

# X10647 – PATFC

## Phase Angle TRIAC Firing Circuit

### Issue 4



#### 1 Introduction

The PATFC is a thick-film hybrid firing circuit, which gives phase control and is therefore useful as a simple proportional control firing circuit for driving an appropriate TRIAC power device to suit most load applications.

#### 2 Applications

Virtually all resistance heaters including ovens, electric furnaces, moulders, dryers, smelters, heating tapes, stress relieving, space heating and heating mantles. This is unsuitable for use on inductive loads.

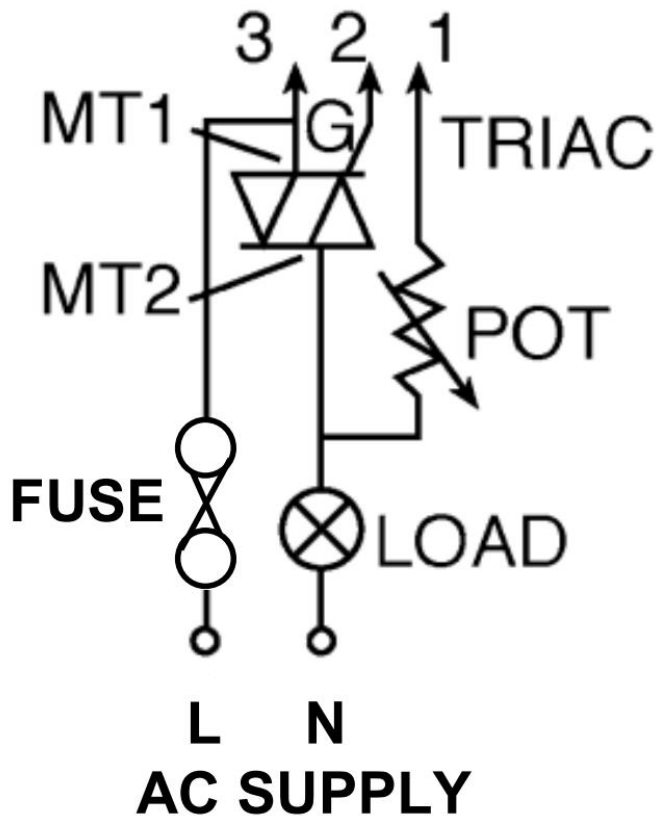
#### 3 Features & Use

- Compact thick film technology
- Simple triggering device
- Requires additional:
  - Potentiometer
  - TRIAC power device
  - Heatsink (for use with TRIAC)



#### 4 Installation

##### 4.1 Connections



##### 4.2 Warning

This unit requires fusing.

All HAZARDOUS LIVE terminals - isolate supply before commencing any installation work.

Note: Front view - Lead connections are right to left (as above photo). Leads 1 to 2 are 2.5mm pitch; leads 2 to 3 are 5mm pitch. Back view - has flat face and silk screen print.



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#### 5 Technical Specifications

Specifications		Dimensions	
Supply Voltage	50V to 250V AC @ 50/60Hz	Overall (Max.) (mm)	18 (H) x 11 (W) x 4 (D)
Hysteresis (typical)	5%	Lead Pitch	5 & 2.5mm-pin S.I.L. type
Power Rating	5A (max.)	Lead Length (Max.)	10mm
Controlled Conduction Angle	10W (min.); 1kW (max.)	Lead Diameter	0.5mm (typical)
Maximum Gate Current	50mA	Body Length	9mm
Storage Temperature	0 to +65°C	Body Width	11mm
Total Conduction Angle	0 to 160°	Body Thickness	4mm
Additional Requirements			
Potentiometer (not supplied)	250kΩ		
TRIAC (not supplied)	(Contact technical sales)		
Heatsink (not supplied)	(Contact technical sales)		

#### 6 Fusing

A semiconductor (fast acting) type fuses should be used as remote failsafe device 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. For spares or replacements contact our sales desk.

#### 7 CE Marking

This product family carries a "CE marking". These phase angle controllers need a suitable remote filter. For information see recommendation section and contact our sales desk.

#### 8 Recommendations & Safety Requirements

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 and Fusing Recommendations
P01.1	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.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

#### 9 Order Code

State Part Number	PATFC
Optional Extras	250kΩ potentiometer
	Heatsinks (various °C/Watt ratings to suit application)
	TRIAC Power Devices

(Please contact our technical sales desk for more information)



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