

X10224

TRIGGER MODULES | SINGLE PHASE

# MAT

110/230V

Manual Phase Angle TRIAC Trigger Module



## CONTACT US:

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## KEY FEATURES:

- ✓ **Compact and Easy to Install:** Fits seamlessly with single-hole panel mounting.
- ✓ **Solid-State Reliability:** Durable construction for long-term, maintenance-free operation.
- ✓ **Manual Control Potentiometer:** Allows precise adjustment of phase angle.
- ✓ **Minimum Output Trimmer:** Built-in for setting minimum output levels.
- ✓ **High Efficiency:** Controls power with minimal energy loss.
- ✓ **Wide Compatibility:** Suitable for most AC resistive or inductive loads.
- ✓ **High Isolation Voltage:** 2500V RMS for enhanced safety.

The **MAT Manual Phase Angle TRIAC Trigger Module** is a versatile and compact solution designed for precise power control in AC circuits. This module is ideal for driving standard TRIACs in 230V or 110V AC regulator circuits, making it suitable for a wide range of applications involving resistive or inductive loads. The MAT module is housed in a robust, industrial-grade enclosure that is both safe and tamperproof, ensuring long-term reliability and ease of use in demanding environments. With a built-in manual control potentiometer and minimum output trimmer, it offers users precise control over the phase angle for optimal performance.

The **MAT Manual Phase Angle TRIAC Trigger Module** is a reliable and efficient choice for professionals seeking precise control over AC power in a wide range of applications. Its compact design, solid-state reliability, and user-friendly controls make it an essential component for industrial, commercial, and residential power management systems.

## TECHNICAL SPECIFICATIONS

|                                       |                |
|---------------------------------------|----------------|
| <b>AC System Line Voltage</b>         | 110/230V ± 10% |
| <b>Line Frequency</b>                 | 50/60Hz        |
| <b>Minimum Offset at 110V</b>         | 0-50%          |
| <b>Minimum Offset at 230V</b>         | 0-50%          |
| <b>Conduction Phase Angle Typical</b> | 0-160°         |
| <b>Controlled Phase Angle Typical</b> | 30-160°        |
| <b>Isolation Voltage</b>              | 2500V RMS      |
| <b>Maximum Leakage Current</b>        | 6mA            |
| <b>Storage Temperature</b>            | 0-85°C         |
| <b>Operating Temperature</b>          | 0-65°C         |
| <b>Mounting Hole Diameter</b>         | 10mm           |

## APPLICATIONS:

The MAT Manual Phase Angle TRIAC Trigger Module is perfect for controlling AC power in various settings, including:

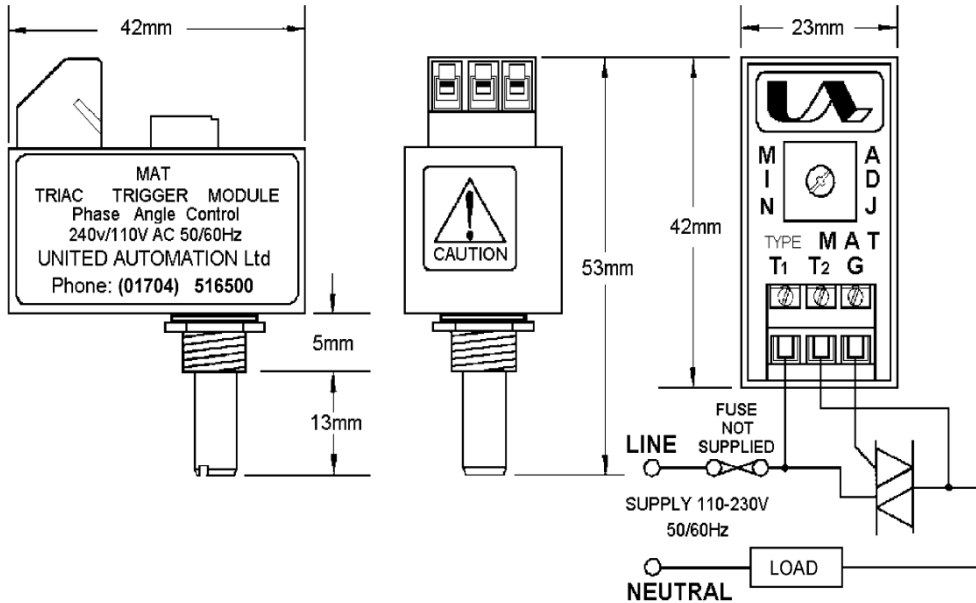
- Heating Systems
- Lighting Control
- Motor Speed Control
- Industrial Equipment

### YOU MUST READ THIS BEFORE INSTALLATION

|  |   |  |   |  |
|--|---|--|---|--|
| <p><b>⚠ ELECTRICAL SAFETY</b></p> <p><b>WARNING: RISK OF ELECTRIC SHOCK</b><br/>Always consult the Installation &amp; Maintenance Instructions before connecting this product to the power supply.</p> <p><b>WARNING: Disconnect Power Before Servicing</b><br/>Ensure the electrical supply is safely disconnected before connecting to any supply, load, or control terminals.</p> | <p><b>🔧 INSTALLATION REQUIREMENTS</b></p> <p><b>WARNING: Installation by Qualified Personnel Only</b><br/>This product must only be installed or fitted by a competent, qualified installer familiar with the relevant electrical standards and installation practices.</p> | <p><b>🚫 USER RESTRICTIONS</b></p> <p><b>WARNING: Not for Use by Vulnerable Individuals</b><br/>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.</p> | <p><b>🏭 USAGE ENVIRONMENT</b></p> <p><b>WARNING: Industrial Use Only</b><br/>This is an industrial-grade product and is not intended for household use.</p> | <p><b>⚠ HOT SURFACE WARNING</b></p> <p><b>WARNING: Hot Surfaces</b><br/>On certain models, surfaces marked with this symbol become hot during use. Avoid direct contact and follow all thermal safety precautions.</p> |
|--|---|--|---|--|

## INSTALLATION

DIMENSIONS AND CONNECTIONS



**WARNING: LIVE TERMINALS** – Switch off mains supply before commencing any service work

## 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 device protection. (See the SRA Datasheet for further information).

## DOCUMENTS

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 |
| X10378 | ILR      | Inductive loads remedy sheet for use with phase angle controllers   |
| P01.1  | COS      | UAL Conditions of Sale  |

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          |
|----------------------|------------------------------|
| Available on request | TRIAC                        |
| Z01062               | 1g Heatsink compound syringe |

## PRODUCT CODE AND RELATED PRODUCT CODE

| Product Code | Product Description                          |
|--------------|--|
| A31414       | MAT- Manual Phase Angle TRIAC Trigger Module |



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