Inrush Current Limiter

The AMG-PU301 is an inrush current limiter. It detects the zero crossing of the AC sine wave and switches a MOSFET or relay after a fixed time delay. In that way, the MOSFET or relay can connect exactly at the next zero crossing, so that the capacitors are charged beginning with the zero crossing, thus limiting the current flow into them. Additionally, the AMG-PU301 has four monitor inputs to detect over current, over voltage, and over temperature conditions. In the case that a fault condition is detected, the IC will inhibit the output. It will remain in this fault/inhibit state until the next power up (recoverable fuse like behavior). It does have a LED driver for indication that it has entered the fault/inhibit state. The IC has a built in slow charge function to charge large capacitor banks step by step.

Application Circuit Example

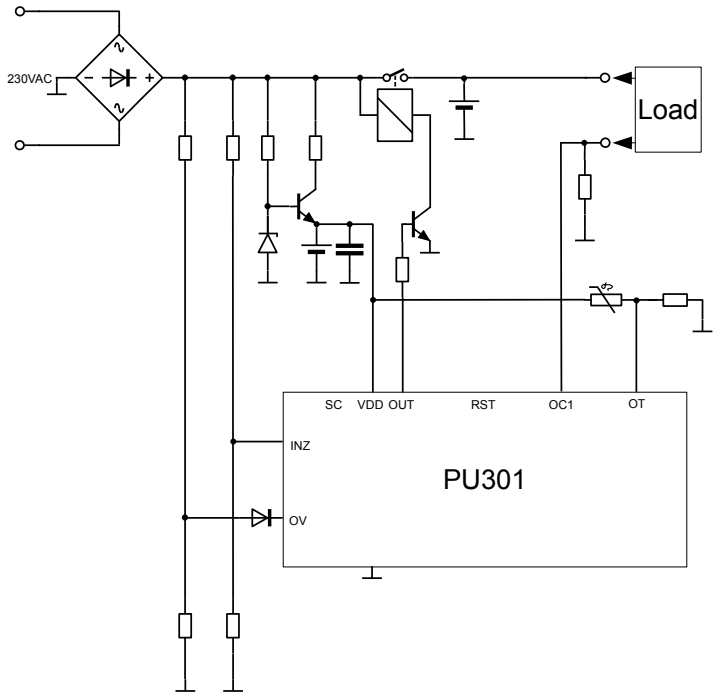

Figure 1: Simplified application example

Features

- ❑ Supply Voltage 10VDC...12VDC
- ❑ Zero crossing detection (with adjustable delay)
- ❑ Driver for MOSFET or relay
- ❑ Over current, over voltage, over temperature protection (recoverable fuse like)
- ❑ Slow charge function
- ❑ Ambient temperature range: 20°C...85°C
- ❑ Package: SOP14
- ❑ RoHS compliant

Ordering Information

❑ AMG-PU301-ISP14U	(SOP14 - shipment in tubes)
❑ AMG-PU301-ISP14R	(SOP14 - shipment in tape & reel)

