Reuter-Stokes
a Baker Hughes business

Flame Tracker Dry 325

25 years trusted experience with a half billion hours of fired operation

No water cooling needed!

Hot end operates up to 325°C

Our Reuter Stokes Flame Tracker Dry 325 senses the ultraviolet (UV) light produced by a flame and signals whether a flame condition exists. This rugged design reduces maintenance by moving sensitive electronics away from the heat, thereby eliminating the need for water cooling. The Silicon Carbide (SiC) optical photodiode is designed for use with multiple fuels, low NOx combustors and steam injection. The Flame Tracker Dry 325 is applicable to a variety of gas turbine models.

High sensitivity, fast response

- Proven SiC technology has high sensitivity to longer UV wavelengths and is not susceptible to black body radiation.
- Rapid response time of less than 0.175 seconds. Similar products may take as long as 1.5 seconds to respond, which creates a potentially undesirable situation.
- Built with the same proven sensing technology that has worked in the Flame Tracker for more than 23 years.
- Analog output with a wide dynamic range.
- Patented circuitry.

Reduced maintenance

- No water cooling lines, which reduces sensor replacement time and eliminates maintenance of water cooling systems.
- Mineral insulated cable eliminates the need for electrical conduit and the use of fragile fiber optic cable.
- Full operation allowed during the water wash cycle.
- Ready to install, no programming necessary.

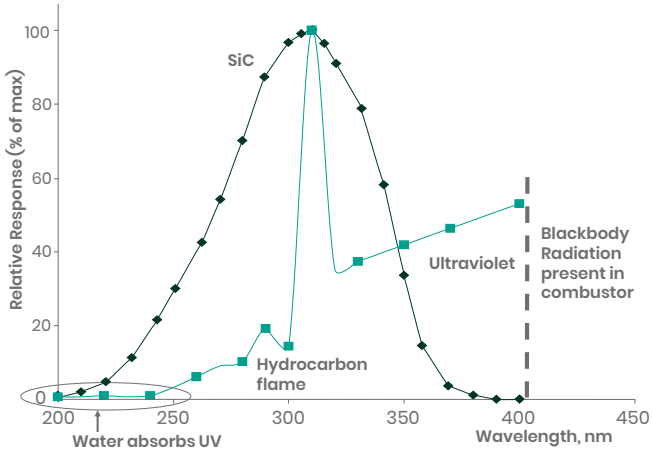
Reliable, low voltage operation

- High reliability. Ruggedized construction, high temperature materials, rigorous validation.
- Industry standard output signal (4-20 mA).
- Fuel flexibility—operates reliably with many fuels, with or without steam injection.
- Improved safety through low voltage operation. Eliminates the 350 VDC supply voltage and explosion-proof conduit required by some sensors.
- Ruggedized mineral insulated cable.

Customized conversion kits

Designed to replace existing sensors, the Flame Tracker Dry 325 is applicable to a variety of gas turbine models. In addition, it is ETL, ATEX, and IECEx certified.

Spectral response



— **Flame emission**

— **SiC**

Peak sensitivity closely matches the key flame peak at 310 nm.

Operating parameters

Power requirements	24 VDC nominal, 12-30 VDC @ 100 mA
Output	4-20 mA (a module to convert output to other controller inputs is available)
Response time	< 0.175 seconds
Operating temperature range	Cool end: -51°C to 1 40°C (-60°F to 284°F) Hot end: -51°C to 325°C (-60°F to 617°F)
Process pressure	To 400 psig (2.8 MPa)
Sensitivity (Standard)	5 mA @ 1x10^{10} photons/in^2/sec. @ 310 nm
Sensitivity (ILG)	6.5 mA @ 1x10^{10} photons/in^2/sec. @ 310 nm

Material specification

Body mount	AISI 316 stainless steel
Housing	AISI 304 stainless steel
Mechanical interface	3/4" NPT female
Sensing element	Silicon Carbide (SiC) photodiode

Increased Low Gain (ILG)

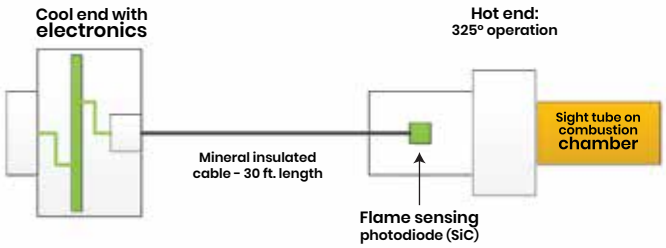
Extra sensitivity to low intensity light:

The ILG sensor model detects dim flames caused by obstructions, condensation, and deposits on the sensor window.

Part numbers

FTD 325	Description
RS-FS-9009-03	NA Class I Division 2 ATEX Zone 2
RS-FS-9010-03	NA Class I Division 1, ATEX Zone 1
FTD 325 ILG	**Description**
RS-FS-9010-03-25X	30 foot cable (9.1 m), NA Class I Division 1, ATEX Zone 1
RS-FS-9009-03-25X	30 foot cable (9.1 m), NA Class I Division 2, ATEX Zone 2
RS-FS-9009-03-173	14.4 foot cable (4.4 m), NA Class I Division 2, ATEX Zone 2

System configuration



reuter-stokes.com

BHCS34180 (10/2024)

Baker Hughes

reuter-stokes.com