

Features

- **Auto Senses Line Voltage**
 - 110-1000VAC, 10–500 Hz
- **Analog Interface**
 - Field scalable
 - 0-5, 0-10 Vdc, 0-20 mA
- **Modbus Digital Interface**
 - RS-485
- **Control Features**
 - Digital Signal Processor(DSP) based Phase Locked Loop (PLL)
 - Phase Angle / ZeroCross / Closed Loop
 - Soft Start
 - Fast Inhibit
- **Integrated Closed Loop Feedback**
 - DC current sense
 - DC voltage sense
- **Easy Setup via Serial Port**
 - Completely Software Configurable
 - Easy User Configuration via Serial Port
 - Free PC based GUI
- **DC Input Bias Voltage**
 - 18-32 V_{DC}



Description

The OZSCR1100 is a state of the art, universal, digitally controlled SCR firing and control board. It has been designed to address numerous SCR power system challenges, allowing fast and economical product development and support.

There is no longer a need to stock dozens of control board variants to meet your various product needs. With the OZSCR1100, nearly every system parameter is software adjustable, providing you a **single** control board solution for all your needs.

Configuration and operating parameters are easily modified using the RS485 Modbus serial port and the Oztek SCR Configuration & Control Tool (SCC). The SCC also makes field updates fast and easy.

A digital phase locked loop is used to synchronize to the AC line, exhibiting wide dynamic range, high rejection of line disturbances and noise, and fast, precise tracking. Intelligent fault handling minimizes down time and protects the system.

Systems operating from line voltages as high as 1000VAC are supported using the integrated, transformer isolated, "picket fence" firing circuitry. Dedicated high voltage and current measurement interfaces are also provided for systems requiring closed loop digital control of DC voltage and/or current, eliminating the need for external hardware and system complexity. Pre-designed control algorithms can quickly be selected and implemented using the SCC tool. The OZSCR1100 is also available with a low voltage AC line synchronization interface in place of the standard SCR cathode sense circuitry.

The OZSCR1100 is ideally suited for a wide range of system applications including:

- Three Phase AC Switch
- Three Phase 6-Pulse Rectifiers
- Single Phase Rectifiers
- Multiple Independent Single Phase AC Switches

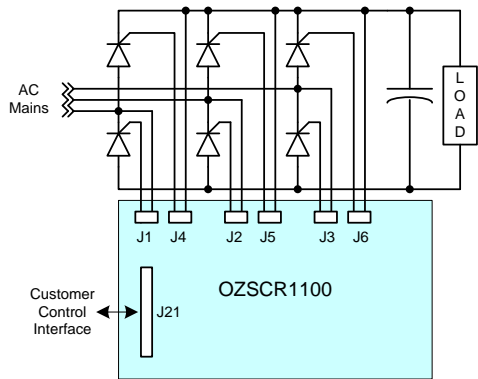
Systems requiring custom off-board gate drive solutions can use the digital logic-level firing pulse signals available on the expansion interface.

Performance Specifications

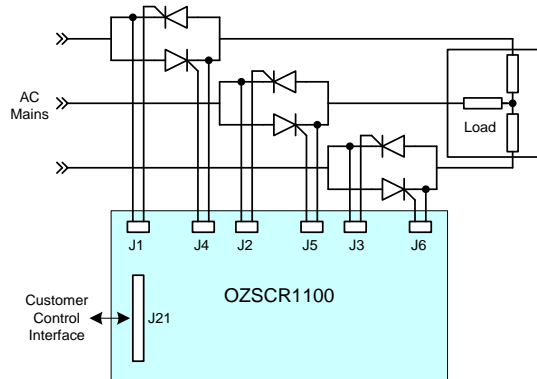
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 85°C
AC Mains Voltage	1000 V _{AC}
Pulse Transformer HiPot (Vac) – 2sec	5400 Vrms
Bias Voltage	18-32 V _{DC}
Electrical Characteristics	
Analog Command Interface	
Voltage Input	0-10 V _{DC}
Current Input	0-20 mA
Delay Angle Range	0 – 180 deg
Phase Reference Angle Bias	0 or 30 deg
Low Voltage Line Sense (-03, -04 only)	+/-10 V

Electrical Characteristics (cont.)	
Soft Start Range	1-65535 deg/sec
Soft Stop Range	1-65535 deg/sec
Gate Drive	
Initial short circuit gate current	3 A
Sustaining gate current	0.75 A
Open Circuit Voltage	15 V
Gate Pulse Width	User configurable
PCB Creepage	UL480, VDE0110
Mechanical Specifications	
Printed Circuit Board Dimensions	6" x 7.5"

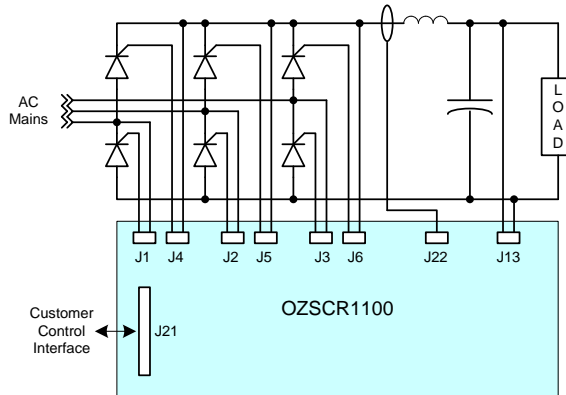
Typical Applications



Open Loop AC/DC Converter



Open Loop Phase Angle Control AC Switch



Closed Loop AC/DC Converter

Ordering Information

Part #	Option	Description
10881 -	01	Standard SCR Cathode Line Sense
	02	Standard SCR Cathode Line Sense with conformal coat
	03	Low Voltage (+/-10V) Line Sense
	04	Low Voltage (+/-10V) Line Sense with conformal coat