

# Offline Flyback Converter

## Short Circuit Protection

### Solution Products



MF-RHT070-0

### Objective

The objective of this PortNote® Solution is the low-cost overload protection of offline power supplies, by using high temperature Bourns® Multifuse® PPTC Resettable Fuses. Transient overload testing on low-power offline converters can be stressful on the output diode and the transformer. The high turns ratio converts relatively low-peak currents in the primary side into peak currents of several amps on the secondary side, which can destroy the diode and overheat the transformer.

The PPTC resettable fuse protects the diode and the transformer during transient overloading by going high ohmic and then resets back to a low ohmic value once the overload is removed. High temperature Bourns® Multifuse® PPTC resettable fuses have temperature coefficients which are half the amount of standard Multifuse® PPTCs, giving them more consistent hold and trip characteristics.

### Solution

1 Multifuse® PPTC Resettable Fuse:  
MF-RHT070-0

### Benefit

The Bourns® Model MF-RHT070-0 resettable fuse reduces the need for larger, more expensive diodes. It also reduces the need for larger cores in the transformer.

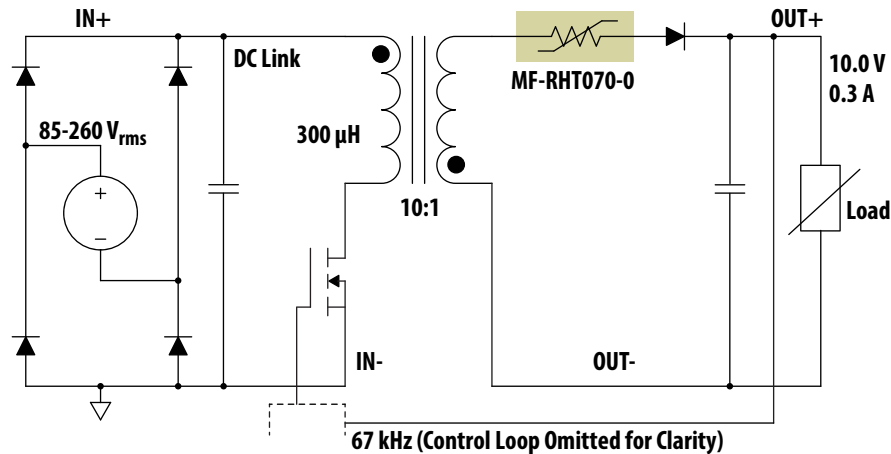
### Compliance

EN 60335, IEC 60730 (low-power circuit test)

### Design Kit



PN-DESIGNKIT-55



The schematic above illustrates the application protection and does not constitute the complete circuit design. Customers should verify actual device performance in their specific applications.