

1 Introduction

This variable phase-angle regulator has been designed for 230V, 10A single phase mains driven inductive loads, such as induction motors, fans and pumps giving fully adjustable voltage outputs from zero to maximum.

The controller has an integrated RC snubber network for control of inductive loads and a zero set speed adjuster to allow the designer/installer to fix a maximum and minimum output voltage level to prevent a motor being driven too slowly.

The large triac enables the unit to handle high inrush currents with ample safety margin on industrial installations.

2 Applications

Suitable for most simple mains driven motors and fans.

3 Features

- Standard Din Rail mount
- Phase angle control
- Integral Protection
- Built in snubber network
- Input signal or Potentiometer (0-5V/0-10VDC 4-20mA)
- Output power span and zero (Min Speed Set)
- Power and status LEDs
- Up to 10A Load
- Built in Heatsink



4 Setup and Operation

INPUT SIGNAL TERMINALS (5V,SIG I/P & 0V)

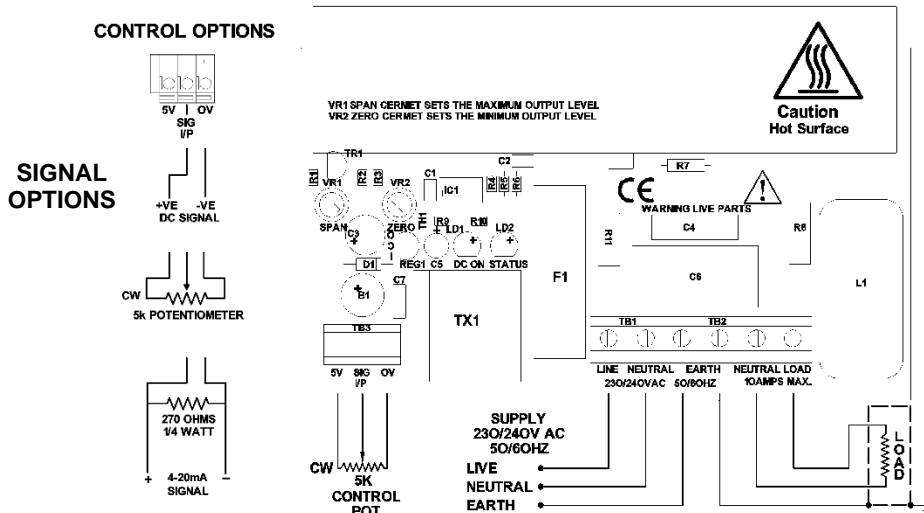
The FSC230/10 supports the industry-standard signals inputs of 0-5V/0-10Vdc and 4-20mA signal or a manual potentiometer.

SPAN AND ZERO ADJUSTMENT

The Span and Zero cermet (VR2 & VR3) allow the user to set the minimum and maximum output voltage in relation to the input signal range [see Typical Control Options].

LED INDICATORS

The FSC230/10 has two LED indicators. The green 'DC ON' is lit when power is supplied to the FSC230/10 and the red 'STATUS' illuminate proportionally in respect to the output.



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5 Specifications

| | |
|--------------------------------------|---|
| Mains supply +/- 10% @ 50Hz | 230VAC |
| Maximum rms on-state current | 10A |
| Minimum operating current | 200mA |
| TRIAC limiting rms on state current | 25A |
| Peak one cycle surge @ 10mS | 250A |
| I ² t for fusing | 112 A ² s |
| Isolation voltage | 2500V rms |
| Maximum recommended unit temperature | 70°C |
| Minimum Signal Range | 0-4V dc |
| Maximum Signal Range | 0-25V dc |
| Signal zero offset (Min Speed) | +60% and -40% of Span |
| Manual potentiometer | 5kΩ Typical |
| Signal input resistance | 5kΩ (“V” Signal), 250Ω (“mA” Signal) ±10% |
| Trigger isolation voltage | 2500V ac (RMS) |
| Trigger pulse rating | 250mA in to 10Ω |
| Storage temperature | 0°C to +65°C |
| Max ambient operating temperature | 70°C |
| Dimensions (Inc DIN Enclosure) | 127mm (D) by 72mm (H) by 94mm (W) |
| Controller Heat Dissipation | 1W/A |

6 Recommendations

NOTE: It is recommended that installation and maintenance of this equipment should be carried out by suitably qualified/trained personnel with reference to the current edition of the I.E.E. wiring regulations (BS7671)

The regulations contain important requirements regarding the safety of electrical equipment. For International Standards refer to I.E.C/ Directive IEC 950.

WARNING

1. LIVE terminals – Isolate supply before commencing any installation work.
2. Unit must be secured on symmetrical 35mm DIN rail DIN rail using the DIN-Housing Supplied.

7 Order Code





| | | |
|--|-----------|-------------------|
| Part Number | FSC230/10 | Stock code A72290 |
| Note: Custom line voltages are available | | |



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