

# FC PLUS

## Electronic universal controllers for fan coils



### Description

FCPLUS is a family of universal thermostats designed to control valves with on-off actuators, any electrical heaters and the three fan speeds.

Once the unit has been set correctly,

FCPLUS can be used to control the following fan coil units:

- 2 pipes;
- 2 pipes with electric heaters;
- 4 pipes.

Typical applications are:

- Household;
- Residential;
- Small commercial areas (offices, hospitals, hotels).

#### Installations:

- independent wall thermostat;
- ceiling-mounted installations;
- floor-mounted fan coil installations;







in all cases, automatic control of the three fan speeds based on the offset between the ambient temperature and the set point is possible.

#### Main characteristics:

- One range that is now even more comprehensive with a simple modern design;
- One controller for a variety of system requirements;
- Easy to use and install;
- Less risk of damaging electronics;
- Maximum focus on comfort and energy savings;
- Functions:
  - Hot Start and Too Cool;
  - Post Ventilation and Periodic Ventilation,
- Economy input or Window Contact,
- Automatic fan speed,
- Low noise level with solid state technology (TRIAC);
- Range control using special pegs;
- Remote air probe (optional accessory);
- Vertically installed for easier on board-installation;
- 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

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

	<b>FP U320/B - FP U120/B</b> The ideal model for wall-mounting; automatically controlled fan speed
	<b>FP U32E/B - FP U12E/B</b> Basic model with economy input
	<b>FP U32W/B - FP U12W/B</b> Basic model with window contact (Window Contact)
	<b>FP U320/S - FP U120/S</b> Universal model with remote probe inputs
	<b>FP U32E/S - FP U12E/S</b> Universal model with economy input + remote probe inputs
	<b>FP U32W/S - FP U12W/S</b> Universal model with window contact + remote probe inputs

#### 'Manual Mode Selection' 4 positions



#### 'Auto Selection' 2 positions



Characteristics	'Manual Selection' OFF/Heat/Cool/AUTO			'Manual Selection' OFF/Heat/Cool/AUTO			'Auto Selection' ON/OFF			'Auto Selection' ON/OFF		
	Model FP U	320/B	32E/B	32W/B	320/B	32E/B	32W/B	120/S	12E/S	12W/S	120/S	12E/S
Part Number	FP10B0000500	FP1EB0#00500	FP1WB0#00500	FP10B0000500	FP1EB0#00500	FP1WB0#00500	FP10S0020500	FP1ES0#20500	FP1WS0#20500	FP10S0020500	FP1ES0#20500	FP1WS0#20500
X = not significant - Digital Input not present # = Digital Input powered or voltage-free, N.O. or N.C.												
<b>Application</b>												
2 pipes	*	*	*	*	*	*	*	*	*	*	*	*
2 pipes with integrated electric heaters	*	*	*	*	*	*	*	*	*	*	*	*
2 pipes with regulated electric heaters	*	*	*	*	*	*	*	*	*	*	*	*
4 pipes	*	*	*	*	*	*	*	*	*	*	*	*
<b>Installation</b>												
Wall-mounted	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Device-mounted — ceiling	*	*	*	*	*	*	*	*	*	*	*	*
Device-mounted - floor	*	*	*	*	*	*	*	*	*	*	*	*
<b>Inputs/Outputs</b>												
Digital Inputs	-	1	1	-	1	1	-	1	1	-	1	1
Air probe	1	1	1	1	1	1	1	1	1	1	1	1
Remote air probe (not supplied)	-	-	-	-	-	-	1	1	1	1	1	1
Remote water probe (not supplied)	1	1	1	1	1	1	1	1	1	1	1	1
Triac output 230V~ FANS <b>1 A max.</b>	3	3	3	3	3	3	3	3	3	3	3	3
Triac output 230V~ VALVE <b>0.5 A max.</b>	2	2	2	2	2	2	2	2	2	2	2	2
LEDs	3	3	3	3	3	3	3	3	3	3	3	3
<b>Functions</b>												
Hot Start	-	-	-	-	-	-	**	**	**	**	**	**
Too Cool	-	-	-	-	-	-	**	**	**	**	**	**
Economy Input	-	•	-	-	•	-	-	•	-	-	•	-
Window Contact	-	-	•	-	-	•	-	-	•	-	-	•
Operating/probe alarm LEDs	•	•	•	•	•	•	•	•	•	•	•	•

• compatible

\* dip-switch selectable

\*\* only if remote water probe is present

(\*) system configuration (wall-mounted) automatically identified if the remote air probe is not installed

## Characteristics common to all models

### Functions

Automatic change-over

Periodic Ventilation

Control of set point

Post Ventilation

Automatic speeds

Regulation of valves/fans

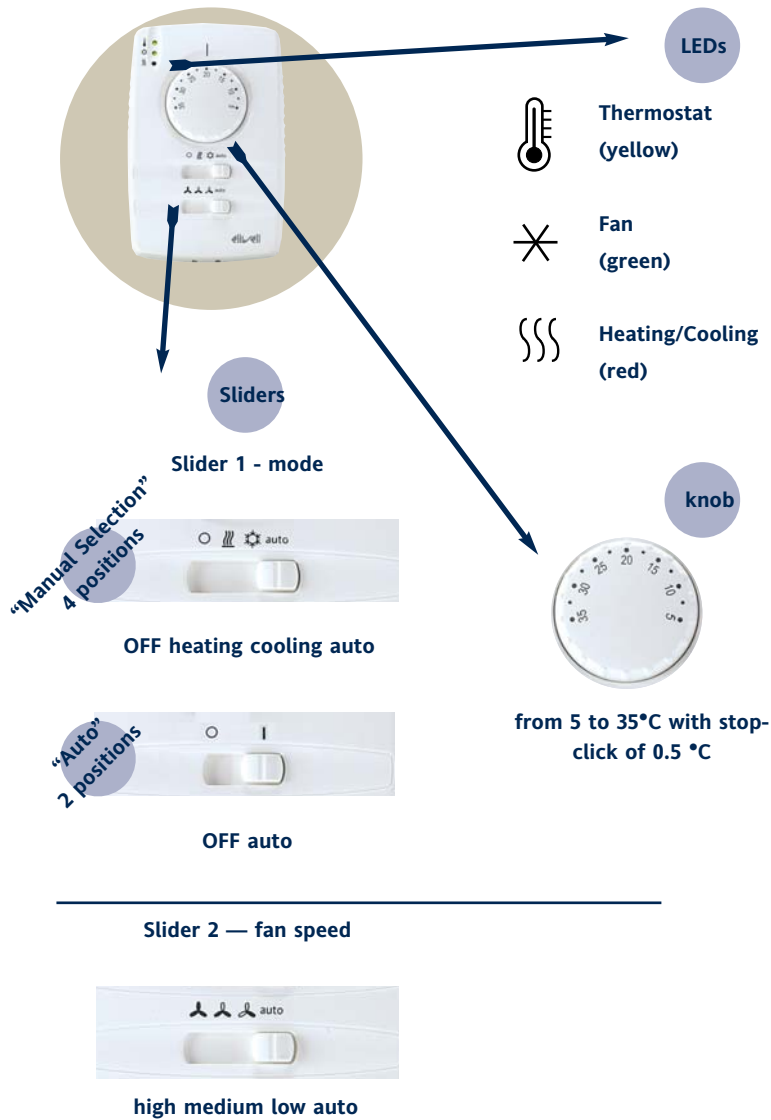
Number  
Model

Code  
FP

Description  
Fan Coil PLUS

1st	U	Universal model, fan coil system with 2 or 4 pipes selectable (with dip-switch)
2nd	3	• slider 1 (mode) : Off / Heating / Cooling / Automatic
	1	• slider 2 (mode) : ON/OFF
3rd	2	Heating Mode (electric heaters) present selectable (with dip-Switch)
4th	0	No voltage input
	E	Economy input present
5th	W	Window Contact input present
	/B	Basic Model — without remote probes
	/S	Model with remote water and air probe inputs

## User interface



## Technical Data

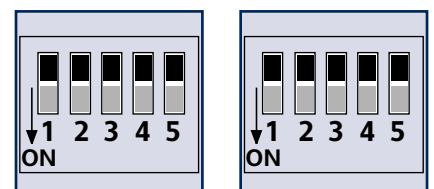
- Power supply: 230V~ 50/60Hz
- Electrical data for 230V output: 0.5 A max for valve outputs and 1 A max for fan outputs
- Insulation class: II
- Protection class: IP30
- Analogue inputs: 1 (+1) NTC probes
  - remote air probe (optional); cover 4.7 X 27 mm; plastic resin tube; length of cable: 1.5 m
  - remote water probe (optional); cover 6 X 23 mm; plastic resin tube; length of cable: 2 m
- 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 with 2.5 mm maximum diameter<sup>2</sup>
- Ambient temp.: 0...55 °C
- Storage temp.: -20...85 °C
- Compliance: CE LV-EMC compliant

## Dip Switch Table

DIP NUMBER	Description	ON	OFF
1	Type of installation	ceiling-mounted	floor-mounted
2	Fan	continuous (1)	on request (2)
3	Thermostat control	on valve	on fan
4 and 5	Type of unit		
	•2 pipes without electric heaters	-	4,5
	•2 pipes with integrated electric heaters	4,5	-
	•2 pipes with regulated electric heaters	5	4
	•4 pipes	4	5

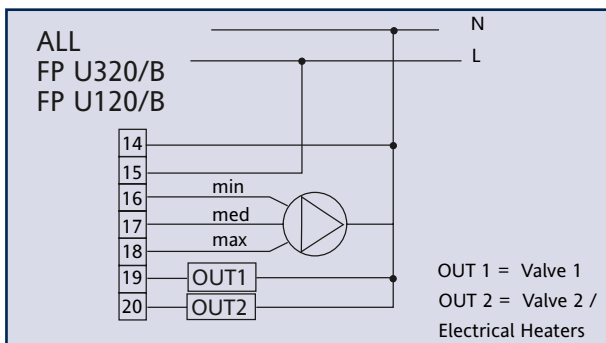
- (1) no Hot Start and Too Cool.  
 (2) on request in heating mode;  
 continuous in cooling mode.

Dip Switch

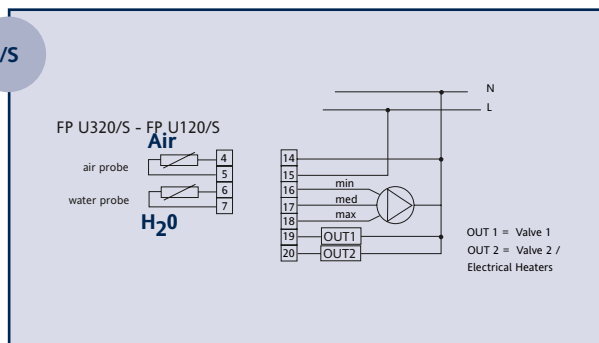


# Wiring diagram

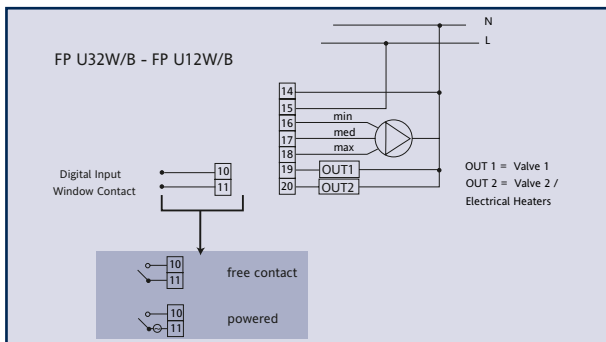
ALL



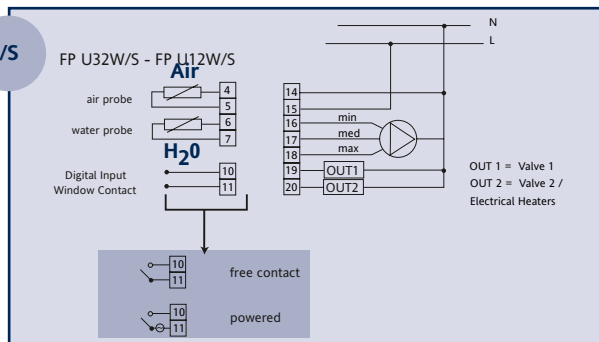
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WINDOW CONTACT

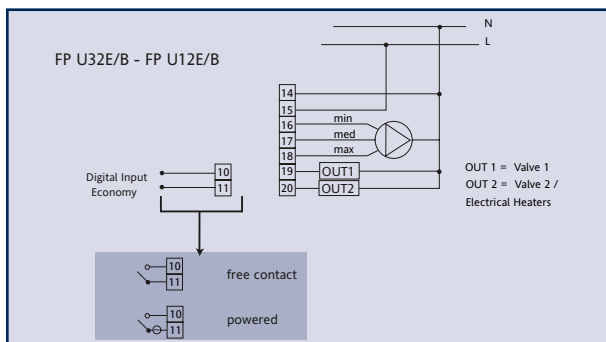


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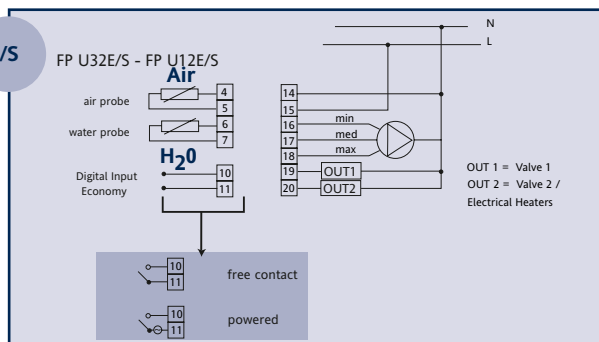


WINDOW CONTACT

ECONOMY



/S



ECONOMY

## Legend

Air  
H<sub>2</sub>O

remote air probe  
remote water probe

Window Contact  
Economy

Economy

E Economy

/S with probe(s)

NOTE FP320/B has no inputs

W Window Contact

OUT1 Valve 1  
OUT2 Valve 2/Electrical Heaters  
Digital Input - if present (Free contact / Powered):  
depending on model

## 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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