



# UNIVERSAL PHASE ANGLE TRIGGER MODULE

## FC11AL

X10222

### INTRODUCTION

This single phase or phase to phase firing module uses variable phase-angle control with adjustable signal matching and selectable soft-start. The power transformer is remote for increased reliability and wide operational voltage capacity.

The unique <sup>®</sup>MONO-LINK firing system is ideal for use with inductive loads and requires minimal wiring to the power devices. The module is fully enclosed for safety and eligibility in industrial environments.

### APPLICATIONS

Applicable to most AC resistive or inductive loads via a triac or thyristor, on single phase to neutral or phase to phase supplies, within voltage limits. Also suitable for half-wave vibrator control.

### FEATURES

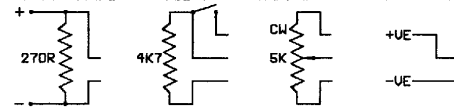
- Fires triacs or thyristors up to 440V (50/60 Hz) supplies.
- MONO-LINK™ - Gate to Gate firing.
- High Isolation opto-coupled output.
- Status LED giving output level indication.
- Soft Start Function.



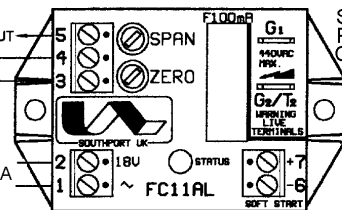
### INSTALLATION

### DIMENSIONS AND CONNECTIONS

CONTROL OPTIONS FOR TERMINALS 3, 4 AND 5  
4-20mA SIGNAL    RELAY    MANUAL POT.    DC SIGNAL



SUPPLY: 18V TO 24V ac @ 65mA



SEE POWER CONNECTIONS

#### **WARNING**

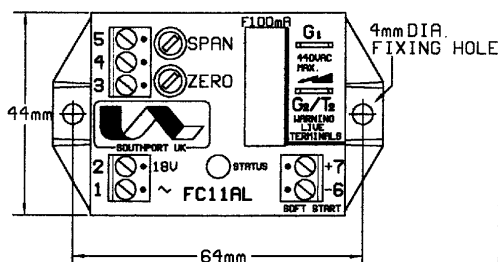
SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK

#### **NOTE**

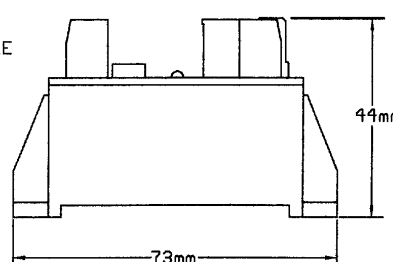
AC INPUT SUPPLY MUST BE ISOLATED FROM SIGNAL AND BE IN PHASE WITH LINE VOLTAGE

GATE CONNECTIONS 6.3 x 0.83mm VERTICAL AMP TAGS

PLAN VIEW

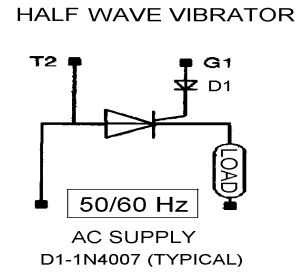
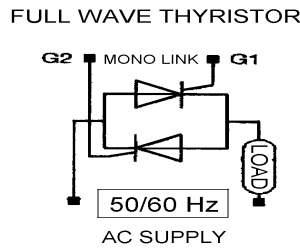
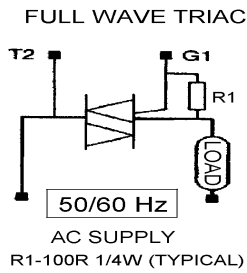


SIDE VIEW



\*MONO-LINK is trade mark of UNITED AUTOMATION LTD. Patent No 2197997

## POWER CONNECTIONS



## SPECIFICATIONS

|                           |                  |                             |                       |
|---------------------------|------------------|-----------------------------|-----------------------|
| Signal Span Minimum       | 0 to 2V dc       | AC input supply             | 18 to 24V ac @ 65mA   |
| Signal Span Maximum       | 0 to 25V dc      | Auxiliary output            | 5V dc @ 5mA protected |
| Signal zero offset        | 0 to 30% of span | Line Frequency              | 50/60 Hz              |
| dV/dt rating              | 100V/μs          | Operating temperature range | 0 to +65°C            |
| Max. Gate/Line voltage    | 440V ac          | Soft start capacitor        | 0.06s/μF              |
| Trigger isolation voltage | 4000Vrms         | Mono-link fuse              | F100mA (HRC)          |
| Trigger output rating     | 0.8A             | Manual potentiometer        | 2K, 5K or 10K         |
| Storage temperature range | -20 to +85°C     | Power connections           | 6.3mm Amp tags        |

## FUSING:

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (semiconductor-MCB) for unit protection. See SRA Data sheet for further information.

## CE MARKING

This product family carries a "CE marking". These phase angle type controllers require a suitable remote filter. For information see recommendation section and contact our sales desk. (See Declaration of Conformity).

## RECOMMENDATION

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

| CODE   | IDENTITY | DESCRIPTION  |
|--------|----------|--|
| 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: FC11AL + Signal option.

Optional extras include: Potentiometer, Soft start capacitor, Supply transformer.



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