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Product Information
COMPACT FLAME CONTROLLER CFC2000L

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CE
008522

Typ: CFC200IR2
S/N: 1042579

2022

II3G Ex ec nC IIC T4 Cc
II3G Ex tc IIIC T100°C Dc
IEC Ex TUR 15.0029X
TÜV 15 ATEX 7682 X

-20 - +70°C
24VDC
200mA

Do not open while energized

Made in
Germany

- **compact design**
- **failsafe design**
- **suitable for continuous operation**
- **use at ambient temperatures* from -55 °C to +85 °C**
  (optional fiber optic insert up to 300/600 °C)
- **visualization of the operating status on the device by LED**
- **approved according to international standards**
- **adjustable via software**
- **SIL 3-certified**

1 | Design

The Compact Flame Controller CFC2000L 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. Up to four separately adjustable parameter levels enable reliable flame monitoring even with the highest requirements. The individual parameters are set with the Software "CFC-Com 1" and an IR communication cable, which is possible during operation.

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 -55 °C to +85 °C, the Compact Flame Controller CFC2000L can be used for many industrial applications.

The Fibre Optic Cable extends the operating temperature range at the burner to +300 °C without cooling. Fibre optic lances with cooling achieve a temperature resistance of up to +600 °C and are designed for use inside the burner.
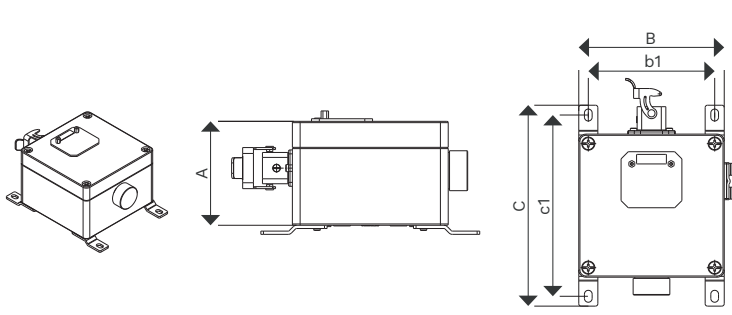
* for the specified temperature ranges heaters may be necessary.
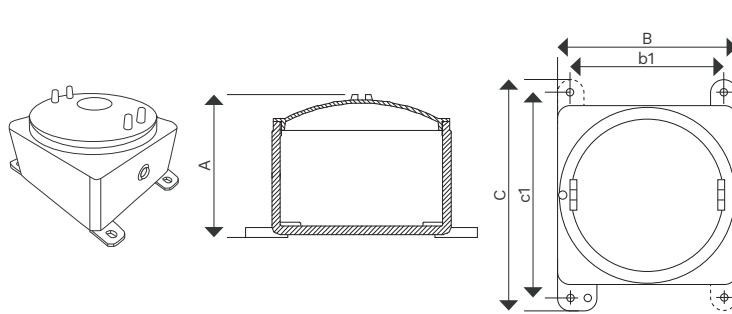
2 | Customer benefits and usage

- ideally suited for use in single or multi-burner applications
- software-based evaluation of flame signals provides safe flame monitoring for complex combustions
- compact design reduces installation efforts and spare parts storage
- usable for all industrial combustions
- suitable for all types of fuel
- large dynamic range of the sensors enables flame monitoring of very small and very large radiation intensities

3 | Housing versions

The Compact Flame Controller CFC2000L is available in the following housing versions for use with a fibre optic cable.

ATEX Zone 2	
O/E-Converter housing (IP65)	
Length A:	80 mm
Width B/b1:	120/106 mm
Height C/c1:	168.5/152 mm
Weight:	1.5 kg
IECEx TUR 15.0029X	

ATEX Zone 1	
Ex-O/E-Converter housing (IP66)	
Lenght A:	165 mm
Width B/b1:	230/106 mm
Height C/c1:	302/267 mm
Weight:	8.3 kg
IECEx DEK 13.0075	

4 | Technical data

Spectral sensitivities	UV, IR, combination of UV/IR (190 nm to 2700 nm)	
Type	**Wavelength**	**Spectral range**
UV	280 nm to 420 nm	UV
UV1	190 nm to 550 nm	UV to VIS
IR	300 nm to 1050 nm	UV to IR
IR2	300 nm to 2700 nm	UV to IR
IR3	1050 nm to 2700 nm	IR

Power supply	24 V DC
Current consumption	max. 200 mA
Operating temperature*	-55 °C to +85 °C
Type of protection	IP65/IP66
Explosion proof	international standards availabe
Relais outputs	flame relay (switch-over, potential-free) ready for operation (NO, optional) wire break detection (optional)
Analogue output	0/4 mA to 20 mA
Safety switch-off time	adjustable (0.4 s to 5 s)

* for the specified temperature ranges heaters may be necessary.

5 | Connection diagram

CFC2000L	Harting	Harting	Special Cable KW6	
F3	1	1	white	Flame relay root
	2	2	brown	Flame ON
	3	3	pink	Flame OFF
F2	4	4	green	Power supply (+24 V DC)
	5	5	yellow	Power supply (GND)
IR COM Port	6	6	grey	Analogue output (0/4 mA to 20 mA)
	7	7	blue	Remote selection parameter level 2
	8	8	red	Failure output (+24 V DC)
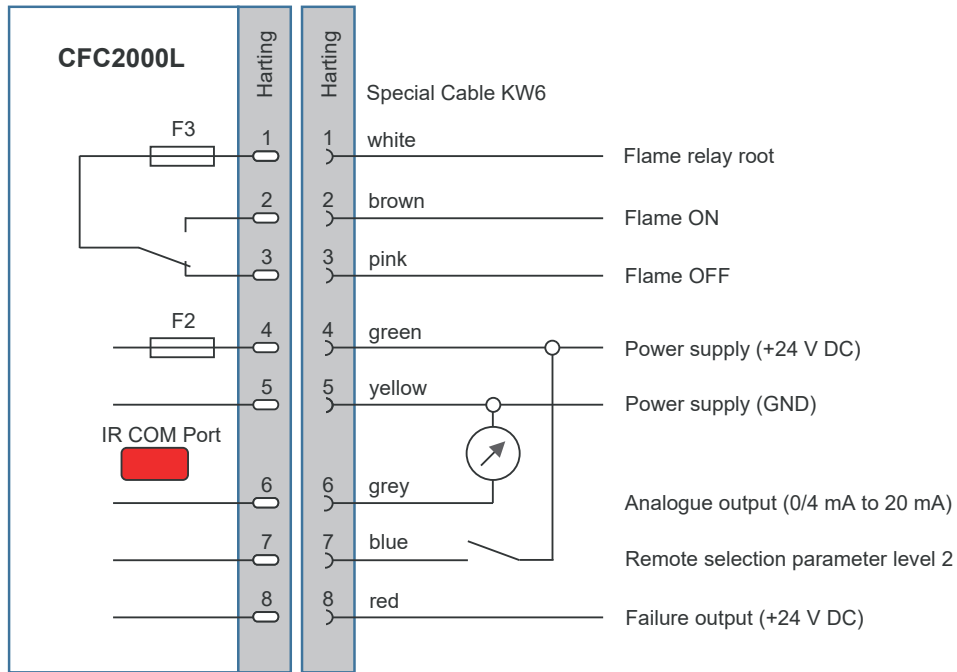
Further connection diagrams with special configurations (ready for operation contact, heating, etc.) available on request.

6 | Part numbers

Type	ATEX Zone 2	ATEX Zone 1
UV	6013-2033-00	7013-2034-00
UV1	6013-2003-00	7013-2004-00
IR	6013-2043-00	7013-2042-00
IR2	6013-2063-00	7013-2064-00
IR3	6013-2083-00	7013-2084-00

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