

# Harsh Environment Sensors BROCHURE

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## D-GT 810

## D-GT 800

### Flame sensor

**Flame sensor for the monitoring of gas and oil flames, primarily in gas turbines or in particularly harsh environments**

#### Features

- Optionally available with air/water cooling
- Deployable with high combustion chamber overpressure
- High vibrational stability.
- D-GT 800**
- Conforms to general safety regulations
- Self-monitoring and fail-safe in conjunction with a control unit/burner control
- Connection to the D-UG 120, D-UG 660 control unit and the D-GF 150 burner control.
- D-GT 810**
- Analysis of the d.c light component of the flame radiation
- Analysis with extremely fast reaction times
- Connection to any control unit with 2-wire transmitter 4...20mA.

#### Applications

- Burners with difficult installation conditions for conventional flame sensors or on those whose environmental temperature near the sighting tube is very high
- Power stations
- Chemical industry
- Refineries
- Cement plants
- Waste incinerators
- Steam generators
- Heating plants
- Gas turbines.

#### Certifications (only D-GT 800)

- DVGW
- GOST-R
- PTB (ATEX).

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**DURAG GROUP** smart solutions for  
combustion and environment



D-GT 800-P

#### Functional description

With its combination of highly sensitive photo element and sturdy design, the D-GT 800/810 flame sensor is ideal for use in harsh environments such as in gas turbines. The photodiode used can detect almost all blue burning flames, such as gas flames having only a low radiation component in the visible range.

The D-GT 800/810 is available with different photo element for optimal selectivity when using different fuels.

#### Models

- Cable connection (-Ex)
- Axial plug (-P).

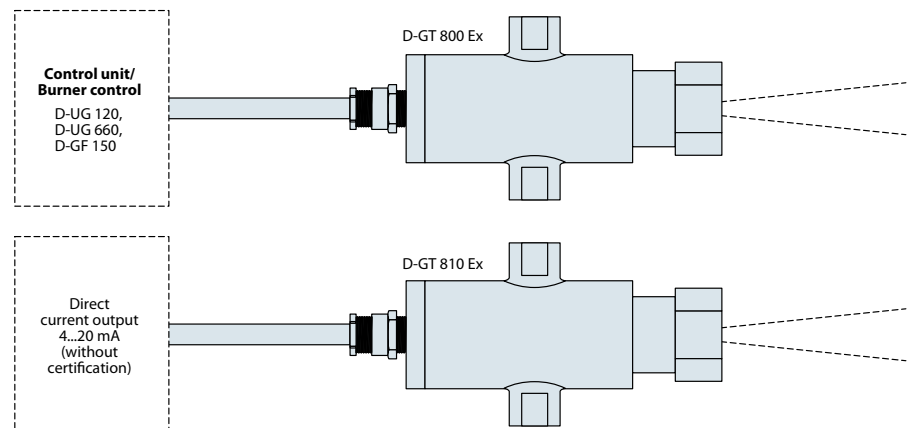
#### Accessories

- UV-A, UV-B and IR test light source**  
230 V/50 Hz (D-ZS 093)
- Terminal box** for connecting the flame sensor (D-ZS 140, D-ZS 141).

#### Flame sensor selection

Flame sensor	Suitable for		Features
	Gas	Oil	
D-GT 800/810 UAF	○	++	with intensive ambient light (neighbouring burners)
D-GT 800/810 UA	+	++	at low NO <sub>x</sub> component

++ ideally suited + well suited ○ conditional suited ! not permitted (from experience)



Operational mode D-GT 800	Intermittent operation, continuous operation and 72-hour operation without permanent supervision	Perm. ambient temperature	Without cooling: 0...+120°C Air cooling: -20...+200°C Water cooling: -20...+300°C
Operational mode D-GT 810	4...20 mA / 100 Ohm at 18 VDC 700 Ohm at 30 VDC	Vibration	10 g
Safety	Self-monitoring and fail-safe in conjunction with a control unit/burner control	Dimensions	Ø100 mm; length approx. 190 mm
Protection	With cable gland (D-GT 800/810-P) IP67, Ex-Version (D-GT 800/810/Ex) IP66	Weight	Without cooling: approx. 1.5 kg, with cooling: approx. 2.0 kg
Ex-Protection (D-GT 800/810 Ex)	II 2G Ex d T4/T5/T6	Max. combustion chamber overpressure	30 bar
Spectral range	UV	Sighting tube connection	¾" NPT (F)
Viewing angle	6°	Cooling connection	½" NPT (F)

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