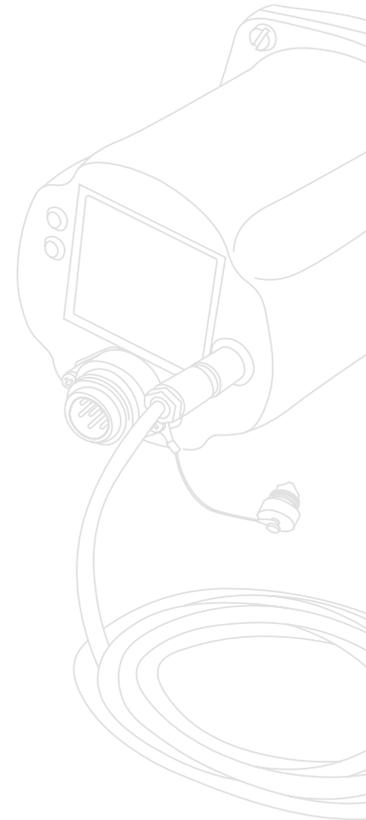**BFI Automation**

Product Information
FLAME SCANNER
COMPACT VERSION 100

100 (UV)

- **compact design**
- **failsafe design**
- **suitable for continuous operation, intermittent and 72-hours operation**
- **use at ambient temperatures from -20 °C to +60 °C**
- **visualization for flame relay and flame intensity on the device by LED**
- **Einstellbare Empfindlichkeit über Bedienterminal**
- **approved according to international standards**

1 | Design

The Flame Scanner Compact Version CFC100 is a complete, optical flame monitor for single and multi-burner systems. Its compact design integrates the flame relay and analog output and provides the binary signal „Flame ON/OFF" as well as the analog signal „0/4 mA to 20 mA" directly. It is suitable for continuous operation due to its fail-safe design and electronic self-monitoring.

The flame radiation is detected via a sensor and evaluated electronically. The small angel of view offers significant advantages, especially for sight tubes with small diameters and extraneous light discrimination.
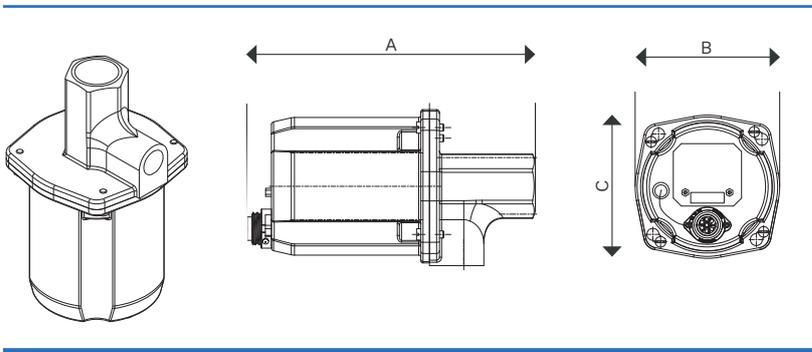
Due to the specified ambient temperature range* from -20 °C to +60 °C, the Compact Flame Controller CFC200 can be used for many industrial applications.

The hand held terminal HT 100 (optionally available) can be used to analyse the flame, set the thresholds of both channels and display the operating data of the appliance.

2 | Customer benefits and usage

- ideally suited for use in single or multi-burner applications
- compact design reduces installation efforts and spare parts storage
- suitable for all types of fuel
- adjustable thresholds separately for both channels via hand held terminal

3 | Housing versions

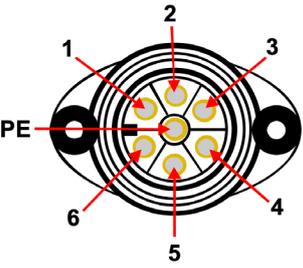| ATEX Zone 2	
Standard housing	
Length A:	210 mm
Width B:	108 mm
Height C:	108 mm
Weight:	1.5 kg
Type:	100

4 | Technical data

Spectral sensitivity UV	185 nm to 260 nm
Angle of view	2,7°
Self checking	fully electronic (every second) and alternating mechanically (approx. every 2 minutes)
Power supply	24 V DC
Current consumption	max. 200 mA
Design	according to protection class III SELV
Current output	0/4...20 mA, Ra < 250 Ω
Flame relay	1 changeover contact, potential-free, SELV max. 48 V switching voltage max. 1 A switching current (fused with 0,5 A) max. 30 W switching power

4 | Technical data

Thresholds	programmable via hand held terminal
Safety switch-off time	set by factory to 1 s, other switch-off times (2-5 s) available on request
Ambient temperature	-20 °C to +60 °C
Area switching	external selection via 24V DC signal
Electrical connection	Amphenol-Tuchel plug C16-1
Type of protection	IP 65
Sight port connection	1" female thread

Purge air
   Connection
   Volume
   Pressure
	
	½" female thread
	10 m³/h
	0,02 bar over combustion chamber internal pressure

CE UL	CE0063 MH47747

5 | Connection diagram

Occupancy of socket / plug	PIN	Internal connection AC/DC	Cable number	Colours of BFI special cable
	1		1	white
	2		2	brown
	3		3	pink
	4	+24V DC	4	green
	5	0V	5	yellow
	6	Output 4-20 mA	6	grey
	7	Switch over channel 2 with external 24 V DC	7	blue
		Not used		red

Connection of standard Compact Flame Controller with special cable KW6

	Internal		External		
Contact	Core colour	Function	Burner control	mA-display	Power supply
1	white	Flame relay lead	x		
2	brown	Flame relay Flame ON	x		
3	pink	Flame relay Flame OFF	x		
4	green	Power supply +24V DC			+24V DC / 200mA
5	yellow	Power supply GND		-	GND
6	grey	Analogue output + (0/4 to 20mA)		+	
7	blue	Switch over channel 2 with external 24 V DC	(x)		
	red	Not used			

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