

D-LX 200

Compact Flame Monitor

- Wide sensitivity range
- For ambient temperatures from -40°C up to +85°C
- Dual channel design throughout
- Measurement of flame flicker frequency
- Selective to individual burners and fuels

**SIL 3 certified**

Compact flame monitor

The D-LX 200 allows for selective and failsafe flame monitoring with a high level of accuracy.

Applications

The D-LX 200 is a compact flame monitor of the latest generation for monitoring flames for continuous operation, for example in:

- Large power stations
- District heating plants
- Chemical process incineration plants
- Thermal exhaust gas incineration plants
- Sulphur recovery units
- Refineries
- Rotary kilns / cement plants

The system reliably detects flames from all fuels, particularly gas, oil, coal and wood, as well as various combustion processes (low-NO_x, recirculating operation, combination burners). The large sensitivity range and ambient temperature range enable the flame monitor to be used in the most diverse environments.

New functionality

The flame radiation is converted into an electrical flame signal by a highly sensitive photodiode. Different photodiodes allow for effective conversion of the flame radiation from various fuels and burner geometries (UAF, UA and IG versions).

- Measurement of the flicker frequency and intensity of the flame
- The amplifier gain is automatically adapted to the signal strength of the flame
- Periodic signals are detected and result in the message „Flame Off“
- Separate thresholds for flame intensity and flicker frequency
- The permissible ambient temperature range is -40°C to +85°C.



User interface of the flame monitor software



Two ranges

The D-LX 200 has two ranges with selectable parameters (see illustration). It is possible to switch between these ranges externally, so that the flame monitor can easily be adjusted to different combustion conditions, e.g. with different fuels.

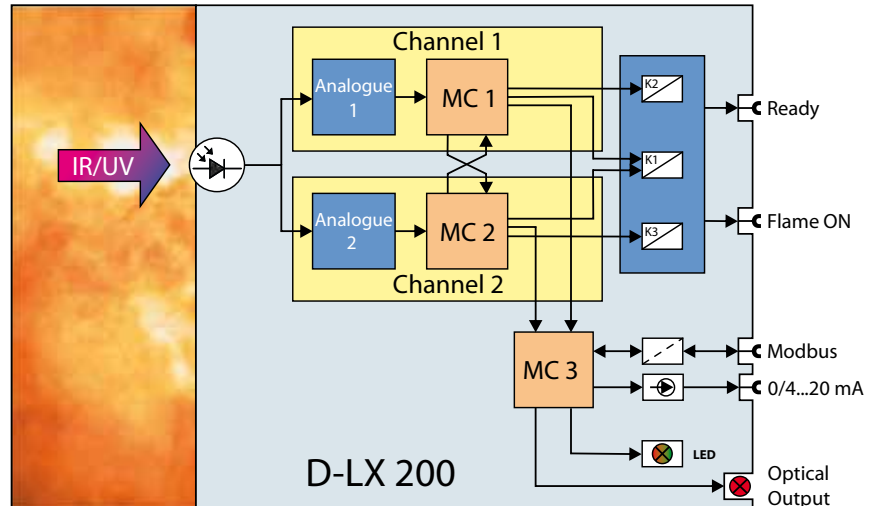
Flicker frequency	60	250 Hz						
Flicker amplitude	3000	8000						
Gain characteristic curve	1	2	3	4	5	6	7	8

Example of a parameter setting e.g. for an oil-fired furnace

Level of availability, for a broad range of applications.

A new standard

- The D-LX 200 is failsafe, self-monitoring and meets the highest international safety standards and regulations for continuous operation
- Dual channel design throughout (see block diagram) – removes the requirement to interrupt the photoelectric current eliminating the use of electrical and mechanical shutters
 - Thanks to a consistent approach towards safety and availability, the D-LX 200 is the only flame monitor worldwide with Safety Integrity Level 3 (SIL 3) certification.



D-LX 200 block diagram

Technical data

Spectral sensitivity	D-LX 200 UAF 280 – 410 nm D-LX 200 UA 190 – 520 nm D-LX 200 IG 780 – 1800 nm
Operating voltage	24 VDC ±20%
Power consumption	5 W
Ambient temperature	-40°C to +85°C
Safety time	1, 2, 3, 5 s
Flame relay contact	1x closing contact 24 VDC, 0.5 A
Status relay contact	1x closing contact 24 VDC, 0.5 A
Flame intensity analogue output	0/4 ... 20 mA, max. load 750 ohm
Protection class (EN 60529)	IP66/68
Sighting tube connection	G1¼" or NPT1¼" F
Purge air connection	G½" or NPT ½" F
Optical viewing angle	6°
Dimensions	85x85 mm Length approx. 250 mm
Weight	approx. 1.25 kg

A new quality of communication

- Communication via Modbus RTU (RS485) or IrDA
- The flame monitor settings and the flame signal can be checked locally or remotely
- Signal, frequency and intensity of flame directly visible
- Continuous recording of the flame signal and parameters possible – ideal support for commissioning the flame monitor, for example
- Important signals and parameters can be observed directly on the device during operation via LEDs and switch settings.

Proven compatibility and options

- All D-LX 200 types are also available as models for use with fibre optic systems (D-LX 720)
- The connection flange is compatible with current standard installations of devices D-LE 603 or D-LX 100.

Certifications

D-LX 200... D-LX 720...	CE 0085	SIL 3 IEC 61508	CS US	FM APPROVED
-10	●			
-20	●	●		
-30			●*	●*
-40		●	●*	●*

*in preparation



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