

Features

- power and speed control depending on the size of the input variables
- only single-phase load (maximum output current 6 A)
- regulation range 0° - 180° el.
- galvanic separation of control inputs
- emergency input
- thermal protection
- adjustable maximum opening angle of the triac 0° - 180° el.
- DIN rail mounting

Applications

- speed control of fans
- power control
- dimmers

Description

Single-phase triac controller is used for the fluid power control or fan speed depending on the size of the input variables. As a control variable can be used voltage 0-20 mA, current 0-20 mA or 5 digital inputs (degrees), which are evenly distributed throughout the regulation range. Activating the digital input is a connection to terminal GND (e.g. a transistor with open collector or contact). If is not connected to any digital input or analog inputs are both zero, there is a maximum closure of triac. In this stage you cannot set the maximum opening angle of the triac. Decision-marking level for switching triac is activated any digital input or by increasing the control voltage over 0,25 V or by increasing control current over 1 mA. Only then can set the maximum opening angle of the triac. The maximum opening angle of the triac can be adjusted by trimmer next to the terminal. For speed control adjusts trimmer to a minimum speed at which

the fan motor is not expossively exposed to heat, which could lead to damage.

The controller is equipped an emergency input (clamps TK-TK). When releasing the emergency input will close the triac. This contact can be used to connect thermocontact of engine.

Thermal overload protection for the triac is located inside the controller, temperature sensor, which reacts with overheating as well as emergency input, i.e., the full closure of the triac. Heat sink and stage indication are located on the front panel.

Heat sink and stage indication are located on the front panel. LED indicator signals the stage in which the controller is located. In normal condition the indicator is glowing permanently. Change of speed (opening angle) causes change of light intensity. Blinking indicates the activity of emergency input/thermal overload.

For powering external sensors determining control input variables can be used a source reference voltage of 10 VDC / 100 mA.

Cross sections of the connecting wires must be dimensioned with regard to the length of the lines and the danger of interference.

Technical data

Parameter	Value	Units
Power		
Supply voltage	230	V
Frequency	50	Hz
Supply current (max)	20	mA
Power		
Junction voltage	0 – 230	V
Frequency	50	Hz
Max. output current	6	A
Regulation range	0° - 180°	el.
Inputs		
Control voltage	0 - 10	VDC
Control current	0 - 20	mA
5x digital input		
Emergency input		
Output – Reference voltage		
Voltage	10	VDC
Max. output current	100	mA
Cover		
Cover	IP20	
Junction temperature range	0 - +40	°C
Storage temperature range	-20 - +60	°C
Dimensions (w x h x d)	71 x 78 x 91	mm

! Warning !

Regulator must always be preceded by the a main switch and overload protection and short circuit according to the nominal values listed on the label.

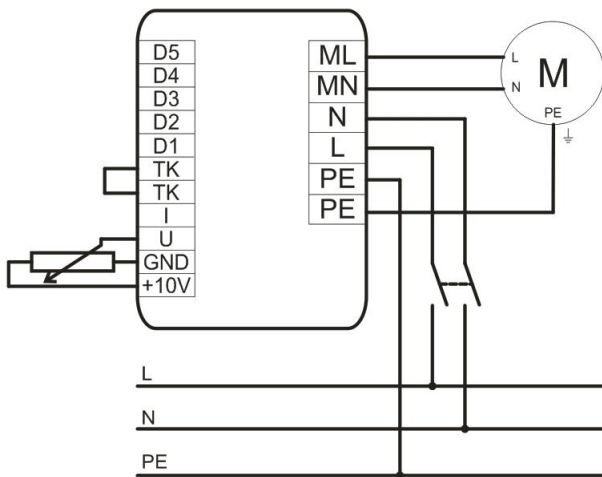
At the conclusion of the triac (activating overheating protection, an active emergency input, zero control variable) does not disconnect the load from the network. It is therefore to be regarded as a load is still under electric tension. Disconnect from the network must ensure that other devices (e.g. circuit breaker).

The controller can cause intense parasitic noise, especially at low engine speeds.

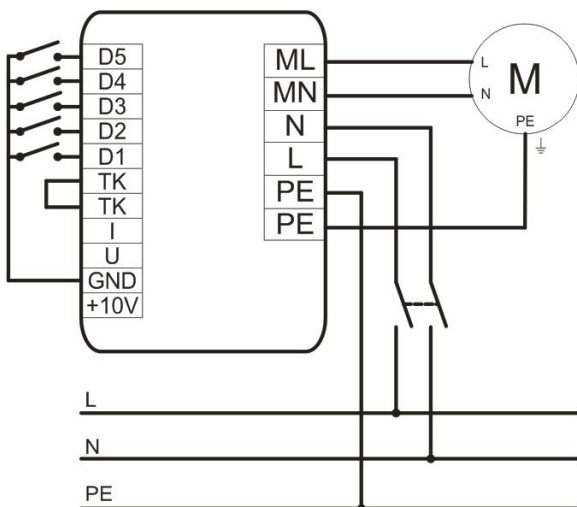
The heat sink is electrically connected to terminal PE.

Diagrams

remote potentiometer 10kΩ

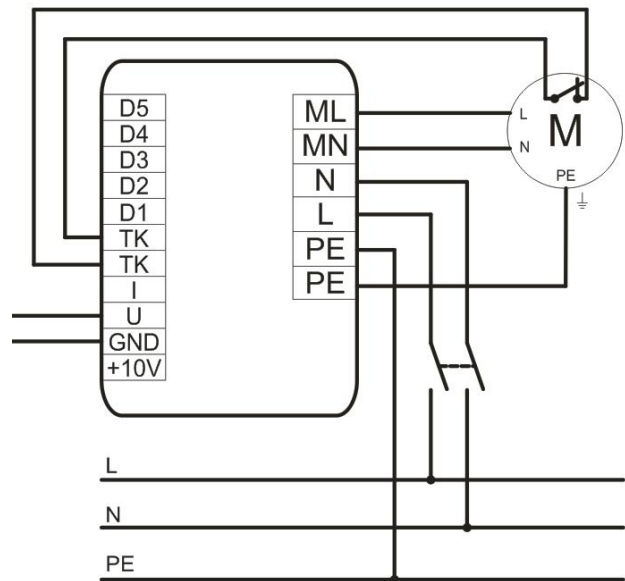


digital inputs



control voltage 0 až 10 VDC

(with thermocontact)



Assembly

Every installation must be realized by project of qualified designer. The installation and commissioning may make only qualified person.

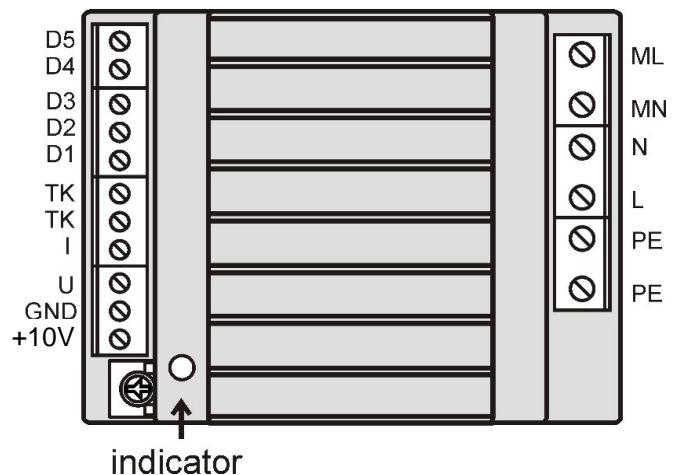
The triac controller can be mounted on DIN rail in any position.

The assembly must be careful not to dirty interior was not the regulator, which contains sensitive electronic components.

Remote control can be mounted up to a distance of 50 m from the controller.

Controllers must not be overloaded current exceeding the maximum permissible current I_{max}

Terminal



Dimensions

