



FASEC 43/43C

automatic speed controller

WHAT IT IS

FASEC 43/43C is designed for speed control and is particularly suitable for fan applications.

HOW IT IS MADE

- **Size: front panel 48x96 mm, depth 96 mm (excluding socket)**
- **Mounting: panel mount on hole 45x92 mm**
- **Connections: Octal socket**
- **Input: PTC probe**
- **Regulation output: 2.5 A TRIAC, 7 A TRIAC**
- **Filter external (in version 7 A): maximum current for load supply 7 A; cylinder size \varnothing 38 mm, height 28 mm; fixing bolt M8**
- **Regulation type: phase choking proportional**
- **Function type: evaporation**
- **Power supply: 230 V~ 50 Hz.**

GENERAL DESCRIPTION

FASEC 43/43C is designed for speed control and is particularly suitable for fan applications.

The standard version provides a triac output to control a load up to 2.5 A, while a special version ensures control up to 7 A. The latter version contemplates the use of an LC filter fitted outside the instrument. Such filter is necessary to reduce conducted emissions and radio frequency due to the type of regulation.

The temperature probe is galvanically insulated from the supply voltage.

Another special model is available to control speed in ZHIEL motors.

OPERATION

The logical operation of FASEC 43/43C is based on decreasing the turns of the load (evaporation) as the temperature increases. The regulation Set can be adjusted through the central "0% speed" potentiometer (scale $-40 \dots 30$ °C/0...60 °C).

The temperature differential, which subtracted from the Set determines the temperature for the load maximum speed, can be set through the "100% speed" potentiometer (scale 3...31 °C).

The "min speed" potentiometer allows to set a minimum speed below which the motor won't work. It is used in case of high inertia loads which cannot be controlled by FASEC when the output control voltage is very low.

Example of operation: suppose to set a

0 °C starting temperature (0% speed) and a 10 °C differential (100 % speed): when the temperature reaches 0°C both fans start spinning at a speed which is slightly over the minimum set speed; when the temperature reaches 10 °C (0-10) the fans operate at maximum speed.

MECHANICAL MOUNT

The instrument is designed for panel mount. Drill a 45x92 mm hole and insert the instrument holding it with the special brackets supplied.

The operating temperature range allowed for correct operation is from -5 to 65 °C.

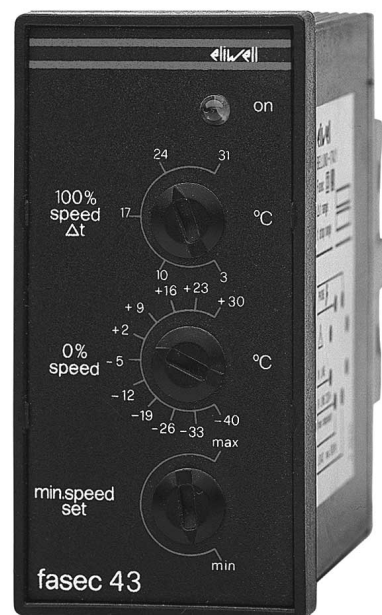
Do not install the instrument in moist and/or dirty places or near heat sources.

The filter (for the version with 7 A capacity) is provided with a bolt for fixing.

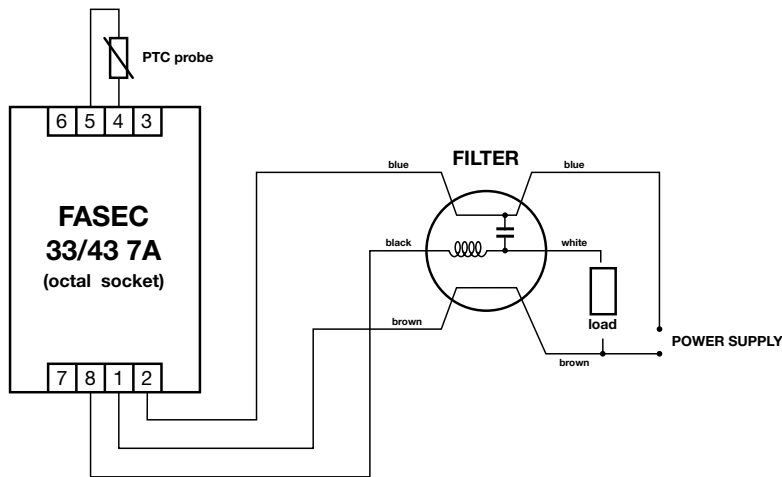
ELECTRICAL CONNECTIONS

Work on electrical connections always with the machine turned off. The instrument is provided with a connection for Octal socket wiring.

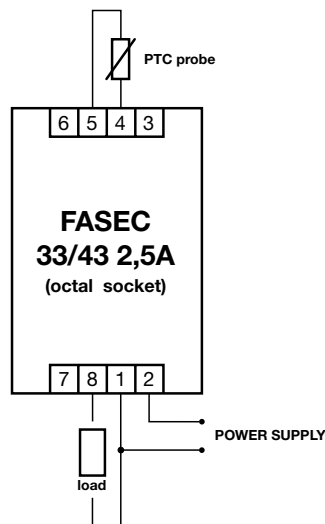
The PTC-type probe does not need to observe any polarity, and it can be lengthened by using a normal bipolar cable (we remind you that an increased length affects the behaviour of the instrument from the electromagnetic compatibility point of view: wiring should be carried out with great care). It is advisable to keep the probe wire away from other power cables.



CONNECTIONS FASEC 33/43 7 A



CONNECTIONS FASEC 33/43 2.5 A



ALLOWED USE

For your safety, FASEC 43/43C should be installed and used according to the given instructions and, especially, no components subject to dangerous voltage must be accessible under normal conditions: the only accessible part must be the front of the instrument.

This device should be adequately protected from water and dust considering its application. Its rear side should only be accessible by using a tool.

FASEC 43/43C is suitable to be incorporated in household appliances and/or the like, and it has been tested -as regards its safety- to the reference European Harmonised Standards.

It is rated:

- according to its construction, as an automatic, electronic control device to be incorporated, independently installable
- according to its automatic operation features, as a 1Y-type acting control device

FORBIDDEN USE

Any use different from the allowed one is, as a matter of fact, forbidden.

We remind you that the effected regulation has a functional value, and it is subject to failure: any protective device provided for by the regulations concerning this product or suggested by common sense due to evident safety reasons, must be carried out outside the instrument.

LIABILITY AND RESIDUAL RISKS

Invensys Controls Italy s.r.l. is not liable for any damages caused by:

- installing or using this instrument in a different way than it was designed for, and in particular, without complying with the safety prescriptions provided for by regulations and/or hereby stated;
- using it on equipment which does not ensure an adequate protection from electrical shock, water or dust considering the way it has been installed;
- using it on equipment which allows accessing dangerous components without using any tools;
- tampering with the product or altering it;
- using it on equipment which does not comply with legal provisions and regulations in force.

TECHNICAL DATA

Housing: plastic, self-extinguishing (NO-RYL).

Size: front panel 48x96 mm, depth 96 mm (excluding socket).

Mounting: panel mount on hole 45x92 mm.

Connections: Octal socket.

Operating temperature: -5...65 °C; (23...149 °F).

Storage temperature: -30...75 °C; (-22...167 °F).

Input: PTC probe.

Regulation output: 2.5 A TRIAC, 7 A TRIAC.

Filter external (in version 7 A): maximum current for load supply 7 A; cylinder size Ø 38 mm, height 28 mm; fixing bolt M8.

Regulation type: phase choking proportional.

Function type: evaporation.

Power supply: 230 V~ ±10%; 50 Hz.

DISCLAIMER

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