

P	LTR	DESCRIPTION	DATE	DWN	APVD
	A	INITIAL DRAWING	12SEP2019	VM	DH

Electrical Specifications (-55°C to +95°C unless otherwise specified)

Input	
Input supply voltage range (Vcc)	3.8 - 32 Vdc
Input current (max.) @ 5Vdc	16mAdc
Must turn-on voltage	3.8Vdc
Must turn-off voltage	1Vdc
Reverse voltage protection	-32Vdc
I/O	
Dielectric strength (min.)	1,500V rms/60 Hz.
Insulation resistance (min.) @ 500Vdc	10 <sup>8</sup> ohms
Capacitance (max.)	15pF
Output	
Output current rating (max.)	10A rms (Fig. 2, Note 1)
Surge current (max.)	100A pk (Fig. 1, Note 2)
Continuous load voltage (max.)	250V rms
Transient blocking voltage (max.)	460V pk
Frequency range	45 - 440 Hz.
Output voltage drop (max.) @ 25A load current	1.5V rms
Off-state leakage current (max.) @ 220V rms/400 Hz.	9mA rms
Turn-on time (max.)	1/2 cycle
Turn-off time (max.)	1 cycle
Off-state dv/dt (min.), with snubber	200V /µs (Note 3)
Zero voltage turn-on window (max.)	±15V pk
Output chip junction temperature (max.)	125°C (Note 1)
Thermal resistance (max.), junction to ambient	11.5°C/W
Thermal resistance (max.), junction to case	2.0°C/W
Fusing I <sup>2</sup> T, 1 ms (max.)	150A <sup>2</sup> s
Load power factor (min.)	0.2
Power dissipation (max.)	1.5W/A

Environmental Characteristics

**Ambient Temperature Range** —  
 Operating — -55°C to +95°C  
 Storage — -55°C to +110°C

**Vibration Resistance** —  
 30 G's, 78-2,000 Hz

**Shock Resistance** —  
 100 G's, 6 ms pulse

**Constant Acceleration Resistance** —  
 100 G's

Mechanical Characteristics

**Weight (max.)** —  
 3 oz. (85 grams)

**Materials** —  
 Case — Plastic, self-extinguishing, epoxy filled  
 Terminals — Brass, nickel-plated  
 Base Plate — Aluminum

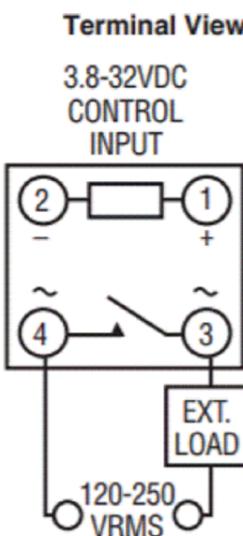
**NOTE:** Do not exceed 125 in-oz when tightening screws.

Product Facts

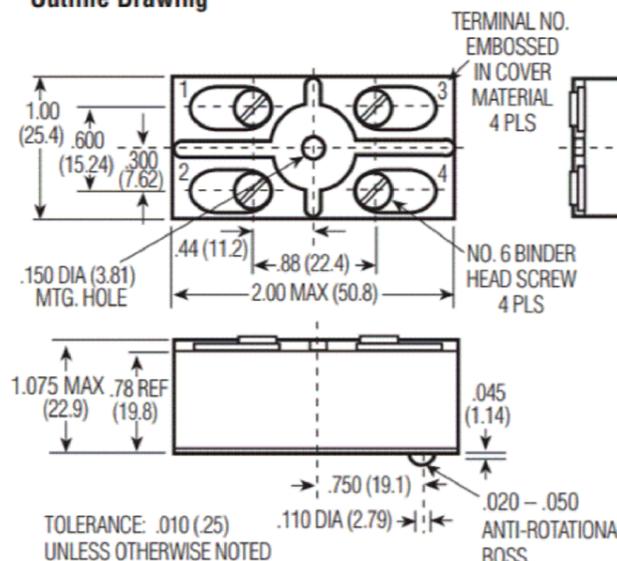
- Approved to DSCC drawing 86031
- Optically coupled all solid state relay
- TTL compatible input
- Zero voltage turn-on for low EMI
- Custom power package with screw terminals



Circuit Diagram



Outline Drawing



KILOVAC Part Number	DSCC Part Number	Screening Level
PS12-1Y	86031-001	Y
PS12-1W	N/A	W

Figure 1 - Peak Surge Current vs. Surge Current Duration

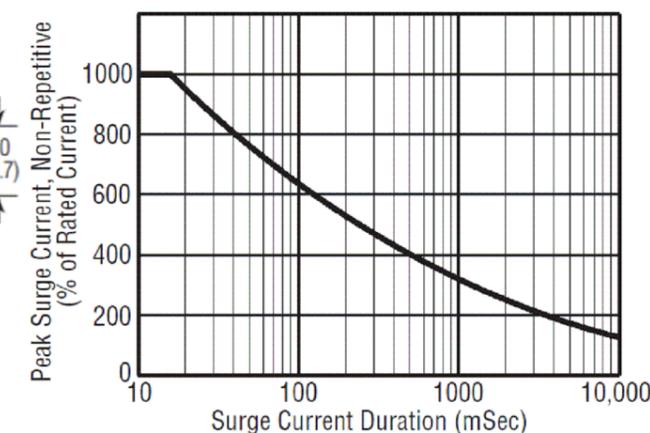
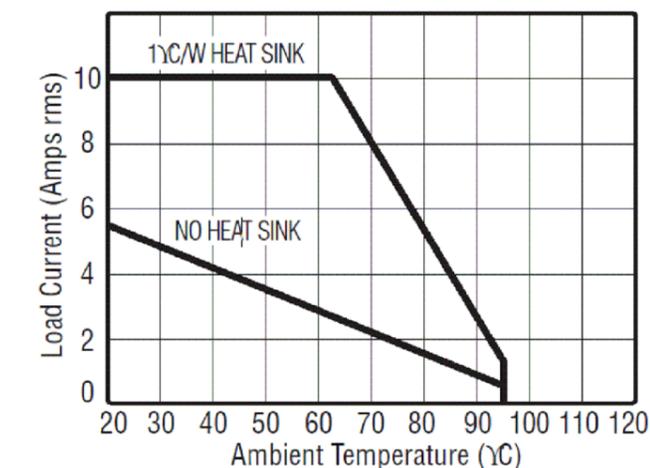


Figure 2 - Load Current vs. Temperature



Notes

1. Operation at elevated load currents up to 10 amps is dependent on the use of suitable heatsink to limit junction temperature.
2. Heating of output chips during and after a surge may cause loss of output blocking capability until junction temperature falls below maximum rating.
3. Internal snubber network is provided across output chips.

ALL DIMENSIONS ARE IN INCHES(MM)

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN VM 12SEP2019	TE Connectivity					
DIMENSIONS: INCHES		CHK RV 12SEP2019				NAME PS12 SERIES HIGH PERFORMANCE SOLID STATE RELAYS		
TOLERANCES UNLESS OTHERWISE SPECIFIED:		APVD DH 12SEP2019	PRODUCT SPEC APPLICATION SPEC					
0 PLC ± - 1 PLC ± - 2 PLC ± - 3 PLC ± - 4 PLC ± - ANGLES ± -		PRODUCT SPEC				SIZE A3	CAGE CODE -	DRAWING NO C-PS12-SERIES
MATERIAL -		FINISH -	WEIGHT -	CUSTOMER DRAWING		SCALE NTS	SHEET 1 OF 1	REV A