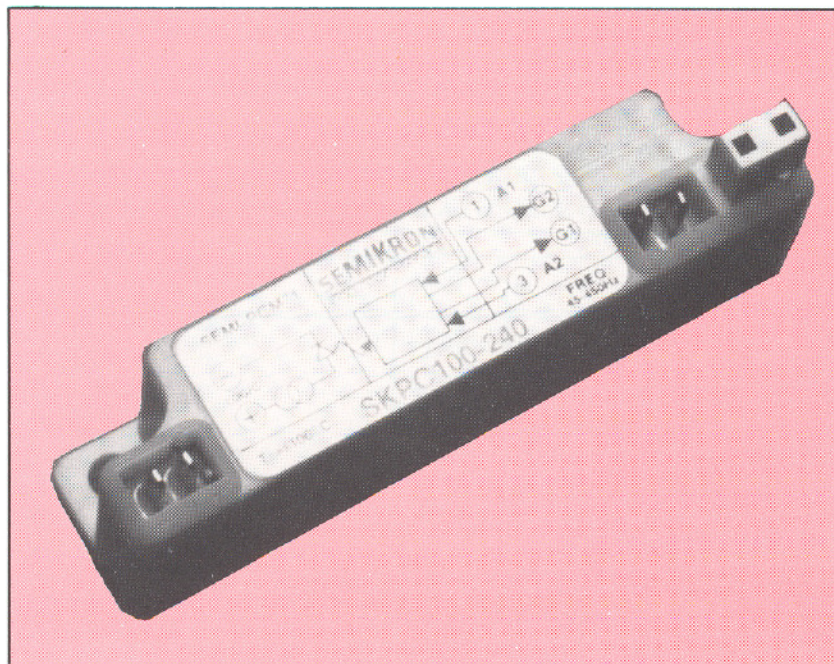


# SEMIKRON

innovation + service



SKPC100 is one of the new generation of Semikron Power Control Modules (SEMI-PCM). The new design allows triggering of a wide range of SCR's for both zero voltage or instantaneous switching applications. Thus forming the basis of very high power solid state relays. The SKPC100 is particularly suitable for highly inductive or large in-rush current type loads.

The improved design incorporates a wider range of input logic voltages, operation in D.C. bridges type B2HZ/B2HKF and higher operating temperatures. The opto-isolated input circuit has a high sensitivity and is protected against reverse voltage connections.

The versatile packaging is fully compatible for mounting with SEMIPACK 1 to SEMIPACK 4 SCR Modules. Identical polarised dual plugs, as used for SEMIPACK gate/cathode connections, are provided to simplify wiring of the SKPC100 to SEMIPACK Modules.

SKPC100  
INSTANTANEOUS  
TRIGGER  
CONTROL MODE

SKPC100Z  
ZERO VOLTAGE  
TRIGGER  
CONTROL MODE

## MAIN FEATURES

- \* TTL and CMOS compatible
- \* Fully Isolated protected input
- \* Conforms to UL, CSA and VDE requirements
- \* Triggers, wide range of SCR's
- \* Versatile Package

## TYPICAL APPLICATIONS

- \* High Power Solid State Relays
- \* High In-rush Current Loads
- \* Phase Angle Control of Heating Loads etc.



**PRODUCT TYPES:**

SKPC100 - 240  
SKPC100Z - 240  
SKPC100 - 440  
SKPC100Z - 440

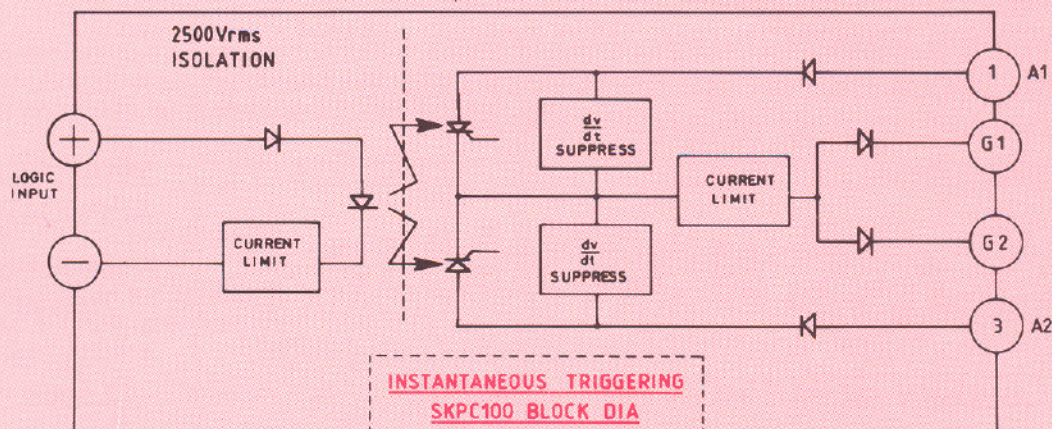
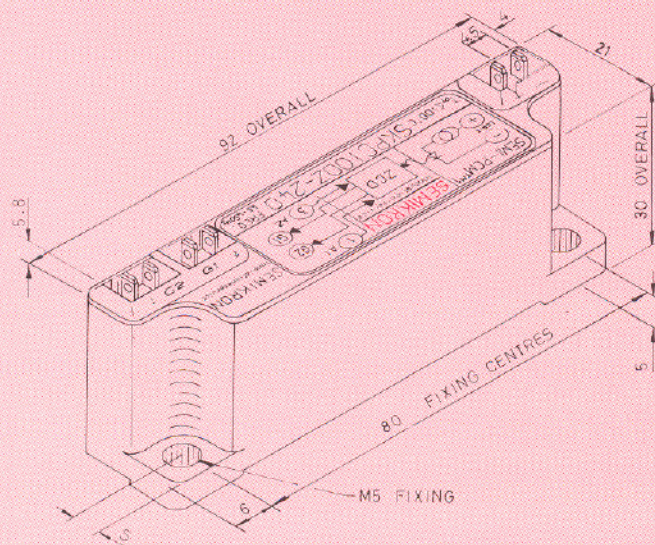
INST. TRIGGER 240Vrms  
ZERO V. TRIGGER 240Vrms  
INST. TRIGGER 440Vrms  
ZERO V. TRIGGER 440Vrms

**ELECTRICAL SPECIFICATIONS:**

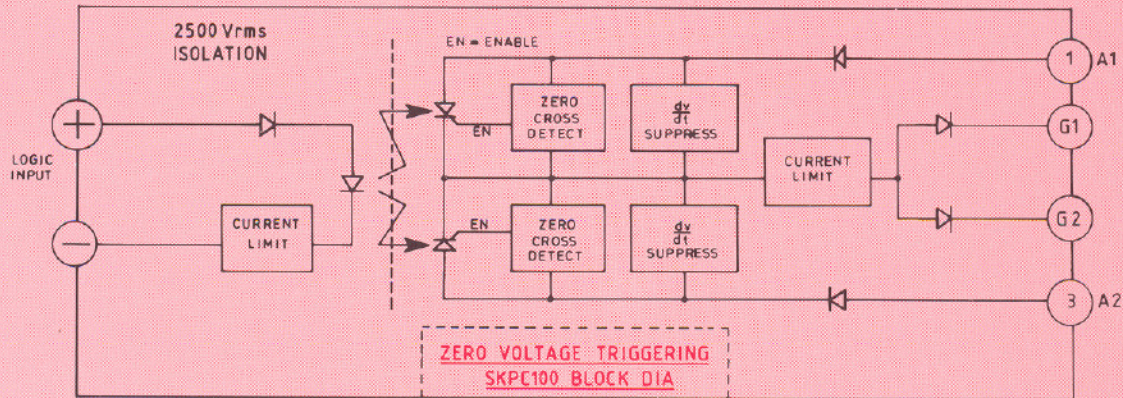
Operating Supply Voltage	Nom. + 10%, -20%
Operating Frequency	45 - 450Hz
Input Logic Trigger Voltage/Current	4 - 32V/10 - 30mA max.
Non Trigger Input Voltage	1.5V typ., 2.0V max.
Critical Dv/Dt	500V/ $\mu$ s min. for 240V type 100V/ $\mu$ s min. for 440V type
Peak Gate Output Current	1.7A @ 90°C Conduction Angle
R.M.S. Gate Current	100mA max.
Zero Voltage Crossing )	35V max. for SKPC100Z - 240
Inhibit Voltage )	70V max. for SKPC100Z - 440
Input/Output Isolation	2.5KV rms

**MECHANICAL SPECIFICATIONS:**

Storage Temperature	-40°C to +125°C
Operating Temp.	-30°C to +100°C
Operating Humidity	80% RH Non-Condensing
Flame Retardance	UL94-VO
Weight	60 gms
Mounting	80mm Centres, M5 screws, 2Nm Torque
Hardware Supplied	2 screws, 3 plugs, 6 crimps

**MECHANICAL OUTLINE**

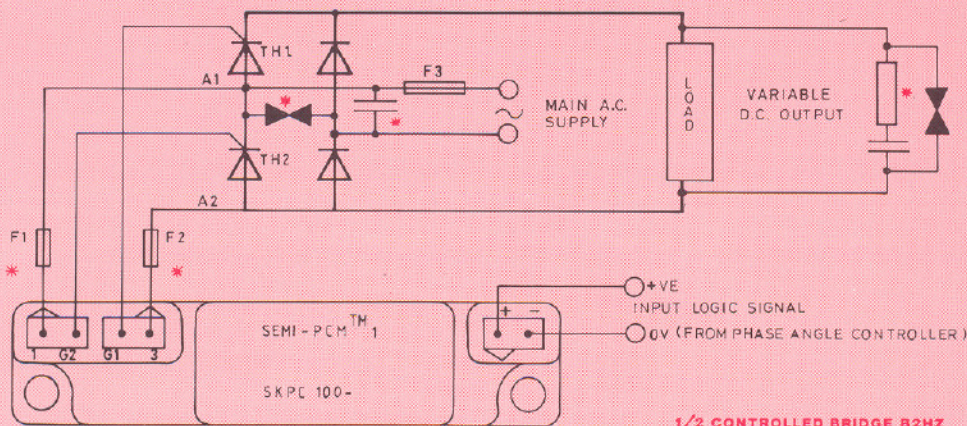
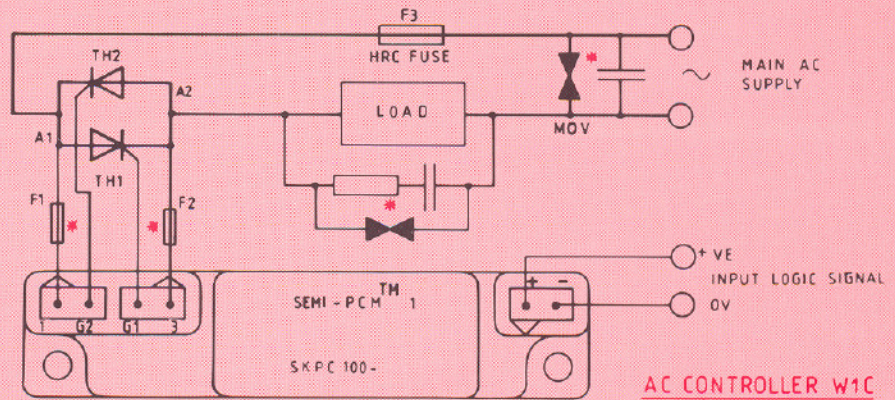




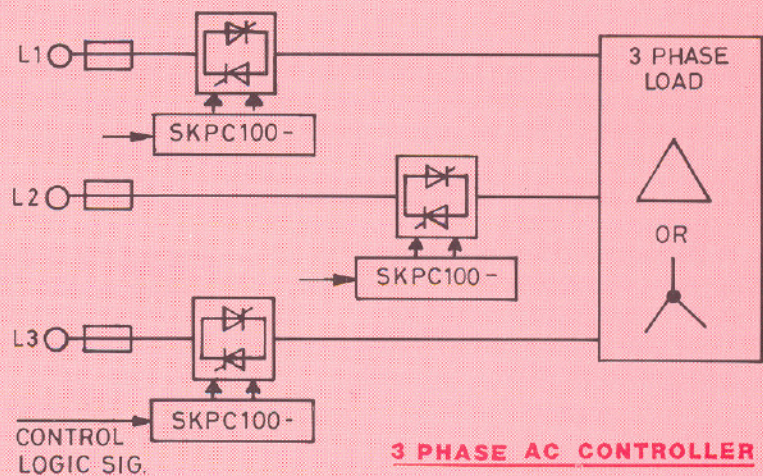
## NOTES

1. FUSE F1 AND F2 RECOMMENDED: 500mA FAST BLOW (HRC) TYPE
2. USE SKPC100 FOR PHASE ANGLE CONTROL APPLICATIONS
3. USE SKPC100Z FOR ZERO CROSS (SOLID STATE RELAY) APPLICATIONS

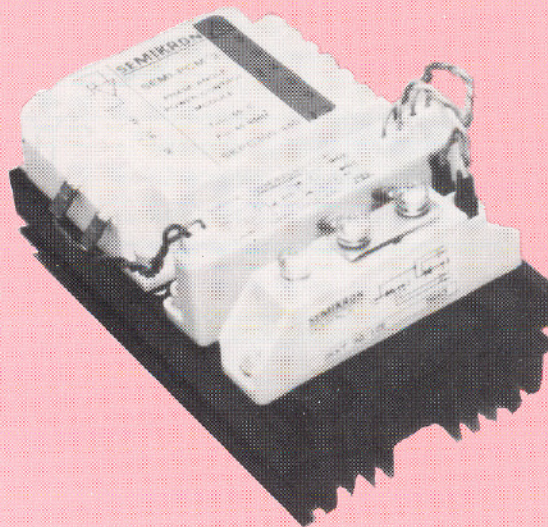
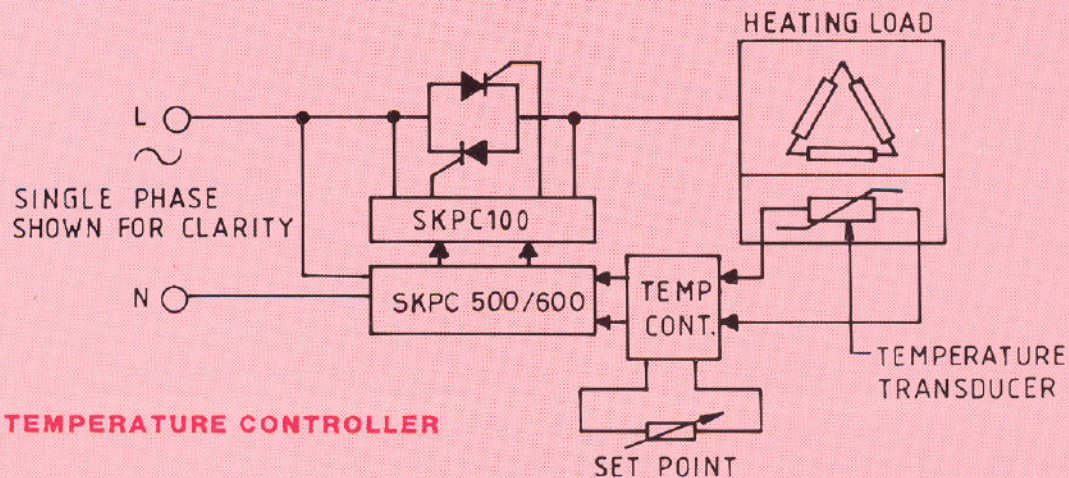
\* RECOMMENDED PROTECTIVE COMPONENTS



## APPLICATION EXAMPLES







Within this SEMI-PCM range, there are a number of other Power Control Modules as follows:

SKPC1501.C.

SKPC200

SKPC300

SKPC500

SKPC600

- A 20-pin Custom Microchip for multi-channel digital phase angle control. Parallel or serial interface to micro-processors for controlling thyristors.
- Single Phase Angle Controller for both AC to AC regulator or AC to DC bridge applications
- Three Phase Thyristor Controller for both AC to AC regulator or AC to DC bridge applications
- Low cost Burst Firing Controller for heating loads
- Precision Burst Firing Controller with compensation for supply voltage variation and maximum power limit facility

The above controllers can be supplied as fully assembled Power Semiconductor assemblies - SEMISTACK (refer to photograph as above) consisting of heatsinks, fuses, snubber networks and SCR's etc. Contact our Sales Office for custom designs for specific applications.

Due to Semikron's policy of constant improvement and technical innovation, we reserve the right to make changes in these specifications at any time without notice.

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