

# Thyristor Damper Circuit

## ■ Description

- ▶ A thyristor damper circuit is connected to the input of a power converter and selectively bypasses a damping resistor
- ▶ The thyristor damper circuit includes a damper (resistor), a bypass (thyristor) and an enable circuit (RC circuit)
- ▶ The thyristor turns on to bypass the resistor damper once its threshold voltage is reached. How quickly the threshold voltage is reached is dependent on the RC time constant of the enable circuit

## ■ Benefits

- ▶ Dampens oscillations which may cause flicker
- ▶ Increased efficiency since the damping resistor is bypassed for portions of the line cycle
- ▶ Reduces cost since the thyristor bypass only needs the RC enable circuit to turn on and bypass the damping resistor. The thyristor bypass will turn off when there is no current
- ▶ **Could be used with:** lighting drivers

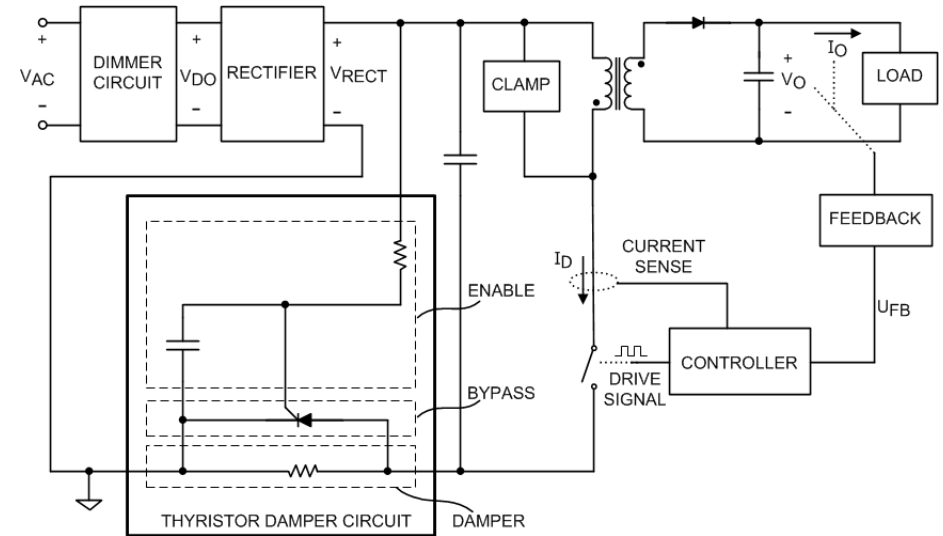


Figure 1. Lighting system with an example thyristor damper circuit