



	CPC1976Y	Units
AC Operating Voltage	20 - 240	V_{rms}
Load Current	2.0	A_{rms}
On-State Voltage Drop	1.6	$V_{rms} (A_T I_L = 2A_{rms})$

Description

CPC1976Y is an AC Solid State Switch utilizing dual power SCR outputs. This device also includes zero turn on circuitry and is available with a blocking voltage up to 600V.

Features

- Load Current up to $2A_{rms}$
- Blocking Voltages up to 600V
- 5mA Sensitivity
- Zero-Crossing Detection
- DC Control, AC Output
- Optically Isolated
- TTL and CMOS Compatible
- Low EMI and RFI Generation
- High Noise Immunity
- Machine Insertable, Wave Solderable

Approvals

- UL recognized file #: E69938
- CSA certified file #: LR 43639-8

Ordering Information

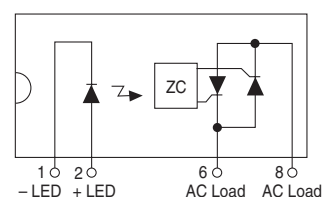
Part #	Description
CPC1976Y	8 Pin SIP (25/Tube)

Applications

- Programmable Control
- Process Control
- Power Control Panels
- Remote Switching
- Gas Pump Electronics
- Contactors
- Large Relays
- Solenoids
- Motors
- Heaters

Pin Configuration

CPC1976Y Pinout



Absolute Maximum Ratings (@ 25° C)

Parameter	Ratings	Units
Blocking Voltage	600	V
Input Power Dissipation	150 ¹	mW
Input control Current	50	mA
Peak (10ms)	1	A
Reverse Input Voltage	5	V
Total Power Dissipation	1600 ²	mW
Isolation voltage Input to Output	3750	V _{rms}
Operational Temperature	-40 to +85	°C
Storage Temperature	-40 to +125	°C
Soldering Temperature DIP Package	+260	°C
Surface Mount Package (10 seconds Max.)	+220	°C

¹ Derate Linearly 1.33 mW / °C

² Derate Linearly 16.6 mW / °C

Absolute Maximum Ratings are stress ratings. Stresses in excess of these ratings can cause permanent damage to the device. Functional operation of the device at conditions beyond those indicated in the operational sections of this data sheet is not implied.

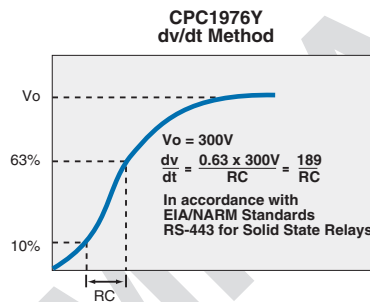
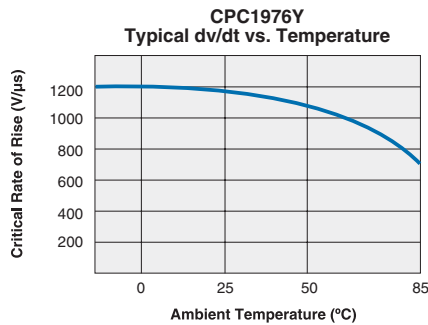
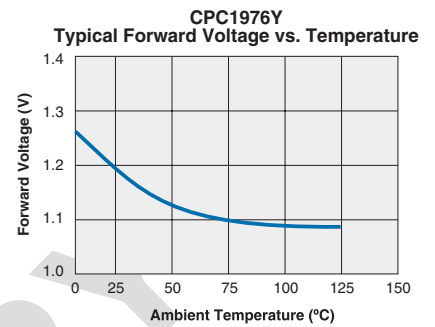
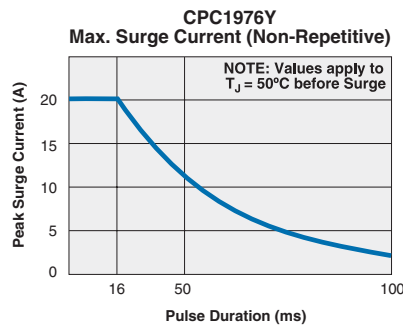
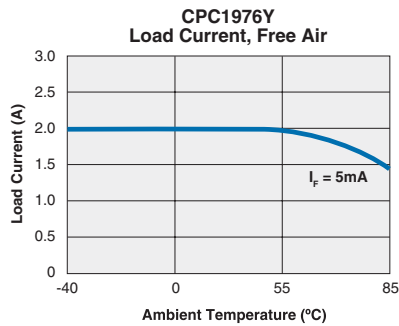
Electrical Characteristics

Parameters	Conditions	Symbol	Min	Typ	Max	Units
Output Characteristics @ 25°C						
Load Current (Continuous)	V _L =120-240VAC	I _L	0.005	-	2.0	A _{rms}
Off State Leakage Current	V _{DRM}	I _{LEAK}	-	-	1	mA
On-State Voltage Drop	I _L =2A _{rms}	-	-	-	1.6	V _{rms}
Critical Rate of Rise	-	dv/dt	1000	1200	-	V/μS
Switching Speeds						
Turn-on	IF=5 mA	T _{ON}	-	-	0.5	cycles
Turn-off	IF=5 mA	T _{OFF}	-	-	0.5	cycles
Zero-Cross Turn-On Voltage	1st half cycle	-	-	2	10	V
	Sub. half cycle	-	-	-	2	V
Operating Frequency ¹	-		20	-	500	Hz
Load Power Factor for Guaranteed Turn-On ²	-	PF	0.25	-	-	-
Input Characteristics @ 25°C						
Input Control Current For Normal Environment	-	I _F	5	-	50	mA
For High Noise Environment	-	I _F	10	-	100	mA
Input Voltage Drop	V _F =5mA	V _F	0.9	1.2	1.4	V
Input Drop-out Voltage	-	-	0.8	-	-	V
Reverse Input Current	V _R =5V	I _R	-	-	10	uA
Common Characteristics @ 25°C						
Input to Output Capacitance	-	C _{I/O}	-	-	3	pF
Input to Output Isolation	-	V _{I/O}	3750	-	-	V _{rms}

¹ Zero Cross 1st half cycle @ <100Hz

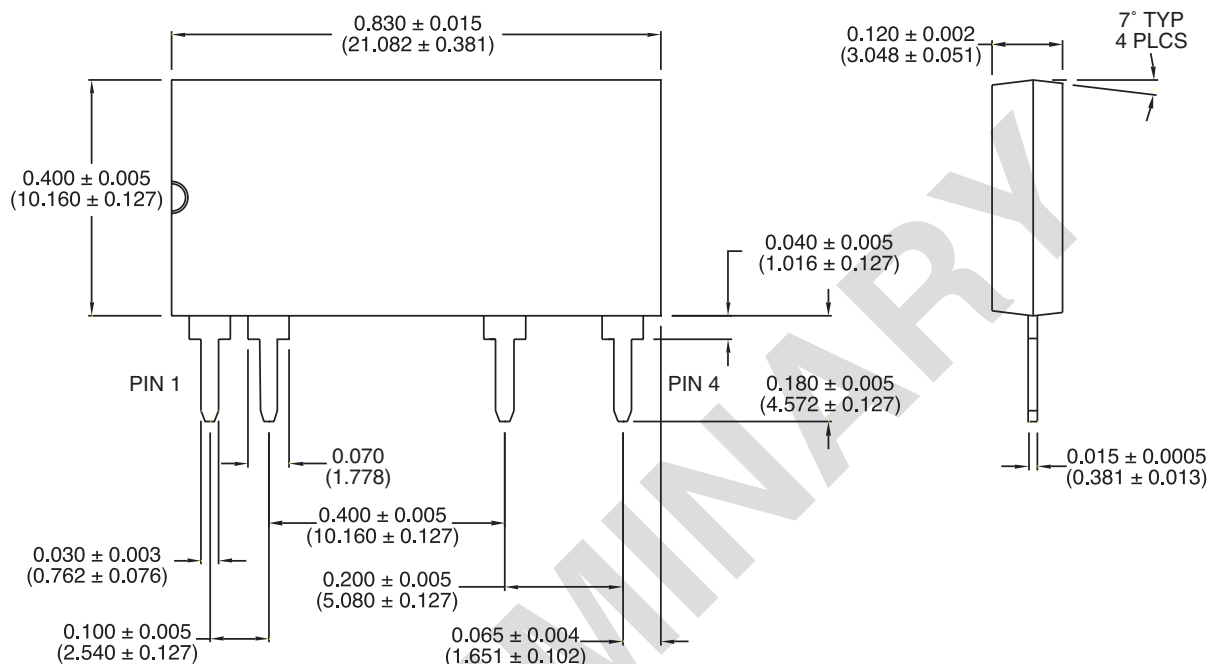
² Snubber circuits may be required at low power factors.

PERFORMANCE DATA*



* The Performance data shown in the graphs above is typical of device performance. For guaranteed parameters not indicated in the written specifications, please contact our application department.

MECHANICAL DIMENSIONS



Dimensions:
mm
(inches)

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