



F&F Filipowski sp. j.
Konstytucyjńska 79/81 95-200 Pabianice
tel/fax +48 42 2152383; 2270971 POLAND
http://www.fif.com.pl e-mail: fif@fif.com.pl

TEMPERATURE REGULATOR
with adjustable fan speed

RT-833

WARRANTY. The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us. More information how to make a complaint can be found on the website: www.fif.com.pl/reklamacja



Do not dispose of this device to a garbage bin with other unsorted waste! In accordance with the Waste Electrical and Electronic Equipment Act any household electro-waste can be turned in free of charge and in any quantity to a collection point established for this purpose, as well as to the store in the event of purchasing new equipment (as per the old for new rule, regardless of brand). Electro-waste thrown in the garbage bin or abandoned in the bosom of nature pose a threat to the environment and human health.

Purpose

The regulator is designed for direct control of 12/24 V DC fan speed in the control panels (or similar installations) as a function of temperature.

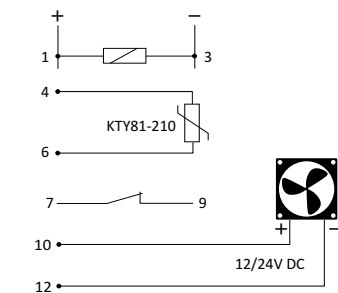
Operation

Once the temperature rises above the set point T_{min} , the fan starts, and its rotational speed will be proportional to the measured temperature and regulator settings:

- for temperature T_{min} the rotational speed will be equal to the set minimum speed.
- for temperature $T_{min} + \Delta$ the rotational speed is 100%.
- for temperature in range $T_{min} < T < T_{min} + \Delta$ rotational speed is mapped proportionally in the range from the set minimum speed up to 100%.

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Description IN/OUT



- 1-3 regulator power
- 4-6 input of the temperature probe
- 7-9 NC contact
- 10-12 fan control output

Installation

1. Disconnect the power supply.
2. Install the regulator on rail in the connection box.
3. Connect power wires: „+” to terminal 1; „-” to terminal 3.
4. Connect the temperature probe to terminals 4 and 6. Any polarity.
5. Connect the fan: „+” to terminal 10; „-” to terminal 12.
6. The power supply circuit of signalling of over-temperature and errors system, connect in series with 7-9 contacts.

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The regulator has a relay output that signals too high temperature or damage (no power) to the regulator. During normal operation, the contact 7-9 is closed. If the measured temperature is higher than the maximum value ($T_{min} + \Delta$) for a period of three minutes, the contact is switched off. If the regulator is damaged or the power is off, contacts 7-9 can be used for error signalling.

To avoid the problem with the motor stalling at low speeds, the regulator can start from the maximum speed - the fan starts from the maximum speed and then slows down to a suitable value.

Signalling

1. Green LED U – system power
2. Red LED \checkmark :
 - off – temperature below T_{min}
 - flashes (50% ON - 50% OFF) - temperatures above $T_{min} + \Delta$ but within the adjustment range.
 - on - temperature constantly (longer than three minutes) above the limit value

Setting

1. T_{min} - minimum temperature, adjustment range 25÷60°C
2. ΔT - temperature increase, adjustment range 5÷30°C
3. RS - minimum speed, range 0÷80%

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Specifications

power supply	12÷24V DC
DC load current (10-12)	<6A
alarm contact (load)	1NC separated (10A)
temperature adjustment range	
T_{min}	25÷60°C
ΔT	5÷30°C
accuracy of measurement	±1°C
start speed setting	0÷80%
temperature sensor	KTY 81-210
power indication	green LED
status indication	red LED
power consumption (standby/operation)	0,05W/0,6W
operating temperature	-15÷50°C
terminal	2,5mm ² screw terminals
tightening torque	0,4Nm
dimensions	1 module (18mm)
mounting	on TH-35 rail
ingress protection	IP20

Dedicated temperature probe [F&F]

designation	RT
temperature sensor	KTY 81-210
dimensions	∅5; h=20mm
isolation of sensor	heat shrink
wire	OMY 2x0,34mm ² ; l=2,5m
designation	RT823
temperature sensor	KTY 81-210
dimensions	∅8; h=40mm
isolation of sensor	steel sleeve
wire	heat-resist SIHF 2x0,5mm ² ; l=2,5m

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