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Interpower

ZPF & ZPV Series 3 and 4 amp DC Controlled PCB Mounting Solid State Relays

Features

- **Excellent Current Surge Characteristics**
- **Zero voltage turn on**
- **Compatible with standard logic families**
- **4 KV RMS Isolation**
- **600 VDRM**
- **UL Recognised**
- **VDE Approved**
- **Military and Civil Aviation Approvals.**

General Description

The ZPV and ZPF ranges of printed circuit board mounting Solid State Relays offer the user all the usual advantages of semiconductor devices linked with compact size

The series offers a nominal input impedance of 1500 OHMS, 600 VDRM and 4KV isolation as standard

Three all plastic packages are available, one for the ZPV and two for the ZPF series

ZPV 4003B and ZPV 6004A

The 3 and 4 amp ZPV has a vertical style 10 5 mm wide body which, providing a minimum 4mm air gap is left between adjacent SSRs, can be used for high density packing * The single inline pins are connected to the PCB in a unique manner which ensures good mechanical and electrical reliability

ZPF 4003B and ZPF 6004A

The 3 and 4 amp versions are available in an industry standard 10mm deep case — ideal for rack mounted printed circuit board applications

ZPF 4003B/6 and ZPF 6004A/6

Electronically identical to the ZPF 4003B and ZPF 6004A These types offer 2mm of insulation on all surfaces with a 12.75 mm deep case and meets the requirements of IEC 380 and other International Standards

*The derating graph on page 16 is based on a single ZPV SSR mounted in such a way that all surfaces (except the base) are in free air The rating depends totally on the environment — moderate air flow improves the dissipation, restricted air flow reduces it Closely packed units will result in a reduction in dissipation efficiency and possible over heating-resulting in a reduction in reliability

An application note is available on request

MAXIMUM RATINGS Ta=25°c (unless otherwise stated)	**ZPV 4003B ZPF 4003B ZPF 4003B/6**	**ZPV 6004A ZPF 6004A ZPF 6004A/6**
Input Voltage	24V	24V
Line Voltage (Nominal)	250V RMS	250V RMS
Repetitive Peak Off State Voltage V_{DRM}	600V	600V
On State Current	3A	4A
Non-Repetitive On State Current I_{TSM} 10mS	85A	115A
Fusing current I^2t 10mS ½ cycle	$36A^2s$	$66A^2s$
Off state dv/dt (typ)	200 V/µs	200 V/µs
Commutating dv/dt snubbed for	0 5 PF	0 5 PF
Operating Temperature Range *	-40°C to + 80°C	-40°C to + 80°C
Isolation input — output — case 1 sec	4000V RMS	4000V RMS

CHARACTERISTICS Ta=25°C f=50 Hz (unless otherwise stated)

PARAMETER	**CONDITION**	**MIN**	**MAX**	**MIN**	**MAX**
Input Circuit (Control)					
Must Operate Voltage			3V		3V
Must Release Voltage			1V		1V
Input Resistor	(See Fig 1)				
Output Cicuit					
Line Voltage V RMS		28V	280V	28V	280V
Off State Current mA RMS	V line=280V RMS f=50 Hz		6 5mA		6 5mA
On State Voltage Vt					
3 Amps RMS	T_J=25°C		1 5V pk		
4 Amps RMS	T_J=25°C				1 6V pk
Minimum Load Current mA RMS	See 'HINTS' for lower currents	50mA		100mA	
Nom Frequency Range		47Hz	63Hz	47Hz	63Hz
Turn on time t on			0 5 cycle		0 5 cycle
Turn off time t off			0 5 cycle		0 5 cycle

*For further electrical information and outline drawing please see pages 16 and 17
For definitions see page 19

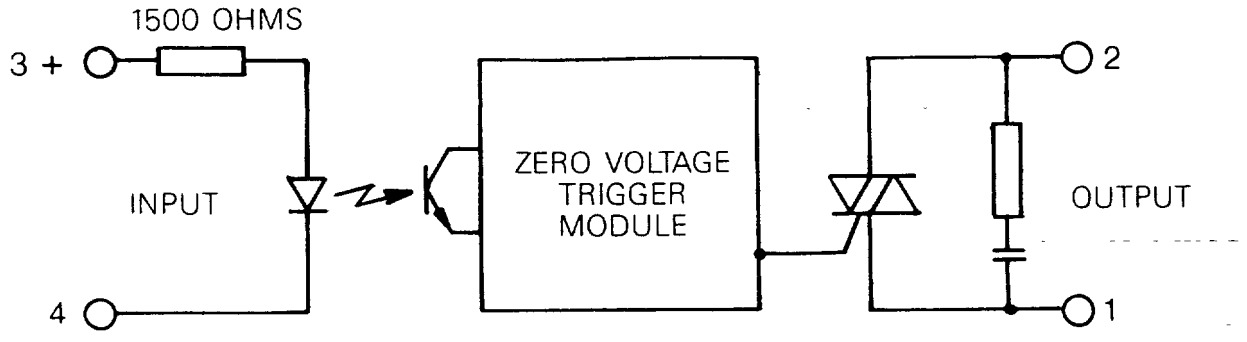

Fig. 1