



FASEC 33

single-phase speed controller

WHAT IT IS

FASEC 33 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:** condensation
- **Power supply:** 230 V~, 50 Hz.

GENERAL DESCRIPTION

FASEC 33 is an instrument designed to control speed and is particularly suitable for fan applications.

Its standard version provides a triac output to drive a load up to 2.5 A, while a special version allows regulation of loads 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 power voltage.

Another special model is available for speed regulation in ZHIEL motors.

OPERATION

The operation logic of FASEC 33 is based on the concept that as temperature increases an increase in the number of turns of the applied load (condensation) follows. The regulation Set is set through the central potentiometer "0% speed" (scale 0...60 °C).

The temperature differential, which determines the temperature at which the load turns at the maximum speed when summed to the Set value, is set through the "100% speed" potentiometer (scale 3...31 °C).

The "min speed" potentiometer allows to set a minimum speed below which the motor will never operate.

It is used in case of high inertia loads that

FASEC 33 cannot control when the output controlling voltage is very low. Example of application: let's assume the starting temperature is set to 30 °C (0% speed) with a differential of 10 °C (100% speed).

When the temperature reaches 30 °C the fans begin to turn at a speed which is slightly higher than the minimum set; when the temperature reaches 40 °C (30+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 external filter (for the version with 7 A capacity) is provided with a bolt for fixing.

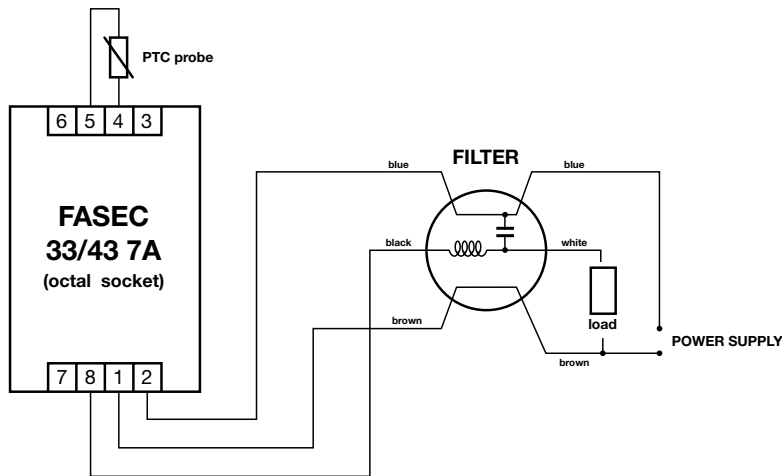
ELECTRICAL CONNECTIONS

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

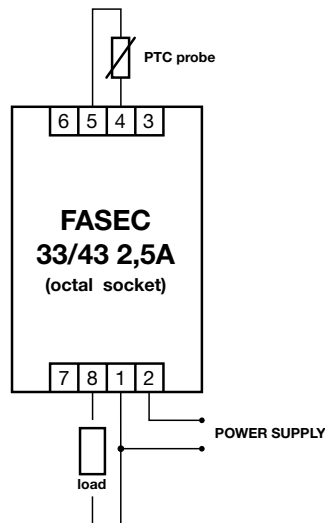
The PTC-type probe does not need to observe any polarity, and it can be lengthened by using a normal bipolar cable (we remind you that an increased length affects the behaviour of the instrument from the electromagnetic compatibility point of view: wiring should be carried out with



CONNECTIONS FASEC 33/43 7 A



CONNECTIONS FASEC 33/43 2.5 A



great care). It is advisable to keep the probe wire away from other power cables.

ALLOWED USE

For your safety, FASEC 33 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 33 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: condensation.

Power supply: 230 V~ ±10%; 50 Hz.

DISCLAIMER

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