

# MMC 7 FAN SPEED CONTROLLER



## Description

**MMC 7** is a totally encapsulated and very robust TRIAC controller providing 7A output and 100% galvanic isolated control inputs. Designed to be mounted directly on a Capacitor motor requiring Triac regulation, the **MMC 7** is an economical solution to your speed control needs.

**MMC 7** has all its electronics built into a rugged 'tube' and is totally integrated, making it extremely resilient to water, temperature, humidity, mechanical stresses and many other factors. No liquid can reach the electronics, making the **MMC 7** unique among isolated triac controllers, and yet simple to use.

**MMC 7** is supplied and controlled from one multicable, making it easy to connect to an AC motor's connection housing. The MMC 7 is delivered with 1m of cable with clearly numbered leads from 1 to 10 and a yellow Earth wire. The tube is made of Aluminium, and is internally connected to the Earth.

**MMC 7** in addition to the traditional Triac circuit, there is a microprocessor controller that guarantees zero DC level, ensures no spurious trigger and operates a sophisticated "closed loop" control. This control constantly measures the voltage output, compares it to the input and corrects the output for any error. This pseudo 'closed loop' therefore ensures the motor is at approximately the same speed for almost any load.

**MMC 7** has total galvanic isolation between power and control, making interfacing to low voltage external controllers no problem. Ask **DELTA SENSE** for an appropriate controller, ie the Coolman 6 which can be configured to temperature, humidity, pressure, voltage or almost anything that needs to control the speed of an AC motor. There is a START input, which when taken low activates an internal relay and connects the L1 phase to the output. This makes the **MMC 7** even smarter, because no external contactors/relays are needed to stop and start the AC motor.

**MMC 7** is protected against over temperature with a built in switch that OPENS when the temperature reaches around 80°C inside, allowing the MMC 7 to work under the most demanding of conditions.

**MMC 7** has an auxiliary 10V DC output, which can be used for potentiometers, sensors, controllers etc. not exceeding 50mA  
**MMC 7** can automatically start/stop the motor from the internal L1 relay upon set limits from the DC control input. This is an additional feature, please ask **DELTA SENSE** for details.

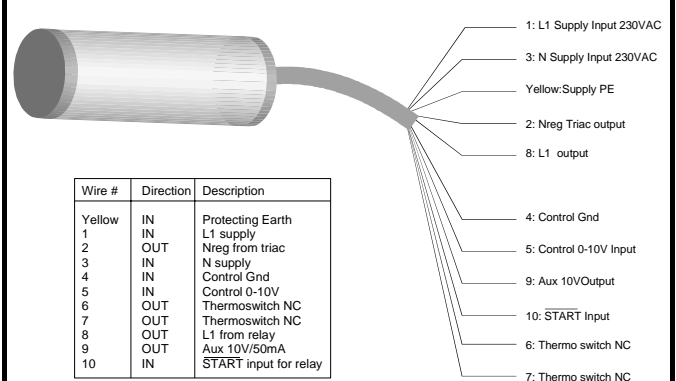
## Picture



## Technical data

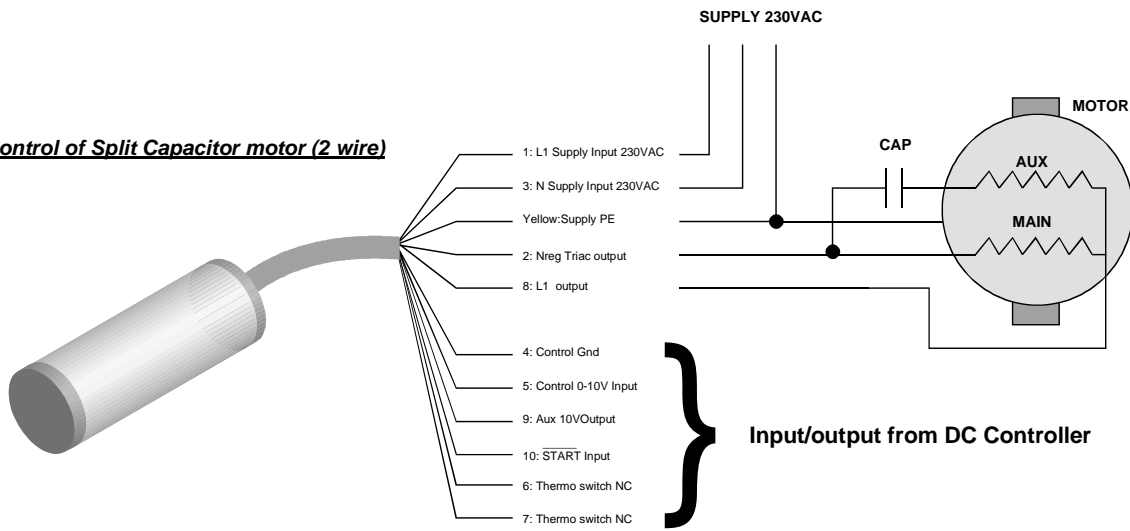
- 207-253 VAC / 50Hz supply
- Optional 24 VAC / 50Hz supply
- Max 7A load with Capacitor motor 2/3 wire technology
- Microcontroller based phaseangle and correction
- Automatic load compensation, voltage controlled closed loop
- 50-230V output voltage from triac with soft up and down
- 0-10V DC/1mA controller input
- Active low START input for starting the motor, relay max 15mA
- Optional < 0.5V automatic STOP of motor (ask)
- Auxiliary 10V =/50mA output for potentiometer or else
- Thermo switch output opens at internal temp > 80°C
- Multicable 10x0.75 max 1meter, grey cap, marked leads
- IP Grade 68.... totally encapsulated!
- Can be mounted outside, to a motor, at the controller or elsewhere
- CE approved. (EMC 89/336/EEC LVD 73/23/EEC)
- Material Polycarbonate caps at each ends, alu housing
- Dimensions Ø 70x150mm
- Weight max 500 grams

## Connections

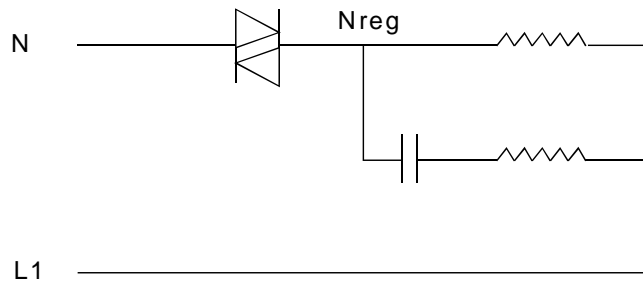


## MMC 7 connected as a 2 wire triac control

### Control of Split Capacitor motor (2 wire)

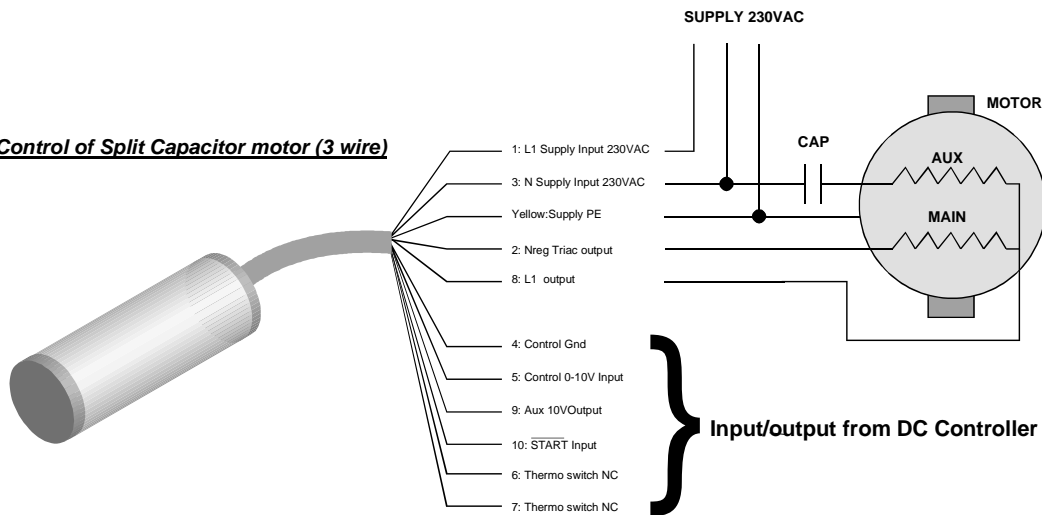


### Principle of operation



## MMC 7 connected as a 3 wire triac control

### Control of Split Capacitor motor (3 wire)



### Principle of operation

