



Industrial Power Controllers

Proudly Made in the USA

DC – Up to 400VDC; Up to 10A
AC – Up to 280VAC; Up to 400Hz; Up to 10A

Switch – Protect – Manage



NORTH / SOUTH AMERICA

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About Micropac

Micropac Industries, Inc. has been involved in microelectronics design and manufacturing since 1963 and is **ISO 9001**, **AS 9100**, **UL** and **DLA** certified to provide a wide range of qualified microelectronic products to the **industrial, military, medical** and **space markets**. Micropac products are used thousands of feet below the surface in oil & gas exploration / production as well as millions of miles from Earth in satellites and probes found on Mars and the outer reaches of the solar system. Micropac products also find a home in mission critical applications such as cancer radiation treatment, blood oxygen oximeters, and NASA space suit ECG amplifiers. Some of the most demanding customers on the planet rely on Micropac to deliver the highest quality products, on time, and at competitive prices.

Micropac corporate headquarters located in Garland, Texas, includes all Design & Development Engineering, Quality Assurance, Customer Service and General Management. A technical sales office located in Bremen, Germany provides international support. Authorized technical sales representatives and distributors cover North & South America, Europe and Asia.



Markets Served

Solutions Through Technology

Space



53278, 53503, 53504,
53506,
53507, 53513, 53514
Satellite Power
Distribution Systems





52494 - Current
Limiter - (EMU)
Spacesuit



Hall Effect
Devices-
Cameras for
MSL Rover

Medical



Optocoupler Array -
CT Scanner and
Radiation Delivery
System



Heart Transplant
Blood Gas
Analyzer Sensor

Military



Gyro Sensor -
Hellfire Missile



53111-Relay
Bus Transfer Switch



Hall Effect Sensor-
Folding Wings- JSF



52280-Heater
Aegis Radar

Industrial



42149 - 200°C
PWM Controller



42094 - 200°C
Voltage Regulator

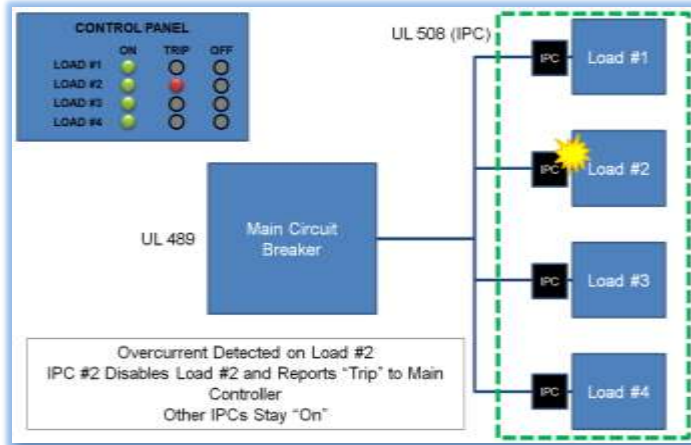


IPC01 - Industrial
Power Controller



Industrial Power Controllers

Micropac Industrial Power Controllers (IPCs) combine the functionality of a Solid State Relay and resettable circuit breaker in one package. These **UL-508 and CSA C22.2** recognized (file number E354703) devices provide **overload protection** and **output status telemetry** in addition to **load switching** and are available for both DC and AC applications.



AC Output; Overload Protection, Output Status

Series	Description	Current Rating (Amps)			
		3	5	7	10
IPC01-40	< 40V RMS	■*	■*	■*	■
IPC01-280	< 280V RMS	■*	■		

* Contact Factory

DC Output; Overload Protection, Output Status

Series	Description	Current Rating (Amps)			
		3	5	7	10
IPC01-75	< 75V	■*	■*	■*	■
IPC01-400	< 400V	■*	■		

* Contact Factory

Accessories

		3	5	7	10
IPC01-TP	Thermal Pad	■	■	■	■
IPC01-HS1	Heatsink	■	■	■	■
IPC01-DIN	DIN Rail Adapter	■	■	■	■
IPC01-CVR	IP20 Cover	■	■	■	■

Compact

- Combines a circuit breaker and solid state relay in the same solid state relay package
- Familiar Hockey-Puck package
- Multiple load voltage and current ratings in the same package footprint simplifies system layout considerations

Interface

- Computer / Controller Friendly
 - TTL / CMOS compatible output enable and output status
 - Trip reset by cycling output enable
 - Output status provides positive notification of an overload condition
- "System Designer Friendly"
 - Initial protection during Integration & Test
 - Thermal and power derating
 - Controlled turn-on soft start

Safety



- Self protecting
 - Instant trip when commanded "On" into a short
 - Overload protection without nuisance tripping due to in-rush current demand
 - Repeated turn-on into an overload condition results in quicker trip response due to "thermal memory" feature
- Slip on cover protects equipment / people from potentially hazardous voltages

Reliability

- Reliable and Designed for Harsh Industrial Environments
 - No moving parts
 - No contacts to bounce, wear or arc
 - -40°C to +80°C with a option for -55°C to +125°C
 - Full power and thermal derating over the full operating temperature range

Applications

Typical applications include **heating control**, **lighting control** and **motion control**. IPCs are easily integrated into **PLC** or **computer controlled automation systems** providing **TTL / CMOS** compatible control and telemetry interfaces as well as accepting up to 32VDC input commands.

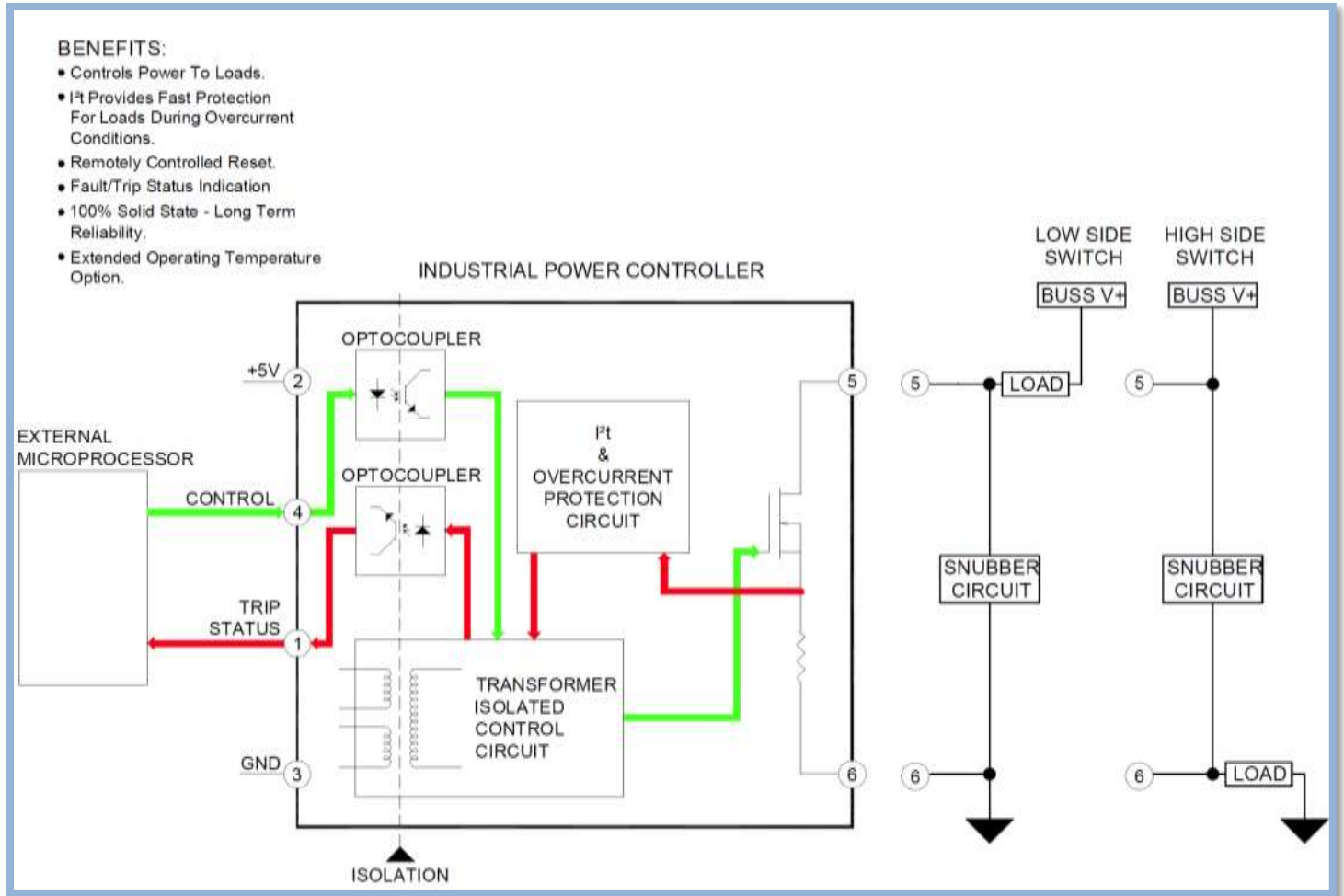
<p>Warehouse Lighting</p> 	<p>To save energy, the lighting of each lamp is activated by computer or presence detectors. The solid-state relays are used to switch these lamps.</p>
<p>Factory Automation – Motor Control</p> 	<p>Used to drive the motor's direction of rotation, and guarantee the dependability of the installation through the extended service life and power switching it brings you. Also, vital element of safety consideration in factory design.</p>
<p>Traffic / Railroad Lights</p> 	<p>Can be used in traffic lights: like all solid-state relays, they have a very long service life, guaranteeing optimal operation of the lights. They can be used with DC or AC systems.</p>
<p>Vending Machines</p> 	<p>Overall machine fault protection plus individual switching of lights and motors.</p>
<p>Industrial Ovens</p> 	<p>Used in severe environments, such as industrial ovens. They regulate the power supply to the heater elements, thus improving oven efficiency.</p>
<p>Military COTS</p> 	<p>Power switching needs for military vehicles. Heavy emphasis on COTS, but the requirement to survive in harsh environments and operate to MIL-STD-1760 and MIL-STD-704 power systems. -55°C to +125°C operation.</p>
<p>Space Ground Support Equipment</p> 	<p>Ground support equipment for space and aerospace applications to control lighting, motors, and electronics.</p>
<p>Aircraft Ground Support Equipment</p> 	<p>Ground support equipment for switching aircraft cabin electronics loads, on-board motors and compressors.</p>
<p>Engineering Labs</p> 	<p>Can be used to control DUTs, breadboards, laboratory equipment.</p>

Notional Application

Switch – Isolated switches provide capability to switch both low side and high side loads.

Protect – IPCs protect power sources, loads and wiring from overload conditions

Manage – Trip Status telemetry and remote control capability provides effective power distribution management when integrated within a system containing a PLC or microcontroller / microprocessor controller architecture.

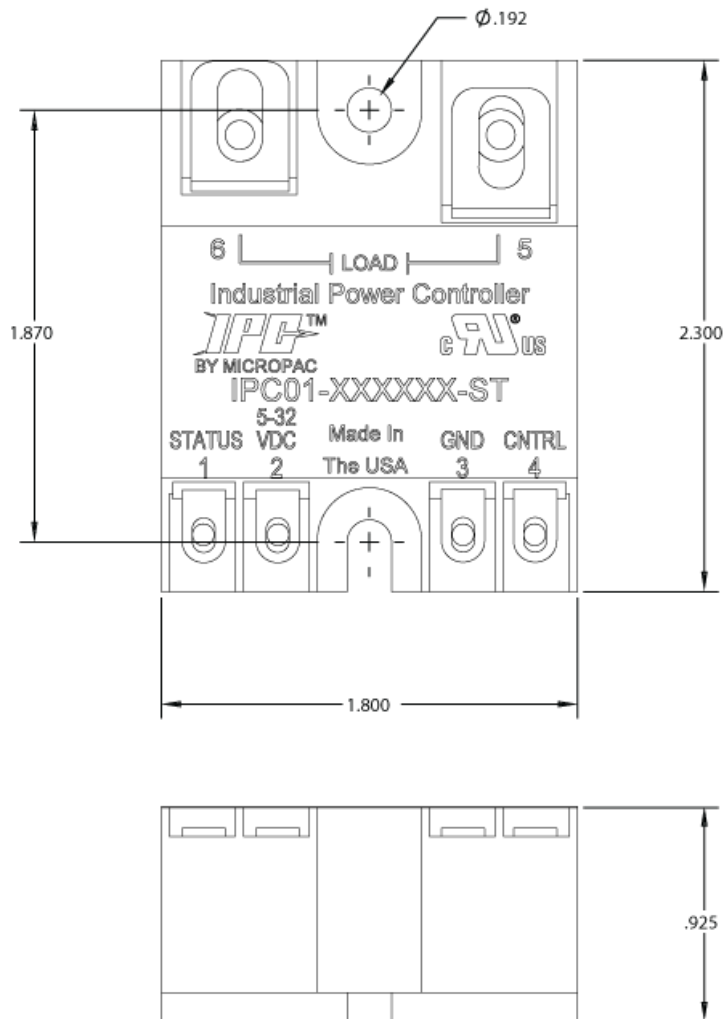



Ordering Information

Part Number	AC / DC	Voltage	Trip Current	Operating Temperature
IPC01-40VAC10A-ST	AC	< 40V	10A	-40°C to +80°C
IPC01-280VAC5A-ST	AC	< 280V	5A	-40°C to +80°C
IPC01-75VDC10A-ST	DC	< 75V	10A	-40°C to +80°C
IPC01-400VDC5A-ST	DC	< 400V	5A	-40°C to +80°C

Mechanical Information

All dimensions in inches.



An aerial, top-down view of a car assembly line. The line is a long, narrow tunnel with a central conveyor belt. On either side of the belt, there are rows of robotic arms and workstations. The cars are in various stages of assembly, from chassis to nearly complete vehicles. The lighting is bright, and the overall scene is one of a highly organized industrial environment.

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