DURAG

D-LE 603
D-LE 603 Ex

Flame sensor

Flame sensor for the monitoring of gas, oil and coal flames, primarily in multi-burner furnces.

D-LE 603

Features

- Self-monitoring and fail-safe in conjunction with a control unit/burner control
- Flame sensors for every spectral range from UV to IR
- Connection to the D-UG 120 control unit, D-UG 660 control unit as well as to the D-GF 150 burner control
- Uniform output signal thus mutually interchangeable
- Adjustable to different combustion technologies such as exhaust gas recirculation
- Compliance to general safety regulations
- ATEX approved (D-LE 603 .../94 Ex for zone 1 and D-LE 603.../97 Ex for zone 2).

Applications

- Power stations
- Chemical industry
- Refineries
- Cement plants
- Waste incinerators
- Steam generators
- Heating plants.

Certifications

- DVGW
- APAVE
- UL 372
- FM Class 7610
- AGA: AG 210
- GOST-R
- PTB (ATEX).

Functional description

The photo element in the flame sensor generates a signal which is proportional to the flame radiation intensity. The output signal of the flame sensor is used as an input signal to a control unit or a burner control.

The D-LE 603 flame sensor is available with different photo elements for maximum selectivity when using various fuels.

D-LE 603 / 94 Ex
D-LE 603 / 95 Ex

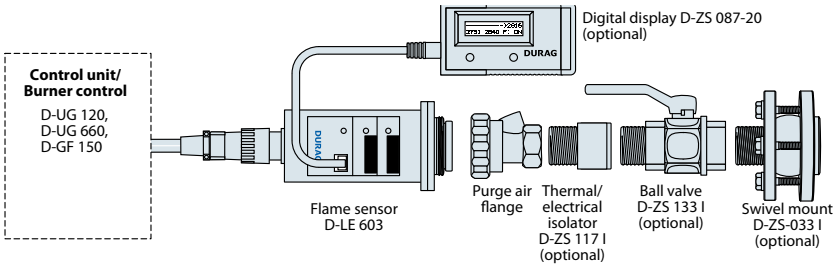
Accessories

- **Digital display** for optimal alignment of flame sensors (D-ZS 087 - 20)
- **Optical adjustment** aid for alignment of the swivel mount on the sighting tube (D-ZS 118)
- **UV-C test light source** 230 V / 50 Hz (D-ZS 077-10)
- **UV-A, UV-B and IR test light source** 230 V/50 Hz (D-ZS 093)
- **Swivel mount** for the alignment of the flame sensor (D-ZS 033-I)
- **Thermal isolator** with electrical insulation (D-ZS 117 - I)
- **Ball valve** for closing the sighting tube (D-ZS 133 - I)
- **Terminal box** for connecting flame sensor (D-ZS 140).

Flame sensor selection

Flame sensor	Suitable for fuels				Features
	Gas	Oil	Coal	Wood	
D-LE 603 UH	++	o			selective single burner monitoring in multiple-burner plants
D-LE 603 US	++	+			at low UV radiation
D-LE 603 UAF	o	++			with intensive ambient light (neighbouring burners), gain switchover
D-LE 603 UA	+	++	+	o	at low NO_x component, gain switch-over
D-LE 603 UI	++	++	+	+	remote changeover of spectral sensitivity
D-LE 603 IS	!	+	++	+	selective single burner monitoring (coal, oil)
D-LE 603 IG	o	+	++	++	selective single burner monitoring (coal, oil, wood)
D-LE 603 ISE	!		++		dual-channel flame sensor (LOG/LOG)
D-LE 603 ISO	!		++		dual-channel flame sensor (LIN/LOG)

++ ideally suited + well suited o conditionally suited ! not permitted (from experience)



Operational mode	Intermittent operation, continuous operation and 72-hour operation without permanent supervision	Dimensions	90x92 mm, length approx. 350 mm
		Weight	approx 1.8 kg
Safety	Self-monitoring and fail-safe in conjunction with a control unit/ burner control	Sighting tube connection	G 1¼"
Protection class	with cable gland (D-LE 603…-CG) IP65, with axial plug (D-LE 603…-P) IP67	Purge air connection	G ½"
		D-LE 603 Ex	
Gain	four settings	Ex-protection optional optional optional	II 2G Ex de IIC T5/T6 Class I, Div. 1, Group B, C & D Class I, Div. 2, Group A, B, C & D II 3G Ex nAnC IIC T6
High-pass filter	three settings		
Spectral ranges	UV, VIS, IR	Weight	approx. 4.3 kg
Viewing angle	6°	Sighting tube connection	G 1"
Perm. ambient temperature	-20…+60°C	Protection class	IP65