

UV Flame Monitor System



AVAILABLE WITH FACTORY MUTUAL
AND ATEX CERTIFICATION

**Superior Flameout Protection
for Industrial Gas Turbines**

Honeywell

UV Flame Monitor System

Industrial power generation gas turbine installations demand the superior protection provided by the Honeywell UV Flame Monitoring System. The Honeywell flame monitor system detects the ultraviolet radiation emitted by a hydrocarbon flame and produces an output signal to indicate a flame or no-flame condition. This system has delivered proven performance on General Electric (and GE licensee) gas turbines for more than 35 years. Land-based and off-shore applications include power generation, pumping stations, ship-board power generation among other industrial uses. A variety of sensor types, amplifier types and sensor cable lengths are available.

Features

- High sensitivity with fast response time (0.1 sec typical)
- Amplifiers support multiple voltage requirements: 28 Vdc, 20-35 Vdc, and 115 Vac.
- Operating distances up to 1000 feet, sensor to amplifier.
- Available with Factory Mutual approval for explosive atmospheres.
- Available with European Directive CE mark for EMC 89/336/EEC, LVD 73/23/EEC and ATEX Explosive Atmosphere 94/9/EC
- Qualified component on General Electric turbines.

Proven Design

- Geiger Mueller-type sensor phototube. Detects ultra-violet band at 1800 - 2600 angstroms. "Solar blind" and tolerant to black body radiation.
- Two-year shelf-life, 10,000 hours MTBF with over one billion operating hours.



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LG1093 Flame Sensor Characteristics

	LG1093AA	LG1093AB	LG1093AC
Mounting Interface	3/4 inch internal NPT	1.73 inch O.D. by 0.14 inch wide flange	1.73 inch O.D. by 0.14 inch wide flange
Control Panel Connection	Teflon shielded cable with one inch external conduit thread.	Two pin connector	Two conductor armored cable.
Operating Temperature	-40°F to +350°F	-40°F to +350°F	-40°F to +350°F
Window Pressure Rating	150 psig at 400°F	6.3psig	6.3psig
Special Certifications	Factory Mutual: Explosion Proof Class I, Divisions 1 and 2, Groups B, C and D CE Mark: EMC Directive 89/336/EEC ATEX Directive 94/9/EC II 2G EEx d IIA T3 or EEx d IIC T3 Models AA34/35/36/44/45/46	None	CE Mark: EMC Directive 89/336/EEC ATEX Directive 94/9/EC Models AC01.....09
Cable Lengths	AAx4: 16ft (4.9m) AAx5: 42ft (12.8m) AAx6: 61ft. (18.6m)		AC01/AC02: 9ft. (2.7m) AC05: 24ft. (7.3m) AC09: 60ft (18.3m)

EG1033 Amplifier Characteristics

	EG1033AA	EG1033AB	EG1033AC/AD
Physical Dimensions	6.62 x 4.25 x 2.32 inches	6.62 x 4.25x4.44 inches	6.62 x 4.25x4.44 inches
Mounting Holes	Four .20 in diameter holes, 6.00 x 2.00 inches apart	Four .20 in diameter holes, 6.00 x 2.00 inches apart	Four .20 in diameter holes, 6.00 x 2.00 inches apart
Power Input	28 + 0.14 Vdc, 0.5 amps max	115 Vac +/- 10%, 60 Hz, 10 watts max.	20 to 35 Vdc, 10 watts max
Amplifier Output	Transistor open collector	Relay Contacts	Relay Contacts
Flame Detect Time	Typical 0.1 sec; max 1.0 sec	Typical 0.1 sec; max 1.0 sec	Typical 0.1 sec; max 1.0 sec
Flame Loss Detect Time	0.2 sec max	0.2 sec max	0.2 sec max
CE Mark: EMC Directive 89/336/EEC LVD Directive 73/23/EEC	Yes	No	Yes

Note: Each amplifier will power two sensors, single or dual applications, and provide a separate output signal for each sensor. The EG1033AD model allows separation of the chassis ground shield connection from the input power low, distinguishing it from the EG1033AC.



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Electric (and GE licensee) gas turbines for more than 35 years. The Honeywell system is currently used on gas turbines used for land-based and off-shore power generation, pumping stations, shipboard power generation and various other industrial applications. A variety of sensor types, amplifier types and sensor cable lengths are available.

Features

- ▶ High sensitivity with fast response time (0.1 sec typical).
- ▶ Amplifiers support multiple voltage requirements: 28 Vdc, 20-35 Vdc, and 115 Vac.
- ▶ Operating distances up to 1000 feet, sensor to amplifier.
- ▶ Available with Factory Mutual approval for explosive atmospheres.
- ▶ Available with European Directive, Electromagnetic Compatibility 89/336/EEC and CENELEC approval, meeting European Directive 76/117/EEC.
- ▶ Qualified component on General Electric turbines.

Proven Design

- ▶ Geiger Mueller-type sensor phototube. Detects ultra-violet band at 1800-2600 angstroms. "Solar blind" and tolerant to black body radiation.
- ▶ Two-year shelf-life, 10,000 hours MTBF with over one billion operating hours.



Amplifier, EG1033AB/AC/AD



Amplifier, EG1033AA



Flame Sensor, LG1093AA



Flame Sensor, LG1093AC

LG1093 FLAME SENSOR CHARACTERISTICS

	LG1093AA	LG1093AB	LG1093AC
Mounting Interface	3/4 inch internal NPT	1.73 inch O.D. by 0.14 inch wide flange	
Control Panel Connection	Teflon shielded cable with one inch external conduit thread.	Two pin connector	Two conductor armored cable.
Operating Temperature	-40°F to 350°F		
Special Certifications	EMC Certification (CE Mark) Directive 89/336/EEC Factory Mutual Explosion Proof Class I, Divisions 1 and 2, Groups B, C, and D. CENELEC approval, models AA34/35/36 Directive 76/117/EEC	None	EMC Certification (CE Mark) Directive 89/336/EEC
Cable Lengths	AA24/AA34: 16ft (4.9m) AA25/AA35: 42ft (12.8m) AA26/AA36: 61ft. (18.6m)		AC01/AC02: 9ft. (2.7m) AC05: 24ft. (7.3m)

EG1033 AMPLIFIER CHARACTERISTICS

	EG1033AA	EG1033AB	EG1033AC/AD
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EMC Certification (CE Mark) Directive 89/336/EEC	Yes	No	Yes

Note: Each amplifier will power two sensors, single or dual applications, and provide a separate output signal for each sensor. The EG1033AD model allows separation of the chassis ground shield connection from the input power low, distinguishing it from the EG1033AC.