

FC PLUS - FC BASICOM

FC BASIC enhanced with two new controllers: FC PLUS and FC BASICOM



FC PLUS



FC BASICOM

General Description

Climate Controls Europe is pleased to introduce two new controllers that will further enhance, along with KLR-E and FC Basic, the range of products for Fan Coils.

- **FC PLUS** is an electronic controller that enhances the level and quality of the Air Conditioning solutions for Fan Coils offered by the consolidated FC Basic line. Easiness of installation and use, reduced power consumption and state-of-the-art electronic technology, specifically designed to offer the highest levels of comfort, are the main benefits of this family of controllers. FC Plus enables to automatically control 1 or 2 valves, the three fan speeds on the basis of the deviation between ambient temperature and the configured set-point. The controller can also be easily customized according to specific needs thanks to its 5 dip-switches, offering users a single solution for several requirements (stock reduction).

- **FC BASICOM** offers an additional advantage, as it can be connected to a Modbus network (by means of an external converter module) in order to centrally manage medium-small systems like those installed in hotels and offices.

Typical applications of FC PLUS and FC BASICOM

Domestic / residential, small commercial areas like offices, hospitals and hotels that require the possibility of integrating all controllers in a centralized management system in order to be able to implement energy saving and remote management for ceiling, wall and/or floor Fan Coil units.

These devices are specifically able to control 2-pipe systems, with or without electric heaters (provided that the dip-switches are correctly configured on the unit) and 4-pipe Fan Coil units.

FC Plus and Basicom, with its autofan feature, provide an excellent and energy efficient control of comfort, thanks to their solid state relays, fare less noisy than traditional models.

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User Interface

The two new models use the same interface, are designed to be installed vertically on the OEMs equipment and come with two 4-position sliders.

Which are the advantages offered by FC PLUS and FC BASICOM?

Strong Flexibility: the two controllers are conceived to easily meet our customers' requirements:

• Easily Adaptable to Every Application

Manufacturers needs may vary according to applications. Our controllers can be easily adapted to specific installations, from the most basic ones to aesthetic customization and more specific functional ones.

• Stock Reduction Optimization for Distributors and large retailers;

The stocking of material is extremely expensive. And this is why we have decided to reduce the number of variants through the introduction of new models suited to be adapted to all possible applications. The use of the 5 DIP-switches, installed on all models, enables to configure several systems (changing their functions), also after cabling the unit (**see dip switch table**).

• No Risks to Damage the Electronics

Easiness of installation, thanks to the specific assembly design, are the main benefits of the FC Plus and Basicom family for our **Installers**. The user interface with the electronics is connected with a simple click, after the anchoring and cabling of the base that contains all the connectors.

• Addressing the End Users' Needs

Electronic technology to offer a comfortable and accurate adjustment of ambient temperature. The Periodic Ventilation function circulates the air in the room and cools the remote air sensor. The Hot Start function, used in winter, prevents cold air from entering the room by controlling the temperature of the heat exchanger.

• Easiness of use: the user interface is intuitive and "user friendly".

- **Noiseless:** thanks to the replacement of traditional relays with solid state relays.
- **Energy saving:** thanks to models that include an economy input or a window contact (the controller enters the stand-by mode as soon as a window is opened), and the unit's operating logic.

• Communication Ready

FC BASICOM offers **Hotels** owners the possibility of integrating the whole system into a network and of monitoring the units installed in each room. Two-pegs are mounted, as for previous FC Basic, under the dial knob to allow the set point to be limited or blocked.

Features and technical data of FC PLUS and FC BASICOM

User Interface

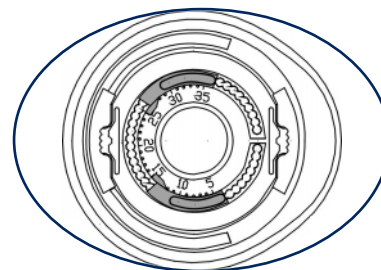
Knob

Set point range:

a) FC PLUS from 5° to 35°C with stop click $\pm 0.5^\circ$;

b) FC BASICOM + and – configurable by means of parameters

• 2 pegs to limit the set point range or block it on a specific value:



Sliders

- 1 Fan speed slider: High/Medium/Low/Auto
- 1 Operating Mode slider for mode selection: OFF/Heating/Cooling/Auto

LEDs

- Heating LED (red)
- Cooling LED (green)
- Cooling or Heating demand LED (yellow)



Dip Switch table

DIP #	Description	ON	OFF
1	Type of installation	Ceiling mounted	Floor mounted
2	Ventilation	Continuous (1)	On demand (2)
3	Thermostation	On valve	On fan
4 and 5	Type of plant		
	• 2 pipes without Electric Heaters	-	4,5
	• 2 pipes with E.H. for integration mode	4,5	-
	• 2 pipes with E.H. for regulation mode	5	4
	• 4 pipes	4	5

(1) no Hot Start and Too Cool

(2) on demand in heating mode and continuous in cooling mode

Inputs

- Internal sensor for ambient temperature (on all models)
- Remote sensor for air temperature: it disables the internal sensor as soon as the related input is connected. If this is not present, the unit switches on wall-mounted installation mode.
- Remote water temperature sensor. It enables the Hot Start and Too Cool functions.
- 24V~ input (only on specific models), usable as Window Contact or as Economy input.

Outputs

according to the configuration of dip-switches:

- 2-pipe Systems : Heating/Cooling valve, management of the three fan speeds
- 2-pipe Systems with electric heaters: Cooling valve, electric heaters, management of the three fan speeds
- 4-pipe Systems: Cooling valve, Heating valve, management of the three fan speeds

Functions

- **Fan speed:** possibility to select the manual or automatic mode.
- **Automatic change over:** automatically selects the operating mode according to the ambient temperature.
- **Electric Heaters:** controls an auxiliary electric heaters in the winter mode (systems with 2-pipe and Electric Heaters).
- **Input configured as Economy:** if enabled, it fixes the heating set point to 12°C and the cooling set point to 28°C.
- **Input configured as Window Contact:** the controller enters the standby mode when a window is opened.
- **Hot Start:** the fan starts only if the temperature of water is sufficiently high in heating mode (a water probe is mandatory).

• **Too Cool:** the fan starts only if the temperature of water is sufficiently low in cooling mode (a water probe is mandatory).

• **Periodic ventilation:** this function is enabled for on-board installations and enables the temperature sensor to measure the air temperature more accurately.

• **Post Ventilation:** this function is enabled if electric heaters are present and enables the heat of the resistance to be dissipated after its disabling.

• **Standard configuration:** all models come with 5 DIP switches that enable the user to configure the system according to specific needs.

Technical data

- Power supply: 230V~ 50/60Hz;
- 230V output: 0.5 A max for valve outputs and 1 A max for fan outputs;
- Insulation class: II;
- Protection class: IP30;
- Analog inputs: 1 (+1) NTC probes:
 - Remote air probe (optional);
 - Remote water probe (optional);
- Sizes: 80x120x40 mm;
- Mounting: on walls and on machine board (floor or ceiling Fan Coil installation);
- Color of enclosure: white;
- Connections: screw terminal board for wires with a maximum diameter of 2.5 mm²;
- Ambient temperature: 0...55 °C;
- Storage temperature: -20...85 °C;
- CE Compliant, LV-EMC directives.

Description of product codes

This table provides information on the meaning of model codes.

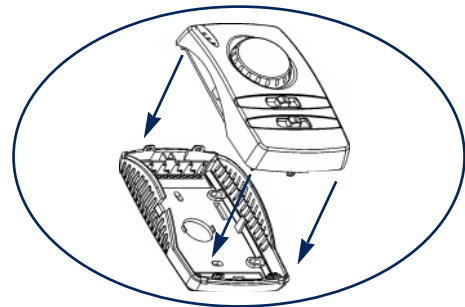
Digit #	Code	Description
Model	FP	Fan coil PLUS
	FC	Fan coil BASICOM
1st	U	Universal model, selectable 2- or 4-pipe Fan Coil Systems (Dip Switch)
2nd	3	2 sliders: Off / Heating / Cooling / Automatic & Low / Medium / High / Automatic Ventilation
3rd	2	Electric Heater presence selectable (Dip Switch)
4th	0	No 24Vac input
	E	Economy function available
	W	Window Contact function available
5th	/B	Basic model – without remote sensors (only for FP family)
	/S	Model with possibility to connect remote water and air sensors

How to order FC PLUS and FC BASICOM

The section below provides information on the models available along with the codes of the single articles.

Model	Part Number
FP U320/B	FP 10B 0 00 02 00
FP U320/S	FP 10S 0 00 02 00
FP U32E/B	FP 1EB 0 00 02 00
FP U32E/S	FP 1ES 0 00 02 00
FP U32W/B	FP 1WB 0 00 02 00
FP U32W/S	FP 1WS 0 00 02 00
FC U32E/S	FC 1ES 0 00 02 00
FC U32W/S	FC 1WS 0 00 02 00

Mounting



Our standard lead time is 4 weeks after order confirmation.

Accessories

The table below details the accessories that can be used with FC Plus and FC BasiCom

Accessory	Part Number	Description
Remote air probe	SN8PCL1500	NTC Probe, PVC cable, reinforced insulation plastic tube, length 1,5 m, Plastic Cap 7x24,5 mm
Remote water probe	SN8PAA1500	NTC Probe, PVC cable, AISI 304 reinforced insulation metal tube, length 1,5 m, Metal Cap 6x40 mm

Eliwell & Controlli s.r.l

via dell'Industria, 15
Zona Industriale Paludi
32010 Pieve d'Alpago (BL)
ITALY

Telephone +39 0437 986111
Facsimile +39 0437 989066

Internet <http://www.eliwell.it>

**For more information
please contact:**

EBERLE Controls GmbH

Postfach 13 01 53 D-90113 Nürnberg
Klingenhofstraße 71 D-90411 Nürnberg

T. +49 (0)911 5693 0 F. +49 (0)911 56 93 536

E-Mail: info.eberle@invensys.com
Internet <http://www.eberle-controls.de>