



# THREE PHASE THYRISTOR DRIVER

**FC36M**

X10248

## INTRODUCTION

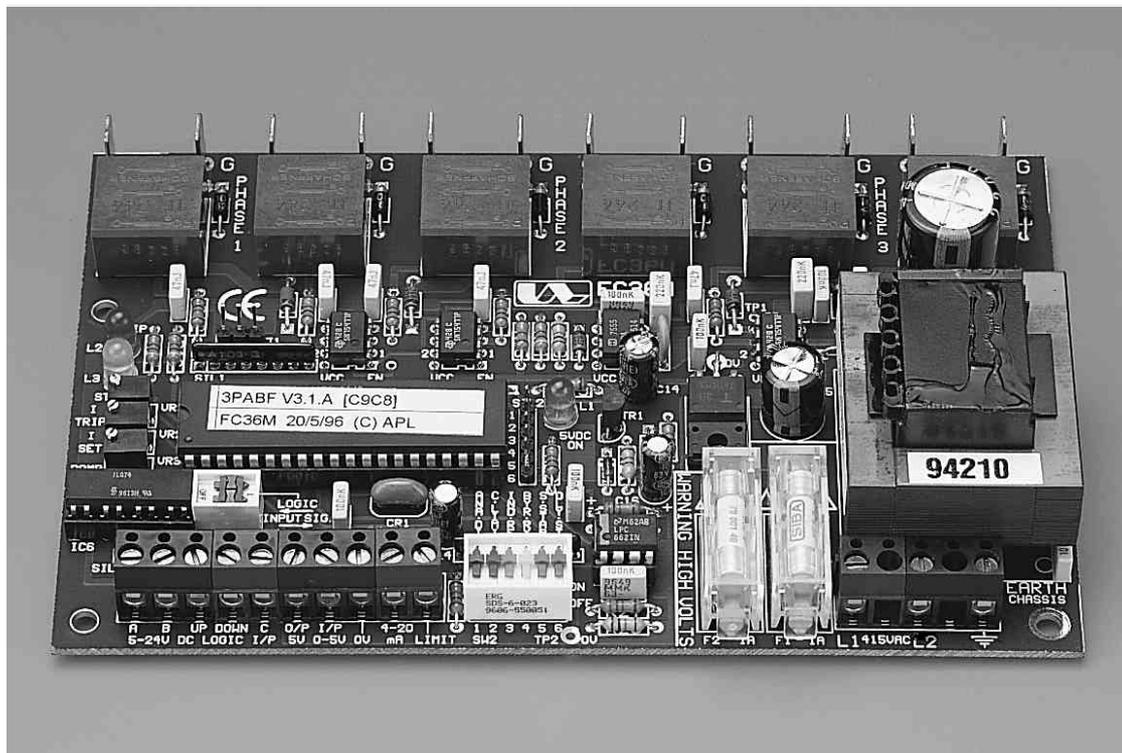
This three phase microprocessor based firing circuit is primarily designed for the control of thyristors (SCR's) and has a wide range of selectable features, including a DIN rail mounted enclosure as one of many optional extras. The signal control options can be analogue or digital input. The unit incorporates phase angle and burst firing modes, or combinations of both. Installation phase wiring is kept to a minimum, with no necessity for external phasing transformers.

## APPLICATIONS

Universally acceptable to AC, DC, resistive or inductive loads via thyristor pairs on three phase assemblies. SCR Power handling gives smooth proportional control to all types of industrial processes (e.g. furnaces, electroplating, controlled rectifiers, transformers etc.).

## FEATURES

- Switch selectable phasing reversal.
- Control type: Phase angle, burst fire, or Phase angle burst fire combination.
- Input signal control options (opto isolated): Digital or Analogue.
- Load type selection switch, for resistive or inductive applications.
- Output status LED indication.
- Current limit facility, switch selectable with LED indication.
- Over current latching trip to 120% of maximum, with LED indication.
- Adjustable ramp control 0 to 30 seconds.



### **SPECIFICATIONS**

Supply voltage ( specify with order code)	110, 240 or 415v ac @ 50/60 Hz ; +/- 10%
Primary fusing (ceramic 20 x 5mm)	Two F1A (HRC)
Current consumption	300 mA (Full conduction)
Initial short circuit gate current	1A
Sustaining short circuit gate current	0.5A
Initial pulse voltage	15V (Open circuit)
Sustaining pulse voltage	8V
Initial gate pulse rate of rise	1 (A/uS)
Pulse width @ 50/60 Hz	22 uS
Pulse train frequency	25 kHz
Trigger mode-selected by input	Burst Fire and Phase Angle
Voltage signal into 10 K ohms	0-5V dc
Current signal into 240 ohms	4 - 20mA
Opto-isolated inputs	5 - 25V dc
Adjustable ramp control from power up	0-30 seconds
Control limit or over-current trip	0-100 mA dc
Load type-Selected by switch (SW2)	Resistive or Inductive
Operating and storage temperature range	-5 to +65°C
Overall Dimensions (Firing circuit only)	L 160mm x W 100mm x H 36mm
Fixing Centres of firing circuit	150mm x 62mm

### **FUSING:**

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor - MCB) for unit protection. On initial 'switch on' some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. (See SRA Datasheet for further information).

### **CE MARKING**

This product family carries a "CE marking" . In phase angle mode the controller will need a suitable remote filter. For information see recommendation section and contact our sales desk.

### **RECOMMENDATION**

Other documents available on request, which may be appropriate for your applications.

<b>CODE</b>	<b>IDENTITY</b>	<b>DESCRIPTION</b>
X10229	RFI	Filtering recommendation - addressing the EMC Directive
X10213	ITA	Interaction, uses for phase angle and for burst fire control.
X10255	SRA	Safety requirements - addressing the Low Voltage Directive (LVD) including :- Thermal data/cooling ; "Live" parts warning & Earthing requirements; Fusing recommendations.
AP02/4	COS	UAL Conditions of sale

**NOTE** It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.E. wiring regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding safety of electrical equipment. (For International standards refer to I.E.C directive IEC 950).

### **ORDER CODE:**

State part number: FC36M + (required supply voltage -110, 240or 415v)  
Optional extras include: customer supply voltage, FC36M enclosures, thyistor



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