

# eliwell

## FC BASIC

### Fan Coil electronic controllers for 2-pipes, 4-pipes and universal systems



#### Description

**FC BASIC** is the best answer to systems requiring functionality, low costs and technological innovation in one control unit.

Its modern, ergonomic design combined with its unique electronic features make the **FC BASIC** an innovative product, capable of providing an unparalleled room comfort. For a distributor or wholesaler the universal models will allow him to carry one model that covers the whole range of Fan coil applications, thus limiting his inventory and SKU number. For the installer, the benefit of the **FC BASIC** is the ease of installation and the limited risk of damaging the controller during installation.

**FC BASIC** provides the end user the required comfort and significant cuts on his energy bills thanks to 2 energy saving functions.

#### Main characteristics

- Easy to use and install;
- Less risk of damaging electronics;
- Maximum focus on comfort and energy savings;
- 3 Fan Speed (Min/Med/Max);
- Functions:
  - Hot Start;
  - Periodic Ventilation;
  - Set point limits;
- Economy input ("E" models) or Economy function available on terminals ("N" models) ;
- Window Contact;
- Range control using special pegs;
- "built-in" air probe (always present);
- Remote air/water probe (optional accessory);
- Operating and probe alarm LEDs;
- Attention to specific requirements:
  - Manufacturers: adaptable to specific requirements;
  - Distributors: universality reduces stock-holding requirements;
  - Installers: easy to install and less risk of damaging electronics,
  - End-user: simple and intuitive to give maximum comfort and accuracy with a focus on saving energy,

#### Models

Several models are available covering a wide range of applications and installations.

	210/L - 220/W - 220/R 2 pipes	 2 pipes	 SAPE	 SWT	 230 volt		
	210/L - 220/W - 220/R 2 pipes + electrical heaters	 2 pipes	 SAPE	 SWT	 electrical heaters	 230 volt	
	420/L - 420/W - 420/R 4 pipes	 2 pipes	 4 pipes	 SAPE	 SWT	 230 volt	
	U12/L - U22/W - U22/R Universal models	 2 pipes	 4 pipes	 SAPE	 SWT	 electrical heaters	 230 volt
	Economy function	available, on demand, on all models: <ul style="list-style-type: none"> <li>• Economy input ("E" models)</li> <li>• Economy function available on terminals ("N" models);</li> </ul>					



Characteristics	2 PIPES			2 PIPES + ELECTRIC HEATERS			4 PIPES			UNIVERSAL MODELS		
	Model	210/L	220/W	220/R	211/L	221/W	222/R	410/L	420/W	420/R	U12/L	U22/W
<b>Part Number</b>	FB10L0000500	FB30W0000500	FB30R0000500	FB20L0000500	FB40W0000500	FB40R0000500	FB50L0000500	FB60W0000500	FB60R0000500	FB70L0000500	FB80W0000500	FB80R0000500
<b>Application</b>												
2-pipes	*	*	*									
2-pipes + electric heaters				*	*	*						
4-pipes							*	*	*			
UNIVERSAL MODELS										*	*	*
<b>Outputs</b>												
Heat or cool valve	*	*	*	*	*	*				*	*	*
Electric heaters				*	*	*				*	*	*
Heat <b>and</b> cool valve							*	*	*	*	*	*
Fan speed	3	3	3	3	3	3	3	3	3	3	3	3
<b>Inputs</b>												
Remote air sensor (not supplied)	*	*	*	*	*	*	*	*	*	*	*	*
Remote water sensor (not supplied)	*	*		*	*		*	*		*	*	
Window Contact (/W)	*	*		*	*		*	*		*	*	
Remote Heat/Cool input			*			*			*			*
<b>Switches</b>												
ON/OFF		*	*		*	*		*	*		*	*
Heat/Off/Cool	*			*			*			*		
<b>Functions</b>												
Auto changeover		*			*			*			*	
Manual changeover	*		*	*		*	*		*	*		*
Antifrost - depending on model	*	*		*	*		*	*		*	*	
Hot start (temperature)	*	*		*	*		*	*		*	*	

## Characteristics common to all models

### Inputs

3 Fan Speed (Min/Med/Max)

### Functions

Hot Start (/R models - timer only)

LED LED (Heat/Cool/On)

Periodic ventilation

ECONOMY switch (/E)\*

Set point limits

ECONOMY function (/N)\*\*

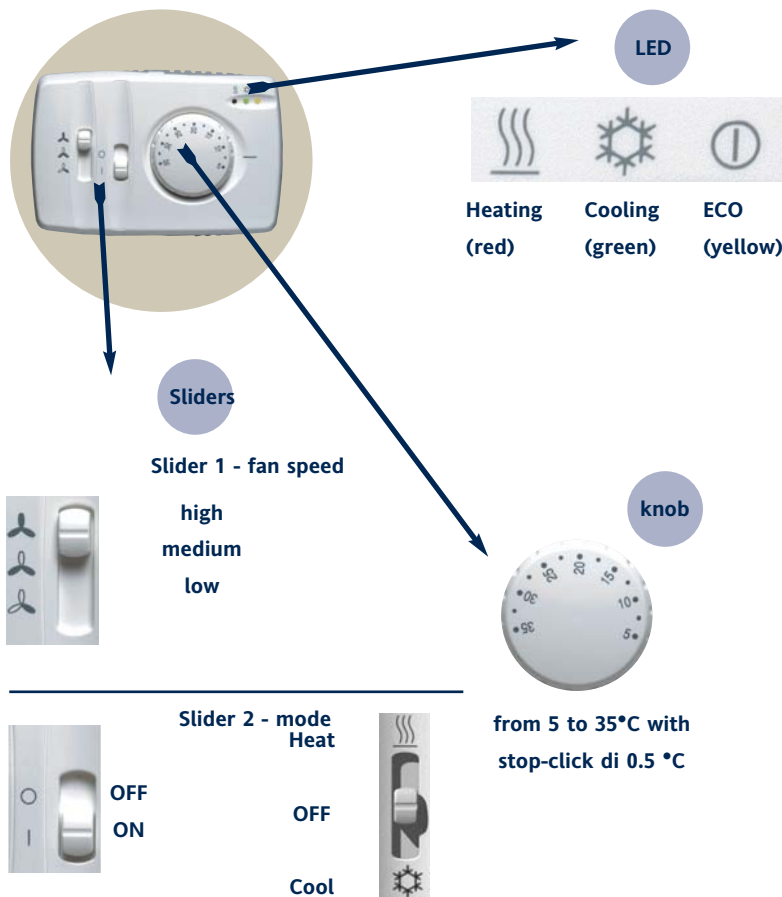
\*All models can be supplied with the economy switch, the 4th digit of the article number would change from "0" to "E".

\*\*All models can be supplied with the economy function available on terminals, the 4th digit of the article number would change from "0" to "N".

## Description of product codes

Nr.	Code	Description
Model	FC	FC BASIC
1st	2 - 4 - U	2-pipe only - 4-pipe only - Universal model, selectable 2- or 4-pipe fan coil system
2nd	1 - 2	Mode slider switch Heating/Off/Cooling - Mode slider switch On/Off
3rd	0 - 1 - 2	Electric heater not present - present - presence selectable
4th	0 - E - N	Economy switch present on top of controller ("E") - Economy function available on terminals ("N")
5th	/L	Local Heating/Cooling mode selection (local slider switch)
	/R	Remote Heating/Cooling mode selection (external switch)
	/W	Water sensor use requested

## User Interface



## Technical Data

- Power supply: 230V~ 50/60Hz
- Electrical data for 230V output: 0.5 A max for valve outputs and 1 A max for fan outputs
- Insulation class: II
- Protection class: IP30
- Analogue inputs: 1 (+1) NTC 103 AT-2 probes
  - air probe\* (always present), or
  - remote air probe\* (optional);
  - remote water probe (optional);
- \* selectable via dip-switch
- Outputs: 3 relay outputs
- Unit dimensions: 80x120x40 mm
- Mounting: wall-mounted, device-mounted (floor or ceiling)
- Colour of casing:
  - Front: white;
  - Base unit: white.
- Connections: screw terminal block
  - for wires 2.5 mm<sup>2</sup> - rigid cable -
  - for wires 1.5 mm<sup>2</sup> - flexible cable -
- Ambient temp.: 0...55 °C
- Storage temp.: -20...85 °C
- Compliance: CE LV-EMC compliant

## Dip Switch Table - Universal Models (6 dip) & Specific Models (4 dip)

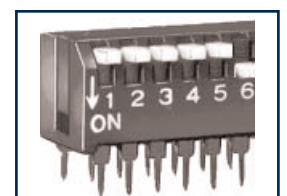
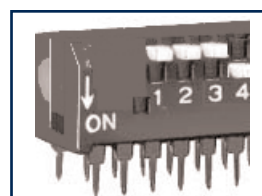
DIP Nr.	Description	ON	OFF
6	Air probe used*	local	remote
5	Fan in cooling status	on demand	always ON
4	Neutral Zone value	5°C	2°C
	Hysteresis value	2°C	1°C
3	Electric heater control	regulation	integration
	Hot Start	0 (time)	enabled
2	2-pipes / 4-pipes	4-pipes	2-pipes
1	Electric heater presence	yes	no

DIP Nr.	Description	ON	OFF
4	Air probe used*	local	remote
3	Fan in cooling status	on demand	always ON
2	Neutral Zone value	5°C	2°C
	Hysteresis value	2°C	1°C
1	Electric heater control	regulation	integration
	Hot Start	0 (time)	enabled

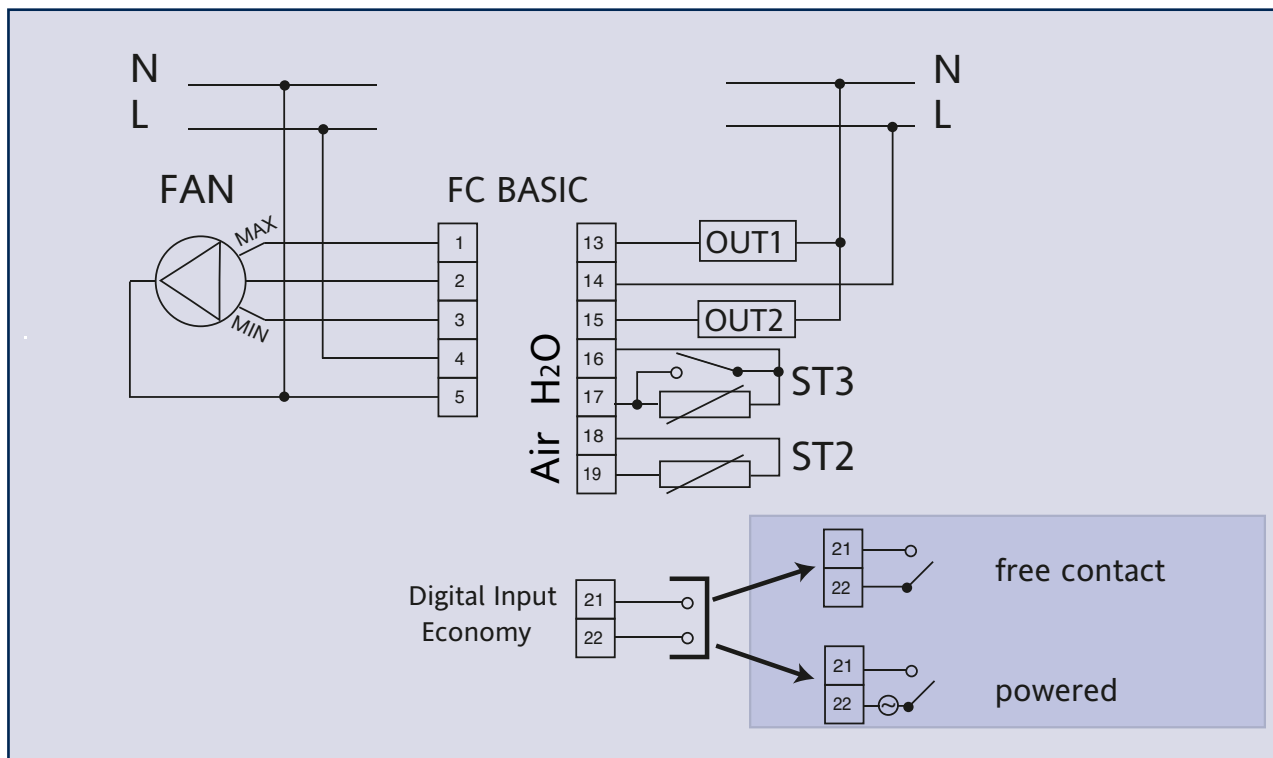
\* internal sensor (local) always present, device-mounted, enabled with

- DIP6=ON (Universal Models)
- DIP4=ON (Specific Models)

Dip Switch



## Wiring diagram



## Legend

<b>Air</b>	remote air probe	<b>Window Contact</b>	Window Contact
<b>H<sub>2</sub>O</b>	remote water probe	<b>Economy</b>	Economy
1	High speed	OUT1	see table below
2	Med.Speed	OUT2	see table below
3	Low Speed		
4	L Phase Line		
5	N Neutral		
13-15	Relay Outputs	<b>2-pipe only</b>	<b>4-pipe</b>
16-17	Water Sensor Heat/Cool/ Window contact	OUT 1 not used	OUT 1 cooling valve
18-19	Air sensor	OUT 2 heating/cooling valve	OUT 2 heating valve
21-22	ECONOMY function free contact or under voltage depending on model	<b>2-pipe with electric heater</b>	
		OUT 1 electric heater	
		OUT 2 heating/cooling valve	

## Accessories

### PROBES



#### Remote water probe

SN8PAA1500 NTC probe, PVC cable, plastic resin AISI 304 tube with reinforced insulation (metal) 1.5 m long metal cover 6X40



#### Remote air probe

SN8PCL1500 NTC probe with plastic resin tube with reinforced insulation 6X40 PVC cable 1.5 m long; plastic cover 7X24.5

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