Solid State Relay KSD440AC8

UL 60950 (File No.E108430)

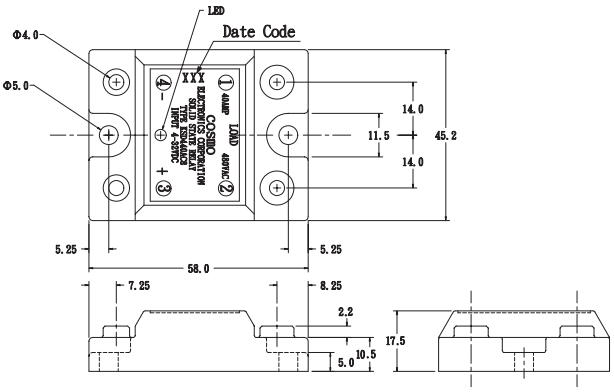
Features

1. Molded epoxy body.
2. Zero crossing circuit.
3. High input/output insulation.
4. Small size and light weight.
5. Fast reactive speed.
6. Good heat sinking.
7. Normally open.

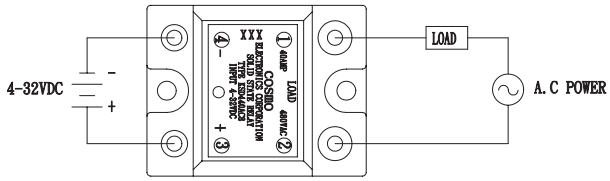
Applications

1. Household Appliances.
2. Temperature Control System.
3. Industrial Automatic Control.
4. Lighting System.
5. Office Appliances.
6. Factory Appliances.

Outside Dimension : Unit (mm)



Schematic : Top View



Absolute Maximum Ratings

(Ta=25℃)

Parameter		Symbol	Rating	Unit
Input	Input Signal Voltage	VIN	4~32	VDC
	Drop-out Voltage	Vdo	1	VDC
Output	RMS on-state current	IT	40	Arms
	Peak one cycle surge current (8.3 ms)	Isurge	400	A
	Repetitive peak-off state Voltage	VDRM	800	V
	Operating frequency	f	47~70	Hz
	Critical rate of rise of on-state current	di/dt	50	V/μS
	Load supply voltage	Vout	480	Vrms AC
Isolation Voltage input to output		Viso	4000	Vrms
Operating Temperature		Topr	-30~100	℃
Storage Temperature		Tstg	-30~125	℃

Electrical Characteristics

(Ta=25℃)

Parameter		Symbol	Conditions	MIN	TYP	MAX	Unit
Input	Pick-up Voltage	Vpu	It=1Arms			4	VDC
	Input current	Iin	Vin=4-32V	5		12	mA
Output	On-state Voltage	VT	IT=1Arms			1.5	Vrms
	Operating Current	Iop	Vout=480Vrms	50			mArms
	Leakage Current	I leak	Vout=480Vrms			14	mArms
	Critical rate of rise of off-state Voltage	dv/dt	See Note 1	50	200		V/μS
	Zero-cross Voltage				Yes		
	Load Voltage Rating	Vout	IT=50mArms MIN	75		480	VAC
Minimum trigger current		IFT	VDRM=1200V			25	mA
Isolation resistance input to output		RISO	DC500V	10^{10}			Ω
Turn-on time		Ton	60Hz AC			8.3	mS
Turn-off time		Toff	60Hz AC			8.3	mS
Thermal resistance (between junction and case)		Rth (j-C) I			1.3		℃/W

Note1：Output (dv/dt) protection is provided in all models, and they are designed to switch resistive or inductive loads to 0.2 power factor. The dv/dt rating is based on source impedance of 50 ohms.

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Data Curve

Fig.1 RMS On-state Current vs. Ambient Temperature

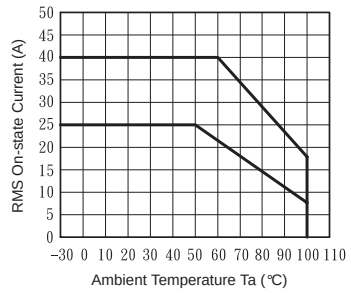

Fig.2 Surge Current vs. Time

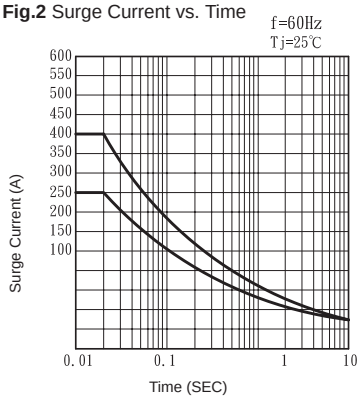

Fig.3 Open Circuit Leak Current vs. Supply Voltage

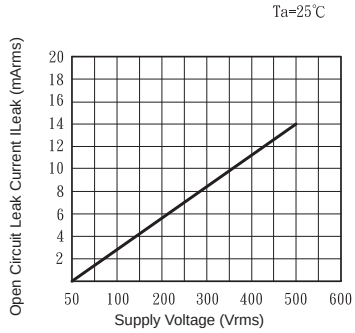

Fig.4 RMS On-state Current vs. CaseTemperature

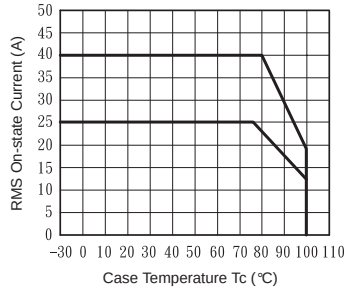

Fig.5 Input Voltage vs. Ambient Temperature

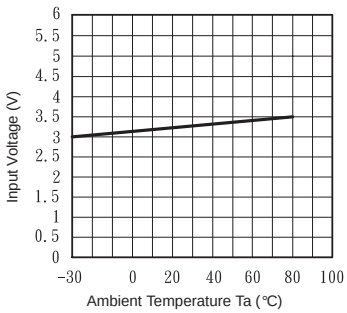

Fig.6 Input Current vs. Input voltage

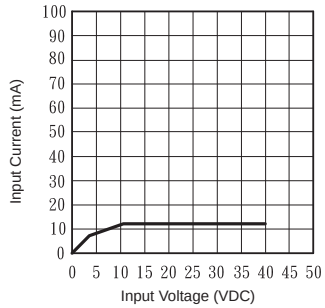

Fig.7 Action waveform

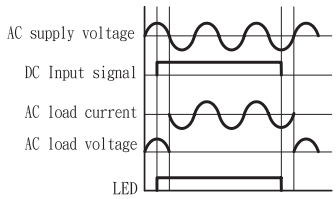
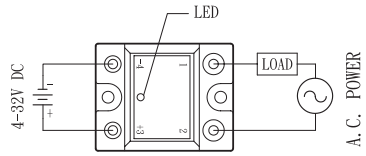
Fig.8 WIRING DIAGRAM