Surface Mount Solid State Relay — PCD



FEATURES

- Industry Standard "Hockey Puck" Design
- 10 to 40 Amp Output
- 50 to 250 or 50 to 480 Volt Output
- 4 to 32 Volt DC Input
- Zero Crossing Switching
- Built In Snubber Network
- 4,000 Volt Isolation Between Input and Output
- Solid Epoxy Body Resistant to the Environment
- Completely Sealed, Immersion Cleanable
- Very High Surge Resistance
- Has the CE Mark
- UL Recognized and Certified for Canada
- Lead Free & RoHS Compliant

File # E86876

Certified by a NRTL

PART NUMBER	Input Voltage	Maximum Trigger Current	Maximum Output Currnet	Maximum Output Voltage	Minimum Output Voltage	Zero Cross
PCD210AC8-X	4-32 VDC	10 mA	10 Amps	250 VAC	50 VAC	Y
PCD215AC8-X	4-32 VDC	25 mA	15 Amps	250VAC	50 VAC	Y
PCD225AC8-X	4-32 VDC	25 mA	25 Amps	250 VAC	50 VAC	Y
PCD240AC8-X	4-32 VDC	25 mA	40 Amps	250 VAC	50 VAC	Y
PCD425AC8-X	4-32 VDC	25 mA	25 Amps	480 VAC	75 VAC	Y
PCD440AC8-X	4-32 VDC	25 mA	40 Amps	480 VAC	75 VAC	Y

Note: -X denotes Lead Free

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Absolute Maximum Ratings at 25 Degrees C				
Parameter		**Symbol**	**Rating**	**Unit**
Input	Input signal voltage	V_{IN}	4-32	V DC
	Drop out voltage	V_{do}	1	V DC
Output	RMS on state current	I_T	10, 15, 25, or 40	A rms
	Peak one cycle surge current	I_{surge}	10x I_T	A
	Repetitive peak off state voltage	V_{DRM}	600 *See note 2	V
	Operating frequency	**f**	47 - 70	Hz
	Critical rate of rise on state current	**di/dt**	50	A/ μS
	Load supply voltage	V_{out}	250 *See Note 2	Vrms AC
Isolation voltage input to output		V_{iso}	4000	Vrms
Operating temperature		T_{opr}	-30 - 100	°C
Storage temperature		T_{stg}	-30 - 125	°C
Soldering temperature 10 seconds		T_{sol}	260	°C

Electrical Characteristics at 25 Degrees C				
Parameter		**Symbol**	**Conditions**	**Unit**
Input	Pick up voltage	V_{pu}	It=1Arms	4V DC MAX
	Input current	I_{in}	Vin=4 - 32V	5 TO 12 mA
Output	On state voltage	V_T	It=1Arms	1.5V rms MAX
	Operating current	I_{op}	Vout=240 Vrms	50 mArms MIN
	Leakage current	I_{leak}	Vout=240 Vrms	3.5 TO 7 mArms
	Critical rate of rise of off state voltage	**dv/dt**	See Note 1	50 TO 200V/ μS
	Zero cross voltage	V_{ox}	I_{in} =7mA	35 VAC MAX
	Load voltage rating	V_{out}	I_T =50mArms MIN	50 TO 280VAC
Minimum trigger current		I_{FT}	V_{DRM} =600V	25 mA MAX
Isolation resistance input to circuit		R_{iso}	DC 500V	10^{10} OHMS MIN
Turn on time		T_{on}	60Hz AC	8.3 ms MAX
Turn off time		T_{off}	60Hz AC	8.3 ms MAX
Thermal resistance (between junction and case)		Rth(j-c)I		1.3 °C/W

NOTES: 1. Output (dv/dt) protection is provided on all models. They are designed to switch resistive or inductive loads to 0.2 power factor. The dv/dt rating is based on a source impedance of 50 ohms.

2. Model PCD425AC8-1 is rated 25 amps at 480 VAC. I surge is 250 amps and V DRM Is 1200 VOLTS. Vout Is 480 VAC.

   Model PCD440AC8-1 is rated 40 amps at 480 VAC. I surge is 400 amps and V DRM Is 1200 VOLTS. Vout Is 480 VAC.

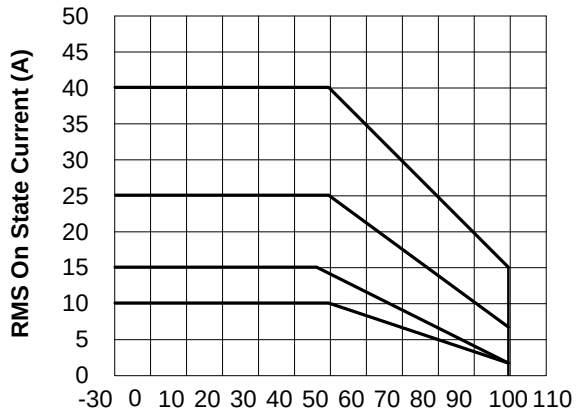
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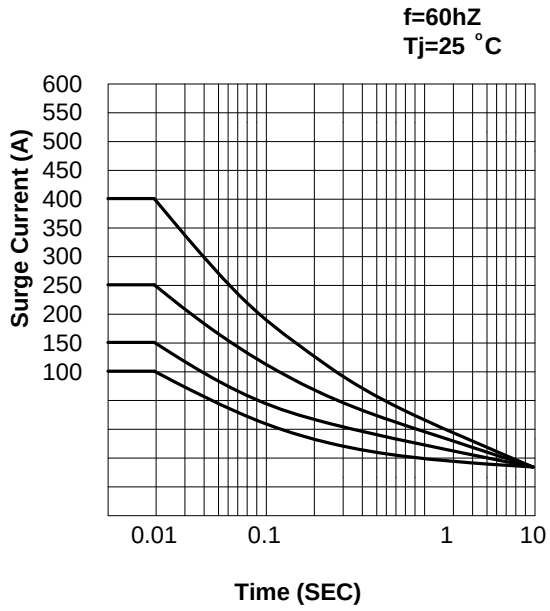
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CHARACTERISTIC CURVES

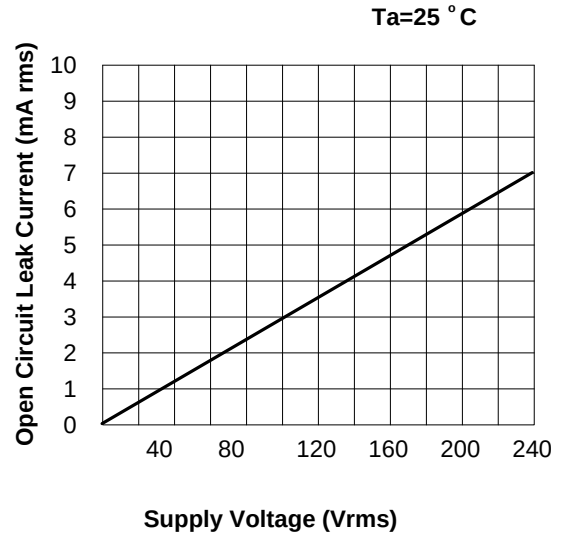
RMS On-state Current vs. Ambient Temperature



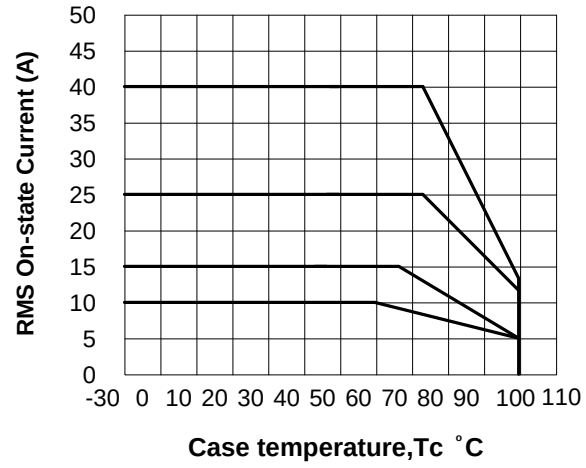
Surge Current vs. Time



Open Circuit Leak Current vs. Supply Voltage



RMS On-state Current vs. Case Temperature



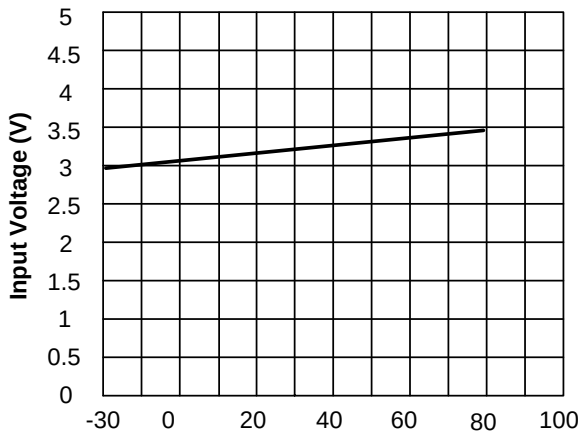
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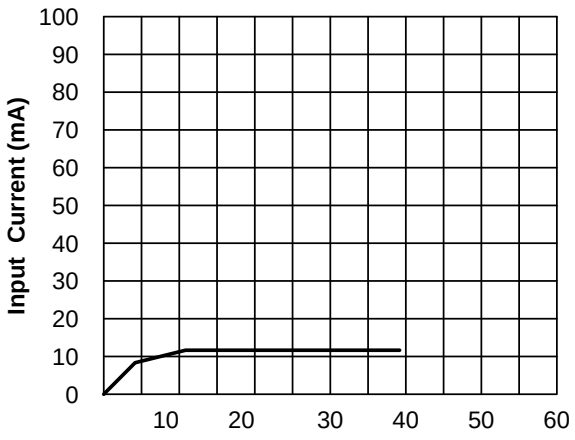
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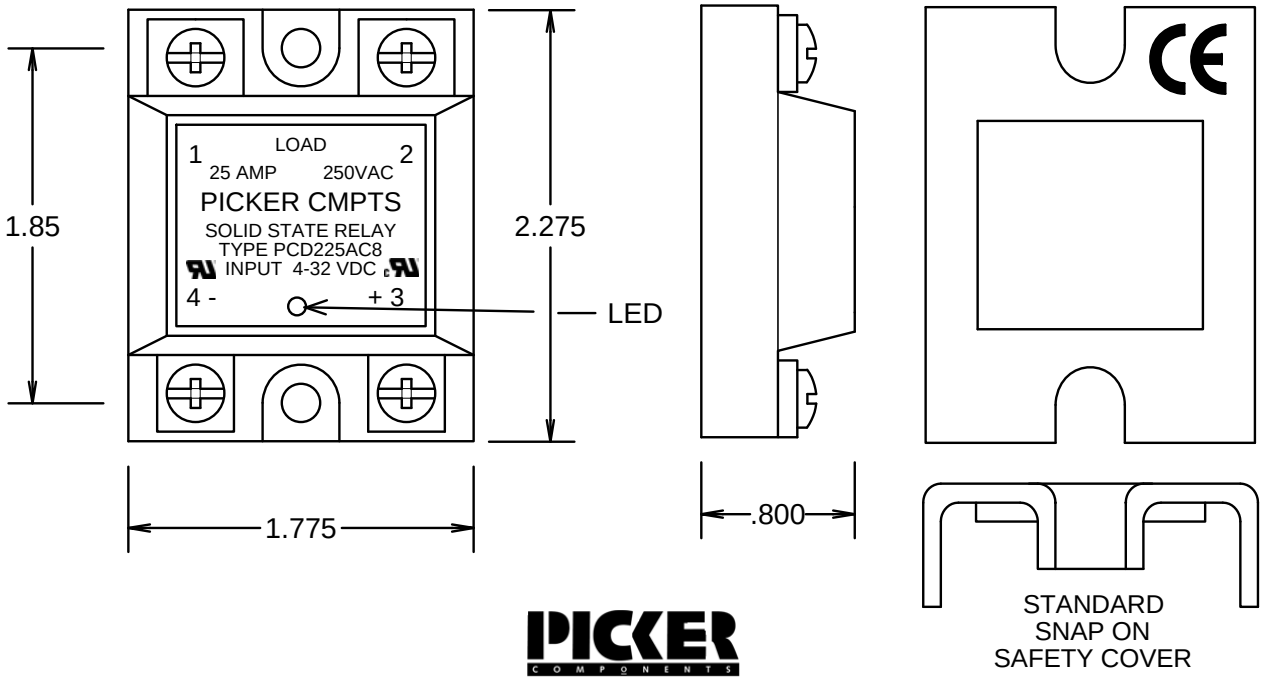
Input Voltage vs. Ambient Temperature



Input Current vs. Input Voltage



Dimensions in Inches



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