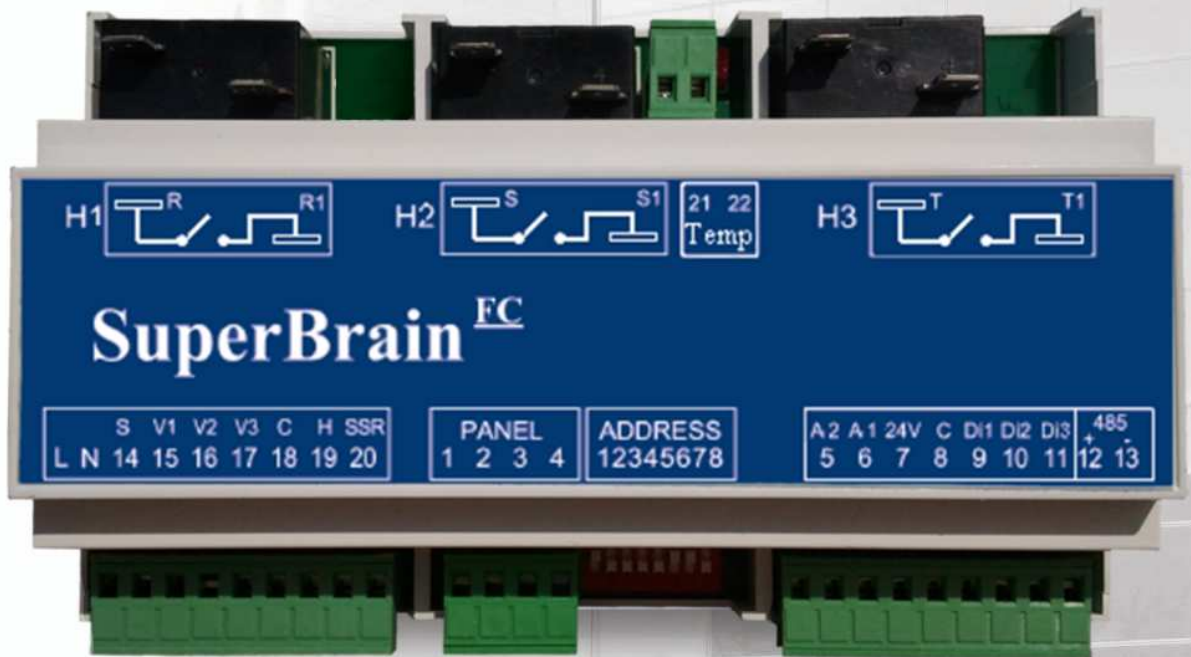


SuperBrain^{FC}

Micro Controller



SuperBrain FC

Micro Controller

General:

The SuperBrain FC (SB) controller is a programmable micro controller specifically designed for controlling air conditioning units, fan & coil and large capacity fan & coil units.

The SuperBrain FC controller is the optimal solution for air conditioning units that include heating elements, cooling valves and VAV systems.

Features:

- Power supply 230VAC.
- 3 Speed fan velocities.
- Time operation control (stand alone).
- Heating and cooling solenoid control.
- Input for no flow/temperature protector.
- Time proportional control using Solid State Relay (SSR).
- Input for fire/smoke detector.
- Communication RS485.

Options:

- Modulation control for heating and cooling valves.
- Operating up to 3 heating elements with 20A relays each.
- Selectable on/off OR start/stop fan operation.
- Selectable summer/winter OR automatic heating/cooling operation.

Modulating Control

The SB controller includes modulating PID control algorithms (0-10VDC) for controlling heating and cooling valves and motorized dampers. The SB uses an accurate PID algorithms that maintains an accurate set points.

Solenoid Valves Control

The controller includes thermostat control algorithms for heating and cooling solenoid valves. The algorithm maintains the set points that can be adjusted from the control panel.

Heating Elements Control

The controller has control algorithms enabling the operation of the heating elements in equal stages, binary stages and/or SSR control.

Fan shut-off during fire detection

The controller has a special input for a fire/smoke detector that shuts the fan off in case of fire.

No flow/high temperature protector

The controller has a special input that can shut off the heating elements in situations that there is no airflow and/or in a case where the high temp protector is switched "off".

Communication with BMS

The controller has a communication port with an open protocol algorithm (MODBUS, MSTP) enabling the Building Management System or other controllers to communicate with the SB controller.

Specifications:

Power requirements : 230VAC, 30VA, 50/60Hz

Dimensions (height, length, width):

Thermostat : 119, 80, 21 mm.

SB FC Power unit : 96, 158, 58 mm.

Total Weight:

Thermostat panel : 80 gr.

Power unit : 1,089 gr.

Valve actuator output : 0-10 VDC, 8mA.

Solenoid operation : 230VAC, max 150MA
: 24VAC, max 150MA

Fan relays : 3X5A (option 3X10A)

Heating element relays : 20A

SSR output : 24VAC, max 150MA

Fire/smoke sensor input : dry contact

Flow/temp. Protector Input : dry contact

Environmental operating limits : -20 - 70°C, 0-95 Rh%

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