6 wires	○
Mounting	G1 (With bushing, may be used with 3/4-inch thread)	3/4 - 14NPT	=
Mounting direction	-45° to +90°	-45° to +45°	○
Coaxial cable	Not required	Required	◎
Wiring distance	200m max.	50m max. (coaxial cable)	◎
Operating temperature	100°C max.	79°C max.	◎
Pressure resistance for viewing window	350kPa	140kPa	○
Protection	IP66	NEMA4 (IP56 equivalent)	○
Shutter voltage	24Vdc (supplied by AUR300/350)	100Vac (supplied externally)	○
Shutter replacement period	Approx. 3 years	Approx. 2 years	○
Shutter structure	Unit structure	Shutter alone	○
Tube replacement period	Approx. 3 years or 25,000h	Approx. 3 years or 25,000h	=
Tube structure	Glass tube protected by adapter and silicone rubber	Glass tube	○
Signal level	mA	μ A	◎
PWA	None	Contained	○

Comparison of AUR300C and R4332A

Model No.	AUR300C Advanced UV relay	R4332A Protectoglo	Improvement
Dimensions	261 × 60 × 104 (1 ch.)	290 × 138 × 115 (2 ch.)	○
Mass	1.2kg	4.0kg (including 2 amplifiers)	○
Mounting	Screw mounting	Screw mounting	=
Mounting direction	Vertical, or horizontal with terminals upward	Vertical only	=
LED indication	4 LEDs:POWER, SHUTTER, START CHECK, and FLAME	1 LED, common to power and shutter status	⊙
Flame signal	0 to 5V	0 to 100mA	⊙
Power consumption	Approx. 10W	Approx. 19W	⊙
Dynamic self-check	Available	Available	=
Channel structure	1 channel (amplifier contained)	2 channels (separate amplifier required for each channel)	○