FASAR elettronica

AUTOTRANSFORMER SPEED CONTROLLERS

Autotransformer speed controllers are reliable and versatile devices, ideal for controlling the speed of single-phase electric motors in various industrial and civil applications.

Thanks to their autotransformer-based technology, they allow you to precisely adjust the voltage supplied to the motor, offering smooth and stable speed control. The perfect sinusoidal shape of the output voltage also ensures silent operation of the motor.

Autotransformer speed controllers work by controlling the voltage supplied to the electric motor. The autotransformer is a transformer with a single winding that acts as both the primary and secondary, allowing the output voltage to be varied proportionally to the input voltage. When you adjust the position of the switch on the controller or press the appropriate button, you change the connection points on the autotransformer, thus varying the output voltage supplied to the motor. The higher the voltage, the higher the speed of the motor; vice versa, reducing the voltage results in a decrease in speed.

To meet different application needs, we offer a range of autotransformer speed controllers available in various models, ***analog and digital***, each designed to manage a specific maximum motor absorption current, in particular:

3A, 5A, 7.5A and 10A.

It is possible to select one of the 5 speeds via the switch in the analog versions and, in the case of the digital model, via an appropriate button.

The 5 output voltages for all the models offered are:

100Vac, 125Vac, 145Vac, 180Vac, 230Vac.

These controllers are easy to install and use, ensuring safe and efficient operation. They are particularly suitable for applications that require frequent speed variations or precise adjustments, such as machinery, fans, pumps and other automation systems.

Furthermore, thanks to their robustness and construction quality, they ensure a long life over time, even in demanding operating environments. By choosing an autotransformer speed regulator, you can optimize the performance of your systems, improving efficiency and energy savings.

5-Speed controllers with smoke evacuation button

FE1084 (3A) **FE1085 (5A)** **FE1086 (7,5A)** **FE1087 (10A)**

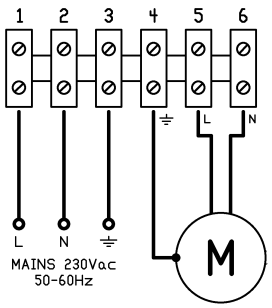
	FE1084	FE1085	FE1086	FE1087
				
Power supply	230Vac -50/60Hz	230 Vac -50/60Hz	230Vac -50/60Hz	230Vac -50/60Hz
Maximum load MOTOR	3A	5A	7,5A	10A
Maximum auxiliary output (ex. Gas solenoid valve)	3A	3A	3A	3A
Dimensions in mm	240x190x200h	240x190x200h	300x220x160h	300x220x160h
Weight in kg	4,5	4,8	8,5	8,9
IP protection	IP56	IP56	IP56	IP56
Protection fuse auxiliary output	T3,15A	T3,15A	T3,15A	T3,15A
Controls	5-speed switch, ON/OFF switch, Emergency button for smoke extraction	5-speed switch, ON/OFF switch, Emergency button for smoke extraction	5-speed switch, ON/OFF switch, Emergency button for smoke extraction	5-speed switch, ON/OFF switch, Emergency button for smoke extraction

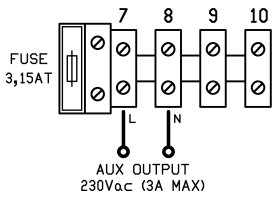
Switching on and activating/deactivating loads

- Power on the regulator, the green light comes on, the motor is powered but off.
- Activate the loads by pressing the green button: the motor starts at speed 1 or the speed set on the switch.
- Adjust the desired speed using the 5-position rotary switch.

- In emergency, regardless of the setted speed, by pressing the smoke evacuation button, the motor immediately goes to maximum speed to extract the heat and smoke generated during a fire.
- During this emergency mode, the rotary switch and the ON/OFF button (its light goes out) have no effect.
- By deactivating the emergency button, the regulator returns to normal operating mode, maintaining the last speed set before the emergency.

- The loads are deactivated by pressing the ON/OFF button.
- At each new start, the regulator automatically activates at the speed set on the switch.
- The green light remains on as long as the device is powered.





5-Speed autotransformer controllers

FE1048 (3A) **FE1049 (5A)** **FE1050 (7,5A)** **FE1051 (10A)**

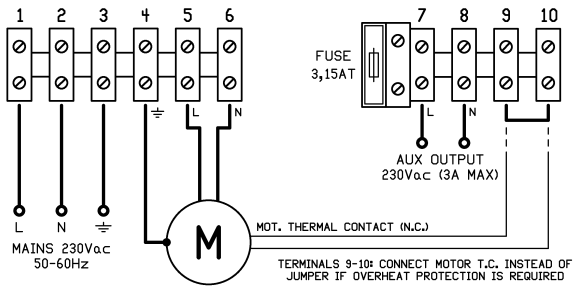
	FE1048	FE1049	FE1050	FE1051
				
Power supply	230Vac -50/60Hz	230 Vac -50/60Hz	230Vac -50/60Hz	230Vac -50/60Hz
Maximum load MOTOR	3A	5A	7,5A	10A
Maximum auxiliary output (ex. Gas solenoid valve)	3A	3A	3A	3A
Dimensions in mm	240x190x200h	240x190x200h	300x220x160h	300x220x160h
Weight in kg	4,5	4,8	8,5	8,9
IP protection	IP56	IP56	IP56	IP56
Protection fuse auxiliary output	T3,15A	T3,15A	T3,15A	T3,15A
Motor thermal contact	NC	NC	NC	NC
Controls	5-speed switch	5-speed switch	5-speed switch	5-speed switch

Switching on and enabling/disabling loads

- Power on the regulator.
- Activate the loads by pressing the green button.
- Adjust the desired speed using the 5-position rotary switch.
- The loads are deactivated by pressing the red button.
- The red light indicates that the motor outputs are activated.
- At each new start, the regulator automatically activates at the speed set on the switch.

Thermal protection

- If the motor thermal contact opens (overheating), all outputs are deactivated.
- When the contact closes, pressing the green button reactivates the outputs at the same speed set before the alarm.
- If the thermal protection is not used, terminals 9 and 10 (as shown in the diagram) must be connected together with a wire jumper.



5-Speed digital controllers with 6-key keyboard

FE1055 (3A) **FE1056 (5A)** **FE1057 (7,5A)** **FE1058 (10A)**

	FE1055	FE1056	FE1057	FE1058
				
Power supply	230Vac -50/60Hz	230 Vac -50/60Hz	230Vac -50/60Hz	230Vac -50/60Hz
Maximum load MOTOR	3A	5A	7,5A	10A
Maximum auxiliary output (ex. Gas solenoid valve)	3A	3A	3A	3A
Dimensions in mm	240x190x160h	240x190x160h	300x220x120h	300x220x120h
Weight in kg	4,5	4,8	8,5	8,9
IP protection	IP56	IP56	IP56	IP56
Protection fuse motor	T4A	T6,3A	T8A	T12,5A
Protection fuse auxiliary output	T3,15A	T3,15A	T3,15A	T3,15A
Motor thermal contact	NC	NC	NC	NC
Controls	Digital keyboard with 6 keys	Digital keyboard with 6 keys	Digital keyboard with 6 keys	Digital keyboard with 6 keys

Switching on and activating/deactivating loads

- When the motor is powered, the red LED corresponding to the OFF button lights up: the motor is powered but switched off.
- Pressing any of the buttons from 1 to 5, starts the motor: the green LED associated with the button lights up, while the red LED (OFF) goes off.
- About half a second after switching on, the gas solenoid valve (or other connected load) also activates and the yellow LED (AUX) lights up.

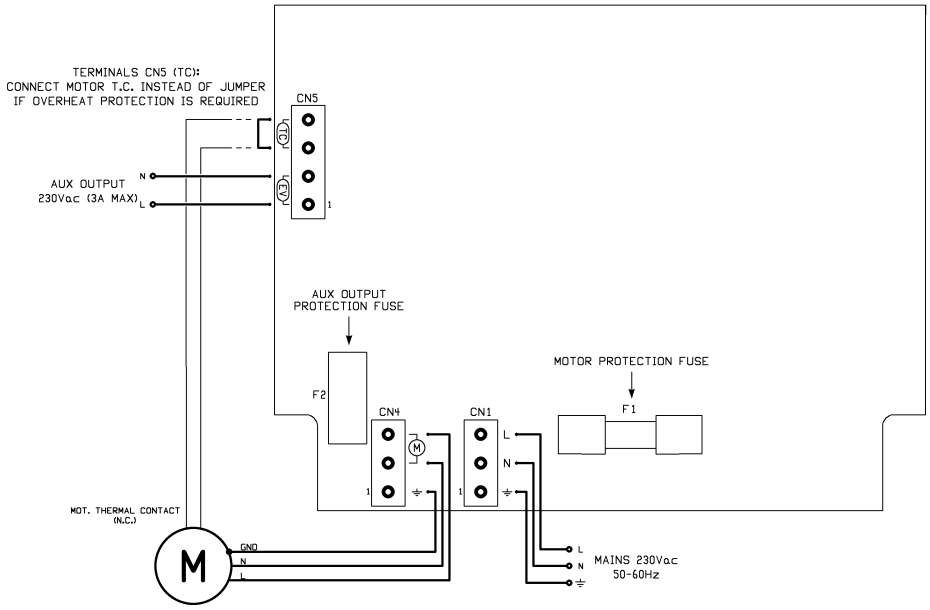
- If the motor is at speed 5, pressing and holding the corresponding button for 3 seconds activates the intensive speed function for 10 minutes.
- During this function, the LED corresponding to the button flashes.
- After 10 minutes, the motor switches off automatically: the green LED goes off, the yellow LED (AUX) goes off and the red LED lights up.

- With the motor running at any speed, holding down the 5 speed button for 3 seconds activates the intensive mode for 10 minutes (the LED corresponding to the button flashes).
- During this interval, you can exit the intensive mode by pressing any button between 1 and 5 or OFF: in this case, the motor sets itself to the selected speed or switches off.
- Otherwise, at the end of the 10 minutes, the motor automatically returns to the previously set speed.

- To turn off the motor, press the OFF button: the gas solenoid valve (or other load) deactivates, the yellow LED (AUX) goes off, the green LED of the last set speed goes off, the red LED lights up, indicating that the motor is off but still powered.

Thermal protection and alarm management

- The thermal contact of the motor is normally closed.
- In case of overheating of the motor windings, the contact opens: the motor and the solenoid valve (or other load) turn off, the green and red LEDs flash to signal the alarm, the buttons do not work.
- The alarm signal remains until the thermal contact closes and the user does not intervene.
- If the thermal protection is not used, the TC terminals (as indicated in the diagram) must be connected together with a jumper.



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