

X10221

TRIGGER MODULES | SINGLE PHASE | PHASE TO PHASE

# AFM11

Up to 480V

Universal Phase Angle Trigger Module



## CONTACT US:

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## KEY FEATURES:

- ✓ **Wide Voltage Compatibility:** Capable of firing TRIACs or thyristors up to 480VAC, suitable for various industrial environments.
- ✓ Adjustable Soft-Start Function.
- ✓ **Current Limit Control:** Allows precise feedback control for voltage or speed regulation of AC or DC loads.
- ✓ **Pulse-Train Firing:** Ensures reliable and efficient operation via an isolation transformer, enhancing the module's adaptability to different loads.
- ✓ **Energy Efficient:** Consumes less than 2W, making it a cost-effective choice for continuous operation.
- ✓ Status LED Indicator
- ✓ Fully Enclosed Design

## APPLICATIONS:

Ideal for a wide range of industrial and commercial applications, including:

- Industrial Ovens
- Restaurant and Hospitality
- Quartz and Heat Lamps
- Moulders and Dryers
- Inductive Loads

The **AFM11 Universal Phase Angle Trigger Module** is a versatile and robust solution for precise power control in a wide range of industrial applications. Designed to manage both single-phase and phase-to-phase AC or DC loads, this module offers advanced variable phase-angle control with features like adjustable signal matching, current limit input, and a customizable soft-start function. Its powerful pulse-train output ensures reliable performance for both resistive and inductive loads, making it an essential component in power assemblies, particularly for controlling thyristors, TRIACs, and hybrid diodes.

The **AFM11 Universal Phase Angle Trigger Module** is a reliable and flexible power control solution, designed to meet the demanding requirements of industrial applications. With its advanced features and robust design, it ensures optimal performance and efficiency, making it an indispensable tool for professionals in various fields.

## TECHNICAL SPECIFICATIONS

Signal Span Minimum	0 – 2.5VDC (see X10390)
Signal Span Maximum	0 – 25VDC (see X10390)
Signal Zero Offset	0 – 50% of span (see X10390)
Signal Input Resistance	5kΩ ±20%
Trigger Pulse Height	8V open circuit
Trigger Pulse Rating	250mA in to 10Ω
Trigger Isolation Voltage	2500VAC RMS
Trigger Outputs (G & K)	Short circuit protected
AC Input Supply (nominal)	18 – 24VAC RMS @ 100mA
Auxiliary Output (nominal)	5VDC @ 20mA
Thyristor Line Voltage	12 – 480VAC RMS @ 50/60Hz
Manual Potentiometer	2kΩ, 5kΩ or 10kΩ
Limit Feedback Input	0.6 – 30VDC
Soft-start	1 – 30 seconds (adjustable)
Storage Temperature	0°C – 85°C
Operating Temperature	0°C – 75°C

**Note:** Limit feedback input – may be in the form of a current transformer used with a feedback PCB (details as shown in the installation section) or a shunt used with an amplifier PCB (details not given – for information contact the technical sales desk)



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ENGLAND

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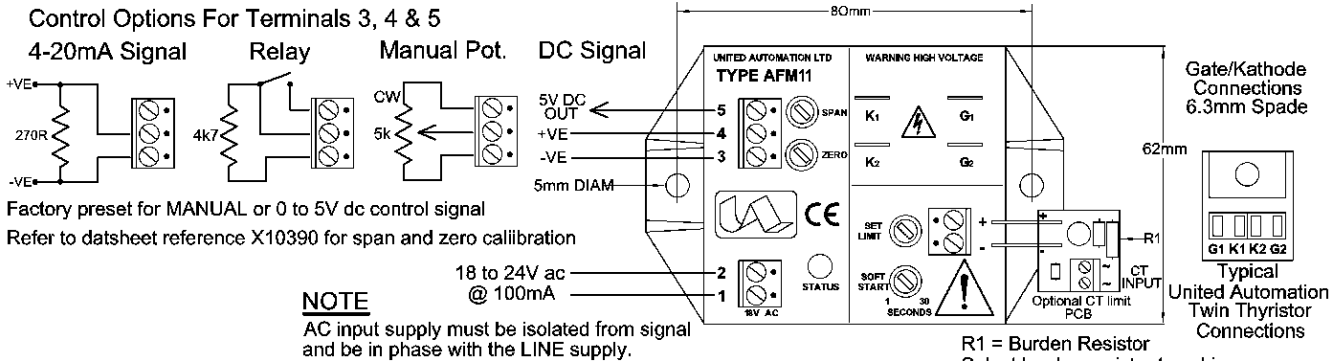


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## INSTALLATION

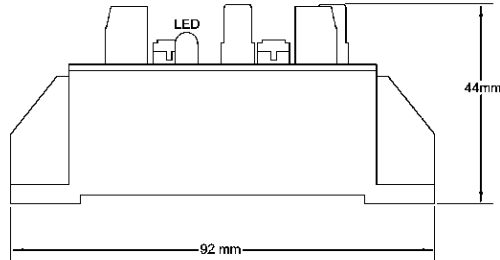
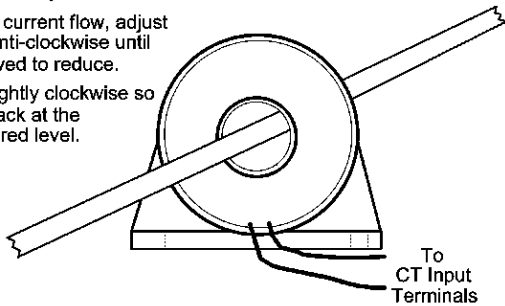


### CURRENT LIMIT SET UP

1. Set LIMIT cermet fully clockwise.
2. With maximum current flow, adjust LIMIT cermet anti-clockwise until output is observed to reduce.
3. Turn cermet slightly clockwise so that output is back at the maximum required level.

### OPTIONAL "CT"

If Current Limit is required



### WARNING !

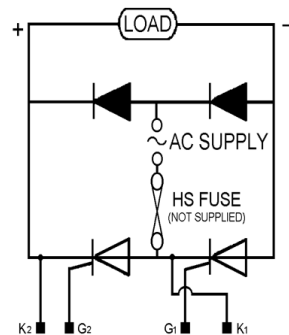
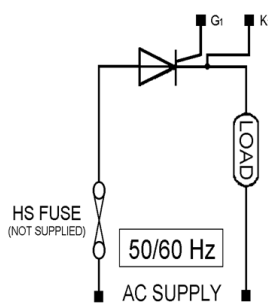
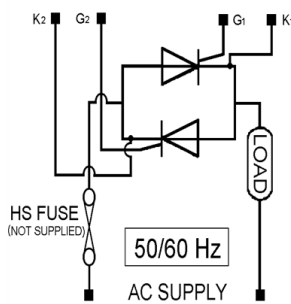
ENSURE SUPPLY IS OFF BEFORE COMMENCING ANY SERVICING WORK

## CONNECTIONS

FULL WAVE THYRISTORS

HALF WAVE - THYRISTOR

DC CONTROLLED



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## RECOMMENDATIONS

### FUSING

It is recommended that this unit's AC supply should be fused for safety and unit protection. An appropriate 250VAC, fast-acting, glass-type fuse (typically F1A glass 20mm x 5mm Ø) should be used (see the SRA datasheet in the recommendations section 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
P01.1	COS	UAL Conditions of Sale
X10378	ILR	Inductive loads remedy sheet for use with phase angle controllers
X10390	ZSS	For signal zero and span calibration setup & adjustment
X10389, X10424		For Current Transformer (CT) performance graph – 32A & 240A respectively

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
A403001	Manual (5K) Potentiometer Knob and Leads
T30201	Transformer 2VA Dual Primary, Dual Secondary
<b>Note:</b> Stack assembly (SCRs/transformers/fusing/heatsink), appropriate filter to match load, current transformers, current transformer feedback PCB	

## PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A31411	AFM11- Universal Phase Angle Trigger Module



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