● FLAME SAFEGUARD SYSTEM

Advanced Ultraviolet Flame Detector | AUD300C1000 CE UL CSA

The AUD300C1000 Advanced Ultraviolet Flame Detector is designed to detect ultraviolet radiation from an oil or gas burner flame, for use with both batch and continuous operation. It is used in combination with a dedicated burner controller. By means of a built-in shutter, any malfunction of the UV flame detector or burner controller is detected by the continuous self-checking (Dynamic Self-Check) function, ensuring highly reliable combustion safety control.

Specifications

Applicable types of flame*	City gas, natural gas, propane gas, kerosene, heavy oil, coke oven gas, hydrogen, chlorine, ammonia, naphtha, ethylene, etc.
Combined burner controller	RX-R40, RX-R44, RX-R46 AUR450C, AUR300C, AUR350C
Shutter voltage	Approx. 24 Vdc (supplied from burner controller)
Self-checking cycle	Approx. 75 cycles/min.
Insulation resistance	Between flange unit mounting conduit and F-terminal (or blue lead wire) Between flange unit mounting conduit and S1-terminal (or white lead wire) Between flange unit mounting conduit and G-terminal (or yellow lead wire) Between flange unit mounting conduit and S2-terminal (or white lead wire) 50 MΩ min. by 500 Vdc megger at each of above locations. (However, the tube unit must be removed.)
Dielectric strength	Between flange unit mounting conduit and F-terminal (or blue lead wire) Between flange unit mounting conduit and S1-terminal (or white lead wire) Between flange unit mounting conduit and G-terminal (or yellow lead wire) Between flange unit mounting conduit and S2-terminal (or white lead wire) There must be no abnormality when 1,500 Vac is applied for 1 minute or 1,800 Vac for 1 second at each of the above locations. (However, the tube unit must be removed.)
Ambient operating temperature	When flame is detected (shutter is opening and closing): -20 to +120 °C (However, when no flame is detected (shutter continuously open), the maximum ambient operating temperature is 100 ˚C.)
Ambient storage temperature	-20 to +70 °C
Ambient storage humidity	90%RH at 40 ˚C max.
Vibration resistance	4.9 m/s² or less (10 to 55 Hz for 2 hours in each in X, Y, and Z directions)
Impact resistance	300 m/s² in vertical and horizontal directions (without breakage)
Pressure resistance for flange	350 kPa
Protection	IP66 (except a conduit tube connection port)
Mounting posture	-45 to +90˚ (vertical mounting)
Mounting	G1 (at the mounting section of sighting pipe)
Lead wires	AWG18 heat resistant silicone cable, with approx. 2.4 m color lead wires
Electric wire pipe mounting conduit	1/2-14NPSM
Flame signal wire requirements and extension distance	Requirements: 600 V vinyl insulation wires, IV wires with 2.0 mm², max. 200 m
Materials	Main body: heat resistant resin Mounting section: aluminum
Main body color	Purple (equivalent to DIC257)
Weight	Approx. 630 g
Expiration date of tube unit and shutter unit	3 years
Standards compliance	Certificated by CE, UL and CSA standards (However, the CE certificate is granted to the combination of AUR450C and Q241A1004.)

*. For applications using coke oven gas, hydrogen, chlorine, ammonia, naphtha, ethylene, etc., in which the burner structure may impose restrictions on the mounting of the flame detector, it is necessary to check that the flame monitoring is reliable.

AUD maintenance kit

<Model No.: AUD60A1000>

The AUD maintenance kit includes the assembled tube unit and shutter unit, as well as consumables such as the main unit flange and tight-fitting cover O-ring, expiration date label*[1], etc.

*1. Expiration date label

GOOD THRU
04/2013

Model No. configuration

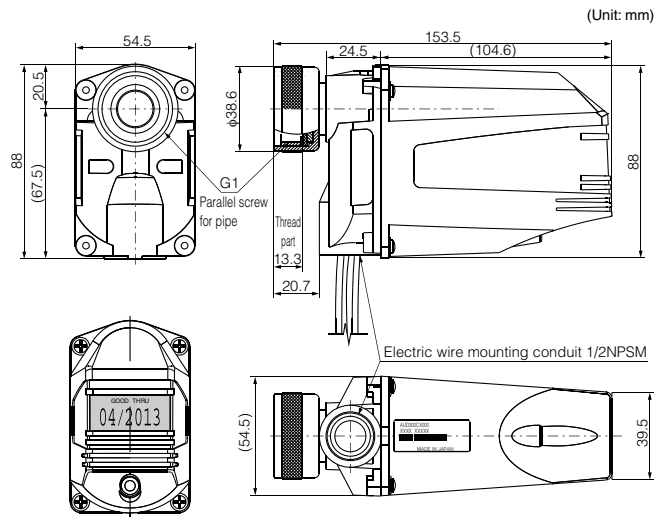| Name	Lens	Additional specification	Model No.
Advanced Ultraviolet Flame Detector	Standard	None	AUD300C1000
		Inspection results included	AUD300C100D
		Tropical treatment	AUD300C100T
		Inspection results included + tropical treatment	AUD300C100DT
	Condenser	None	AUD300C110O
		Inspection results included	AUD300C110D
		Tropical treatment	AUD300C110T
		Inspection results included + tropical treatment	AUD300C110DT

Optional parts (sold separately)

Name	Model No.
Bushing 1 × 3/4	81409780-001
Packing nut	81409482-001

Maintenance part (sold separately)

Name		Model No.
AUD maintenance kit (For AUD300)	Inspection results not included	AUD60A1000
	Inspection results included	AUD60A100D

External dimensions

(Unit: mm)

Electric wire mounting conduit 1/2NPSM

1 DIGITAL CONTROLLERS
2 RECORDERS, INDICATORES
3 CONVERTERS
4 FLAME SAFEGUARD SYSTEM
5 ACTUATORS
6 SENSORS
7 GAS FLOW MEASUREMENT AND CONTROL PRODUCTS