

PWR011

Power amplifier for thermic valves



Summary

PWR011 consists of a power transformer and two solid state relays. It is used to power a fancoil controller e.g. FCR010 or radiator controller (or radiator and cooling panel controller) UC102 (UC200). The controller outputs 24 V AC PWM for heating and cooling are connected to the solid state relays which control 230 V AC thermic actuators.

Applications

- Individual room controls for rooms with more fancoils or radiators / cooling panels, controlled in a group.
- Individual room controls with thermic valves powered by 230 V AC.

Function

The transformer provides 24 V AC to power a fancoil controller so that it is not necessary to install extra 24 V AC wiring. It is used for applications where a small number of I/O modules has to be installed at a remote place or to power a single fancoil controller. The solid state relays separate and amplify the controller output PWM or binary signals to 230 V AC signals, so it is possible to use more thermic actuators at one output than may be connected directly to the output of the controller. The actuators must operate at 230 V AC.

The devices are designed for operation in normal, non-aggressive environment. They do not need maintenance and may be installed in any position. They are clamped on the DIN rail.

Technical data

Power supply	230 V AC \pm 10 %
Transformer	230 / 24 V AC
Transformer output power	10 VA
Inputs	2x DI for 24 V AC, 15 mA
Outputs	2x solid state relay, zero-switching, for AC load 230 V AC, max. switched current 3 A, constantly 250 mA. Recommended valve actuators are e.g. STA21 (Siemens), TWA (230 V types, Danfoss).

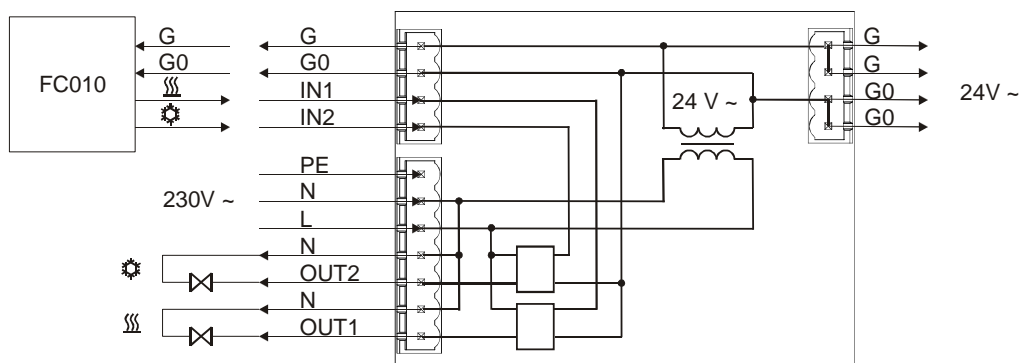
	AC1, general use, noninductive load according to EN 60947-4-1 ed. 3
Protection degree	IP20 (EN 60529)
Housing	polycarbonate box (certification UL94V0) elbox 4U
Instalation	DIN rail
Recommended wire diameter	0,14–1,5 mm ²
Mass	0,2 kg
Dimensions	71 (l, 104 with installation fixtures) x 99 (w) x 54 (h) mm
Ambient temperature	External conditions: 5 – 40°C; 5 – 85 % relative humidity; non-condensing gases and chemically non-aggressive conditions (according to EN 60721-3-3 climatic class 3K3) Storage: 5 – 40 °C; 5 – 85 % relative humidity; non-condensing gases and chemically non-aggressive conditions (according to EN 60721-3-1 climatic class 1K2)

Terminals

Svorky a konektory

OUT1	output 1, 230 V AC
OUT2	output 2, 230 V AC
N	neutral
N	neutral
L	power 230 V st
PE	protective earth
IN1	input 1 from controller, 24 V AC
IN2	input 2 from controller, 24 V AC
G0	24 V AC, common ground for power and inputs
G	24 V AC, power for the controller
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G	24 V AC, power for the controller
G	24 V AC, power for the controller

Connection



Safety note

The device is designed for monitoring and control of heating, ventilation, and air conditioning systems. It must not be used for protection of persons against health risks or death, as a safety element, or in applications where its failure could lead to physical or property damage or environmental damage. All risks related to device operation must be considered together with design, installation, and operation of the entire control system which the device is part of.

**Changes in
versions**

05/2018 – First datasheet version.
06/2018 – *Safety note* added.