



The 39K and 0.22uF filter keeps the output low during the 30% of the AC wave form when there is less than 1mA available to drive the opto

The Zener maintains 5.1V over most of the AC current waveform.
 The 3K3 resistor sets the maximum opto current to ~1mA over 70% on the input AC wave form.
 The Capacitor in the RE1201 will pass higher currents for higher frequencies, harmonics, spikes etc.
 The zener will shunt these higher currents to protect the opto which itself also has surge handling 1A for <1uS