

X10647

Variable AC Voltage Regulators

# PATFC

Phase Angle Triac Firing Circuit



## CONTACT US:

☎ 0044 (0) 1704-516 501

✉ [enquiries@united-automation.com](mailto:enquiries@united-automation.com)

🌐 [www.united-automation.com](http://www.united-automation.com)

## KEY FEATURES:

- ✓ **Compact Thick Film Technology:** Utilises advanced thick film technology for a compact and efficient design, ensuring reliable performance in demanding environments.
- ✓ **Simple Triggering Device:** Offers a straightforward triggering mechanism, simplifying operation and enhancing usability for seamless integration into diverse applications.

## APPLICATIONS:

- Ovens
- Electric Furnaces
- Heating Tapes
- Smelters
- Quartz Lamps / Heat Lamps
- Moulders
- Dryers
- Stress Relieving
- Space Heating
- Heating Mantles

\*Note: This product is unsuitable for use with inductive loads.

Introducing the Phase Angle Triac Firing Circuit (PATFC), a versatile thick-film hybrid firing circuit designed for phase control, offering simple and efficient proportional control for driving triac power devices across various load applications.

Upgrade your firing circuit with the Phase Angle Triac Firing Circuit (PATFC), offering precise phase control and reliable performance across a wide range of applications. Built with innovative thick film technology, it ensures efficient operation and simplified control for enhanced functionality.

## TECHNICAL SPECIFICATIONS

Supply voltage	50V to 250V ac @ 50 to 60Hz
Hysteresis (typical)	5%
Power rating	5A (max.).
Controlled conduction angle	10W (min.); 1kW (max.)
Maximum gate current	50mA
Storage temperature	0 to 65°C
Total conduction angle	0 to 160°
Further Dimensions	
Overall (max.)	18(H) x 11(W) x 4(D) mm
Lead pitch	5 & 2.5mm-pin S.I.L. type
Lead length (max.)	10mm
Lead diameter	0.5mm (typical)
Body length	9mm
Body width	11mm
Body thickness	4mm

## YOU MUST READ THIS BEFORE INSTALLATION

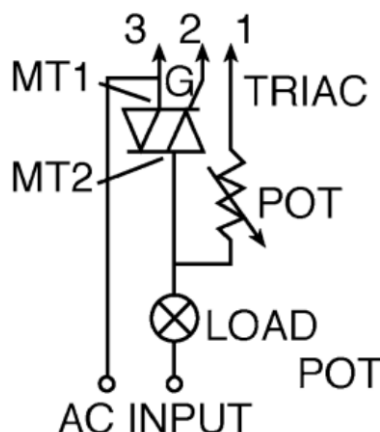
 ELECTRICAL SAFETY	 INSTALLATION REQUIREMENTS	 USER RESTRICTIONS	 USAGE ENVIRONMENT	 HOT SURFACE WARNING
<b>WARNING: RISK OF ELECTRIC SHOCK</b> Always consult the Installation & Maintenance Instructions before connecting this product to the power supply. <b>WARNING: Disconnect Power Before Servicing</b> Ensure the electrical supply is safely disconnected before connecting to any supply, load, or control terminals.	<b>WARNING: Installation by Qualified Personnel Only</b> This product must only be installed or fitted by a competent, qualified installer familiar with the relevant electrical standards and installation practices.	<b>WARNING: Not for Use by Vulnerable Individuals</b> This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or instructed by a person responsible for their safety.	<b>WARNING: Industrial Use Only</b> This is an industrial-grade product and is not intended for household use.	<b>WARNING: Hot Surfaces</b> On certain models, surfaces marked with this symbol become hot during use. Avoid direct contact and follow all thermal safety precautions.

# PATFC

## Phase Angle Triac Firing Circuit

### INSTALLATION

### DIMENSIONS & CONNECTIONS



#### 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.

### RECOMMENDATIONS

#### FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (semiconductor - MCB) for unit/device protection. On initial 'switch on' some loads may need an increased Factor of Safety (F of S) for unit and /or unit protection. Integral gate protection is provided) but further appropriate fusing should be integrated into the 12V supply (e.g., HRC F1A) and load circuit. See SRA Datasheet for further information.

### DOCUMENTS

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

Code	Identity	Description
X10229	RFI	Filtering recommendation – addressing 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

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
A403027	250kΩ Potentiometer

### PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
D31410	PATFC Angle TRIAC Firing Circuit