

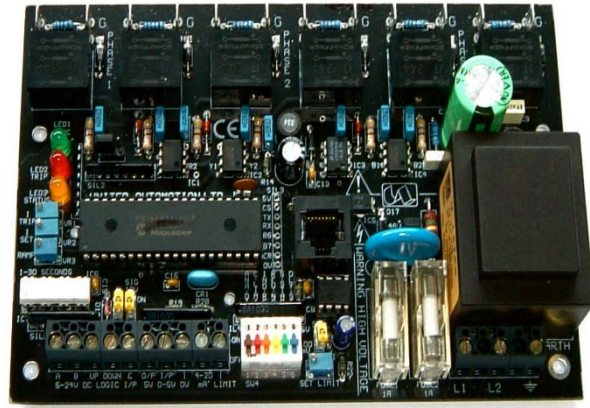


FC36M DUAL Mode Firing Board 110v, 230v & 415v

This three-phase microprocessor-based firing circuit is a populated printed circuit board primarily designed for incorporating into three phase power control assemblies for the control of thyristors (SCRs). The unit is available in various supply voltage capabilities (see specifications for details). Phase wiring installation is kept to a minimum, with simple gate/cathode outputs and no necessity for external phasing supply transformers. It has a wide range of selectable features, as listed below.

APPLICATIONS

- Power Supplies
- Half and Fully controlled Rectifiers
- AC Motor Control
- DC Motor Control
- Soft Starters
- Heater Controllers
- Induction Generator
- AC Voltage Regulation
- Three Phase Transformer Control
- Universally acceptable for AC, DC, resistive or



most inductive loads via thyristor pairs on three phase assemblies. SCR Power handling gives smooth proportional control to all types of industrial processes which include furnaces, electroplating, controlled rectifiers and transformers.

FEATURES

- Switch selectable phasing reversal.
- Control type: phase-angle, burst-fire, or phase-angle and burst-fire combination.
- Analogue or digital input signal control options (opto-isolated).
- 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.
- RJ45 communications port for remote programming/display console.

TECHNICAL SPECIFICATIONS

Nominal Supply voltages (+/-10%)	110V, 230V or 415V ac @ 50/60 Hz
Primary fusing	Two HRC-F1A (ceramic 20 x 5mm)
Current consumption	350mA (Full Conduction)
Initial short circuit gate current	500mA
Sustaining short circuit gate current	250mA
Initial pulse voltage	9V
Sustaining pulse voltage	5V
Pulse train frequency	25kHz
Trigger mode-selected by input	Burst Fire and Phase Angle
Voltage signal into 10kΩ / 20k	0-5V dc / 0-10V dc
Current signal into 240Ω	4 - 20mA



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Three Phase Thyristor Driver – X10248.



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Opto-isolated inputs	5 - 24V dc
Adjustable ramp control from power up	0-30 seconds
Control limit or over-current trip	0-100 mV dc or 0-25V dc
Load type-Selected by switch (SW4)	Resistive or Inductive
Operating and storage temperature range	0 to +65°C
Further Dimensions	
Firing Circuit board (PCB) only	L 162mm x W 108mm x H 40mm
Hole size and Fixing centres of PCB	4x M3.5 clear holes, 150mm x 62mm
Firing Circuit with DIN-rail enclosure	L 166mm x W 128 mm x H 70 mm

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 information.

Recommendations

Other documents available on request, which may be appropriate for your application: -

Code	Identity	Description
X10229	RFI	Filter recommendations: 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 and Fusing Recommendations
X10652	CM- (FC36M/MV)	Commander Module (Remote Programmer)

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

OPTIONAL EXTRAS

Product Code	Product Description
A30102	FC36M DIN Housing Kit
J02001	RJ45 lead
A402131	Commander Module

United Automation can also supply Thyristors, fuse or Complete Assembled. For more details, please contact us @enquiries@united-automation.com

PRODUCT CODE AND RELATED PRODUCT CODE

<i>For 110V</i>	
Product Code	Product Description
A34424	FC36M (110v)
A34424-DIN	FC36M (110v) c/w DIN housing
<i>For 230V</i>	
Product Code	Product Description
A34416	FC36M (230v)
A34416-DIN	FC36M (230v) c/w DIN housing
<i>For 415V</i>	
Product Code	Product Description
A34411	FC36M (415v)
A34411-DIN	FC36M (415v) c/w DIN housing



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