

# EBERLE

# FC BASICOM



## Electronic Universal controllers for fan coils

### Description

**FC BASICOM** is a family of universal thermostats designed for use in a network with Modbus protocol (using an external converter module) to implement a centralized control system in medium/small systems such as hotels and offices.

**FC BASICOM** controls valves with on-off actuators, any electric heaters and the three fan speeds.

Once the unit has been set correctly, **FC BASICOM** 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) for centralized control of small systems.

#### 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 energy saving.

### Models and Connectivity

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



#### FC U32E/S

Universal model with economy input that moves the set points to 14 °C during winter operation and 28 °C during summer operation if enabled



#### FC U32W/S

Universal model with window contact: when enabled it puts the controller on stand-by as long as the window stays open.



#### BUSAdapter350

TTL - RS-485 serial interface on DIN rail for connecting FCBASICOM and an RS-485 network designed for connection to ModBUS supervision system.



#### Interface RS-232/RS-485

RS-232/RS-485 serial interface for connecting a PC and a series of instruments in an RS-485 network.



## Characteristics

ModBUS protocol

Model	FC U32E/S	FC U32W/S
Part Number	FC1EB000201	FC1ES000201
<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
Air probe	1	1
Remote air probe (not supplied)	-	-
Remote water probe (not supplied)	-	-
Triac output 230V~ FANS	3 (1 A max)	3 (1 A max)
Triac output 230V~ VALVE	2 (0.5 A max)	2 (0.5 A max)
LEDs	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

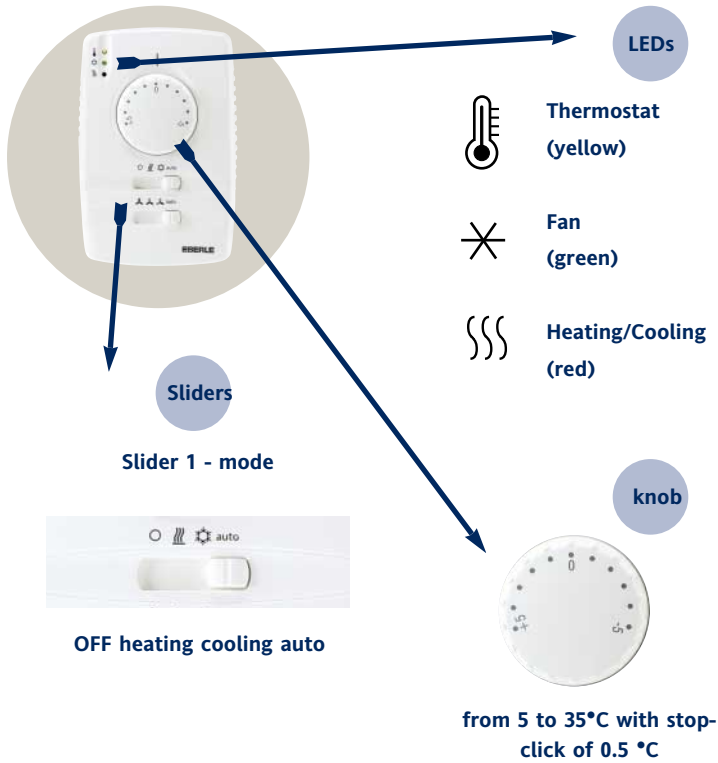
## Characteristics common to all models

### Functions

manual change-over	Automatic speeds
automatic change-over	Control of set point
Post Ventilation	Regulation of valves/fans
Periodic Ventilation	

Number Model	Code FC	Description
		Fan Coil BASICOM
1°	U	Universal model, fan coil system with 2 or 4 pipes selectable (with dip-switch)
2°	3	2 slide switches: Off / Heating / Cooling / Automatic & Ventilation Low / Medium / High / Automatic
3°	2	Heating Mode (electric heaters) present selectable (with dip-Switch)
4°	E	Economy input present
	W	Window Contact input present
5°	/S	Model with remote water and air probe inputs

## User interface



Slider 2 — fan speed



## Technical Data

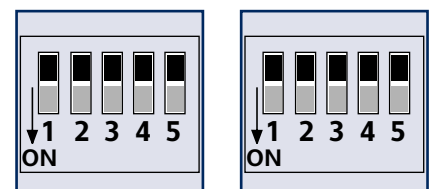
- Power supply: 230V~ 50/60Hz
- Electrical data for 230V output: 0.5 A max for valve outputs and 1 A max for fan outputs
- Insulation class: II
- Protection class: IP30
- Analogue inputs: 1 (+1) NTC probes
  - remote air probe (optional); cover 4.7 X 27 mm; plastic resin tube; length of cable: 1.5 m
  - remote water probe (optional); cover 6 X 23 mm; plastic resin tube; length of cable: 2 m
- Serial: TTL for connection (via BusAdapter350\*) to ModBUS network
- \*NOTE: Only use BusAdppter350 for connection in RS-485 network**
- 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

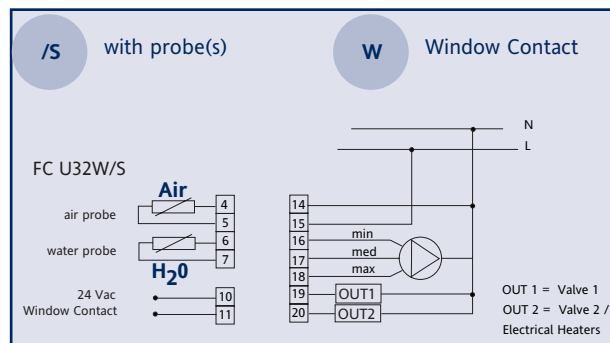
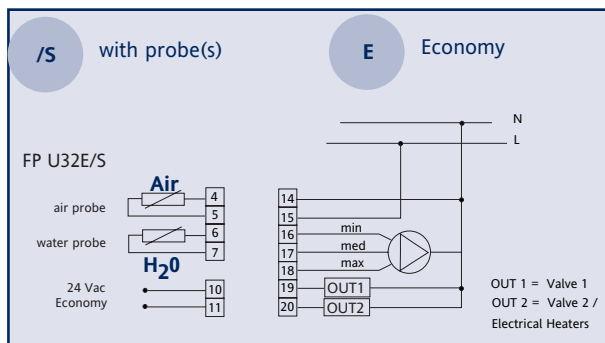
DIP NUMBER	Description	ON	OFF
1	Type of installation	ceiling-mounted	floor-mounted
2	Fan	continuous (1)	on request (2)
3	Thermostat control	on valve	on fan
4 and 5	Type of unit		
	•2 pipes without electric heaters	-	4,5
	•2 pipes with integrated electric heaters	4,5	-
	•2 pipes with regulated electric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



## Legend

Air	air probe (remote)
H <sub>2</sub> O	water probe (remote)
24 Vac	Power supply 24V
Window Contact	window contact
Economy	Economy
OUT1 Valve 1	Valve 1
OUT2 Valve 2	Valve 2/Electric Heaters

## Accessories

### PROBES



#### Remote water probe

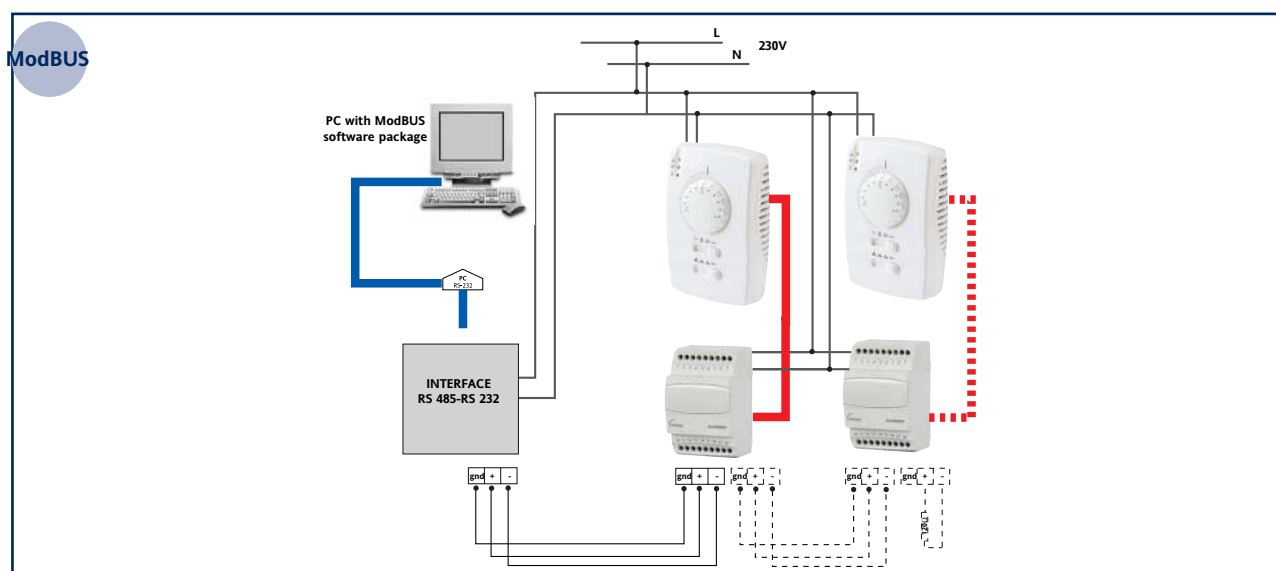
SN8PAA1500 NTC probe, PVC cable, plastic resin AISI 304 tube with reinforced insulation (metal) 1.5 m long metal cover 6X40



#### Remote air probe

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

## Connectivity



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### BUSAdapter350

TTL - RS-485 serial interface on DIN rail.

**NOTE: ONLY use BUSAdapter 350 series**



### Interface RS-232/RS-485

RS-232/RS-485 serial interface.