Data Sheet: FC 300

MOTRON
Motron A/S the fastest way from idea to product

Description

FC 300 from ***MOTRON*** is a miniature plug and play LOW COST frequency converter, intended for variable speed regulation of fans etc up to 370W max with a 2-10V input range and apr. 5-50Hz output range with linear V/F control. 0V on control line will stop the motor.

FC 300 is an extremely robust product in a Die Cast Aluminium Box which can be placed almost anywhere. It is simple to use, and yet very efficient in control. The electronics has been sealed with resin for maximum robustness and user connections are avaliable throgh terminals inside the cabinet.

FC 300 will connect to 230VAC powersupply, a standard 230V AC motor and a simple 2-10V isolated control signal will command the motor to run at specified speed. Typical 5kOhm input impedance !!

FC 300 has an input detector, which will STOP the motor, if the inputsignal is less than apr. 1V=, so no need for an extra start/stop signal, its all been taken care off.

FC 300 has a number of build in **safety funtions**, which all will stop the motor, and retry after apr. 30 seconds. Overtemperature, motor shorts, overvoltage, undervoltage, ground failures etc will be detected and stop the motor.

FC 300 comes in different versions. Mainly, a Wall Mount version with integrated bottom flanges for mounting. Also, a Flange Version is supplied for mounting directly in some kind of Air Convection systems. This type needs to be cooled by forced air , as in Chimneys etc.

FC 300 is designed with an integrated main supply filter. Isolation between control input and live supply is designed to withstand min 3kV.

FC 300 is as standard supplied with glands and snap in terminals for connections, but an alternative is a Complete Delta Drive with integrated Cables as per Customer requirements. Cable and Drive..

Picture



Never ever has Speed Control of small appliance controls been that easy!

PLUG AND PLAY

Technical data

- Supply 230V~+/- 20% + PE / 50/60Hz.
- Input current max 5A.
- Motor rating max 370W (6 pole motor) (cabel lenght max. 10meter)
- Output current max 2A
- Efficiency min 95%.
- Ambient temperature –10 - +40ºC
- Humidity non condensing 10-90%RF
- Shortcircuit rated and protected
- Overtemperature protected
- Over volt and under volt protected
- Ground failure protected
- 15.9KHz switch frequency
- 2-10V control input typical 5 kOhm
- Automatic STOP at input < 1-2V for easy control
- V/F drive scheme and max 50Hz output
- Minimum frequency apr. 7 Hz
- Retry timer fixed at 30 seconds for any failure
- Adjustment trimmer for max speed setting
- Galvanic (3kV) isolation between live and control parts
- Passive cooled from die cast alu box and heatsink
- Snap in terminals for easy electrical connection
- Die cast alu box with integrated heatsink and flanges for mounting
- IP54 grade, all electronics sealed . Molded from factory
- Measures Max 118x118x56mm (TBD)

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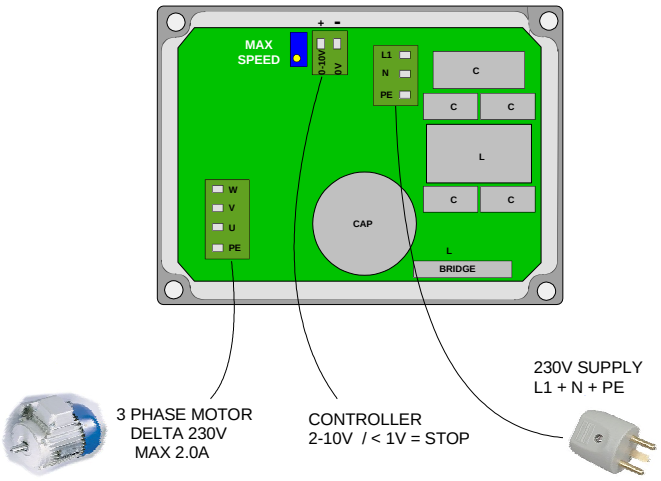
Connection



Trimmer inside

Maximum speed can be adjusted from the integrated trim potentiometer.

Maximum frequency, 50-60 Hz, can be adjusted between apr. 5-10V of the input control voltage.

So, Max speed can be achieved with 5V DC systems as well as with 10V DC systems. Automatic stop as well.

Speed should be limited at 50 Hz for standard Motors. No Slip in motors can be tolerated, as the current will increase in a progressive way.

Stopping of the FC 370 will always take place when the dc input signal is less than apr. 1-2V.

As it is a "low cost" frequency converter, and the input signal comes from an optocoupler, there there can be slight deviations from units to units.

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