



Nil

DQ

1SS

FEATURES

- Dual Solid State
- Two Independently Controlled SCR Output Relays
- Screw Terminal Version Available
- Panel Mount
- Built in Snubber
- Opto-Isolation Between Input and Output
- RoHS Compliant

CROSS REFERENCES

Crouzet: Dual Output
Example: 84140210 Crosses to PCS28-24D-240A-40Z
Crydom: Dual
Example: D2440DE-10 Crosses to PCS28-24D-240A-40R
Crydom: Evolution Dual
Example: CD2425W2V Crosses to PCS28-24D-240A-25

INPUT PARAMETERS (Ta = 25°C) US E93379

Control Voltage Range	12D	4 - 15 VDC
	24D	15 - 32 VDC
Must Turn-On Voltage	12D	4 VAC
	24D	15 VAC
Control Current	12D	8 - 50 mA
	24D	6 - 30 mA
Input Resistance	12D	330 Ω
	24D	1.5 kΩ
Must Turn-Off Voltage		1 VDC

OUTPUT PARAMETERS (Ta = 25°C)

Load Current Range	0.1 - 25 A	0.1 - 40 A	0.1 - 50 A
Max. Surge Current (10 ms)	300	400	500
Max. I ² t (10 ms, A ² s)	450	800	1,250

OUTPUT PARAMETERS Continued

Load Voltage	240 A	380 A	480 A
Load Voltage Range (VAC)	48 - 280	48 - 440	48 - 530
Max. Transient Voltage (V _{pk})	600	800	1,200
Max. Off-State Leakage Current	10 mA		
Max. On-State Voltage Drop	1.5 V _{RMS}		
Min. Power Factor	0.5		
Max. Turn-On Time	Zero-Cross: 1/2 Cycles + 1 ms; Random: 1 ms		
Max. Turn-Off Time	1/2 Cycles + 1 ms		
Frequency Range	47 - 63 Hz		
Min. Off-State dv/dt	500 V/us		

CHARACTERISTICS

Dielectric Strength	4,000 VAC, 50 Hz/60 Hz, 1 min. (Input to Output)
	2500 VAC, 50 Hz/60 Hz, 1 min. (Input, Output to Output)
Insulation Resistance	1000 MΩ at 500 VDC
Operating Temperature	- 30°C to 80°C
Storage Temperature	- 30°C to 100°C
Weight	Approximately 83 g

ORDERING INFORMATION

Example:	PCS28	-12D	-240A	-25	Z	-1SS
Model:	PCS28					
Control Voltage:	12D: 4 - 15 VDC; 24D: 15 - 32 VDC;					
Load Voltage:	240A: 48 - 280 VAC; 380A: 48 - 440 VAC					
	480A: 48-530VAC					
Load Current:	25: 25 A; 40: 40 A; 50: 50 A					
Switching Type:	Z: Zero Crossing; R: Random Turn-On					
Package:	Nil: Quick Connect Output Pins, Four Position Header Input Pins 1SS: Single Input Control for Dual Output, Screw Terminal Input, Screw Terminal Outputs, with LED DQ: Quick Connect - All 8 Pins					

For Accessories and Heat Sinks see Page 2

PRECAUTIONS

- 1) When choosing a Solid State Relay (SSR), note the actual load current and ambient temperature and reference the Characteristic Curves on page 3.
- 2) SSRs require an adequate heat sinking or other effective cooling measures.
- 3) With ambient temperature above 25°C refer to the curve of Max. Load Current vs Ambient Temperature for load current derating.
- 4) Apply heat-conducting silicon grease or a thermal transfer pad on the space between the SSR and the heatsink and screw the SSR firmly into the heat sink to avoid damage from overheating.
- 5) Tighten the SSR terminal screws properly. We recommended screw installation torque as follows :
 M4 screw mounting torque range is (0.98-1.37)N • m,
 M3 screw mounting torque range is (0.56-0.98)N • m.
 Loose screws will damage the SSR when heat is generated from the connection. Also, excessive screw torque may damage relays internal components.
- 6) It is recommended to use a heat sink matched to the Current Load. With any heat sink test that the SSR base temperature does not exceed 65°C.
- 7) When using the PCS28 relay with an inductive load, it is suggested to select random turn-on (i.e., a model with "R" letter).
- 8) The PCS28 is not suitable for capacitive loads; if you must then do not choose products with varistor protection (i.e., a model with "Y" letter).
- 9) Listed parameters are based on resistive loads. Do not use the relay beyond the described current, temperature, load or voltage limits as described in this data sheet.

ACCESSORIES

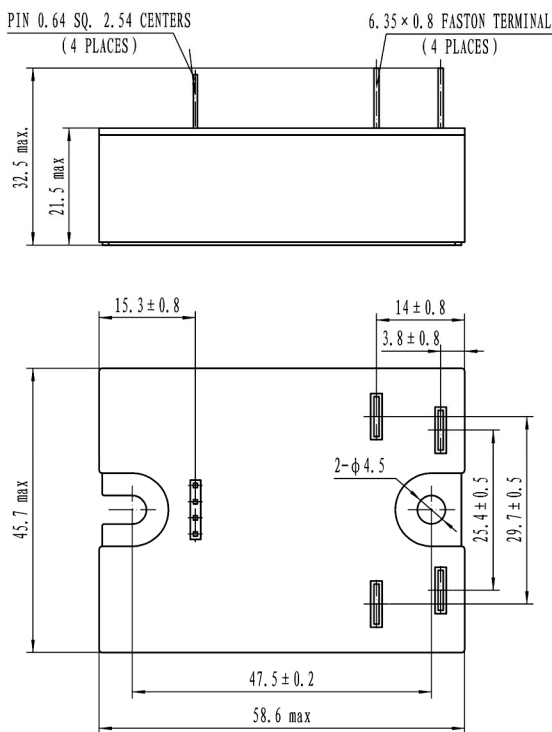
Heat Transfer Pad	HTP100
Heat Sinks	PCH-I-50 for applications up to 20 Amps @ 25°C Ambient Temperature
	PCH-H-110 for applications up to 35 Amps @ 25°C Ambient Temperature
	PCH-H-150 for applications up to 50 Amps @ 25°C Ambient Temperature

ACCESSORIES SOLD SEPERATELY

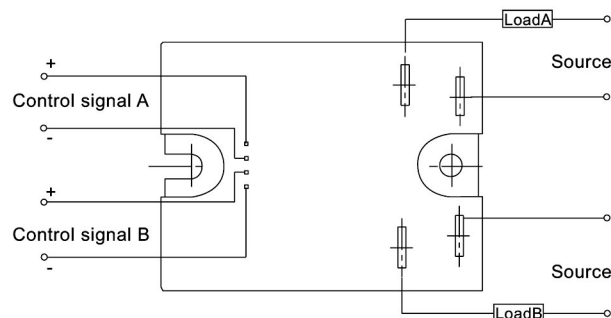
DIMENSIONS (mm)

Nil Standard Package

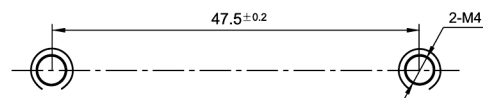
Outline Dimensions



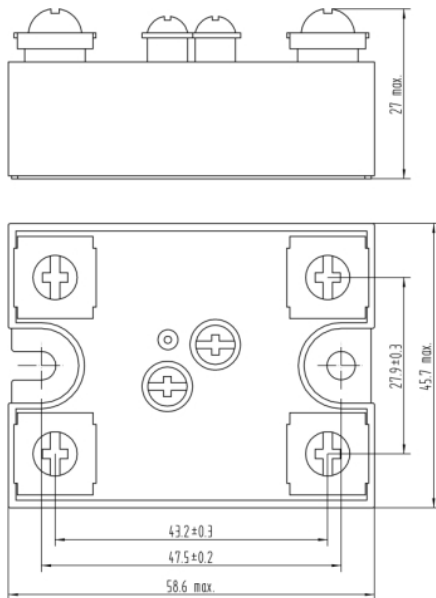
Wiring Diagram



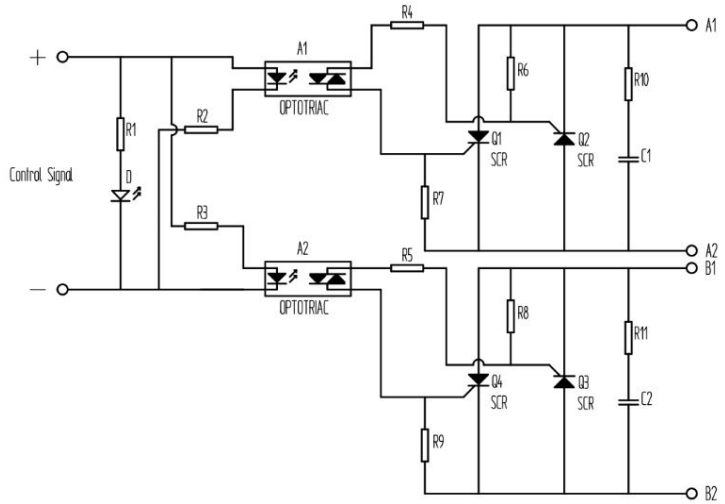
Mounting Holes



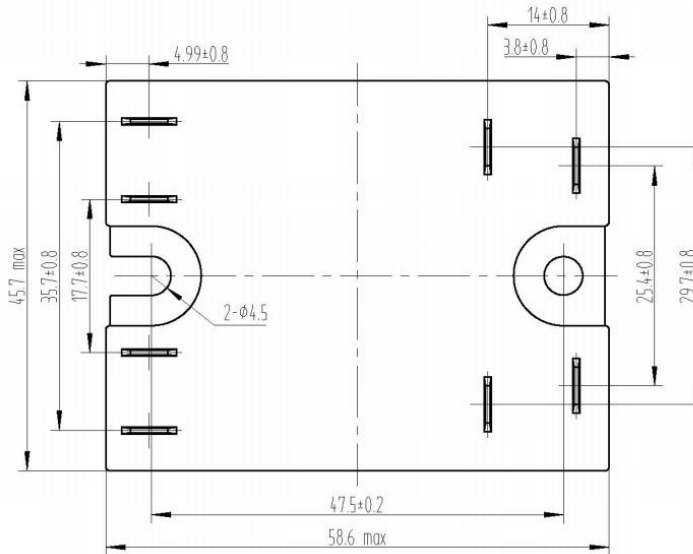
1SS Package Dimensions



1SS Schematic



DQ Package Dimensions



CHARACTERISTIC CURVES

