

# Power Solid State Relays

## Optically Isolated MOSFET-Based Power Relays

### IXYS Integrated Circuits Division Power Solid State Relays

Provided in a variety of innovative packages, these dependable solid state devices can be used to switch power reliably to high current loads under the control of milliamp-level DC signals. A wide selection of blocking voltages and current handling capabilities offer flexible design options. Optical architecture isolates the input circuitry from the output circuitry by up to 5000V<sub>rms</sub> to provide safety for personnel and for added noise immunity.

#### AC/DC Power Relay Features:

- Load Current up to 15A<sub>DC</sub> / 15A<sub>rms</sub> @ T<sub>C</sub>=25°C
- Blocking Voltages from 60V<sub>P</sub> to 1000V<sub>P</sub>
- Input-to-Output Isolation up to 5000V<sub>rms</sub>
- Very Low On-Resistance
- Low Input Control Current: 10mA Max

### Bidirectional Power Relays

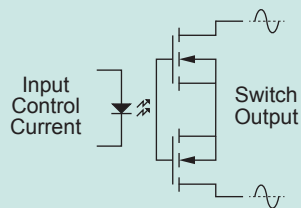
IXYS Integrated Circuits Division's bidirectional solid state power relays, also called AC/DC relays, are designed to switch high current loads in which current flows in both directions.

### Unidirectional Power Relays

IXYS Integrated Circuits Division's unidirectional solid state power relays, also called DC-Only relays, are designed to switch high current loads in which current flows in only one direction.

#### DC-Only Power Relay Features:

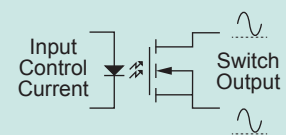
- Load Current up to 32A<sub>DC</sub> @ T<sub>C</sub>=25°C
- Blocking Voltages from 60V<sub>P</sub> to 1000V<sub>P</sub>
- Input-to-Output Isolation: 2500V<sub>rms</sub>
- Very Low On-Resistance
- Low Input Control Current: 10mA Max



**AC/DC Relay  
Block Diagram**

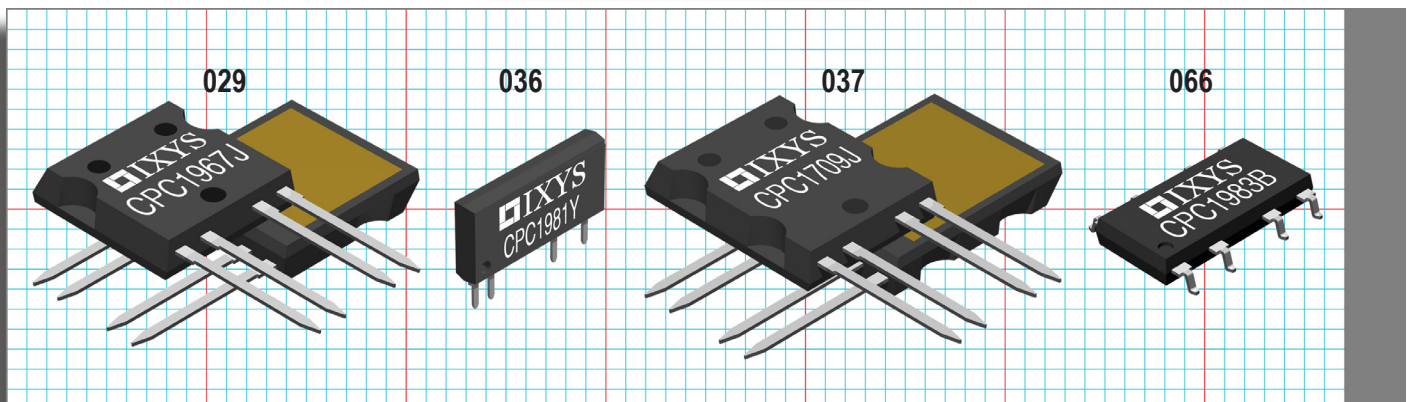
#### APPLICATIONS:

- Industrial Controls, Motor Controls
- Robotics
- Transportation Equipment
- Aerospace, Defense
- Instrumentation
- Meters (Watt/Hr, Water, Gas)



**DC-Only Relay  
Block Diagram**

### Power Relay Packages



## MOSFET-Based Power Relays (AC/DC, Bidirectional)

Part Number	Blocking Voltage	Load Current			On Resistance	Switching Times $t_{on}/t_{off}$	Input Control Current	Isolation Voltage	Package Type
		Free Air	5°C/W Heat Sink	$T_c=25^\circ\text{C}$					
	( $V_P$ )	( $A_{DC} / A_{rms}$ )			( $\Omega$ )	(ms)	( $mA_{DC}$ )	( $V_{rms}$ )	
CPC1906	60	2	-	-	0.3	10 / 5	10	2500	036
CPC1907B	60	6	-	-	0.06	5 / 1	5	5000	066
CPC1908	60	3.5	8.5	15	0.3	20 / 5	10	2500	029
CPC1909	60	6.5	15	15	0.1	25 / 10	10	2500	037
CPC1916	100	2.5	-	-	0.34	5 / 3	10	2500	036
CPC1918	100	5.25	13	15	0.1	25 / 10	10	2500	037
CPC1926	250	0.7	-	-	1.4	10 / 10	10	2500	036
CPC1927	250	2.7	6.7	15	0.2	25 / 10	10	2500	037
CPC1967	400	1.35	3.35	13.15	0.85	20 / 5	10	2500	029
CPC1968	500	2	5	15	0.35	20 / 5	10	2500	037
CPC1973	400	0.35	-	-	5	5 / 3	10	2500	036
CPC1977	600	1.25	3.1	12.25	1	20 / 5	10	2500	029
CPC1978	800	0.75	1.85	7.25	2.3	20 / 5	10	2500	029
CPC1979	600	1.4	3.5	14.5	0.75	25 / 5	10	2500	037
CPC1981	1000	0.18	-	-	18	10 / 5	10	2500	036
CPC1983	600	0.5	-	-	6	5 / 2	5	2500	036
CPC1983B	600	0.5	-	-	6	5 / 2	5	5000	066
CPC1983YE	600	0.5	-	-	6	5 / 2	5	4000	036
CPC1986	1000	0.65	1.6	6.5	3	20 / 5	10	2500	029
CPC1988	1000	0.9	2.25	9.4	2.5	20 / 5	10	2500	037

## MOSFET-Based Power Relays (DC-Only, Unidirectional)

Part Number	Blocking Voltage	Load Current			On Resistance	Switching Times $t_{on}/t_{off}$	Input Control Current	Isolation Voltage	Package Type
		Free Air	5°C/W Heat Sink	$T_c=25^\circ\text{C}$					
	( $V_P$ )	( $A_{DC}$ )			( $\Omega$ )	(ms)	( $mA_{DC}$ )	( $V_{rms}$ )	
CPC1706	60	4	-	-	0.09	5 / 2	5	2500	036
CPC1708	60	4	11.85	24	0.08	20 / 5	10	2500	037
CPC1709	60	9	22.8	32	0.05	20 / 5	10	2500	037
CPC1718	100	6.75	17.5	32	0.075	20 / 5	10	2500	036
CPC1726	250	1	-	-	0.75	5 / 2	10	2500	036
CPC1727	250	3.4	8.6	20	0.09	20 / 5	10	2500	036
CPC1777	600	1.5	4.6	15	0.5	20 / 5	10	2500	029
CPC1779	600	1.65	4.12	15	0.4	20 / 5	10	2500	036
CPC1786	1000	0.65	1.75	6.9	2	20 / 5	10	2500	029
CPC1788	1000	1	2.45	10.3	1.25	20 / 5	10	2500	037

For more information about IXYS Integrated Circuits Division's Power Solid State Relays, please visit:

<http://www.ixysic.com/Products/SSRPower.htm>

For additional information, contact your IXYS IC Division Representative:

<http://www.ixysic.com/home/pages.nsf/locate.rep>

Or visit IXYS IC Division's web site:

<http://www.ixysic.com>