

## Control unit

**Self-monitoring and fail-safe control unit for the monitoring of gas, oil and coal flames with DURAG UV, UV+IR or IR- flame sensors, primarily in multiple-burner furnaces.**

### Features

- Suitable for intermittent operation, continuous operation and 72-hour operation as per TRD 604
- Optional parallel operation of two flame sensors in any combination: UV/UV, UV/IR or IR/IR
- Three different settings supported for various modes (e.g. dependent on fuel or combustion technology), automatic activation by burner management system
- Plain text display.

### Applications

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

### Certifications

- DVGW
- DIN-CERTCO
- APAVE
- UL 372
- FM Class 7610
- AGA: AG 210
- GOST-R.



D-UG 660

### Functional description

The D-UG 660 control unit analyses the flame radiation via the pulse signal of the flame sensor connected.

The easy-to-read LCD display continually shows information on the defined setting and operational status.

The flame intensity and signal are present at two current outputs 0/4...20 mA for further analysis.

### Flame sensors

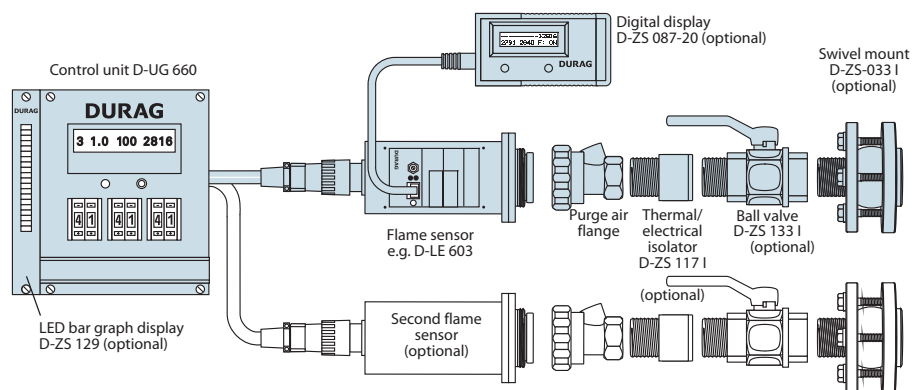
- D-LE 103 for standard applications
- D-LE 603 for selective flame monitoring
- D-LE 702/703 for special applications (fibre optics)
- D-GT 800 for particularly harsh environments
- sensors for Ex-applications are also available.

### Design

- Plug-in module (21HP and 3RU) for 19" racks (IP00).

### Accessories

- **Digital display** for optimal adjustment of the flame sensors by measuring the pulse rate and its extreme values (D-ZS 087 - 20)
- **Optical adjustment aid** for the alignment of the Swivel mount on the sighting tube (D-ZS 118)
- **LED bar graph display** for the flame intensity (D-ZS 129)
- **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 alignment of flame monitor to the flame to be monitored (D-ZS 033 - I)
- **Thermal isolator** with electrical isolation (D-ZS 117 - I)
- **Ball valve** for closing sighting tube (D-ZS 133 - I)
- **Terminal box** for connecting flame monitor (D-ZS 140 / 141)
- Various **enclosures and racks** for 1 to 4 devices.



Operation mode	Intermittent operation, continuous operation, 72-hour operation without continual supervision	Pre-configurable combinations of switching threshold and safety time	3
Safety	Self-monitoring and fail-safe	Flame sensor connection	1 or 2 (parallel)
Power supply	24/48 VAC or VDC, 115/230 VAC	Display	alpha-numeric LCD display
Protection	IP00	Flame intensity	0/4...20 mA
Flame relay	1x switch-over contact, 230 VAC, 2A	Flame signal	0/4...20 mA
Status relay	1x switch-over contact, 230 VAC, 2A	Perm. ambient temperature	-20...+60°C
Threshold setting	00...99	Dimensions	19" plug-in module, 3 RU, 21 HP
Safety time	1 ... 5,5s	Weight	approx. 1 kg

