

X10247

TRIGGER MODULES | SINGLE PHASE

FC11BL

Burst Fire ZVS Trigger Module

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KEY FEATURES:

- ✓ **Zero Voltage Switching:** Fires TRIACs or thyristors up to 440V, ensuring precise control.
- ✓ **MONO-LINK™ Gate Firing:** Provides reliable gate-to-gate firing for consistent performance.
- ✓ **Universal Signal Matching:** Compatible with voltage or mA control signals with universal span and zero matching.
- ✓ **Status LED:** Displays output level for easy monitoring.
- ✓ **High-Resolution Output:** Features a high isolation opto-isolated output for enhanced safety and reliability.

APPLICATIONS:

The FC11BL is ideal for managing a wide range of resistive loads, including:

- Ovens and Furnaces
- Hot Plates and Extruders
- Moulders and Space Heating
- Boilers and Dryers
- Soldering Pots and Irons
- Heating Tapes and Stress Relieving
- Smelting and Heating Mantles

The **FC11BL Burst Fire ZVS Trigger Module** is a single-phase module designed for efficient control of resistive loads. Operating on a one-second nominal time base, this module ensures precise, zero-voltage switching (ZVS) by providing a variable on/off ratio that is directly proportional to the manual control or DC input signal. The opto-isolated output driver stage self-times with the power device connections, eliminating phase timing issues. This results in seamless sine wave cycles being passed through the load, reducing rapid current changes and minimising Radio Frequency Interference (RFI).

With its robust design and versatile applications, the FC11BL Burst Fire ZVS Trigger Module is a top choice for controlling resistive loads in industrial and commercial environments.

TECHNICAL SPECIFICATIONS

Signal Span Minimum	1.5 to 5V DC
Signal Span Maximum	5 to 25V DC
Signal Zero Offset	0 to 30% of span
dV/dt rating	100V/μs
Max. gate/line Voltage	440V AC
Trigger Isolation Voltage	4kV RMS
Trigger Output Rating	0.8A
Storage Temperature	0°C to +85°C
AC Input Supply (nominal)	18 to 24V RMS @ 65mA
Auxiliary Output (nominal)	5V DC@ 5mA protected
Line Frequency	50/60 Hz
Max. Ambient Temperature	65°C Operational
Cycle Time Base Nominal	1 second
Mono-link Fuse	F100mA (HRC)
Manual Potentiometer	2, 5 or 10KΩ
Power Connections	6.3mm Amp tags

YOU MUST READ THIS BEFORE INSTALLATION

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

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FC11BL

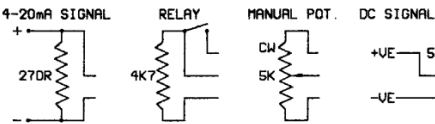
Burst Fire ZVS Trigger Module

INSTALLATION

CONNECTIONS AND DIMENSIONS

CONNECTIONS

CONTROL OPTIONS FOR TERMINALS 3,4 AND 5



WARNING

SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK

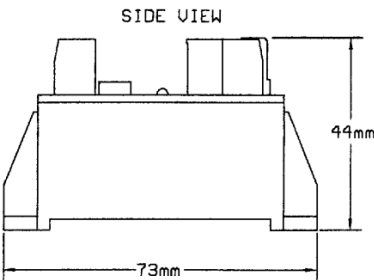
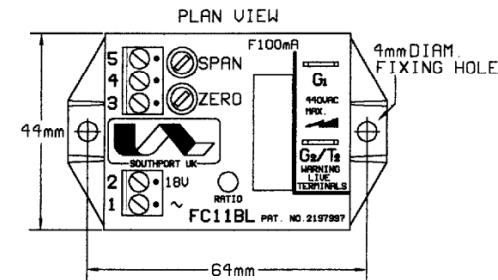
NOTE

INPUT SUPPLY MUST BE ISOLATED FROM SIGNAL

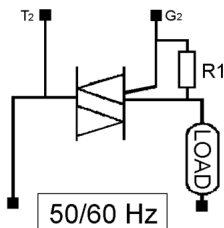
SUPPLY: 18V TO 24V ac/dc @ 65mA

GATE CONNECTIONS 6.3mm X 0.83mm VERTICAL AMP TAGS

SEE POWER CONNECTIONS



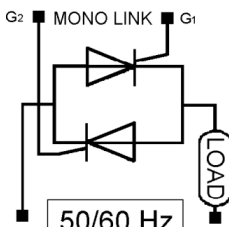
FULL WAVE TRIAC



AC SUPPLY

R1-100R 1/4W (TYPICAL)

FULL WAVE THYRISTOR



AC SUPPLY

RECOMMENDATIONS

FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (semiconductor-MCB) for protection. On initial 'switch on', some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. See 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
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
A403001	Manual (5K) Potentiometer Knob and Leads
T30201	Transformer 2VA Dual Primary, Dual Secondary

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A32410	FC11BL - Burst Fire ZVS Trigger Module



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