Transient Protection

The CSR Control Switch Relay is designed and tested to operate reliably in a normal power industry environment. This includes being subjected to transients on the control bus up to 3.5KV. Since the CSR is normally isolated from the bus, it will experience transients only if they occur in the operating mode. This precludes the possibility of a detrimental, accumulating affect over the life of the unit. As such, no transient protection is needed with circuits B and C. Circuit A with its voltage divider circuit does remain on the bus and therefore contains a bipolar diode, as previously explained, to clip the transients to an acceptable value.

Because of the nature of the operation of the rotary solenoid, the CSR does generate transients that may be of interest to the user. These transients are less than 2KV and generally in the 1.5KV to 1.8KV range. When used in conjunction with unprotected static devices, like solid state relays, a bipolar diode is recommended across the rotary solenoid and the relay contact.

The CSR is available with Serial Communication Control.

Coil Voltage Data

COIL	COIL CIRCUIT VOLTS	COIL CIRCUIT DC OHMS @25°C	BURDEN (AMPS) AT RATED VOLTAGE
C	48VDC	4.83	9.9
D	125VDC	18.96	6.6

24VDC and 250VDC available — Consult factory.

Contact Ratings

CONTACT CIRCUIT VOLTS	INTERRUPTIVE RATING (AMPS)		SHORT TIME RATING* (AMPS)	CONTINUOUS RATING (AMPS)
	RESISTIVE SINGLE CONTACT	INDUCTIVE SINGLE CONTACT		
12VDC	–	–	60	30
24VDC	–	–	60	30
48VDC	–	–	60	30
125VDC	3	3	60	30
250VDC	–	–	–	–
600VDC	–	–	–	–
120VAC	20	20	60	30
240VAC	15	15	60	30
480VAC	10	10	60	30
600VAC	6	6	60	30

* Short time current is for one minute.

Coil Burden Data

COIL	NOMINAL VOLTAGE	VOLTAGE RANGE
C	48VDC	41-56VDC
D	125VDC	106-140VDC

OPTIONS

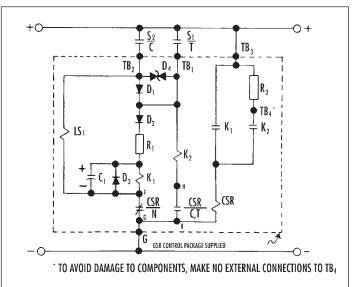Three basic circuits are available to satisfy different power industry applications.

Circuit B
One Second Time Delay
With Anti-Pumping Circuitry

Circuit B has a time delay that holds the CSR in the command position for 1 sec. It also has anti-pumping circuitry so that the command contact may be closed indefinitely (greater than 100 msec).

Circuit B
One Second Time Delay with Anti-Pumping Circuitry

Circuit C
Time Delay and Anti-Pumping
Controlled By the Command Contacts

Circuit C has no built in time delay. It exactly follows (or is a slave to) the operation of the command contact (maximum 15 second time delay).

* TO AVOID DAMAGE TO COMPONENTS, MAKE NO EXTERNAL CONNECTIONS TO TB₄

Circuit C
Time Delay with Anti-Pumping Controlled by the Command Contacts