Flamonitec®
BFI AUTOMATION

Technical Information

Compact Flame Detector IFC 400

for oil -, gas- and dual fuel burners for continuous burner operations

1 | Description

The IFC 400 is a compact flame detector specially designed for use in industrial single flame combustion combustion systems for continuous operation. The flame detector is easy to mount using the 1/2“ adapter. Adjustment work is not necessary during commissioning or maintenance due to the processor-controlled 3-channel flame signal evaluation.

Two options are available for the signal output. A relay output for connection to a PLC or the ionisation output for direct connection to a burner controller. The ionisation output makes it possible to replace a poor ionisation monitoring system with an independent flame detector.

The operating states are displayed directly on the IFC 400 by means of an LED. In addition, all information from the IFC 400 can be transferred to a PC and logged via the optional BSTcom readout tool.

2 | Safety Instruction

The IFC 400 is a safety component and must therefore not be opened, modified or misused! In the event of a fall, impact, moisture, wetness or other influences that may cause damage to the flame detector, the unit must be replaced even if there is no apparent damage! Repairs are not permitted!

Before starting any work, the system must be disconnected from the power supply. Before initial commissioning or when replacing the unit, the electrical wiring must be checked!

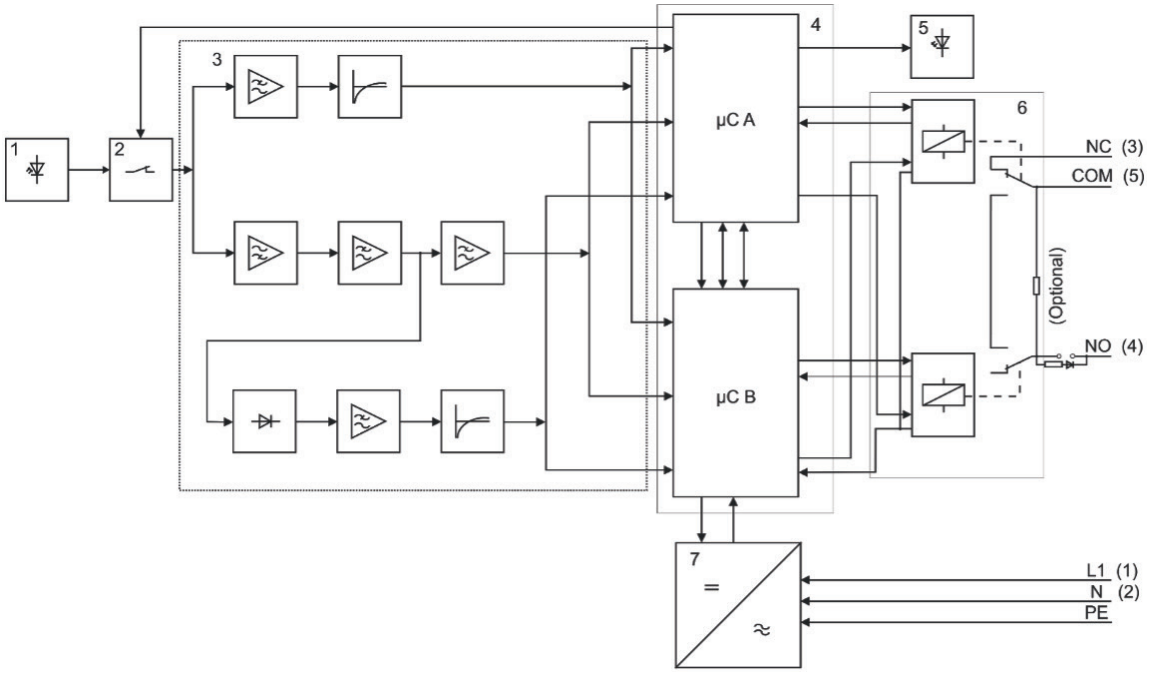
This technical description is only valid in connection with the separately available operating instructions. If you are unsure about any application using this flame detector, please email or call the manufacturer or the authorised distributor.

3 | Technical data

Electrical system, optical system, mechanical system

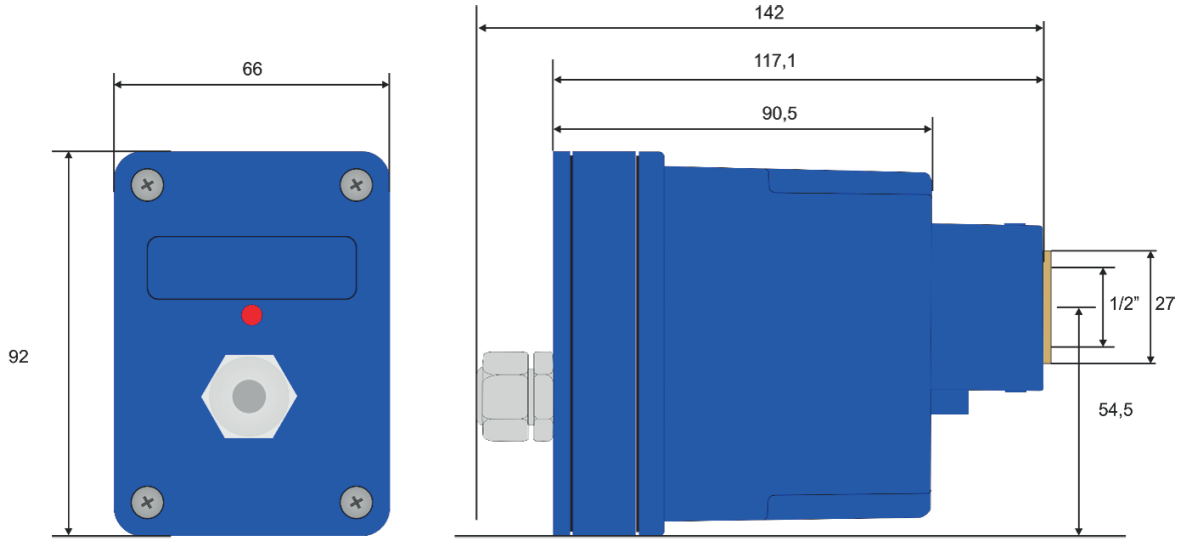
Optical features	350 to 1100 nm
Orientation	axial
Input	230 V AC / 50-60 Hz 120 V AC (optional)
Prefuse	max. 1 A, slow
consumption	max. 50 mA
Operating temperature	-20 °C to +70 °C
Relay output	**Floating, potential-free change-over contact** max. switching current 0.5 A max. switching power 125 W max. switching voltage 250 V AC
Operating position	any position
Kind of protection	IP 65
Protection class	I
Humidity	max. 95% r.H., non-condensing
Electrical connection	Fixed cable connection, 1.5 m
Restart time	Standard 5s Other times on request
Reaction time Switch-on time Switch-off time	 < 1s < 1s
For the switch-off time applies:	For installations in accordance with DIN / EN 267 or DIN / EN 676 at the moment of self-checking < 2s
Thresholds Amplitude Pressure Frequency	**Off / On / Max.** 50 / 100 / 1023 150 / 200 / 900 15 / 20 / 400
Weight	0,82 kg
Certificate	CE 0085CU0083

4 | Block diagram



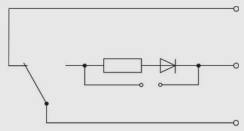
Item	Designation
1	Sensor
2	Shutter
3	Preamplifier
4	Signal evaluation
5	Optical output
6	Relay
7	Power supply

5 | Dimensions IFC 400



All dimensions in mm

6 | Connection diagram IFC 400

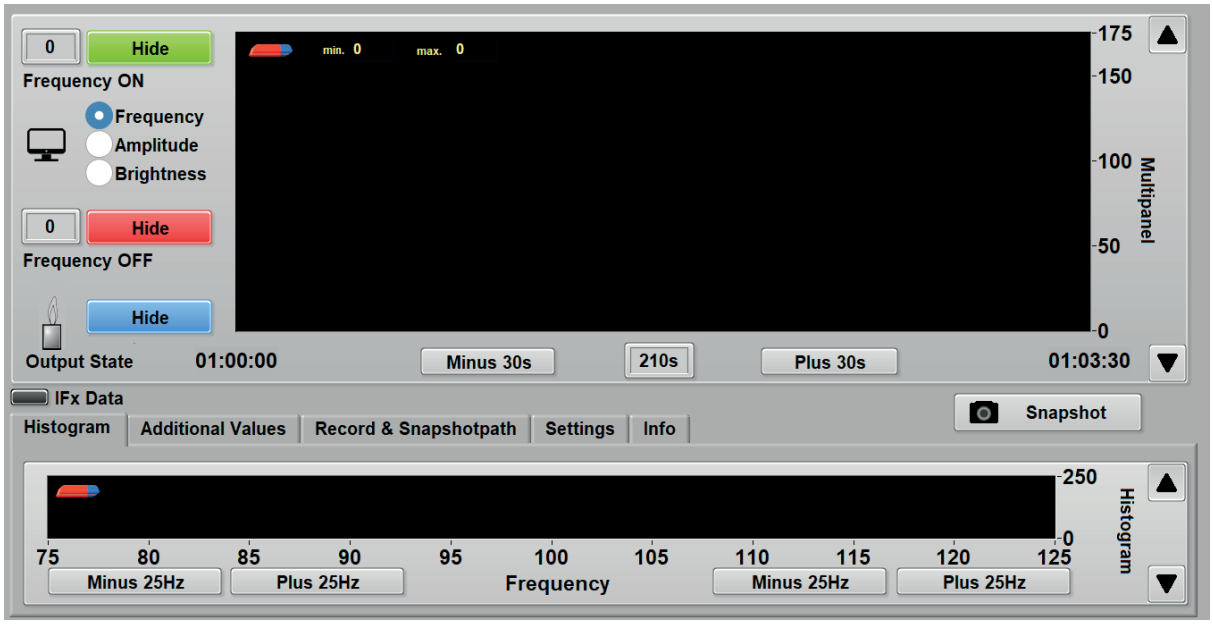
Internal connection diagram AC/DC	Cable No.	Connection
L	1	L
N	2	N
	3	NC
	4	NO
	5	Com
PE	PE	PE

7 | Mounting instructions

The IFC 400 should be mounted as close as practical to the flame and on the same axis. The flame detector is compact and should be mounted with the IFC ½" adapter. Fix the detector with the two screws to the adapter and taking care to protect the sensor from other light sources. To avoid any problems at start-up; please avoid alignment of the flame detector with the ignition spark electrode.

8 | Diagnostic tool IFx-Com with BST-Com

All data and values of the IFC 400 can be read out and analysed via software. The data logger makes it easy to save all measurement data. In addition, screenshots are possible. More details can be found in the description of the BST-Com software.



9 | Overview of the flame detectors IFC 400 and available additional components

Type	Des-cription	Part-No.
Compact Flame Detectorm IFC 400/230, sensitive*, fixed connection cable 1.5 m	230 V AC	6015-0050-01
Compact Flame Detector IFC 400/230, sensitive* Ionization, fixed connection cable 1.5 m	230 V AC	6015-0050-04
Adapter ½“		1830-0160-00
Adapter ½“ with UV-quartz glass plate, nut and gasket		6595-8980-00
Adapter ½“ with UV-quartz glass lense, nut and gas-ket		6595-8980-10
Adapter 1“ with purge air connector ½“, nut and gas-ket		465301000100
Adapter 1“ with purge air connector ½“, UV-quartz glass plate, nut and gasket		465301120100
Adapter 1“ withpurge air connector ½“, UV-quartz glass lense, nut and gasket		6595-8981-06
Adapter 1“ with purge air connector ¼“, nut and gas-ket		1830-0161-14
Adapter 1“ with purge air connector ¼“, UV-quartz glass plate, nut and gasket		6595-8981-14
Adapter 1“ with purge air connector ¼“, UV-quartz glass lense, nut and gasket		6040-4833-00

* For installations according to DIN / EN 267 or DIN / EN 676, the switch-off time at the moment of the self-check < 2 s.

** If there is no continuous negative pressure in the combustion chamber, a lens or pane must also be ordered as a pressure barrier.

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Disposal information

The flame detector is equipped with electrical and electronic components and must be disposed separate from household waste. Follow the local and actual regulations for waste disposal.

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