### PRODUCT SPECIFICATION

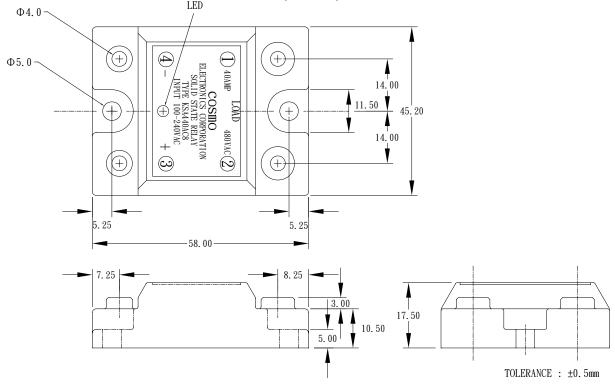
COSMO ELECTRONICS CORPORATION

SOLID STATE RELAY: KSA440AC8

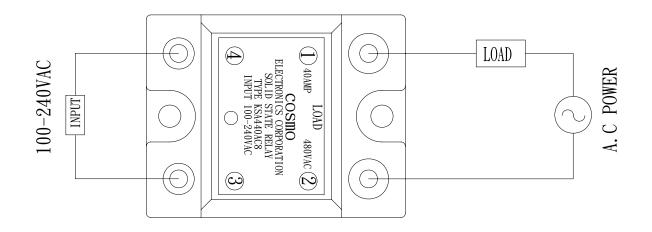
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1. OUTSIDE DIMENSION: UNIT ( mm )



2. SCHEMATIC: TOP VIEW



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3.Absolute Maximum Ratings				(Ta=25°ℂ)
Parameter		Symbol	Rating	Unit
Input	Input signal voltage	V <sub>IN</sub>	100~240	VAC
	Drop-out voltage	$V_{do}$	10	VAC
Output	RMS on-state current	I <sub>T</sub>	40	Arms
	Peak one cycle surge current (8.3ms)	I <sub>surge</sub>	400	Α
	Repetitive peak-off state voltage	$V_{DRM}$	800	V
	Operating frequency	f	47~70	Hz
	Critical rate of rise of on-state current	di/dt	50	A/us
	Load supply voltage	$V_{out}$	480	Vrms AC
Isolation voltage input to output		V <sub>iso</sub>	4000	Vrms
Operating temperature		$T_{opr}$	-30~100	$^{\circ}\mathbb{C}$
Storage temperature		T <sub>stg</sub>	-30~125	$^{\circ}\!\mathbb{C}$
Soldering temperature 10 sec		T <sub>sol</sub>	300	$^{\circ}\!\mathbb{C}$

#### 4.Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	MIN	TYP	MAX	Unit
Pick-up voltage	$V_{pu}$	Rin=11K $\Omega$			100	VAC
Input current	Rin			11		ΚΩ
On-state voltage	$V_{T}$	I <sub>T</sub> =1Arms			1.5	Vrms
Operating current	I <sub>op</sub>	Vout=480Vrms	50			mArms
Leakage current	I <sub>leak</sub>	Vout=480Vrms			12	mArms
Critical rate of rise of	dv/dt		50	150		V/us
off-state voltage						
Zero-cross voltage	$V_{ox}$			YES		
Load Voltage Rating	$V_{out}$	I <sub>T</sub> =50mArms MIN	75		480	VAC
Minimum trigger current		V <sub>DRM</sub> =800V			25	mA
Isolation resistance input to output		DC500V	10			GΩ
Turn-on time		60Hz AC			8.3	mS
Turn-off time		60Hz AC			8.3	mS
Thermal resistance						
(between junction and case)				2.5		°C\ <b>W</b>
	Pick-up voltage Input current On-state voltage Operating current Leakage current Critical rate of rise of off-state voltage Zero-cross voltage Load Voltage Rating m trigger current resistance input to output time I resistance	Pick-up voltage Input current Rin  On-state voltage Operating current Leakage current Critical rate of rise of off-state voltage Zero-cross voltage Vox Load Voltage Rating Ton Itime Ton Itime I resistance I resistance  Vpu Rin Rin Vpu Rin Rin Voy Loap Voy Loap Rich Rich Rich Rich Rich Rich Rich Rich	Pick-up voltage $V_{pu}$ Rin=11KΩ         Input current       Rin         On-state voltage $V_T$ $I_T$ =1Arms         Operating current $I_{op}$ Vout=480Vrms         Leakage current $I_{leak}$ Vout=480Vrms         Critical rate of rise of off-state voltage $V_{ox}$ $V_{ox}$ Load Voltage Rating $V_{out}$ $I_T$ =50mArms MIN         In trigger current $I_{FT}$ $V_{DRM}$ =800V         In resistance input to output $R_{ISO}$ DC500V         Itime $T_{off}$ 60Hz AC         I resistance $R_{th}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Pick-up voltage $V_{pu}$ Rin=11KΩ         Input current       Rin       11         On-state voltage $V_T$ $I_T = 1$ Arms         Operating current $I_{op}$ Vout=480Vrms         Leakage current $I_{leak}$ Vout=480Vrms         Critical rate of rise of off-state voltage $V_{ox}$ $V_{ox}$ Zero-cross voltage $V_{ox}$ $V_{ox}$ Load Voltage Rating $V_{out}$ $I_T = 50$ mArms MIN       75         In trigger current $I_{FT}$ $V_{DRM} = 800V$ $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN         In resistance input to output $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN         In resistance input to output $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN         In resistance input to output $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN         In resistance input to output $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN         In resistance $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN $V_{ox} = 10$ marms MIN	Pick-up voltage $V_{pu}$ Rin=11KΩ       100         Input current       Rin       11         On-state voltage $V_T$ $I_T$ =1Arms       1.5         Operating current $I_{op}$ Vout=480Vrms       50         Leakage current $I_{leak}$ Vout=480Vrms       12         Critical rate of rise of off-state voltage $V_{ox}$ YES         Zero-cross voltage $V_{ox}$ YES         Load Voltage Rating $V_{out}$ $I_T$ =50mArms MIN       75       480         In trigger current $I_{FT}$ $V_{DRM}$ =800V       25         In resistance input to output $R_{ISO}$ DC500V       10         Itime $T_{off}$ 60Hz AC       8.3         Itime $T_{off}$ 60Hz AC       8.3         It resistance $R_{th}$

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#### Application Notice

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