

AUTOMATIC BACKPURGE AND CALIBRATION MODULE FOR ZrO₂ ANALYSER

DATASHEET
ZFCS

The ZFCS module is a wall-mounted cabinet which, combined with the oxygen in-situ ZFK8 analyser, performs automatic self cleaning of its tube and its automatic calibration.

The ZKM controller is mounted inside the cabinet, but it has to be ordered separately. It allows the continuous measurement of the oxygen concentration in flue gases from boilers and industrial furnaces in order to control and optimise the combustion or other process.

The analyser consists of a measurement probe (ZFK8) and a controller (ZKM). The probe is mounted on a tube, which is itself inserted in the duct so that the sample flow is conducted to the probe.



GENERAL DESCRIPTION

1. Integration & additional protection of the ZKM controller.
2. ZKM functions (see ZKM/ZFK8 datasheet).
3. Time scheduled or remote automatic calibration and back-purge (through ZKM).
4. Manual calibration and back-purge (through press buttons integrated in the cabinet).
5. Pressure control of the function gases : Compressed air, zero and span calibration gases.
6. Glass front door for a direct view on O₂ measurements and status information.
7. 'P' option: backpurge solenoid valve mounted on the ZFK8 probe, directly downstream a pressure tank for a powerful and efficient back-purge. If option 'P' is not selected, the backpurge solenoid valve is mounted inside the ZFCS cabinet and the pressure tank is not supplied.

SPECIFICATIONS

Dimensions: 654 x 434 x 210 mm

Materials:

Polyester glass-fibered cabinet with glass front door

Weight: Approx. 18 Kg

Colour: Grey RAL7035

Protection class: IP 55

Temperature :

Operation : 0 to 50 °C

Storage : -20 to 70 °C

Flue gas temperature:

See analyser specifications

Power mains: 230 VAC / 50 Hz (other options available)

Startup power consumption: 240 VA

Nominal consumption: 125 VA

Compressed air pressure: 5 bar min. / 17 bar max.

Mounting type:

Wall-mounted, delivered with 4 mounting brackets

Gas connections:

2 inlets for soft tube connection (ø6 mm)

(compressed air, calibration gas)

1 (ZFCS-P*) or 2 (ZFCS) outlets for soft tube connection (ø6 mm)

(back-purge air, calibration gas)

** With option 'P', the compressed air is directly offered to the solenoid valve mounted on the probe flange.*

Electrical connections:

- 3 x PG 9 cable glands
- 2 x PG 13.5 cable glands

Digital Inlets:

- 3 x selectable DI
- ON: 0 V (10 mA max) / OFF: 5 V
- Selectable functions:
 - Signal hold
 - Min & max values reset
 - Stop sensor heater
 - Back-purge (option)
 - Start calibration
 - Stop calibration
 - Switch range

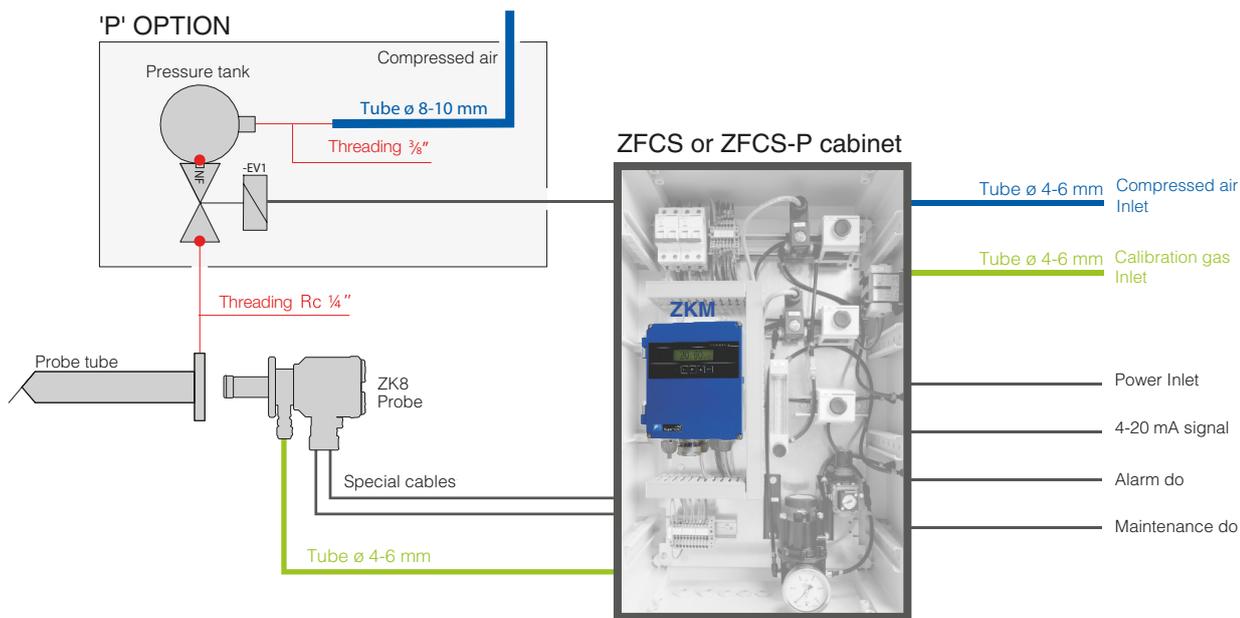
Digital Outlets:

- 6 DO: 250 VAC / 3A or 30 VDC / 3A
- DO functions:
 - Maintenance under process
 - Back-purge under process
 - Span calibration gas
 - Zero calibration gas
 - Analyser fault
 - Alarm
 - Range identification

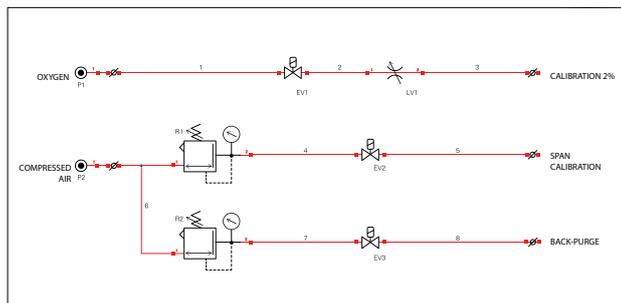
ANALYSER TECHNICAL SPECIFICATIONS

See ZKM/ZFK8 oxygen analyser datasheet.

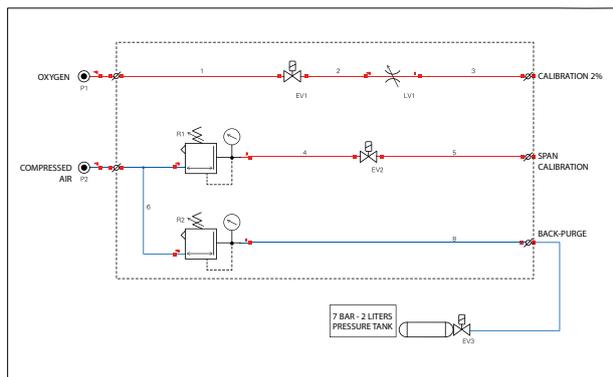
Connections drawing



ZFCS cabinet



ZFCS-P cabinet



CONTENT

ZFCS cabinet:

- 1x ZKMA controller (note*)
- 1x polyester cabinet
- 1x pressure reducer with filter G1/4 0-8bar
- 1x pressure reducer for calibration gas
- 3x stainless steel solenoid valves
- 3x press buttons

ZFCS-P cabinet:

- 1x ZKMA controller (note*)
- 1x polyester cabinet
- 1x pressure reducer with filter G1/4 0-8bar
- 1x pressure reducer for calibration gas
- 2x stainless steel solenoid valves
- 3x press buttons

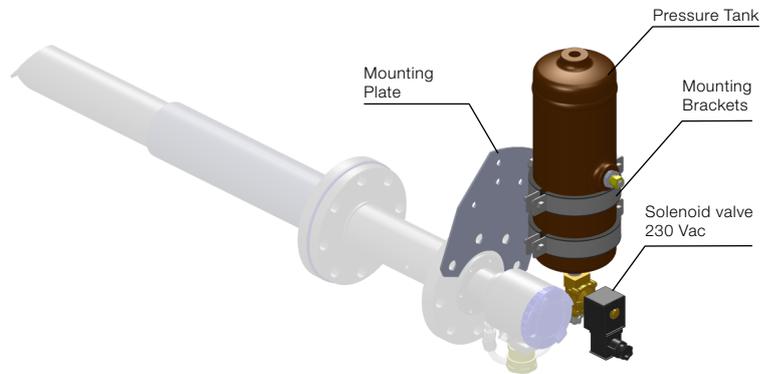
Supplied out of the ZFCS-P cabinet:

- 1x 2L pressure tank
- 1x stainless steel solenoid valve
- 1x flange mounting plate

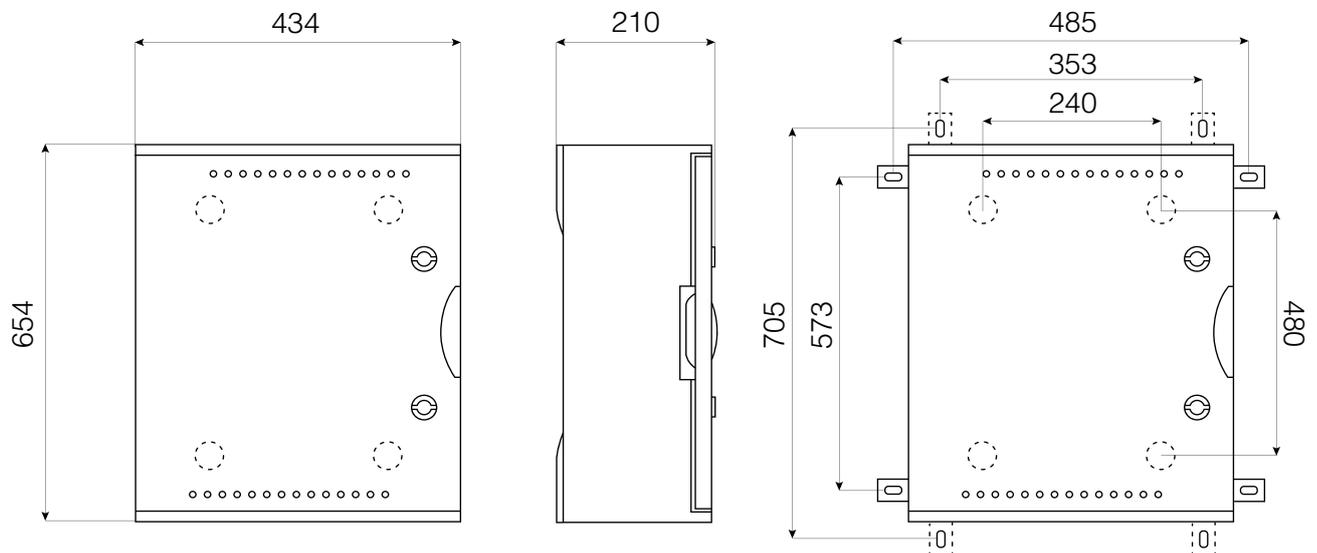
Note* :

The ZFCS price does not include the ZKM controller, the ZFK8 probe, the probe tube, or the connection cables. These items may be purchased separately. The ZKM should be equipped with the automatic calibration and back-purge options.

Backpurge valve and pressure tank



Dimensions drawing (mm)



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